



Low Voltage Products

# ABB Low Voltage components Industrial and commercial applications

Version 0113

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# General Information



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## Knowledge Base

General Enquiries: LV.Enquiries@gb.abb.com  
Customer Services: LV.CustomerService@gb.abb.com  
Technical: LV.TechnicalSupport@gb.abb.com

### Stockists

To find your nearest stockist, please visit:  
<http://www.abb.co.uk/lowvoltage>

### Sales Desk

Telephone: 02476 368676  
Facsimile: 02476 368401  
Credit Control: 01480 475321

If you already have an account you can place orders:

Online: <http://online.abb.com/bol>  
Email: [orders.lvp@gb.abb.com](mailto:orders.lvp@gb.abb.com)  
Facsimile: 02476 368401

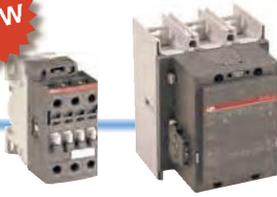
# Easy view product finder

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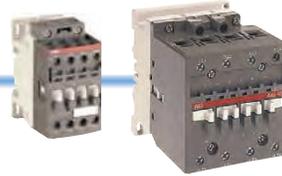
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## Control

New



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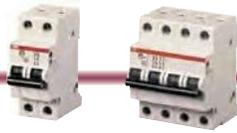
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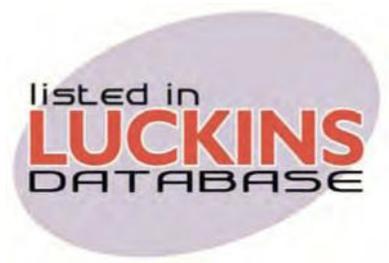
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# General Information

## Wholesales and stockists

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We have created two dedicated publications focussing on our core products for industrial automation and contractor/installer markets.

You will find information on products including brief technical specification, short code, order code, LVE items and product hierarchy. (Example below)

| 70mm <sup>2</sup> Feed Through Terminal Blocks |                                                                                         | Product Hierarchy<br>300010 | LVE Item |
|------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------|----------|
| Type                                           | Description                                                                             | Order Code                  |          |
| 7510                                           | 70mm <sup>2</sup> feed through terminal block (Grey) [jack size = 10]                   | 13N83201090000              | •        |
| 7510-BL                                        | 70mm <sup>2</sup> feed through terminal block (Blue) [jack size = 10]                   | 13N83202090000              | •        |
| 7510-PF                                        | 70mm <sup>2</sup> feed through terminal block, Ground (Green / Yellow) [jack size = 10] | 13N8321090000               | •        |
| Accessories                                    |                                                                                         |                             |          |
| 862-2                                          | Jumper bar, 2 pole, 22mm pitch [jack size = 5]                                          | 13N83221090000              | •        |
| 862-3                                          | Jumper bar, 3 pole, 22mm pitch [jack size = 5]                                          | 13N83223090000              | •        |
| 862-5                                          | Jumper bar, 5 pole, 22mm pitch [jack size = 5]                                          | 13N83225090000              | •        |



### Product hierarchy

The Product Hierarchy has been included to assist in identifying discounts for particular product ranges when used in conjunction with the customer discount structure file.

### LVE item

As a guide, we have indicated our fast running items in the column marked LVE Item with this symbol •, all other items are available on factory lead times.

### Web portal

As a customer, you can also take advantage of the services provided by our web based on-line solutions.

From this portal you can obtain price and availability, check order status, obtain copy documentation and place orders on-line 24/7/365. If you have not already registered, you can do this by

# About Voltimum

ABB is a founder member of Voltimum which was launched in 2003. Voltimum is an internet portal for the electrical industry and is active in 6 countries within Europe.

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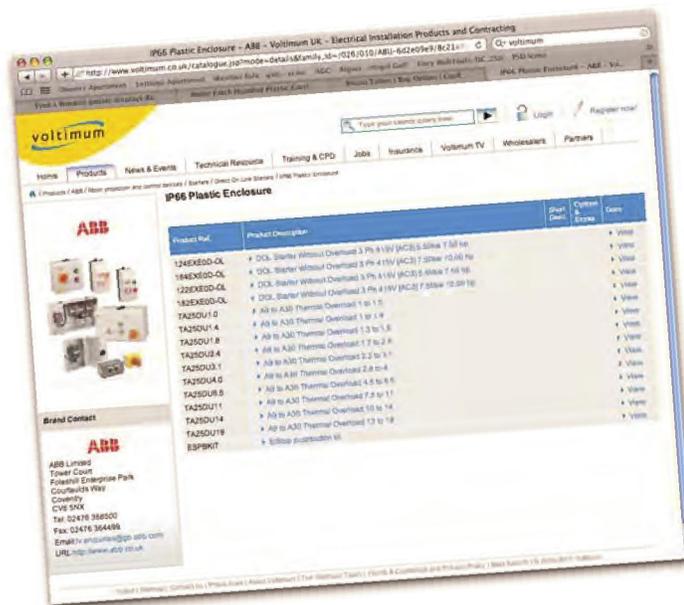
The portal is backed by 7 leading European manufacturers of electrical installation products who have invested over 20 million euros in the project.

Other manufacturers join the Voltimum online catalogue regularly as they see this unique initiative as an opportunity to increase the awareness of their products, being used on a daily basis by electrical contractors.

The initiative was first announced to the press in October 2000 and since then technical architecture of the portal has been designed and developed. Also in this period, 6 locally based teams were put in place to develop the portal in each country, adapting the portal to the needs of the local market and working with local providers of appropriate content.



Voltimum is headed by Bruno Hamon who is based in the Company's HQ in Geneva.



# ABB Low Voltage technical publications

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|                                                                                                                                                                                 |                                                                                                                                                                                  |                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Integrated control range</b><br> <b>New</b><br>Industrial Products<br>1SBC100155C0201       | <b>Block contactors</b><br> Industrial Products<br>1SBC100122C0202                              | <b>Pilot devices</b><br> Industrial Products<br>1SFC151004C0201                                 |
| <b>Soft starters</b><br> Industrial Products<br>1SFC132005C0201                                | <b>Relay &amp; timers</b><br> Industrial Products<br>2CDC110004C0206                            | <b>Installation equipment</b><br> Industrial Products<br>Contractor Products<br>2CSC400002D0206 |
| <b>KNX equipment</b><br> <b>New</b><br>Contractor Products<br>2CDC500007B0207                  | <b>Wiring accessories</b><br> Contractor Products<br>1SXF610007C0201                            | <b>Watchdog PIRs</b><br> Contractor Products<br>9AKK104295D6667                                 |
| <b>MCCBs</b><br> <b>New</b><br>Industrial Products<br>Contractor Products<br>1SDC210015D0204 | <b>ACBs</b><br> Industrial Products<br>1SDC200006D0207                                        | <b>Jokab safety</b><br> <b>New</b><br>Industrial Products<br>2TLC172001C0201                  |
| <b>Switch fuses</b><br> Industrial Products<br>Contractor Products<br>1SCC311013C0201        | <b>Switch disconnectors</b><br> Industrial Products<br>Contractor Products<br>1SCC301001C0201 | <b>Changeover switches</b><br> <b>New</b><br>Industrial Products<br>1SCC303003C0201           |
| <b>XR SlimLine switch fuses</b><br> Industrial Products<br>1SEC311001C0201                   | <b>Cam switches</b><br> Industrial Products<br>Contractor Products<br>1SCC302003C0201         | <b>Cewe plugs and sockets</b><br> <b>New</b><br>Contractor Products<br>2CMC700014C0006        |
| <b>5000 series</b><br> Industrial Products<br>1SNK160001C0207                                | <b>SNK series</b><br> Industrial Products<br>1SNK161001C0204                                  | <b>Solar PV products</b><br> <b>New</b><br>Contractor Products<br>9AKK1051152A5119            |

## Download centre

Our main technical catalogues are illustrated on this page.

Visit the ABB Library at:  
<http://www.abb.com/abblibrary/DownloadCenter/>

or enter the catalogue number into a search engine to download the catalogue(s) you require.



**Priced Edition on-line**

Catalogue number  
 1TXD000001P0211

## Industrial products

To view this publication on-line with our turning page technology type the URL below into your web browser, you do not have to download pdf files. Any price or product changes will be reflected on this URL at the review date. Save the URL in your favourites for future viewing.

<http://view.digi-page.net/?id=ABBIndustrialproducts>



## Contractor products

<http://view.digi-page.net/?id=1TXD000001P0229>

# Control



**New  
AF Range**



## Block contactors

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### New Range Contactors



Full range of product and technical information place this part number in a search engine and download

1SBC100155C0201

### Block Contactors



Full range of product and technical information place this part number in a search engine and download

1SBC100122C0202

### Electronic Products & Relays



Full range of product and technical information place this part number in a search engine and download

2CDC110004C0206

### Pilot Devices



Full range of product and technical information place this part number in a search engine and download

1SFC151004C0201

### Soft Starters

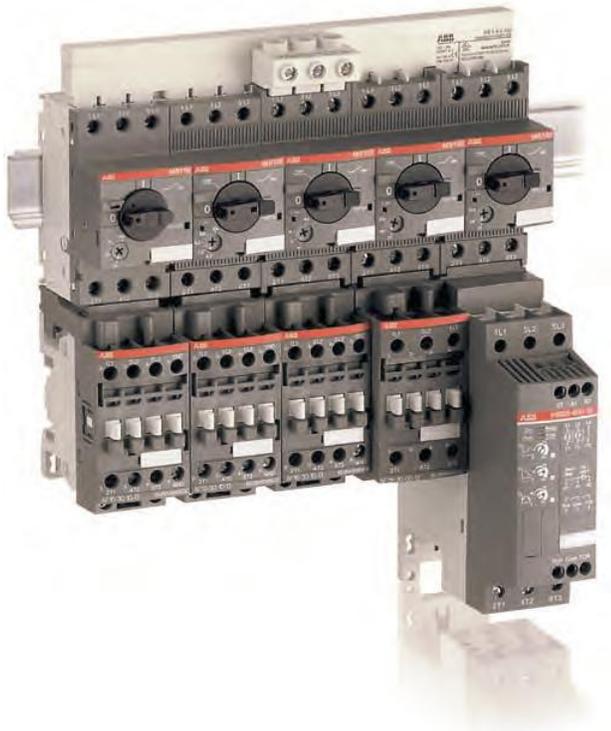


Full range of product and technical information place this part number in a search engine and download

1SFC132005C0201

# Large choice of starting solutions in kit form

1



## Short-circuit and overload protection

- Type 1 or type 2 coordination guaranteed with manual motor starters
- Choice of thermal or electronic overload relays

## Simple construction

- All starters in 45 mm width module

## Time/cost saving

- Same frame size for AC or DC control supply
- Easy, fast and secure assembly, fitting and wiring of components



### Direct-on-line and reversing starters

- Protection by manual motor starters or by fuses with overload relays
- Reversing starters in 90 mm width including mechanical and electrical interlocking

### Softstarters

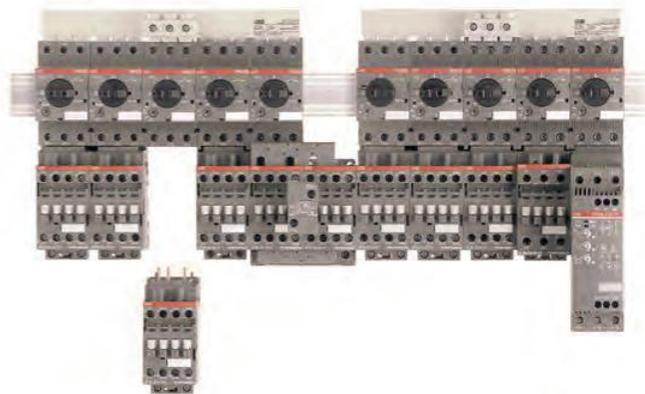
- Protection by manual motor starters or by fuses with overload relays

### Star-delta starters

- Protection by fuses with overload relays

## Standardized busbars and optimized interconnection accessories

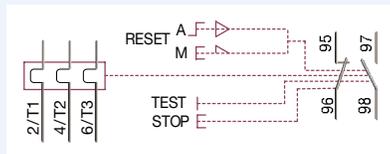
- Same 3-phase busbar and feeder range up to 100 A for manual motor starters
- Direct 35 mm rail mounting: no additional mounting plate required
- Complete range of connection links with manual motor starters and connection sets to build reversing and star-delta starters
- Easy installation and dismantling of contactors: no unwiring of manual motor starters





**Protect your motors with thermal or electronic overload relays**

- One range of TF42 thermal overload relays, trip class 10
- One range of EF19 and EF45 electronic overload relays up to 45 A, 7 setting ranges, trip class 10E, 20E, 30E
- Adjustable current setting ranges
- Overload protection with phase loss sensitivity
- Temperature compensation:
  - up to +60 °C for thermal overload relays
  - up to +70 °C for electronic overload relays
- Automatic or manual reset, sealable
- Stop and test function



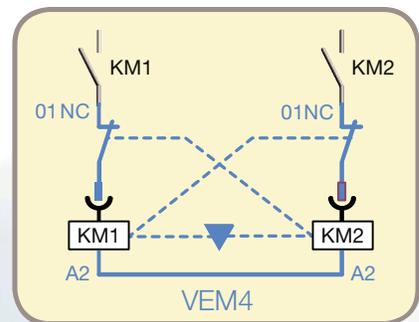
- Current setting range
- Reset function
- Test function
- Stop function



**Interlock your reversing contactors quickly in 90 mm width:**

- Easy with VM4 mechanical interlock unit
- Simple with VEM4 set including mechanical interlock unit and electrical interlock block with A2-A2 connection
- 50% wiring cost savings in one click!

Fixing the electrical interlock block to the contactor front face connects the 2 built-in N.C. interlocking contacts with the two coil supplies



# MS116 and MS132 manual motor starters

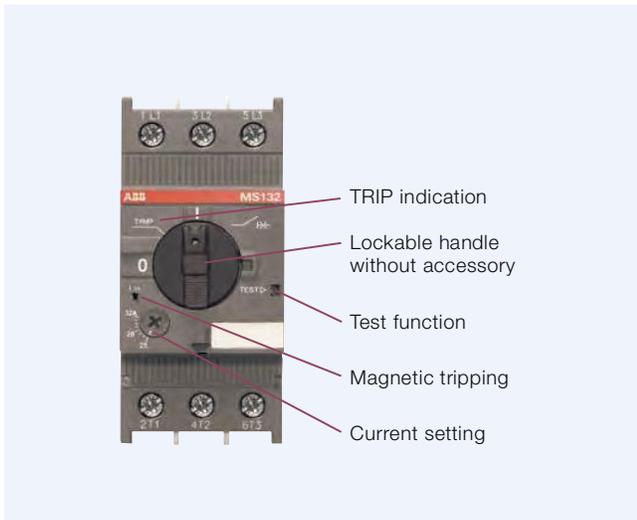
Harmonized design in 45 mm width

1

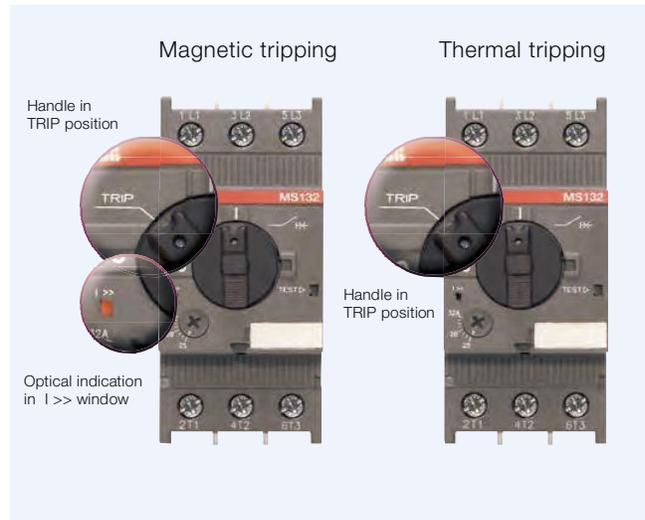


| Types                               | MS116        | MS132           |
|-------------------------------------|--------------|-----------------|
| Setting range                       | 0.1 ... 16 A | 0.1 ... 32 A    |
| Switch position                     | ON / OFF     | ON / OFF / TRIP |
| Magnetic trip indication            | -            | yes             |
| Lockable handle without accessories | -            | yes             |
| Max. breaking capacity $I_{cs}$     | up to 50 kA  | up to 100 kA    |
| Trip class                          | 10A          | 10              |

## ON/OFF switch functionality



## Clear tripping identification



## One range of accessories for MS116 and MS132

- Common auxiliary contacts, signaling contacts and auxiliary trip units
- Common busbar systems



# AF09 ... AF38 3-pole contactors

Simple design with 2 frame sizes in 45 mm width

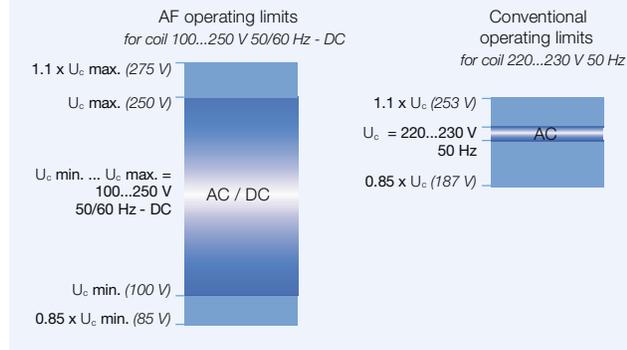


| Types                                     | AF09 | AF12   | AF16   | AF26  | AF30  | AF38    |
|-------------------------------------------|------|--------|--------|-------|-------|---------|
| Rated operational power<br>400 V AC-3     | 4 kW | 5.5 kW | 7.5 kW | 11 kW | 15 kW | 18.5 kW |
| Rated operational current<br>AC-1 (40 °C) | 25 A | 28 A   | 30 A   | 45 A  | 50 A  | 50 A    |
| UL 3-phase motor power<br>480 V           | 5 hp | 7.5 hp | 10 hp  | 15 hp | 20 hp | 20 hp   |

1

## A unique contactor for AC or DC control supply

- Manages large control voltage variations
- Includes an electronic coil interface with extended operating limits  $0.85 \times U_c$  min. ...  $1.1 \times U_c$  max.



## Reduced panel energy consumption

- With low holding AC and DC coil consumption
- From 30% (AF coil) to 80% (AF.Z coil) reduction of AC pull-in consumption

## Built-in surge protection

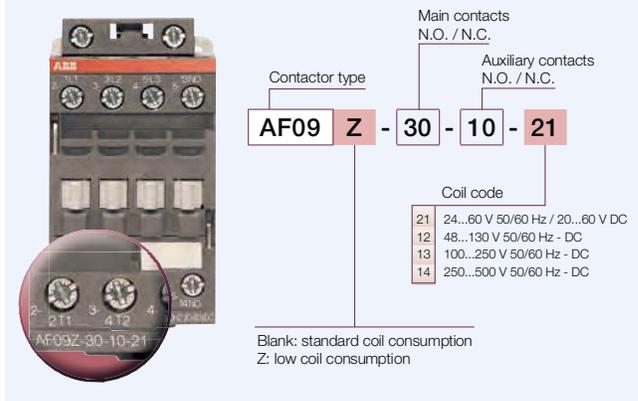
- No extra surge suppressor required

## Improve your equipment reliability with AF.Z contactors

- Withstands control voltage short dips
- Withstands control voltage sags according to SEMI F47-0706 standards
- Additional AF.Z coils available for control voltages between 12...20 V DC and 48...250 V 50/60 Hz - DC

## Only four coils for easier selection

Control voltages covering 24...500 V 50/60 Hz and 20...500 V DC



## Direct control by PLC-output 500 mA, 24 V DC

No use of interface relay



# Switching of auxiliary and control circuits

1



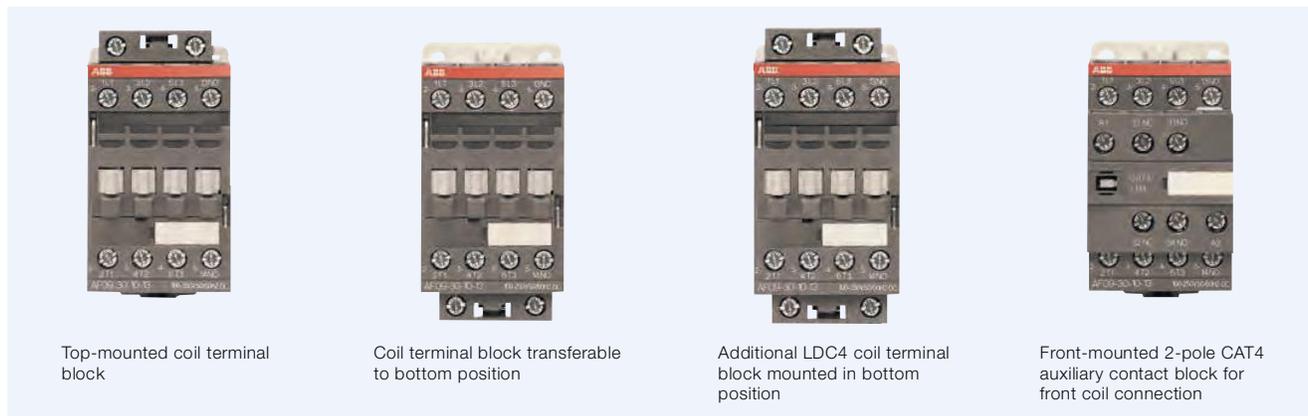
## Optimize your auxiliary contact block configuration

- AF09...AF16 3-pole contactors equipped with a built-in auxiliary contact N.O. or N.C.
- Up to 6 additional auxiliary contacts:
  - front-mounted 1 or 4-pole CA4 blocks
  - side-mounted 2-pole CAL4 blocks
- Reduced panel dimension using up to 2 side-mounted 2-pole CAL4 blocks

## Make your control circuit safe

- **Mirror contact** .....  according to IEC 60947-4-1 Annex F 2.1
- **Mechanically linked contacts** .....  according to IEC 60947-5-1 Annex L 3.0

## Free choice of your coil terminal access



Top-mounted coil terminal block

Coil terminal block transferable to bottom position

Additional LDC4 coil terminal block mounted in bottom position

Front-mounted 2-pole CAT4 auxiliary contact block for front coil connection

## Protect your equipment against accidental contact



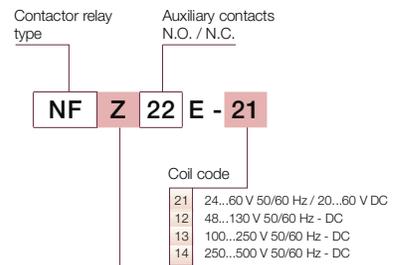
Sealable and transparent protective covers on contactors (BX4) and overload relays



Non-removable protective covers (BX4-CA) for auxiliary contact blocks

## Complete choice of contactor relays

- Same advantages and accessories as AF contactors
- Only four coils for easier selection



Blank: standard coil consumption  
Z: low coil consumption

# PSR softstarters

Compact design with 3 frame sizes



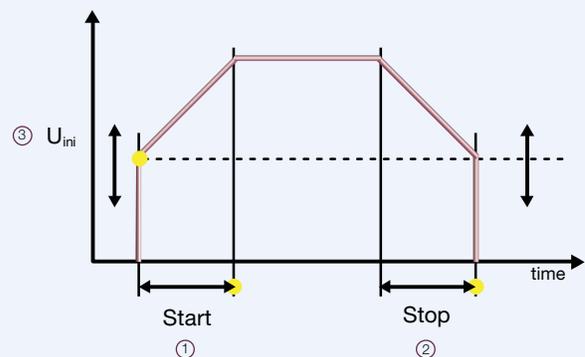
| Types                                | PSR3<br>...<br>PSR16 PSE18 | PSR-PSE25,<br>PSR-PSE30 | PSR-PSE37 |
|--------------------------------------|----------------------------|-------------------------|-----------|
| Rated operational power 400 V AC-53a | 1.5 ... 7.5 kW             | 11 ... 15 kW            | 18.5 kW   |
| UL 3-phase motor power - 480 V       | 2 ... 10 hp                | 15 ... 20 hp            | 25 hp     |

1

- Built-in by-pass contacts in main circuit
- Wide main voltage range: from 208 to 600 V
  - fewer variants
  - very robust and insensitive to voltage variations
- Wide supply voltage range: 100 ... 240 V AC or 24 V DC



- ① Ramp time START = 1 ... 20 sec
- ② Ramp time STOP = 0 ... 20 sec
- ③ Initial voltage  $U_{ini}$  = 40 ... 70 % (also set "end voltage")



## Easy to install and set up

- 35 mm rail or screw mounting
- All settings visible and adjustable on front face
- Run signal relay for all sizes
- Output signal for TOR (Top Of Ramp) for PSR25...PSR37
- 10 starts per hour standard, increased to 20 starts or more with addition of auxiliary cooling fan
- Remote control connection using Field Bus Plug as accessory

Compact starter solution in 45 mm width with manual motor starter up to 15 kW - 400 V



# 3-pole block contactors for all industrial applications and motor starting

1

|                        |                     |                                                                                   |      |
|------------------------|---------------------|-----------------------------------------------------------------------------------|------|
| IEC                    | AC-3 Rated Power    | $\theta$ ? 55 °C, 400 V                                                           | kW   |
| UL/CSA                 | 3-phase Motor Power | 480 V                                                                             | hp   |
| AC Control Supply      |                     |  | Type |
| DC Control Supply      |                     |  | Type |
| AC / DC Control Supply |                     |  | Type |
| IEC                    | AC-3 Rated Current  | $\theta$ ? 55 °C, 400 V                                                           | A    |
|                        | AC-1 Rated Current  | $\theta$ ? 40 °C, 690 V                                                           | A    |
| UL/CSA                 | General Use Rating  | 600 V                                                                             | A    |
| NEMA                   | NEMA Size           |                                                                                   |      |

\*  $\theta$  ? 60 °C for AF09, AF38 contactors

## Main Accessories

|                                                   |                            |
|---------------------------------------------------|----------------------------|
| Auxiliary Contact Blocks                          | Front mounting             |
|                                                   | Side mounting              |
| Timers                                            | Pneumatic (Front mounting) |
|                                                   | Electronic                 |
| Interlocking Units (compact reversing contactors) | Mechanical                 |
|                                                   | With safety blocking       |
| Connection Sets                                   | Mechanical / Electrical    |
|                                                   | For reversing contactors   |
| Surge Suppressors                                 | Varistor (AC/DC)           |
|                                                   | RC Type (AC)               |
| AF contactors have built-in surge protection      |                            |
|                                                   | Transil diode (DC)         |

## Overload Relays

|                                         |                                                                                     |                                           |
|-----------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------|
| Thermal Relays                          |  | Class 10 (10A or 20 for TA42DU to TAB0DU) |
| Electronic Relays                       |  | Class 10E, 20E, 30E                       |
| Accessories for Thermal Overload Relays | Remote tripping coil                                                                |                                           |
|                                         | Remote reset coil                                                                   |                                           |
|                                         | Wall/separate mounting kit                                                          |                                           |

## Manual Motor Starters

|                       |                                         |          |
|-----------------------|-----------------------------------------|----------|
| Manual Motor Starters | Thermal / magnetic protection           | Class 10 |
|                       |                                         | Class 20 |
|                       | Magnetic only types                     |          |
| Accessories           | For contactor mounting                  |          |
|                       | Aux. trip units, aux. contacts, busbars |          |

## Standard



|      |      |      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|------|------|
| 4    | 5.5  | 7.5  | 11   | 15   | 18.5 | 18.5 | 22   | 30   | 37   |
| 5    | 7.5  | 10   | 15   | 20   | 20   | 30   | 40   | 60   | 60   |
| AF09 | AF12 | AF16 | AF26 | AF30 | AF38 | A40  | A50  | A63  | A75  |
| AF09 | AF12 | AF16 | AF26 | AF30 | AF38 | AL40 | AE50 | AE63 | AE75 |
| AF09 | AF12 | AF16 | AF26 | AF30 | AF38 | —    | AF50 | AF63 | AF75 |
| 9    | 12   | 18   | 26   | 32   | 38   | 37   | 50   | 65   | 75   |
| 25   | 28   | 30   | 45   | 50   | 50   | 60   | 100  | 115  | 125  |
| 25   | 28   | 30   | 45   | 50   | 50   | 60   | 80   | 90   | 105  |
| 00   | 0    | —    | 1    | —    | —    | 1P   | 2    | —    | 3    |

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| CA4-10 (1 x N.O.), CA4-01 (1 x N.C.) | CA5-10 (1 x N.O.), CA5-01 (1 x N.C.) |
| CAL4-11 (1 x N.O. + 1 x N.C.)        | CAL5-11 (1 x N.O. + 1 x N.C.)        |
|                                      | TP40DA, TP180DA Direct timing        |
|                                      | TP40IA, TP180IA Inverse timing       |
| VM4                                  |                                      |
| VEM4                                 | VE5-1                                |
| BER16-4                              | VE5-2                                |
|                                      | BER40                                |
|                                      | BEM75-30                             |
|                                      | RV5 (24...440 V)                     |
|                                      | RV5 (24...440 V)                     |
|                                      | RC5-1 (24...440 V)                   |
|                                      | RC5-2 (24...440 V)                   |
|                                      | RT5 (24...264 V)                     |
|                                      | RT5 (24...264 V)                     |

|                      |                      |                    |
|----------------------|----------------------|--------------------|
| TF42 (0.10...38 A)   | TA42DU (18...42 A)   | TA75DU (18...80 A) |
| EF19 (0.10...18.9 A) | EF19 (0.10...18.9 A) | EF45 (0...45 A)    |
|                      | E45DU (0...45 A)     | E80DU (27...80 A)  |
|                      |                      |                    |
|                      | DB80, DB45E, DB80E   |                    |

|                                                               |                                                 |                                                 |
|---------------------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| MS116 for class 10A (0.10...16 A) I <sub>cs</sub> up to 50 kA | MS450 (40...50 A) I <sub>cs</sub> up to 50 kA   | MS495 (28...100 A) I <sub>cs</sub> up to 50 kA  |
| MS132 (0.10...32 A) I <sub>cs</sub> up to 100 kA              | MS497 (11...100 A) I <sub>cs</sub> up to 100 kA | MS451 (11...50 A) I <sub>cs</sub> up to 50 kA   |
|                                                               | MS451 (11...50 A) I <sub>cs</sub> up to 50 kA   | MS496 (28...100 A) I <sub>cs</sub> up to 100 kA |
|                                                               | MO450 (16...50 A) I <sub>cs</sub> up to 50 kA   | MO495 (40...100 A) I <sub>cs</sub> up to 50 kA  |
|                                                               | MO496 (16...100 A) I <sub>cs</sub> up to 100 kA |                                                 |
| BEA16-4                                                       | BEA38-4                                         | BEA40/BEA450                                    |
| BEA50/BEA450                                                  | BEA75/BEA495                                    |                                                 |
| HKF1, HK1, UA1, AA1, PS1, S1, SK1                             | HK4, HKS4, UA4, AA4, PS4, S4, SK4               |                                                 |
| CK1 (MS132 only)                                              |                                                 |                                                 |



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|      |       |       |       |       |       |       |       |       |       |       |        |        |        |        |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 45   | 55    | 75    | 90    | 110   | 140   | 160   | 200   | 250   | 315   | 400   | —      | 475    | 560    | —      |
| 60   | 75    | 100   | 125   | 150   | 200   | 250   | 350   | 400   | 500   | 600   | —      | 800    | 900    | —      |
| A95  | A110  | A145  | A185  | A210  | A260  | A300  | AF400 | AF460 | AF580 | AF750 | AF1250 | AF1350 | AF1650 | AF2050 |
| AE95 | AE110 | AF145 | AF185 | AF210 | AF260 | AF300 | AF400 | AF460 | AF580 | AF750 | AF1250 | AF1350 | AF1650 | AF2050 |
| AF95 | AF110 | AF145 | AF185 | AF210 | AF260 | AF300 | AF400 | AF460 | AF580 | AF750 | AF1250 | AF1350 | AF1650 | AF2050 |
| 96   | 110   | 145   | 185   | 210   | 260   | 305   | 400   | 460   | 580   | 750   | —      | 860    | 1050   | —      |
| 145  | 160   | 250   | 275   | 350   | 400   | 500   | 600   | 700   | 800   | 1050  | 1260   | 1350   | 1650   | 2050   |
| 125  | 140   | 230   | 250   | 300   | 350   | 400   | 550   | 650   | 750   | 900   | 1210   | 1350   | 1650   | 2100   |
| —    | —     | 4     | —     | —     | 5     | —     | —     | 6     | —     | 7     | —      | —      | 8      | —      |

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|                                |                 |           |                 |           |
|--------------------------------|-----------------|-----------|-----------------|-----------|
| CAL18-11 (1 x N.O. + 1 x N.C.) |                 |           |                 |           |
|                                | VM300H / VM300V |           | VM750H / VM750V | VM1650H   |
| VE5-2                          |                 |           |                 |           |
| BEM110-30                      | BEM185-30       | BEM300-30 | BEM460-30       | BEM750-30 |
| RV5 (24...440 V)               |                 |           |                 |           |
| RC5-2 (24...440 V)             |                 |           |                 |           |
| RT5 (24...284 V)               |                 |           |                 |           |

|                      |                      |                                             |                      |                      |                        |
|----------------------|----------------------|---------------------------------------------|----------------------|----------------------|------------------------|
| TA80DU (29...80 A)   | TA200DU (65...200 A) | TA450DU/SU (130...310 A)<br>class 30 for SU |                      |                      |                        |
| TA110DU (65...110 A) |                      |                                             |                      |                      |                        |
| E140DU (50...140 A)  | E200DU (60...200 A)  | E320DU (100...320 A)                        | E500DU (150...500 A) | E800DU (250...800 A) | E1250DU (375...1250 A) |
|                      |                      | DS25-A                                      |                      |                      |                        |
|                      |                      | DR25-A                                      |                      |                      |                        |
| DB80, DB200, D140E   | DB200                | DT450/A                                     |                      |                      |                        |

Circuit Breakers

Tmax Circuit Breaker and accessories



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# AF09 ... AF16 3 pole contactors

AC/DC operated

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## AF09 ... AF16 Contactors

| AC-3<br>400V<br>kW | AC-3<br>400V<br>A | AC-1<br>40°C<br>A | Aux<br>NO | Aux<br>NC | Description                           | Product Hierarchy 1700009 |       |
|--------------------|-------------------|-------------------|-----------|-----------|---------------------------------------|---------------------------|-------|
|                    |                   |                   |           |           |                                       | Order Code                | Price |
| 4                  | 9                 | 25                | 1         | -         | AF09-30-10-11 24-60V50/60HZ-DC        | 1SBL137001R1110           |       |
|                    |                   |                   |           |           | AF09-30-10-12 48-130V50/60HZ-DC       | 1SBL137001R1210           |       |
|                    |                   |                   |           |           | AF09-30-10-13 100-250V50/60HZ-DC      | 1SBL137001R1310           |       |
|                    |                   |                   |           |           | AF09-30-10-14 250-500V50/60HZ-DC      | 1SBL137001R1410           |       |
|                    |                   |                   |           |           | AF09Z-30-10-20 12-20VDC               | 1SBL136001R2010           |       |
|                    |                   |                   |           |           | AF09Z-30-10-21 24-60V50/60HZ 20-60VDC | 1SBL136001R2110           |       |
|                    |                   |                   | -         | 1         | AF09-30-01-11 24-60V50/60HZ-DC        | 1SBL137001R1101           |       |
|                    |                   |                   |           |           | AF09-30-01-12 48-130V50/60HZ-DC       | 1SBL137001R1201           |       |
|                    |                   |                   |           |           | AF09-30-01-13 100-250V50/60HZ-DC      | 1SBL137001R1301           |       |
|                    |                   |                   |           |           | AF09-30-01-14 250-500V50/60HZ-DC      | 1SBL137001R1401           |       |
|                    |                   |                   |           |           | AF09Z-30-01-20 12-20VDC               | 1SBL136001R2001           |       |
|                    |                   |                   |           |           | AF09Z-30-01-21 24-60V50/60HZ 20-60VDC | 1SBL136001R2101           |       |
| 5.5                | 12                | 28                | 1         | -         | AF12-30-10-11 24-60V50/60HZ 20-60VDC  | 1SBL157001R1110           |       |
|                    |                   |                   |           |           | AF12-30-10-12 48-130V50/60HZ-DC       | 1SBL157001R1210           |       |
|                    |                   |                   |           |           | AF12-30-10-13 100-250V50/60HZ-DC      | 1SBL157001R1310           |       |
|                    |                   |                   |           |           | AF12-30-10-14 250-500V50/60HZ-DC      | 1SBL157001R1410           |       |
|                    |                   |                   |           |           | AF12Z-30-10-20 12-20VDC               | 1SBL156001R2010           |       |
|                    |                   |                   |           |           | AF12Z-30-10-21 24-60V50/60HZ 20-60VDC | 1SBL156001R2110           |       |
|                    |                   |                   | -         | 1         | AF12-30-01-11 24-60V50/60HZ 20-60VDC  | 1SBL157001R1101           |       |
|                    |                   |                   |           |           | AF12-30-01-12 48-130V50/60HZ-DC       | 1SBL157001R1201           |       |
|                    |                   |                   |           |           | AF12-30-01-13 100-250V50/60HZ-DC      | 1SBL157001R1301           |       |
|                    |                   |                   |           |           | AF12-30-01-14 250-500V50/60HZ-DC      | 1SBL157001R1401           |       |
|                    |                   |                   |           |           | AF12Z-30-01-20 12-20VDC               | 1SBL156001R2001           |       |
|                    |                   |                   |           |           | AF12Z-30-01-21 24-60V50/60HZ 20-60VDC | 1SBL156001R2101           |       |
| 7.5                | 18                | 30                | 1         | -         | AF16-30-10-11 24-60V50/60HZ 20-60VDC  | 1SBL177001R1110           |       |
|                    |                   |                   |           |           | AF16-30-10-12 48-130V50/60HZ-DC       | 1SBL177001R1210           |       |
|                    |                   |                   |           |           | AF16-30-10-13 100-250V50/60HZ-DC      | 1SBL177001R1310           |       |
|                    |                   |                   |           |           | AF16-30-10-14 250-500V50/60HZ-DC      | 1SBL177001R1410           |       |
|                    |                   |                   |           |           | AF16Z-30-10-20 12-20VDC               | 1SBL176001R2010           |       |
|                    |                   |                   |           |           | AF16Z-30-10-21 24-60V50/60HZ 20-60VDC | 1SBL176001R2110           |       |
|                    |                   |                   | -         | 1         | AF16-30-01-11 24-60V50/60HZ 20-60VDC  | 1SBL177001R1101           |       |
|                    |                   |                   |           |           | AF16-30-01-12 48-130V50/60HZ-DC       | 1SBL177001R1201           |       |
|                    |                   |                   |           |           | AF16-30-01-13 100-250V50/60HZ-DC      | 1SBL177001R1301           |       |
|                    |                   |                   |           |           | AF16-30-01-14 250-500V50/60HZ-DC      | 1SBL177001R1401           |       |
|                    |                   |                   |           |           | AF16Z-30-01-20 12-20VDC               | 1SBL176001R2001           |       |
|                    |                   |                   |           |           | AF16Z-30-01-21 24-60V50/60HZ 20-60VDC | 1SBL176001R2101           |       |



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# AF26 ... AF210 3 pole contactors

## AC/DC operated

### AF26 ... AF210 Contactors

| AC-3<br>400V<br>kW | AC-3<br>400V<br>A | AC-1<br>40°C<br>A | Aux<br>NO | Aux<br>NC | Description                           | Product Hierarchy 1700009 |       |
|--------------------|-------------------|-------------------|-----------|-----------|---------------------------------------|---------------------------|-------|
|                    |                   |                   |           |           |                                       | Order Code                | Price |
| 11                 | 26                | 45                | -         | -         | AF26-30-00-11 24-60V50/60HZ 20-60VDC  | 1SBL237001R1100           |       |
|                    |                   |                   |           |           | AF26-30-00-12 48-130V50/60HZ-DC       | 1SBL237001R1200           |       |
|                    |                   |                   |           |           | AF26-30-00-13 100-250V50/60HZ-DC      | 1SBL237001R1300           |       |
|                    |                   |                   |           |           | AF26-30-00-14 250-500V50/60HZ-DC      | 1SBL237001R1400           |       |
|                    |                   |                   |           |           | AF26Z-30-00-20 12-20VDC               | 1SBL236001R2000           |       |
|                    |                   |                   |           |           | AF26Z-30-00-21 24-60V50/60HZ 20-60VDC | 1SBL236001R2100           |       |
| 15                 | 32                | 50                | -         | -         | AF30-30-00-11 24-60V50/60HZ 20-60VDC  | 1SBL277001R1100           |       |
|                    |                   |                   |           |           | AF30-30-00-12 48-130V50/60HZ-DC       | 1SBL277001R1200           |       |
|                    |                   |                   |           |           | AF30-30-00-13 100-250V50/60HZ-DC      | 1SBL277001R1300           |       |
|                    |                   |                   |           |           | AF30-30-00-14 250-500V50/60HZ-DC      | 1SBL277001R1400           |       |
|                    |                   |                   |           |           | AF30Z-30-00-20 12-20VDC               | 1SBL276001R2000           |       |
|                    |                   |                   |           |           | AF30Z-30-00-21 24-60V50/60HZ 20-60VDC | 1SBL276001R2100           |       |
| 18.5               | 35                | 50                | -         | -         | AF38-30-00-11 24-60V50/60HZ 20-60VDC  | 1SBL297001R1100           |       |
|                    |                   |                   |           |           | AF38-30-00-12 48-130V50/60HZ-DC       | 1SBL297001R1200           |       |
|                    |                   |                   |           |           | AF38-30-00-13 100-250V50/60HZ-DC      | 1SBL297001R1300           |       |
|                    |                   |                   |           |           | AF38-30-00-14 250-500V50/60HZ-DC      | 1SBL297001R1400           |       |
|                    |                   |                   |           |           | AF38Z-30-00-20 12-20VDC               | 1SBL296001R2000           |       |
|                    |                   |                   |           |           | AF38Z-30-00-21 24-60V50/60HZ 20-60VDC | 1SBL296001R2100           |       |
|                    |                   |                   |           |           |                                       | Product Hierarchy 1700003 |       |
| 22                 | 50                | 100               | 1         | 1         | AF50-30-11 48-130V AC/DC              | 1SBL357001R6911           |       |
|                    |                   |                   |           |           | AF50-30-11 100-250V AC/DC             | 1SFL357001R7011           |       |
| 30                 | 65                | 115               | 1         | 1         | AF63-30-11 48-130V AC/DC              | 1SBL377001R6911           |       |
|                    |                   |                   |           |           | AF63-30-11 100-250V AC/DC             | 1SBL377001R7011           |       |
| 37                 | 75                | 125               | 1         | 1         | AF75-30-11 48-130V AC/DC              | 1SBL417001R6911           |       |
|                    |                   |                   |           |           | AF75-30-11 100-250V AC/DC             | 1SBL417001R7011           |       |
|                    |                   |                   |           |           |                                       | Product Hierarchy 1700001 |       |
| 45                 | 96                | 145               | 1         | 1         | AF95-30-11 48-130V AC/DC              | 1SFL437001R6911           |       |
|                    |                   |                   |           |           | AF95-30-11 100-250V AC/DC             | 1SFL437001R7011           |       |
| 55                 | 110               | 160               | 1         | 1         | AF110-30-11 48-130V AC/DC             | 1SFL457001R6911           |       |
|                    |                   |                   |           |           | AF110-30-11 100-250V AC/DC            | 1SFL457001R7011           |       |
| 75                 | 145               | 250               | 1         | 1         | AF145-30-11 48-130V AC/DC             | 1SFL477001R6911           |       |
|                    |                   |                   |           |           | AF145-30-11 100-250V AC/DC            | 1SFL477001R7011           |       |
| 90                 | 185               | 275               | 1         | 1         | AF185-30-11 48-130V AC/DC             | 1SFL497001R6911           |       |
|                    |                   |                   |           |           | AF185-30-11 100-250V AC/DC            | 1SFL497001R7011           |       |
| 110                | 210               | 350               | 1         | 1         | AF210-30-11 48-130V AC/DC             | 1SFL517001R6911           |       |
|                    |                   |                   |           |           | AF210-30-11 100-250V AC/DC            | 1SFL517001R7011           |       |



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# AF260 ... AF1650 3 pole contactors

AC/DC operated

1



## AF260 ... A1650 Contactors

| AC-3<br>400V<br>kW | AC-3<br>400V<br>A | AC-1<br>40°C<br>A | Aux<br>NO | Aux<br>NC | Description                 | Product Hierarchy 1700001 |       |
|--------------------|-------------------|-------------------|-----------|-----------|-----------------------------|---------------------------|-------|
|                    |                   |                   |           |           |                             | Order Code                | Price |
| 140                | 260               | 400               | 1         |           | AF260-30-11 48-130V AC/DC   | 1SFL537001R6911           |       |
|                    |                   |                   |           |           | AF260-30-11 100-250V AC/DC  | 1SFL537001R7011           |       |
| 160                | 305               | 500               | 1         | 1         | AF300-30-11 48-130V AC/DC   | 1SFL557001R6911           |       |
|                    |                   |                   |           |           | AF300-30-11 100-250V AC/DC  | 1SFL557001R7011           |       |
| 200                | 400               | 600               | 1         | 1         | AF400-30-11 48-130V AC/DC   | 1SFL577001R6911           |       |
|                    |                   |                   |           |           | AF400-30-11 100-250V AC/DC  | 1SFL577001R7011           |       |
| 250                | 460               | 700               | 1         | 1         | AF460-30-11 48-130V AC/DC   | 1SFL597001R6911           |       |
|                    |                   |                   |           |           | AF460-30-11 100-250V AC/DC  | 1SFL597001R7011           |       |
| 315                | 580               | 800               | 1         | 1         | AF580-30-11 48-130V AC/DC   | 1SFL617001R6911           |       |
|                    |                   |                   |           |           | AF580-30-11 100-250V AC/DC  | 1SFL617001R7011           |       |
| 400                | 750               | 1050              | 1         | 1         | AF750-30-11 48-130V AC/DC   | 1SFL637001R6911           |       |
|                    |                   |                   |           |           | AF750-30-11 100-250V AC/DC  | 1SFL637001R7011           |       |
| 475                | 860               | 1350              | 1         | 1         | AF1350-30-11 100-250V AC/DC | 1SFL657001R7011           |       |
| 560                | 1050              | 1650              | 1         | 1         | AF1650-30-11 100-250V AC/DC | 1SFL677001R7011           |       |



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# A50 ... A95 3 pole contactors

## AC operated



### A50 ... A95 Contactors

| IAC-3<br>400V<br>kW     | AC-3<br>400V<br>A | AC-1<br>40°C<br>A | Aux<br>NO | Aux<br>NC | Description               | Product Hierarchy 1700003 |       |
|-------------------------|-------------------|-------------------|-----------|-----------|---------------------------|---------------------------|-------|
|                         |                   |                   |           |           |                           | Order Code                | Price |
| 22                      | 50                | 100               | 1         | 1         | A50-30-11 110V 50/60Hz    | 1SBL351001R8411           |       |
|                         |                   |                   |           |           | A50-30-11 220-230V 50Hz   | 1SBL351001R8011           |       |
|                         |                   |                   |           |           | A50-30-11 230-240v 50Hz   | 1SBL351001R8811           |       |
|                         |                   |                   |           |           | A50-30-11 24V 50/60Hz     | 1SBL351001R8111           |       |
|                         |                   |                   |           |           | A50-30-11 400-415V 50Hz   | 1SBL351001R8611           |       |
| 30                      | 65                | 115               | 1         | 1         | A63-30-11 48V 50/60Hz     | 1SBL371001R8311           |       |
|                         |                   |                   |           |           | A63-30-11 110V 50/60Hz    | 1SBL371001R8411           |       |
|                         |                   |                   |           |           | A63-30-11 220-230V 50Hz   | 1SBL371001R8011           |       |
|                         |                   |                   |           |           | A63-30-11 230-240v 50Hz   | 1SBL371001R8811           |       |
|                         |                   |                   |           |           | A63-30-11 24V 50/60Hz     | 1SBL371001R8111           |       |
| A63-30-11 400-415V 50Hz | 1SBL371001R8611   |                   |           |           |                           |                           |       |
| 37                      | 75                | 125               | 1         | 1         | A75-30-11 110V 50/60Hz    | 1SBL411001R8411           |       |
|                         |                   |                   |           |           | A75-30-11 220-230V 50Hz   | 1SBL411001R8011           |       |
|                         |                   |                   |           |           | A75-30-11 230-240v 50Hz   | 1SBL411001R8811           |       |
|                         |                   |                   |           |           | A75-30-11 24V 50/60Hz     | 1SBL411001R8111           |       |
|                         |                   |                   |           |           | A75-30-11 400-415V 50Hz   | 1SBL411001R8611           |       |
| 45                      | 96                | 145               | 1         | 1         | Product Hierarchy 1700001 |                           |       |
|                         |                   |                   |           |           | A95-30-11 48V 50Hz        | 1SFL431001R8311           |       |
|                         |                   |                   |           |           | A95-30-11 110V 50Hz       | 1SFL431001R8411           |       |
|                         |                   |                   |           |           | A95-30-11 220-230V 50Hz   | 1SFL431001R8011           |       |
|                         |                   |                   |           |           | A95-30-11 230-240V 50Hz   | 1SFL431001R8811           |       |
|                         |                   |                   |           |           | A95-30-11 24V 50Hz        | 1SFL431001R8111           |       |
| A95-30-11 400-415V 50Hz | 1SFL431001R8611   |                   |           |           |                           |                           |       |



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# A110 ... A300 3 pole contactors

## AC operated

1



### A110 ... A300 Contactors

| AC-3<br>400V<br>kW       | AC-3<br>400V<br>A | AC-1<br>40°C<br>A | Aux<br>NO | Aux<br>NC | Description              | Product Hierarchy 1700001 |       |
|--------------------------|-------------------|-------------------|-----------|-----------|--------------------------|---------------------------|-------|
|                          |                   |                   |           |           |                          | Order Code                | Price |
| 55                       | 110               | 160               | 1         | 1         | A110-30-11 24V 50/60H    | 1SFL451001R8111           |       |
|                          |                   |                   |           |           | A110-30-11 110V 50/60Hz  | 1SFL451001R8411           |       |
|                          |                   |                   |           |           | A110-30-11 220-230V 50Hz | 1SFL451001R8011           |       |
|                          |                   |                   |           |           | A110-30-11 230-240V 50Hz | 1SFL451001R8811           |       |
|                          |                   |                   |           |           | A110-30-11 400-415V 50Hz | 1SFL451001R8611           |       |
| 75                       | 145               | 250               | 1         | 1         | A145-30-11 24V 50Hz      | 1SFL471001R8111           |       |
|                          |                   |                   |           |           | A145-30-11 48V 50Hz      | 1SFL471001R8311           |       |
|                          |                   |                   |           |           | A145-30-11 110V 50Hz     | 1SFL471001R8411           |       |
|                          |                   |                   |           |           | A145-30-11 220-230V 50Hz | 1SFL471001R8011           |       |
|                          |                   |                   |           |           | A145-30-11 230-240V 50Hz | 1SFL471001R8811           |       |
| A145-30-11 400-415V 50Hz | 1SFL471001R8611   |                   |           |           |                          |                           |       |
| 90                       | 185               | 275               | 1         | 1         | A185-30-11 110V 50Hz     | 1SFL491001R8411           |       |
|                          |                   |                   |           |           | A185-30-11 220-230V 50Hz | 1SFL491001R8011           |       |
|                          |                   |                   |           |           | A185-30-11 230-240V 50Hz | 1SFL491001R8811           |       |
|                          |                   |                   |           |           | A185-30-11 24V 50Hz      | 1SFL491001R8111           |       |
| A185-30-11 400-415V 50Hz | 1SFL491001R8611   |                   |           |           |                          |                           |       |
| 110                      | 210               | 350               | 1         | 1         | A210-30-11 24V 50Hz      | 1SFL511001R8111           |       |
|                          |                   |                   |           |           | A210-30-11 48V 50Hz      | 1SFL511001R8311           |       |
|                          |                   |                   |           |           | A210-30-11 110V 50Hz     | 1SFL511001R8411           |       |
|                          |                   |                   |           |           | A210-30-11 220-230V 50Hz | 1SFL511001R8011           |       |
|                          |                   |                   |           |           | A210-30-11 230-240V 50Hz | 1SFL511001R8811           |       |
| A210-30-11 400-415V 50Hz | 1SFL511001R8611   |                   |           |           |                          |                           |       |
| 140                      | 260               | 400               | 1         | 1         | A260-30-11 24V 50Hz      | 1SFL531001R8111           |       |
|                          |                   |                   |           |           | A260-30-11 110V 50Hz     | 1SFL531001R8411           |       |
|                          |                   |                   |           |           | A260-30-11 220-230V 50Hz | 1SFL531001R8011           |       |
|                          |                   |                   |           |           | A260-30-11 230-240V 50Hz | 1SFL531001R8811           |       |
|                          |                   |                   |           |           | A260-30-11 400-415V 50Hz | 1SFL511001R8611           |       |
| 160                      | 305               | 500               | 1         | 1         | A300-30-11 24V 50Hz      | 1SFL551001R8111           |       |
|                          |                   |                   |           |           | A300-30-11 110V 50Hz     | 1SFL551001R8411           |       |
|                          |                   |                   |           |           | A300-30-11 220-230V 50Hz | 1SFL551001R8011           |       |
|                          |                   |                   |           |           | A300-30-11 230-240V 50Hz | 1SFL551001R8811           |       |
|                          |                   |                   |           |           | A300-30-11 400-415 50Hz  | 1SFL551001R8611           |       |



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# AE50 ... AE63 - AF50 ... AF750 3 pole contactors

## DC operated



### AE50 ... AE110 Contactors

| AC-3<br>400V<br>kW | AC-3<br>400V<br>A | AC-1<br>40°C<br>A | Aux<br>NO | Aux<br>NC | Description        | Product Hierarchy 1700003 |       |
|--------------------|-------------------|-------------------|-----------|-----------|--------------------|---------------------------|-------|
|                    |                   |                   |           |           |                    | Order Code                | Price |
| 22                 | 50                | 100               | 1         | 1         | AE50-30-11 24V DC  | 1SBL359001R8111           |       |
| 30                 | 65                | 115               |           |           | AE63-30-11 24V DC  | 1SBL379001R8111           |       |
| 37                 | 75                | 125               |           |           | AE75-30-11 24V DC  | 1SBL419001R8111           |       |
|                    |                   |                   |           |           |                    | Product Hierarchy 1700001 |       |
| 45                 | 96                | 145               | 1         | 1         | AE95-30-11 24V DC  | 1SFL439001R8111           |       |
| 55                 | 110               | 160               |           |           | AE110-30-11 24V DC | 1SFL459001R8111           |       |

### AF50 ... AF750 Contactors

| AC-3<br>400V<br>kW | AC-3<br>400V<br>A | AC-1<br>40°C<br>A | Aux<br>NO | Aux<br>NC | Description           | Product Hierarchy 1700003 |       |
|--------------------|-------------------|-------------------|-----------|-----------|-----------------------|---------------------------|-------|
|                    |                   |                   |           |           |                       | Order Code                | Price |
| 22                 | 50                | 100               | 1         | 1         | AF50-30-11 20-60V DC  | 1SBL357001R7211           |       |
| 30                 | 65                | 115               |           |           | AF63-30-11 20-60V DC  | 1SBL377001R7211           |       |
| 37                 | 75                | 125               |           |           | AF75-30-11 20-60V DC  | 1SBL417001R7211           |       |
|                    |                   |                   |           |           |                       | Product Hierarchy 1700001 |       |
| 45                 | 96                | 145               | 1         | 1         | AF95-30-11 20-60V DC  | 1SFL437001R7211           |       |
| 55                 | 110               | 160               |           |           | AF110-30-11 20-60V DC | 1SFL457001R7211           |       |
| 75                 | 145               | 250               |           |           | AF145-30-11 20-60V DC | 1SFL477001R7211           |       |
| 90                 | 185               | 275               |           |           | AF185-30-11 20-60V DC | 1SFL497001R7211           |       |
| 110                | 210               | 350               |           |           | AF210-30-11 20-60V DC | 1SFL517001R7211           |       |
| 140                | 260               | 400               |           |           | AF260-30-11 20-60V DC | 1SFL537001R7211           |       |
| 160                | 305               | 500               |           |           | AF300-30-11 20-60V DC | 1SFL557001R7211           |       |
| 200                | 400               | 600               |           |           | AF400-30-11 20-60V DC | 1SFL577001R6811           |       |
| 250                | 460               | 700               |           |           | AF460-30-11 20-60V DC | 1SFL597001R6811           |       |
| 315                | 580               | 800               |           |           | AF580-30-11 20-60V DC | 1SFL617001R6811           |       |
| 400                | 750               | 1050              |           |           | AF750-30-11 20-60V DC | 1SFL637001R6811           |       |



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# AF09 ... AF38 4 pole contactors

## AC/DC operated

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### AF09 ... AF38 Contactors

| IEC<br>AC1<br>A | Main Poles |    | Auxiliary |                                       | Description                           | Product Hierarchy 1700009 |       |
|-----------------|------------|----|-----------|---------------------------------------|---------------------------------------|---------------------------|-------|
|                 | NO         | NC | NO        | NC                                    |                                       | Order Code                | Price |
| 25              | 2          | 2  | -         | -                                     | AF09-22-00-11 24-60V50/60HZ 20-60VDC  | 1SBL137501R1100           |       |
|                 |            |    |           |                                       | AF09-22-00-12 48-130V50/60HZ-DC       | 1SBL137501R1200           |       |
|                 |            |    |           |                                       | AF09-22-00-13 100-250V50/60HZ-DC      | 1SBL137501R1300           |       |
|                 |            |    |           |                                       | AF09-22-00-14 250-500V50/60HZ-DC      | 1SBL137501R1400           |       |
|                 |            |    |           |                                       | AF09Z-22-00-21 24-60V50/60HZ 20-60VDC | 1SBL136501R2100           |       |
|                 | 4          | 0  | -         | -                                     | AF09-40-00-11 24-60V50/60HZ 20-60VDC  | 1SBL137201R1100           |       |
|                 |            |    |           |                                       | AF09-40-00-12 48-130V50/60HZ-DC       | 1SBL137201R1200           |       |
|                 |            |    |           |                                       | AF09-40-00-13 100-250V50/60HZ-DC      | 1SBL137201R1300           |       |
|                 |            |    |           |                                       | AF09-40-00-14 250-500V50/60HZ-DC      | 1SBL137201R1400           |       |
|                 |            |    |           |                                       | AF09Z-40-00-20 12-20VDC               | 1SBL136201R2000           |       |
|                 |            |    |           | AF09Z-40-00-21 24-60V50/60HZ 20-60VDC | 1SBL136201R2100                       |                           |       |
| 30              | 2          | 2  | -         | -                                     | AF16-22-00-11 24-60V50/60HZ 20-60VDC  | 1SBL177501R1100           |       |
|                 |            |    |           |                                       | AF16-22-00-12 48-130V50/60HZ-DC       | 1SBL177501R1200           |       |
|                 |            |    |           |                                       | AF16-22-00-13 100-250V50/60HZ-DC      | 1SBL177501R1300           |       |
|                 |            |    |           |                                       | AF16-22-00-14 250-500V50/60HZ-DC      | 1SBL177501R1400           |       |
|                 |            |    |           |                                       | AF16Z-22-00-21 24-60V50/60HZ 20-60VDC | 1SBL176501R2100           |       |
|                 | 4          | 0  | -         | -                                     | AF16-40-00-11 24-60V50/60HZ 20-60VDC  | 1SBL177201R1100           |       |
|                 |            |    |           |                                       | AF16-40-00-12 48-130V50/60HZ-DC       | 1SBL177201R1200           |       |
|                 |            |    |           |                                       | AF16-40-00-13 100-250V50/60HZ-DC      | 1SBL177201R1300           |       |
|                 |            |    |           |                                       | AF16-40-00-14 250-500V50/60HZ-DC      | 1SBL177201R1400           |       |
|                 |            |    |           |                                       | AF16Z-40-00-20 12-20VDC               | 1SBL176201R2000           |       |
|                 |            |    |           | AF16Z-40-00-21 24-60V50/60HZ 20-60VDC | 1SBL176201R2100                       |                           |       |
| 45              | 2          | 2  | -         | -                                     | AF26-22-00-11 24-60V50/60HZ 20-60VDC  | 1SBL237501R1100           |       |
|                 |            |    |           |                                       | AF26-22-00-13 100-250V50/60HZ-DC      | 1SBL237501R1300           |       |
|                 | 4          | 0  | -         | -                                     | AF26-40-00-11 24-60V50/60HZ 20-60VDC  | 1SBL237201R1100           |       |
|                 |            |    |           |                                       | AF26-40-00-12 48-130V50/60HZ-DC       | 1SBL237201R1200           |       |
|                 |            |    |           |                                       | AF26-40-00-13 100-250V50/60HZ-DC      | 1SBL237201R1300           |       |
|                 |            |    |           |                                       | AF26-40-00-14 250-500V50/60HZ-DC      | 1SBL237201R1400           |       |
|                 |            |    |           | AF26Z-40-00-21 24-60V50/60HZ 20-60VDC | 1SBL236201R2100                       |                           |       |
| 55              | 2          | 2  | -         | -                                     | AF38-22-00-11 24-60V50/60HZ 20-60VDC  | 1SBL297501R1100           |       |
|                 |            |    |           |                                       | AF38-22-00-13 100-250V50/60HZ-DC      | 1SBL297501R1300           |       |
|                 | 4          | 0  | -         | -                                     | AF38-40-00-11 24-60V50/60HZ 20-60VDC  | 1SBL297201R1100           |       |
|                 |            |    |           |                                       | AF38-40-00-13 100-250V50/60HZ-DC      | 1SBL297201R1300           |       |
|                 |            |    |           |                                       | AF38Z-40-00-21 24-60V50/60HZ 20-60VDC | 1SBL296201R2100           |       |



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# A45 ... A75 4 pole contactors

## AC operated



### A45 ... A75 Contactors

| IEC<br>AC1<br>A | Main Poles |    | Auxiliary |    | Description                  | Product Hierarchy 1700003 |       |
|-----------------|------------|----|-----------|----|------------------------------|---------------------------|-------|
|                 | NO         | NC | NO        | NC |                              | Order Code                | Price |
| 70              | 2          | 2  | -         | -  | A45-22-00 24v 50Hz           | 1SBL331501R8100           |       |
|                 |            |    |           |    | A45-22-00 110v 50Hz          | 1SBL331501R8400           |       |
|                 |            |    |           |    | A45-22-00 220-230v 50Hz      | 1SBL331501R8000           |       |
|                 |            |    |           |    | A45-22-00 230-240v 50Hz      | 1SBL331501R8800           |       |
|                 |            |    |           |    | A45-22-00 400-415v 50Hz      | 1SBL331501R8600           |       |
|                 | 4          | 0  | -         | -  | A45-40-00 24v 50Hz           | 1SBL331201R8100           |       |
|                 |            |    |           |    | A45-40-00 110v 50Hz          | 1SBL331201R8400           |       |
|                 |            |    |           |    | A45-40-00 220-230V 50Hz      | 1SBL331201R8000           |       |
|                 |            |    |           |    | A45-40-00 230-240v 50Hz      | 1SBL331201R8800           |       |
|                 |            |    |           |    | A45-40-00 400-415v 50Hz      | 1SBL331201R8600           |       |
| 100             | 4          | 0  | -         | -  | A50-40-00 24v 50Hz           | 1SBL351201R8100           |       |
|                 |            |    |           |    | A50-40-00 110V 50/60Hz       | 1SBL351201R8400           |       |
|                 |            |    |           |    | A50-40-00 220-230V 50Hz      | 1SBL351201R8000           |       |
|                 |            |    |           |    | A50-40-00 230-240v 50Hz      | 1SBL351201R8800           |       |
|                 |            |    |           |    | A50-40-00 400-415v 50Hz      | 1SBL351201R8600           |       |
| 125             | 2          | 2  | -         | -  | A75-22-00 24v 50Hz           | 1SBL411501R8100           |       |
|                 |            |    |           |    | A75-22-00 110v 50Hz          | 1SBL411501R8400           |       |
|                 |            |    |           |    | A75-22-00 220-230v 50Hz      | 1SBL411501R8000           |       |
|                 |            |    |           |    | A75-22-00 230-240v 50Hz      | 1SBL411501R8800           |       |
|                 |            |    |           |    | A75-22-00 400-415v 50Hz      | 1SBL411501R8600           |       |
|                 | 4          | 0  | -         | -  | A75-40-00 24V 50Hz Contactor | 1SBL411201R8100           |       |
|                 |            |    |           |    | A75-40-00 110V 50/60Hz       | 1SBL411201R8400           |       |
|                 |            |    |           |    | A75-40-00 220-230V 50Hz      | 1SBL411201R8000           |       |
|                 |            |    |           |    | A75-40-00 230-240v 50Hz      | 1SBL411201R8800           |       |
|                 |            |    |           |    | A75-40-00 400-415v 50Hz      | 1SBL411201R8600           |       |

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# EK110 ... EK1000 4 pole contactors

## AC operated

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EK 175-40-11

1SBC573412F0001



EK 370-40-11

1SBC573432F0001



EK 1000-40-11

1SFT190109-086C2

### EK110 ... EK1000 Contactors

| AC-1<br>40°C<br>A | Aux<br>NO | Aux<br>NC | Description                | Product Hierarchy 1700002 |       |
|-------------------|-----------|-----------|----------------------------|---------------------------|-------|
|                   |           |           |                            | Order Code                | Price |
| 200               | 1         | 1         | EK110-40-11 230-240V 50Hz  | SK824440-AM               |       |
| 250               | 1         | 1         | EK150-40-11 230-240V 50Hz  | SK824441-AM               |       |
| 300               | 1         | 1         | EK175-40-11 230-240V 50Hz  | SK825440-AM               |       |
| 350               | 1         | 1         | EK210-40-11 230-240V 50Hz  | SK825441-AM               |       |
| 550               | 1         | 1         | EK370-40-11 230-240V 50Hz  | SK827040-AM               |       |
| 800               | 1         | 1         | EK550-40-11 230-240V 50Hz  | SK827041-AM               |       |
| 1000              | 1         | 1         | EK1000-40-11 230-240V 50Hz | SK827044-AM               |       |

#### Aux Contacts

|                                |            |  |
|--------------------------------|------------|--|
| CAL16-11A Side Mount Aux Block | SK829002-A |  |
| CAL16-11B Side Mount Aux Block | SK829002-B |  |
| CAL16-11C Side Mount Aux Block | SK829002-C |  |
| CAL16-11D Side Mount Aux Block | SK829002-D |  |

#### Mechanical Interlocks

|       |            |  |
|-------|------------|--|
| VH145 | SK829071-A |  |
| VH300 | SK829071-B |  |
| VH800 | SK829070-F |  |

#### Terminal Shrouds

|                        |             |  |
|------------------------|-------------|--|
| LT150-EK EK110 / EK150 | SK178001-HB |  |
| LT210-EK EK175 / EK210 | SK178001-KB |  |
| LT550-EK EK370 / EK550 | SK178001-LB |  |

#### Connection Sets

|                         |            |  |
|-------------------------|------------|--|
| BSS100 Connection Sets  | SK829090-B |  |
| BSS145 Connection Sets  | SK829090-F |  |
| BSS210 Connection Sets  | SK829090-G |  |
| BSS550 Connection Sets  | SK829090-E |  |
| BSS1000 Connection Sets | SK829090-H |  |

#### Suppressors

|                                     |            |  |
|-------------------------------------|------------|--|
| RC-EH300/415 110-415V AC Suppressor | SK829007-B |  |
|-------------------------------------|------------|--|

Other voltages available please consult us.



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# AE45 ... AE75 4 pole contactors

## DC operated



### AE45 ... AE75 Contactors

| IEC<br>AC1<br>A | Main Poles |    | Auxiliary |    | Description       | Product Hierarchy 1700003 |       |
|-----------------|------------|----|-----------|----|-------------------|---------------------------|-------|
|                 | NO         | NC | NO        | NC |                   | Order Code                | Price |
| 70              | 2          | 2  | -         | -  | AE45-22-00 24V DC | 1SBL339501R8100           |       |
|                 | 4          | 0  |           |    | AE45-40-00 24V DC | 1SBL339201R8100           |       |
| 100             | 4          | 0  |           |    | AE50-40-00 24V DC | 1SBL359201R8100           |       |
| 125             | 2          | 2  |           |    | AE75-22-00 24V DC | 1SBL419501R8100           |       |
|                 | 4          | 0  |           |    | AE75-40-00 24V DC | 1SBL339201R8100           |       |

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# NF contactor relays

## AC/DC operated

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| NF Contactor Relays |    |                                                                                                         |                                  | Product Hierarchy 1700009 |       |
|---------------------|----|---------------------------------------------------------------------------------------------------------|----------------------------------|---------------------------|-------|
| NO                  | NC | IEC AC-15 Ratings                                                                                       | Part No                          | Order Code                | Price |
| 2                   | 2  | 27-127v 50/60Hz 6A<br>220-240v 50/60Hz 4A<br>400- 440v 50/60Hz 3A<br>500v 50/60Hz 2A<br>690v 50/60Hz 2A | NF22E-11 24-60V50/60HZ 20-60VDC  | 1SBH137001R1122           |       |
|                     |    |                                                                                                         | NF22E-12 48-130V50/60HZ-DC       | 1SBH137001R1222           |       |
|                     |    |                                                                                                         | NF22E-13 100-250V50/60HZ-DC      | 1SBH137001R1322           |       |
|                     |    |                                                                                                         | NF22E-14 250-500V50/60HZ-DC      | 1SBH137001R1422           |       |
| 3                   | 1  |                                                                                                         | NFZ22E-21 24-60V50/60HZ 20-60VDC | 1SBH136001R2122           |       |
|                     |    |                                                                                                         | NF31E-12 48-130V50/60HZ-DC       | 1SBH137001R1231           |       |
|                     |    |                                                                                                         | NF31E-13 100-250V50/60HZ-DC      | 1SBH137001R1331           |       |
|                     |    |                                                                                                         | NF31E-14 250-500V50/60HZ-DC      | 1SBH137001R1431           |       |
| 4                   | -  |                                                                                                         | NFZ31E-21 24-60V50/60HZ 20-60VDC | 1SBH136001R2131           |       |
|                     |    |                                                                                                         | NF40E-12 48-130V50/60HZ-DC       | 1SBH137001R1240           |       |
|                     |    |                                                                                                         | NF40E-13 100-250V50/60HZ-DC      | 1SBH137001R1340           |       |
| 6                   | 2  |                                                                                                         | NFZ40E-21 24-60V50/60HZ 20-60VDC | 1SBH136001R2140           |       |
|                     |    | NF62E-13 100-250V50/60HZ-DC                                                                             | 1SBH137001R1362                  |                           |       |



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# AF09 ... AF38 main accessories for 3 & 4 pole contactors and relays



## Auxiliary contacts

### Front mounted instantaneous auxiliary contacts

| For Contactor       | NO | NC | Part No. | Product Hierarchy 1700009 |       |
|---------------------|----|----|----------|---------------------------|-------|
|                     |    |    |          | Order Code                | Price |
| AF09 ... AF38       | 1  | 0  | CA4-10   | 1SBN010110R1010           |       |
|                     | 1  | 0  | CA4-10-T | 1SBN010110T1010           |       |
|                     | 0  | 1  | CA4-01   | 1SBN010110R1001           |       |
|                     | 0  | 1  | CA4-01-T | 1SBN010110T1001           |       |
| AF09 ... AF16-30-10 | 2  | 2  | CA4-22M  | 1SBN010140R1122           |       |
|                     | 3  | 1  | CA4-31M  | 1SBN010140R1131           |       |
|                     | 1  | 3  | CA4-13M  | 1SBN010140R1113           |       |
| AF26 ... AF38-30-00 | 0  | 4  | CA4-04M  | 1SBN010140R1104           |       |
|                     | 2  | 2  | CA4-22E  | 1SBN010140R1022           |       |
|                     | 3  | 1  | CA4-31E  | 1SBN010140R1031           |       |
| AF09 ... AF16-30-10 | 4  | 0  | CA4-40E  | 1SBN010140R1040           |       |
|                     | 0  | 4  | CA4-04E  | 1SBN010140R1004           |       |
|                     | 2  | 2  | CA4-22U  | 1SBN010140R1322           |       |
| AF09 ... AF16-30-10 | 3  | 1  | CA4-31U  | 1SBN010140R1331           |       |
|                     | 4  | 0  | CA4-40U  | 1SBN010140R1340           |       |

### Front mounted auxiliary contacts with NO leading and NC lagging

|               |   |   |        |                 |  |
|---------------|---|---|--------|-----------------|--|
| AF09 ... AF38 | 1 | 0 | CC4-10 | 1SBN010111R1010 |  |
|               | 0 | 1 | CC4-01 | 1SBN010111R1001 |  |

### Side mounted instantaneous auxiliary contacts

|               |   |   |           |                 |  |
|---------------|---|---|-----------|-----------------|--|
| AF09 ... AF38 | 1 | 1 | CAL4-11   | 1SBN010120R1011 |  |
|               | 1 | 1 | CAL4-11-T | 1SBN010120T1011 |  |

### Front mounted instantaneous auxiliary contacts with A1/A2 terminal blocks

|                     |   |   |          |                 |  |
|---------------------|---|---|----------|-----------------|--|
| AF09 ... AF16-30-10 | 1 | 1 | CAT4-11E | 1SBN010151R1011 |  |
| AF26 ... AF38-30-00 | 1 | 1 | CAT4-11M | 1SBN010151R1111 |  |
| AF09 ... AF16-30-10 | 1 | 1 | CAT4-11U | 1SBN010151R1311 |  |



## Mechanical and electrical interlock sets

|                                          |      |                 |  |
|------------------------------------------|------|-----------------|--|
| Mechanical and Electrical Interlock Unit | VEM4 | 1SBN030111R1000 |  |
| Mechanical Interlock Unit                | VM4  | 1SBN030105T1000 |  |

## Connecting accessories for starting (3 pole contactors)

|                                       |             |                 |  |
|---------------------------------------|-------------|-----------------|--|
| Connecting Link                       | BEA16-4     | 1SBN081306T1000 |  |
| Connecting Link                       | BEA38-4     | 1SBN082306T2000 |  |
| Connection kit for PSR24-30 and MS132 | PSR30-MS132 | 1SFA896212R1001 |  |
| Connection Set for Manual Motor       | BEA26-4     | 1SBN082306T1000 |  |
| Connection Set for Reversing Starter  | BER16-4     | 1SBN081311R1000 |  |
| Connection Set for Reversing Starter  | BER38-4     | 1SBN082311R1000 |  |
| Connection Set for Star-Delta Starter | BEY16-4     | 1SBN081313R2000 |  |
| Connection Set for Star-Delta Starter | BEY38-4     | 1SBN082713R2000 |  |



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# Thermal & electronic overload relays for AF09 ... AF38 3-pole contactors

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| Electronic Overload Relays |           | Product Hierarchy 1700006 |       |
|----------------------------|-----------|---------------------------|-------|
| Setting [A]                | Part No   | Order Code                | Price |
| 0.10...0.32 A              | EF19-0.32 | 1SAX121001R1101           |       |
| 0.30...1.00 A              | EF19-1.0  | 1SAX121001R1102           |       |
| 0.80...2.70 A              | EF19-2.7  | 1SAX121001R1103           |       |
| 1.90...6.30 A              | EF19-6.3  | 1SAX121001R1104           |       |
| 5.70...18.9 A              | EF19-18.9 | 1SAX121001R1105           |       |
| 9.00...30.0 A              | EF45-30   | 1SAX221001R1101           |       |
| 15.0...45.0 A              | EF45-45   | 1SAX221001R1102           |       |



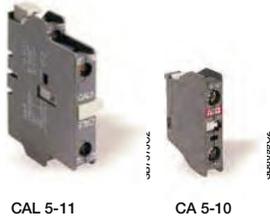
| Thermal Overload Relays |           |                 |       |
|-------------------------|-----------|-----------------|-------|
| Setting [A]             | Part No   | Order Code      | Price |
| 0.10...0.13 A           | TF42-0.13 | 1SAZ721201R1005 |       |
| 0.13...0.17 A           | TF42-0.17 | 1SAZ721201R1008 |       |
| 0.17...0.23 A           | TF42-0.23 | 1SAZ721201R1009 |       |
| 0.23...0.31 A           | TF42-0.31 | 1SAZ721201R1013 |       |
| 0.31...0.41 A           | TF42-0.41 | 1SAZ721201R1014 |       |
| 0.41...0.55 A           | TF42-0.55 | 1SAZ721201R1017 |       |
| 0.55...0.74 A           | TF42-0.74 | 1SAZ721201R1021 |       |
| 0.74...1.00 A           | TF42-1.0  | 1SAZ721201R1023 |       |
| 1.00...1.30 A           | TF42-1.3  | 1SAZ721201R1025 |       |
| 1.30...1.70 A           | TF42-1.7  | 1SAZ721201R1028 |       |
| 1.70...2.30 A           | TF42-2.3  | 1SAZ721201R1031 |       |
| 2.30...3.10 A           | TF42-3.1  | 1SAZ721201R1033 |       |
| 3.10...4.20 A           | TF42-4.2  | 1SAZ721201R1035 |       |
| 4.20...5.70 A           | TF42-5.7  | 1SAZ721201R1038 |       |
| 5.70...7.60 A           | TF42-7.6  | 1SAZ721201R1040 |       |
| 7.60...10.0 A           | TF42-10   | 1SAZ721201R1043 |       |
| 10.0...13.0 A           | TF42-13   | 1SAZ721201R1045 |       |
| 13.0...16.0 A           | TF42-16   | 1SAZ721201R1047 |       |
| 16.0...20.0 A           | TF42-20   | 1SAZ721201R1049 |       |
| 20.0...24.0 A           | TF42-24   | 1SAZ721201R1051 |       |
| 24.0...29.0 A           | TF42-29   | 1SAZ721201R1052 |       |
| 29.0...35.0 A           | TF42-35   | 1SAZ721201R1053 |       |
| 35.0...38.0 A           | TF42-38   | 1SAZ721201R1055 |       |



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# Main accessories for A45 ... AF1650 3 & 4 pole contactors



CAL 5-11

CA 5-10



TP 40 DA



TE5S-240



VE 5-1



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## Auxiliary Contacts [Add on Contacts A45 - A75](#)

| Description                            | Product Hierarchy 1700003 |       |
|----------------------------------------|---------------------------|-------|
|                                        | Order Code                | Price |
| CA5-04E Top Mount Aux Block            | 1SBN010040R1004           |       |
| CA5-04N Top Mount Aux Block            | 1SBN010040R1204           |       |
| CA5-10 Top Mount Aux Block             | 1SBN010010R1010           |       |
| CA5-22E Aux. Contacts                  | 1SBN010040R1022           |       |
| CA5-22M Top Mount Aux Block            | 1SBN010040R1122           |       |
| CA5-22N Top Mount Aux Block            | 1SBN010040R1222           |       |
| CA5-31E Top Mount Aux Block            | 1SBN010040R1031           |       |
| CA5-31M Top Mount Aux Block            | 1SBN010040R1131           |       |
| CA5-40E Top Mount Aux Block            | 1SBN010040R1040           |       |
| CA5-40N Top Mount Aux Block            | 1SBN010040R1240           |       |
| CAL5-11B Side Mount Aux Block          | 1SBN010420R3311           |       |
| CAL5-11 Side Mount Aux Block           | 1SBN010020R1011           |       |
| CB5-10 Start Contact                   | 1SBN010013R1010           |       |
| BA5.50 pkt 50 markers for a range cont | 1SBN110000R1000           |       |

## [Add on Contacts A95 ... A110](#)

|                                | Product Hierarchy 1700001 |  |
|--------------------------------|---------------------------|--|
| CAL18-11 Side Mount Aux Block  | 1SFN010720R1011           |  |
| CAL18-11B Side Mount Aux Block | 1SFN010720R3311           |  |

## [Add on Timers A45 ... A75](#)

|                                          | Product Hierarchy 1700003 |  |
|------------------------------------------|---------------------------|--|
| TP180DA Pneumatic Timer 10-180s On Delay | 1SBN020300R1001           |  |
| TP180IA Pneumatic Timer 10-180s OffDelay | 1SBN020301R1001           |  |
| TP40DA Pneumatic Timer 0.1-40s On Delay  | 1SBN020300R1000           |  |
| TP40IA Pneumatic Timer 0.1-40s Off Delay | 1SBN020301R1000           |  |

## Star Delta Timers

|                                       |                 |  |
|---------------------------------------|-----------------|--|
| TE5S-120 Star/Delta Timer 110/120V AC | 1SBN020010R1002 |  |
| TE5S-24 Star/Delta Timer 24V AC/DC    | 1SBN020010R1001 |  |
| TE5S-240 Star/Delta Timer 220/240V AC | 1SBN020010R1003 |  |
| TE5S-440 Star/Delta Timer 380/440V AC | 1SBN020010R1004 |  |

## Mechanical Interlocks [A45 ... A110](#)

|                          |                 |  |
|--------------------------|-----------------|--|
| VE5-2                    | 1SBN030210R1000 |  |
| WB75A 24V latching block | FPTN372726R1001 |  |

## [A110>](#)

|            | Product Hierarchy 1700001 |  |
|------------|---------------------------|--|
| VM300/460H | 1SFN035100R1000           |  |
| VM300H     | 1SFN034700R1000           |  |
| VM750H     | 1SFN035700R1000           |  |

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# Main accessories for A45 ... AF1650 3 & 4 pole contactors

1



RV 5/50

## Suppressors

| Description            | Product Hierarchy 1700003 |       |
|------------------------|---------------------------|-------|
|                        | Order Code                | Price |
| RC5-2/133 50-133VAC    | 1SBN050200R1001           |       |
| RC5-2/250 110-250VAC   | 1SBN050200R1002           |       |
| RC5-2/50 24-50VAC      | 1SBN050200R1000           |       |
| RT5/150 77-150V DC     | 1SBN050020R1003           |       |
| RT5/32 12-32V DC       | 1SBN050020R1000           |       |
| RV5/250 110-250V AC/DC | 1SBN050010R1002           |       |
| RV5/50 24-50V AC/DC    | 1SBN050010R1000           |       |
| RV5/440 250-440V AC/DC | 1SBN050010R1003           |       |
| RA5-1 Interface Relay  | 1SBN060300R1000           |       |



LT...-AC

1SFS98099-019C3

## Terminal Shourds

| Description   | Product Hierarchy 1700001 |       |
|---------------|---------------------------|-------|
|               | Order Code                | Price |
| LT185-AC      | 1SFN124701R1000           |       |
| LT185-AL      | 1SFN124703R1000           |       |
| LT185-AY      | 1SFN124704R1000           |       |
| LT200/A       | 1SAZ401901R1001           |       |
| LT200E E200DU | 1SAX501904R0001           |       |
| LT300-AC      | 1SFN125101R1000           |       |
| LT300-AL      | 1SFN125103R1000           |       |
| LT320E E320DU | 1SAX601904R0001           |       |
| LT460-AC      | 1SFN125701R1000           |       |
| LT460-AL      | 1SFN125703R1000           |       |
| LT500E E500DU | 1SAX701904R0001           |       |
| LT750-AC      | 1SFN126101R1000           |       |
| LT750-AL      | 1SFN126103R1000           |       |

## Terminal Kits

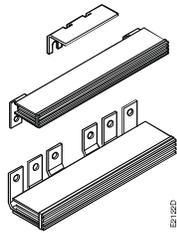
|                                   |                 |  |
|-----------------------------------|-----------------|--|
| LW185 Terminal Enlargement        | 1SFN074707R1000 |  |
| LW300 Terminal Enlargement        | 1SFN075107R1000 |  |
| LD110 Terminal Extension (Pack 1) | 1SFN074308R1000 |  |
| LX300 Terminal Extension          | 1SFN075110R1000 |  |



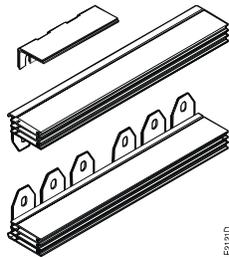
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# Main accessories for A45 ... AF1650 3 & 4 pole contactors



BED 185



BED 400



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## Connection Sets A50 - A75

| Description                                       | Product Hierarchy 1700003 |  |
|---------------------------------------------------|---------------------------|--|
|                                                   | Order Code                |  |
| BEY40-2 Star/Delta Main/Delta/Star Connection Set | 1SBN082813R2000           |  |
| BED50 Star/Delta Connection Set A30-A63           | 1SBN083503R1000           |  |
| BED75 Star/Delta Connection Set A50-A75           | 1SBN084103R1000           |  |
| BES75-40 Reversing Contactors A(E)45-75           | 1SBN083302R1000           |  |

## Connection Sets A95>

| Description                       | Product Hierarchy 1700001 |  |
|-----------------------------------|---------------------------|--|
|                                   | Order Code                |  |
| BED95 Star/Delta Connection Set   | 1SFN084303R1000           |  |
| BED110 Star/Delta Connection Set  | 1SFN084503R1000           |  |
| BED145A Star/Delta Connection Set | 1SFN084703R1000           |  |
| BED210 Star/Delta Connection Set  | 1SFN085103R1000           |  |
| LY110 Connecting Strip 3P         | 1SFN074303R1000           |  |
| LY185 Connecting Strip 3P         | 1SFN074703R1000           |  |

## Spare Coils Spare Coils A45 - A75

| Description             | Product Hierarchy 1700003 |  |
|-------------------------|---------------------------|--|
|                         | Order Code                |  |
| ZA75 110V 50HZ Coil     | 1SBN153510R8406           |  |
| ZA75 230-240V 50HZ Coil | 1SBN153510R8806           |  |
| ZA75 24V 50/60HZ COIL   | 1SBN153510R8106           |  |
| ZA75 400-415V 50HZ Coil | 1SBN153510R8606           |  |

## Spare Coils A110>

| Description              | Product Hierarchy 1700001 |  |
|--------------------------|---------------------------|--|
|                          | Order Code                |  |
| ZA110 110V 50/60Hz Coil  | 1SFN154310R8406           |  |
| ZA110 400-415V 50Hz Coil | 1SFN154310R8606           |  |
| ZA185 110V 50/60Hz Coil  | 1SFN154710R8406           |  |

## Spare Contact Sets A50 - A95

| Description           | Product Hierarchy 1700003 |  |
|-----------------------|---------------------------|--|
|                       | Order Code                |  |
| ZL50 Main Contact Set | 1SBN163503R1000           |  |
| ZL95 Main Contact Set | 1SFN164303R1000           |  |

## Spare Contact Sets A110>

| Description            | Product Hierarchy 1700001 |  |
|------------------------|---------------------------|--|
|                        | Order Code                |  |
| ZL110 Main Contact Set | 1SFN164503R1000           |  |
| ZL145 Main Contact Set | 1SFN164703R1000           |  |
| ZL185 Main Contact Set | 1SFN164903R1000           |  |
| ZL210 Main Contact Set | 1SFN165103R1000           |  |
| ZL260 Main Contact Set | 1SFN165303R1000           |  |
| ZL300 Main Contact Set | 1SFN165503R1000           |  |
| ZL400 Main Contact Set | 1SFN165703R1000           |  |

## Spare Contact Sets EH300>

| Description                  | Product Hierarchy 1700001 |  |
|------------------------------|---------------------------|--|
|                              | Order Code                |  |
| KZ300 Main Contact Set EH300 | SK826200-A                |  |
| KZ550 Main Contact Set EH550 | SK827200-C                |  |

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# Thermal & electronic overload relays for A50 ... AF750 3-pole contactors

1



TA 75 DU



TA 200 DU



TA 450 DU



E 320 DU

## Thermal O/L Relays, Class 10A

A50 - A75 AL50 - AF75

|                              |          |             | Product Hierarchy 1700006 |       |
|------------------------------|----------|-------------|---------------------------|-------|
| For Contactors               | Setting  | Description | Order Code                | Price |
| A50 ... A75<br>AL50 ... AF75 | 18 - 25A | TA75DU-25   | 1SAZ321201R1001           |       |
|                              | 22 - 32A | TA75DU-32   | 1SAZ321201R1002           |       |
|                              | 29 - 42A | TA75DU-42   | 1SAZ321201R1003           |       |
|                              | 36 - 52A | TA75DU-52   | 1SAZ321201R1004           |       |
|                              | 45 - 63A | TA75DU-63   | 1SAZ321201R1005           |       |
|                              | 60 - 80A | TA75DU-80   | 1SAZ321201R1006           |       |

A95 - A300 AF95 - AF110

|                                |            |             | Product Hierarchy 1700007 |       |
|--------------------------------|------------|-------------|---------------------------|-------|
| For Contactors                 | Setting    | Description | Order Code                | Price |
| A95 ... A110<br>AF95 ... AF110 | 29 - 42A   | TA80DU-42   | 1SAZ331201R1003           |       |
|                                | 36 - 52A   | TA80DU-52   | 1SAZ331201R1004           |       |
|                                | 45 - 63A   | TA80DU-63   | 1SAZ331201R1005           |       |
|                                | 60 - 80A   | TA80DU-80   | 1SAZ331201R1006           |       |
|                                | 65 - 90A   | TA110DU-90  | 1SAZ411201R1001           |       |
|                                | 80 - 110A  | TA110DU-110 | 1SAZ411201R1002           |       |
| A145 ... A185                  | 66 - 90A   | TA200DU-90  | 1SAZ421201R1001           |       |
|                                | 80 - 110A  | TA200DU-110 | 1SAZ421201R1002           |       |
|                                | 100 - 135A | TA200DU-135 | 1SAZ421201R1003           |       |
|                                | 110 - 150A | TA200DU-150 | 1SAZ421201R1004           |       |
|                                | 130 - 175A | TA200DU-175 | 1SAZ421201R1005           |       |
| A210 ... A300                  | 150 - 200A | TA200DU-200 | 1SAZ421201R1006           |       |
|                                | 130 - 185A | TA450DU-185 | 1SAZ511201R1001           |       |
|                                | 165 - 235A | TA450DU-235 | 1SAZ511201R1002           |       |
|                                | 220 - 310A | TA450DU-310 | 1SAZ511201R1003           |       |

A145 - A300 AF400 - AF750

|                 |            |           |                 |  |
|-----------------|------------|-----------|-----------------|--|
| A145 ... A185   | 60 - 200A  | E200DU200 | 1SAX511001R1101 |  |
| A210 ... A300   | 100 - 320A | E320DU320 | 1SAX521001R1101 |  |
| AF400 ... AF460 | 150 - 500A | E500DU500 | 1SAX711001R1101 |  |
| AF580 ... AF750 | 250 - 800A | E800DU800 | 1SAX811001R1101 |  |

## Separate Mounting Kits

|                      |             | Product Hierarchy 1700006 |  |
|----------------------|-------------|---------------------------|--|
| For Overload Relays  | Description | Order Code                |  |
| TA42, TA75, TA80 ... | DB80        | 1SAZ301110R0001           |  |
| E140DU               | DB140E      | 1SAX301110R1002           |  |

TA110 - TA450 E500

|                     |              | Product Hierarchy 1700007 |  |
|---------------------|--------------|---------------------------|--|
| For Overload Relays | Description  | Order Code                |  |
| TA110, TA200 ...    | DB200        | 1SAZ401110R0001           |  |
| TA450DU/SU ...      | DT450/A300   | 1SAZ501902R1001           |  |
| E500DU              | DT500/AF460L | 1SAX701902R1001           |  |



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# Mini contactors

## 3 - 4 Pole contactors and relays



B6-30-10



B6-30-10F



B6-30-10P



B7-30-10



B7-40-10



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| AC3 380/415v |   | Aux Contacts |    | Description | Product Hierarchy 1700004 |       |
|--------------|---|--------------|----|-------------|---------------------------|-------|
| kW           | A | NO           | NC |             | Order Code                | Price |

### Contactors

#### 3 pole contactors • Flat Pin Terminals

| kW             | A               | NO                 | NC              | Description      | Order Code      | Price |
|----------------|-----------------|--------------------|-----------------|------------------|-----------------|-------|
| 4              | 16              | -                  | 1               | B6-30-01 230AC   | GJL1211001R8010 |       |
|                |                 |                    |                 | B6-30-01 110AC   | GJL1211001R8014 |       |
|                |                 |                    |                 | B6-30-01 24AC    | GJL1211001R0011 |       |
|                |                 |                    |                 | B6-30-01-F 220AC | GJL1211003R8010 |       |
|                |                 | B6-30-01-F 110AC • | GJL1211003R8014 |                  |                 |       |
|                |                 | B6-30-01-F 24AC •  | GJL1211003R0011 |                  |                 |       |
|                |                 | 1                  | -               | B6-30-10 110AC   | GJL1211001R8104 |       |
|                |                 |                    |                 | B6-30-10 230AC   | GJL1211001R8100 |       |
| B6-30-10 24AC  | GJL1211001R0101 |                    |                 |                  |                 |       |
| B6-30-10 400AC | GJL1211001R8105 |                    |                 |                  |                 |       |

#### 4 pole contactors • Flat Pin Terminals

| kW | A  | NO | NC | Description        | Order Code      | Price |
|----|----|----|----|--------------------|-----------------|-------|
| 4  | 16 | -  | -  | B6-40-00 110AC     | GJL1211201R8004 |       |
|    |    |    |    | B6-40-00 230AC     | GJL1211201R8000 |       |
|    |    |    |    | B6-40-00 24AC      | GJL1211201R0001 |       |
|    |    |    |    | B6-40-00-F 230AC • | GJL1211203R8000 |       |

#### 3 pole contactors

| kW  | A  | NO | NC | Description    | Order Code      | Price |
|-----|----|----|----|----------------|-----------------|-------|
| 5.5 | 20 | -  | 1  | B7-30-01 230AC | GJL1311001R8010 |       |
|     |    |    |    | B7-30-10 110AC | GJL1311001R8104 |       |
|     |    | 1  | -  | B7-30-10 230AC | GJL1311001R8100 |       |
|     |    |    |    | B7-30-10 24AC  | GJL1311001R0101 |       |

#### 3 pole DC contactors • Flat Pin Terminals

| kW | A  | NO | NC | Description        | Order Code      | Price |
|----|----|----|----|--------------------|-----------------|-------|
| 4  | 16 | -  | 1  | BC6-30-01 110DC    | GJL1213001R0014 |       |
|    |    |    |    | BC6-30-01 24DC     | GJL1213001R0011 |       |
|    |    |    |    | BC6-30-01-F 24DC • | GJL1213003R0011 |       |
|    |    | 1  | -  | BC6-30-10 24DC     | GJL1213001R0101 |       |
|    |    |    |    | BC6-30-10-1.4 24DC | GJL1213001R8101 |       |
|    |    |    |    | BC7-30-10 24DC     | GJL1313001R0101 |       |

### Compact reversing contactors

| kW | A | NO | NC | Description                  | Order Code      | Price |
|----|---|----|----|------------------------------|-----------------|-------|
| -  | - | 1  | -  | VB6-30-01 110AC              | GJL1211901R8014 |       |
|    |   |    |    | VB6-30-10 110AC              | GJL1211901R8104 |       |
|    |   |    |    | VB6-30-10 230AC              | GJL1211901R8100 |       |
|    |   |    |    | VB6-30-10 24AC               | GJL1211901R0101 |       |
|    |   |    |    | VB6A-30-10 230AC             | GJL1211911R8100 |       |
|    |   |    |    | VBC6-30-10 24DC              | GJL1213901R0101 |       |
|    |   | -  | -  | VB6A-40-00 220-240V 40-450HZ | GJL1211911R8000 |       |

### Mini contactor relays

| kW | A | NO | NC | Description   | Order Code      | Price |
|----|---|----|----|---------------|-----------------|-------|
| -  | - | 2  | 2  | K6-22Z 110AC  | GJH1211001R8224 |       |
|    |   |    |    | K6-22Z 230AC  | GJH1211001R8220 |       |
|    |   | 3  | 1  | K6-31Z 230AC  | GJH1211001R8310 |       |
|    |   |    |    | KC6-22Z 110DC | GJH1213001R0224 |       |
|    |   | 2  | 2  | KC6-22Z 24DC  | GJH1213001R0221 |       |

# Mini contactors

## Thermal overloads and accessories

1



### Thermal Overload Relays

| Setting [A]   | Part No  | Product Hierarchy 1700006 |       |
|---------------|----------|---------------------------|-------|
|               |          | Order Code                | Price |
| 0.10...0.13 A | T16-0.13 | 1SAZ711201R1005           |       |
| 0.13...0.17 A | T16-0.17 | 1SAZ711201R1008           |       |
| 0.17...0.23 A | T16-0.23 | 1SAZ711201R1009           |       |
| 0.23...0.31 A | T16-0.31 | 1SAZ711201R1013           |       |
| 0.31...0.41 A | T16-0.41 | 1SAZ711201R1014           |       |
| 0.41...0.55 A | T16-0.55 | 1SAZ711201R1017           |       |
| 0.55...0.74 A | T16-0.74 | 1SAZ711201R1021           |       |
| 0.74...1.00 A | T16-1.0  | 1SAZ711201R1023           |       |
| 1.00...1.30 A | T16-1.3  | 1SAZ711201R1025           |       |
| 1.30...1.70 A | T16-1.7  | 1SAZ711201R1028           |       |
| 1.70...2.30 A | T16-2.3  | 1SAZ711201R1031           |       |
| 2.30...3.10 A | T16-3.1  | 1SAZ711201R1033           |       |
| 3.10...4.20 A | T16-4.2  | 1SAZ711201R1035           |       |
| 4.20...5.70 A | T16-5.7  | 1SAZ711201R1038           |       |
| 5.70...7.60 A | T16-7.6  | 1SAZ711201R1040           |       |
| 7.60...10.0 A | T16-10   | 1SAZ711201R1043           |       |
| 10.0...13.0 A | T16-13   | 1SAZ711201R1045           |       |
| 13.0...16.0 A | T16-16   | 1SAZ711201R1047           |       |

### Accessories

| Description                       | Product Hierarchy 1700003 |       |
|-----------------------------------|---------------------------|-------|
|                                   | Order Code                | Price |
| LB6 Soldering receptacle 5-POL.   | GJL1201902R0001           |       |
| BSM6-30 Reversing connecting link | GJL1201908R0001           |       |
| RV-BC6/60 Varistor                | GHV2501902R0002           |       |
| CAF6-02M Top Mount Aux Block      | GJL1201330R0011           |       |
| CAF6-11M Top Mount Aux Block      | GJL1201330R0003           |       |
| CAF6-20M Top Mount Aux Block      | GJL1201330R0007           |       |
| LB6 Soldering receptacle 5-POL.   | GJL1201902R0001           |       |
| BSM6-30 Reversing connecting link | GJL1201908R0001           |       |



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# Manual motor starters

## MS116 ... M495



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### Manual Motor Starter

| MS116      | Setting        | Product Hierarchy 1800001 |       |
|------------|----------------|---------------------------|-------|
|            |                | Order Code                | Price |
| MS116-0.16 | 0.1 ... 0.16A  | 1SAM250000R1001           |       |
| MS116-0.25 | 0.16 ... 0.25A | 1SAM250000R1002           |       |
| MS116-0.4  | 0.25 ... 0.4A  | 1SAM250000R1003           |       |
| MS116-0.63 | 0.4 ... 0.63A  | 1SAM250000R1004           |       |
| MS116-1.0  | 1.0 ... 1.0A   | 1SAM250000R1005           |       |
| MS116-1.6  | 1.0 ... 1.6A   | 1SAM250000R1006           |       |
| MS116-2.5  | 1.6 ... 2.5A   | 1SAM250000R1007           |       |
| MS116-4    | 2.5 ... 4A     | 1SAM250000R1008           |       |
| MS116-6.3  | 4.0 ... 6.3A   | 1SAM250000R1009           |       |
| MS116-10   | 6.3 ... 10A    | 1SAM250000R1010           |       |
| MS116-12   | 8.0 ... 12A    | 1SAM550000R1010           |       |
| MS116-16   | 10 ... 16A     | 1SAM250000R1011           |       |
| MS116-20   | 16 ... 20A     | 1SAM250000R1013           |       |
| MS116-25   | 20 ... 25A     | 1SAM250000R1014           |       |
| MS116-32   | 25 ... 32A     | 1SAM250000R1015           |       |

| MS132      | Setting        | Product Hierarchy 1800001 |       |
|------------|----------------|---------------------------|-------|
|            |                | Order Code                | Price |
| MS132-0.16 | 0.1 ... 0.16A  | 1SAM350000R1001           |       |
| MS132-0.25 | 0.16 ... 0.25A | 1SAM350000R1002           |       |
| MS132-0.4  | 0.25 ... 0.4A  | 1SAM350000R1003           |       |
| MS132-0.63 | 0.4 ... 0.63A  | 1SAM350000R1004           |       |
| MS132-1.0  | 1.0 ... 1.0A   | 1SAM350000R1005           |       |
| MS132-1.6  | 1.0 ... 1.6A   | 1SAM350000R1006           |       |
| MS132-2.5  | 1.6 ... 2.5A   | 1SAM350000R1007           |       |
| MS132-4.0  | 2.5 ... 4A     | 1SAM350000R1008           |       |
| MS132-6.3  | 4.0 ... 6.3A   | 1SAM350000R1009           |       |
| MS132-10   | 6.3 ... 10A    | 1SAM350000R1010           |       |
| MS132-12   | 8.0 ... 12A    | 1SAM350000R1012           |       |
| MS132-16   | 10 ... 16A     | 1SAM350000R1011           |       |
| MS132-20   | 16 ... 20A     | 1SAM350000R1013           |       |
| MS132-25   | 20 ... 25A     | 1SAM350000R1014           |       |
| MS132-32   | 25 ... 32A     | 1SAM350000R1015           |       |

| MS450 - 495 | Setting     | Product Hierarchy 1800001 |       |
|-------------|-------------|---------------------------|-------|
|             |             | Order Code                | Price |
| MS450-40    | 28 ... 40A  | 1SAM450000R1005           |       |
| MS450-45    | 36 ... 45A  | 1SAM450000R1006           |       |
| MS450-50    | 40 ... 50A  | 1SAM450000R1007           |       |
| MS495-63    | 45 ... 63A  | 1SAM550000R1007           |       |
| MS495-75    | 57 ... 75A  | 1SAM550000R1008           |       |
| MS495-100   | 80 ... 100A | 1SAM550000R1010           |       |

1

# Manual motor starters

## Accessories

1



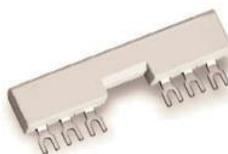
### Accessories

#### MS116 ... MS132

|                             | Product Hierarchy 1800001 |       |
|-----------------------------|---------------------------|-------|
|                             | Order Code                | Price |
| AA1-24 Shunt Trip 24V       | 1SAM201910R1001           |       |
| AA1-110 Shunt Trip 100V     | 1SAM201910R1002           |       |
| AA1-230 Shunt Trip 220-240V | 1SAM201910R1003           |       |
| UA1-24                      | 1SAM201904R1001           |       |
| UA1-120                     | 1SAM201904R1004           |       |
| UA1-230                     | 1SAM201904R1005           |       |
| HKF1-11 Front               | 1SAM201901R1001           |       |
| HK1-11 Side                 | 1SAM201902R1001           |       |
| HK1-20 Side                 | 1SAM201902R1002           |       |
| HK1-02 Side                 | 1SAM201902R1003           |       |
| SK1-11 Signal               | 1SAM201903R1001           |       |
| SK1-20 Signal               | 1SAM201903R1002           |       |
| SK1-02 Signal               | 1SAM201903R1003           |       |
| BEA7/116 Connection Module  | 1SBN080906R1000           |       |
| BEA16/116 Connection Module | 1SBN081406R1000           |       |

#### MS450 ... MS495

|                                  |                 |  |
|----------------------------------|-----------------|--|
| HK4-11 Front Mount Aux Block     | 1SAM401901R1001 |  |
| BEA40/450 Connection Module      | 1SBN083206R1000 |  |
| PSR60-105 & MS495 Connection kit | 1SAM450000R1006 |  |



### 3-phase busbar up to 65A

| MS116 | MS132 | No. MMS | Aux Contacts | Part no    | Product Hierarchy 1800001 |       |
|-------|-------|---------|--------------|------------|---------------------------|-------|
|       |       |         |              |            | Order Code                | Price |
| •     | •     | 2       | 0            | PS1-2-0-65 | 1SAM201906R1102           |       |
| •     | •     | 3       | 0            | PS1-3-0-65 | 1SAM201906R1103           |       |
| •     | •     | 4       | 0            | PS1-4-0-65 | 1SAM201906R1104           |       |
| •     | •     | 5       | 0            | PS1-5-0-65 | 1SAM201906R1105           |       |
| •     | •     | 2       | 1            | PS1-2-1-65 | 1SAM201906R1112           |       |
| •     | •     | 3       | 1            | PS1-3-1-65 | 1SAM201906R1113           |       |
| •     | •     | 4       | 1            | PS1-4-1-65 | 1SAM201906R1114           |       |
| •     | •     | 5       | 1            | PS1-5-1-65 | 1SAM201906R1115           |       |
| •     | •     | 2       | 2            | PS1-2-2-65 | 1SAM201906R1122           |       |
| •     | •     | 3       | 2            | PS1-3-2-65 | 1SAM201906R1123           |       |
| •     | •     | 4       | 2            | PS1-4-2-65 | 1SAM201906R1124           |       |
| •     | •     | 5       | 2            | PS1-5-2-65 | 1SAM201906R1125           |       |

### 3-phase feeder terminals

| 65A | Remarks | mm <sup>2</sup>   | Part no  | Product Hierarchy 1800001 |       |
|-----|---------|-------------------|----------|---------------------------|-------|
|     |         |                   |          | Order Code                | Price |
| •   | flat    | 25mm <sup>2</sup> | S1-M1-25 | 1SAM201907R1101           |       |
| •   | high    |                   | S1-M2-25 | 1SAM201907R1102           |       |



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# Manual motor starters

## Accessories

| Accessories                              | Part No  | Product Hierarchy 1800001 |       |
|------------------------------------------|----------|---------------------------|-------|
|                                          |          | Order Code                | Price |
| Shaft 85mm                               | OXS6X85  | 1SCA101647R1001           |       |
| Shaft 105mm                              | OXS6X105 | 1SCA108043R1001           |       |
| Shaft 130mm                              | OXS6X130 | 1SCA101655R1001           |       |
| Shaft 180mm                              | OXS6X180 | 1SCA101659R1001           |       |
| MSHD-LB Handle,IP64,black for MS116      | MSHD-LB  | 1SAM201920R1001           |       |
| MSHD-LY Handle,IP64,red/yellow for MS116 | MSHD-LY  | 1SAM201920R1002           |       |
| MSHD-LTB Hndl w.trip,IP64,black,MS/MO132 | MSHD-LTB | 1SAM201920R1011           |       |
| MSHD-LTY w.trip,IP64,red/ylw,MS/MO132    | MSHD-LTY | 1SAM201920R1012           |       |
| MSMNO Driver w/o coding w.ScrewMS116&132 | MSMN     | 1SAM101923R0002           |       |
| MSMN Driver w. Screw for MS116 & MS132   | MSMNO    | 1SAM101923R0012           |       |

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# Soft starters

## Overview

### Efficient PSE Range – World's first compact softstarter with Torque control

The latest addition to the ABB softstarter family is the efficient PSE range. This softstarter has been equipped with all the most important features making it a very efficient choice. During the development process, great focus has been put into making sure that both the softstarter and the process are even more reliable. Further more, the softstarter has been equipped with built-in by-pass to reduce the wiring and also with a back-lit display to provide a hassle free and easy set-up and monitoring.

### The complete range of Softstarters

The ABB softstarter portfolio now consists of 4 different ranges making it possible to find a suitable softstarter for almost all possible applications and motor sizes all the way up to 1800A. The softstarter family consists of the Compact PSR, the Flexible PSS, the Efficient PSE and the Advanced PST(B) range.

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### Semiconductor fuses changed to knife type

The Bussmann semiconductor fuses, recommended to be used together with PSS, PSE and PST(B) softstarters have been changed from screw fixing (DIN43 653) to knife fixing (DIN43 620). This will make it possible to use the standard OS type switch fuses from ABB.



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# Soft starters

## Basic PSR and PSE



PSR3 ... PSR16

### PSR Basic Softstarts

| Description                                 | Part No        | Product Hierarchy 1800002 |       |
|---------------------------------------------|----------------|---------------------------|-------|
|                                             |                | Order Code                | Price |
| Basic Softstarter 3A                        | PSR3-600-70    | 1SFA896103R7000           |       |
| Basic Softstarter 6A                        | PSR6-600-70    | 1SFA896104R7000           |       |
| Basic Softstarter 9A                        | PSR9-600-70    | 1SFA896105R7000           |       |
| Basic Softstarter 12A                       | PSR12-600-70   | 1SFA896106R7000           |       |
| Basic Softstarter 16A                       | PSR16-600-70   | 1SFA896107R7000           |       |
| Basic Softstarter 25A                       | PSR25-600-70   | 1SFA896108R7000           |       |
| Basic Softstarter 30A                       | PSR30-600-70   | 1SFA896109R7000           |       |
| Basic Softstarter 37A                       | PSR37-600-70   | 1SFA896110R7000           |       |
| Basic Softstarter 45A                       | PSR45-600-70   | 1SFA896111R7000           |       |
| Basic Softstarter 60A                       | PSR60-600-70   | 1SFA896112R7000           |       |
| Basic Softstarter 72A                       | PSR72-600-70   | 1SFA896113R7000           |       |
| Basic Softstarter 85A                       | PSR85-600-70   | 1SFA896114R7000           |       |
| Basic Softstarter 105A                      | PSR105-600-70  | 1SFA896115R7000           |       |
| Connection Kit PSR3- 6 with MS116 or MS132  | PSR16-MS116    | 1SFA896211R1001           |       |
| Connection kit PSR25-30 with MS132 12 to 32 | PSR30-MS132    | 1SFA896212R1001           |       |
| Connection Kit PSR37-45 and MS450           | PSR45-450      | 1SFA896213R1001           |       |
| Connection Kit PSR60-105 and MS495          | PSR105-MS495   | 1SAM501903R1001           |       |
| Fan for PSR3 to PSR45                       | PSR-FAN3-45A   | 1SFA896311R1001           |       |
| Fan for PSR60 to PSR105                     | PSR-FAN60-105A | 1SFA896313R1001           |       |

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### PSE Basic Softstarts with Overload

| Description                          | Part No       | Product Hierarchy 1800002 |       |
|--------------------------------------|---------------|---------------------------|-------|
|                                      |               | Order Code                | Price |
| Basic Softstarter with Overload 18A  | PSE18-600-70  | 1SFA897101R7000           |       |
| Basic Softstarter with Overload 25A  | PSE25-600-70  | 1SFA897102R7000           |       |
| Basic Softstarter with Overload 30A  | PSE30-600-70  | 1SFA897103R7000           |       |
| Basic Softstarter with Overload 37A  | PSE37-600-70  | 1SFA897104R7000           |       |
| Basic Softstarter with Overload 45A  | PSE45-600-70  | 1SFA897105R7000           |       |
| Basic Softstarter with Overload 60A  | PSE60-600-70  | 1SFA897106R7000           |       |
| Basic Softstarter with Overload 72A  | PSE72-600-70  | 1SFA897107R7000           |       |
| Basic Softstarter with Overload 85A  | PSE85-600-70  | 1SFA897108R7000           |       |
| Basic Softstarter with Overload 105A | PSE105-600-70 | 1SFA897109R7000           |       |
| Basic Softstarter with Overload 142A | PSE142-600-70 | 1SFA897110R7000           |       |
| Basic Softstarter with Overload 170A | PSE170-600-70 | 1SFA897111R7000           |       |
| Basic Softstarter with Overload 210A | PSE210-600-70 | 1SFA897112R7000           |       |
| Basic Softstarter with Overload 250A | PSE250-600-70 | 1SFA897113R7000           |       |
| Basic Softstarter with Overload 300A | PSE300-600-70 | 1SFA897114R7000           |       |
| Basic Softstarter with Overload 370A | PSE370-600-70 | 1SFA897115R7000           |       |
| External Keypad for PSE Range        | PSEEK         | 1SFA897100R1001           |       |



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# Soft starters

## Advanced PST

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PST30...PST72

### PST Advanced Softstarts with Overload

|                                                   |                 | Product Hierarchy 1600001 |       |
|---------------------------------------------------|-----------------|---------------------------|-------|
| Description                                       | Part No         | Order Code                | Price |
| Advanced Softstarter 30A                          | PST30-600-70    | 1SFA894002R7000           |       |
| Advanced Softstarter 37A                          | PST37-600-70    | 1SFA894003R7000           |       |
| Advanced Softstarter 44A                          | PST44-600-70    | 1SFA894004R7000           |       |
| Advanced Softstarter 50A                          | PST50-600-70    | 1SFA894005R7000           |       |
| Advanced Softstarter 60A                          | PST60-600-70    | 1SFA894006R7000           |       |
| Advanced Softstarter 72A                          | PST72-600-70    | 1SFA894007R7000           |       |
| Advanced Softstarter 85A                          | PST85-600-70    | 1SFA894008R7000           |       |
| Advanced Softstarter 105A                         | PST105-600-70   | 1SFA894009R7000           |       |
| Advanced Softstarter 142A                         | PST142-600-70   | 1SFA894010R7000           |       |
| Advanced Softstarter 175A                         | PST175-600-70   | 1SFA894011R7000           |       |
| Advanced Softstarter 210A                         | PST210-600-70   | 1SFA894012R7000           |       |
| Advanced Softstarter 250A                         | PST250-600-70   | 1SFA894013R7000           |       |
| Advanced Softstarter 300A                         | PST300-600-70   | 1SFA894014R7000           |       |
| Advanced Softstarter 370A with Integrated Bypass  | PSTB370-600-70  | 1SFA894015R7000           |       |
| Advanced Softstarter 470A with Integrated Bypass  | PSTB470-600-70  | 1SFA894016R7000           |       |
| Advanced Softstarter 570A with Integrated Bypass  | PSTB570-600-70  | 1SFA894017R7000           |       |
| Advanced Softstarter 720A with Integrated Bypass  | PSTB720-600-70  | 1SFA894018R7000           |       |
| Advanced Softstarter 840A with Integrated Bypass  | PSTB840-600-70  | 1SFA894019R7000           |       |
| Advanced Softstarter 1050A with Integrated Bypass | PSTB1050-600-70 | 1SFA894020R7000           |       |
| External Keypad kit for PST range                 | PSTEK           | 1SFA899003R1000           |       |



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# Pilot devices - compact 22mm Pushbuttons



## Pushbuttons BLACK plastic bezel

| Type                | Contacts |     | Part No     | Product Hierarchy 1300001 |       |
|---------------------|----------|-----|-------------|---------------------------|-------|
|                     | N/O      | N/C |             | Order Code                | Price |
| Flush momentary     | 1        | -   | CP1-10 ■-10 | 1SFA619100R101            | 1     |
|                     | 2        | -   | CP1-10 ■-20 | 1SFA619100R102            | 1     |
|                     | -        | 1   | CP1-10 ■-01 | 1SFA619100R104            | 1     |
|                     | -        | 2   | CP1-10 ■-02 | 1SFA619100R105            | 1     |
|                     | 1        | 1   | CP1-10 ■-11 | 1SFA619100R107            | 1     |
| Flush maintained    | 1        | -   | CP2-10 ■-10 | 1SFA619101R101            | 1     |
|                     | 2        | -   | CP2-10 ■-20 | 1SFA619101R102            | 1     |
|                     | -        | 1   | CP2-10 ■-01 | 1SFA619101R104            | 1     |
|                     | -        | 2   | CP2-10 ■-02 | 1SFA619101R105            | 1     |
|                     | 1        | 1   | CP2-10 ■-11 | 1SFA619101R107            | 1     |
| Extended momentary  | 1        | -   | CP3-10 ■-10 | 1SFA619102R101            | 1     |
|                     | 2        | -   | CP3-10 ■-20 | 1SFA619102R102            | 1     |
|                     | -        | 1   | CP3-10 ■-01 | 1SFA619102R104            | 1     |
|                     | -        | 2   | CP3-10 ■-02 | 1SFA619102R105            | 1     |
|                     | 1        | 1   | CP3-10 ■-11 | 1SFA619102R107            | 1     |
| Extended maintained | 1        | -   | CP4-10 ■-10 | 1SFA619103R101            | 1     |
|                     | 2        | -   | CP4-10 ■-20 | 1SFA619103R102            | 1     |
|                     | -        | 1   | CP4-10 ■-01 | 1SFA619103R104            | 1     |
|                     | -        | 2   | CP4-10 ■-02 | 1SFA619103R105            | 1     |
|                     | 1        | 1   | CP4-10 ■-11 | 1SFA619103R107            | 1     |

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Select your colour by replacing 1 with a digit from the chart below

### Order example:

Ex 1: Type CP1-10■-10, to order color red replace ■ with R: CP1-10 R-10

Ex 2: Order code 1SFA619100R101

To order color red replace 1 with 1: 1SFA619100R1011

| Color codes  |     |       |        |      |       |       |      |       |
|--------------|-----|-------|--------|------|-------|-------|------|-------|
|              | Red | Green | Yellow | Blue | White | Black | Grey | Clear |
| Type ■       | R   | G     | Y      | L    | W     | B     | U    | C     |
| Order Code L | 1   | 2     | 3      | 4    | 5     | 6     | 7    | 8     |



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# Pilot devices - compact 22mm Pushbuttons

1



| Pushbuttons CHROME metal bezel |          |     |             | Product Hierarchy 1300001   |       |
|--------------------------------|----------|-----|-------------|-----------------------------|-------|
| Type                           | Contacts |     | Part No     | Order Code                  | Price |
|                                | N/O      | N/C |             |                             |       |
| Flush momentary                | 1        | -   | CP1-30 ■-30 | 1SFA619100R301 <sup>1</sup> |       |
|                                | 2        | -   | CP1-30 ■-20 | 1SFA619100R302 <sup>1</sup> |       |
|                                | -        | 1   | CP1-30 ■-01 | 1SFA619100R304 <sup>1</sup> |       |
|                                | -        | 2   | CP1-30 ■-02 | 1SFA619100R305 <sup>1</sup> |       |
|                                | 1        | 1   | CP1-30 ■-11 | 1SFA619100R307 <sup>1</sup> |       |
| Flush maintained               | 1        | -   | CP2-30 ■-30 | 1SFA619101R301 <sup>1</sup> |       |
|                                | 2        | -   | CP2-30 ■-20 | 1SFA619101R302 <sup>1</sup> |       |
|                                | -        | 1   | CP2-30 ■-01 | 1SFA619101R304 <sup>1</sup> |       |
|                                | -        | 2   | CP2-30 ■-02 | 1SFA619101R305 <sup>1</sup> |       |
|                                | 1        | 1   | CP2-30 ■-11 | 1SFA619101R307 <sup>1</sup> |       |
| Extended momentary             | 1        | -   | CP3-30 ■-30 | 1SFA619102R301 <sup>1</sup> |       |
|                                | 2        | -   | CP3-30 ■-20 | 1SFA619102R302 <sup>1</sup> |       |
|                                | -        | 1   | CP3-30 ■-01 | 1SFA619102R304 <sup>1</sup> |       |
|                                | -        | 2   | CP3-30 ■-02 | 1SFA619102R305 <sup>1</sup> |       |
|                                | 1        | 1   | CP3-30 ■-11 | 1SFA619102R307 <sup>1</sup> |       |
| Extended maintained            | 1        | -   | CP4-30 ■-30 | 1SFA619103R301 <sup>1</sup> |       |
|                                | 2        | -   | CP4-30 ■-20 | 1SFA619103R302 <sup>1</sup> |       |
|                                | -        | 1   | CP4-30 ■-01 | 1SFA619103R304 <sup>1</sup> |       |
|                                | -        | 2   | CP4-30 ■-02 | 1SFA619103R305 <sup>1</sup> |       |
|                                | 1        | 1   | CP4-30 ■-11 | 1SFA619103R307 <sup>1</sup> |       |

Select your colour by replacing <sup>1</sup> with a digit from the chart below

**Order example:**  
**Ex 1:** Type CP1-10■-10, to order color red replace ■ with R: CP1-10 R-10  
**Ex 2:** Order code 1SFA619100R101<sup>1</sup>  
 To order color red replace <sup>1</sup> with 1: 1SFA619100R1011

| Color codes             |     |       |        |      |       |       |      |       |
|-------------------------|-----|-------|--------|------|-------|-------|------|-------|
|                         | Red | Green | Yellow | Blue | White | Black | Grey | Clear |
| Type ■                  | R   | G     | Y      | L    | W     | B     | U    | C     |
| Order Code <sup>1</sup> | 1   | 2     | 3      | 4    | 5     | 6     | 7    | 8     |



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# Pilot devices - compact 22mm

## Illuminated pushbuttons



### Illuminated pushbuttons with integrated LED BLACK plastic bezel

| Type                    | Voltage           | N/O | N/C | Part No     | Product Hierarchy 1300001 |       |
|-------------------------|-------------------|-----|-----|-------------|---------------------------|-------|
|                         |                   |     |     |             | Order Code                | Price |
| Flush momentary         | 24V<br>AC/DC      | 1   | -   | CP1-11 ■-10 | 1SFA619100R111            | 1     |
| Flush momentary red     |                   | -   | 1   | CP1-11 R-01 | 1SFA619100R1141           |       |
| Extended momentary      |                   | 1   | -   | CP3-11 ■-10 | 1SFA619102R111            | 1     |
| Extended momentary red  |                   | -   | 1   | CP3-11 R-01 | 1SFA619102R1141           |       |
| Flush momentary         | 110-130V<br>AC/DC | 1   | -   | CP1-12 ■-10 | 1SFA619100R121            | 1     |
| Flush momentary red     |                   | -   | 1   | CP1-12 R-01 | 1SFA619100R1241           |       |
| Extended momentary      |                   | 1   | -   | CP3-12 ■-10 | 1SFA619102R121            | 1     |
| Extended momentary red  |                   | -   | 1   | CP3-12 R-01 | 1SFA619102R1241           |       |
| Flush momentary         | 220V<br>AC/DC     | 1   | -   | CP1-13 ■-10 | 1SFA619100R131            | 1     |
| Flush momentary red     |                   | -   | 1   | CP1-13 R-01 | 1SFA619100R1341           |       |
| Extended momentary      |                   | 1   | -   | CP3-13 ■-10 | 1SFA619102R131            | 1     |
| Extended momentary red  |                   | -   | 1   | CP3-13 R-01 | 1SFA619102R1341           |       |
| Flush maintained        | 24V<br>AC/DC      | 1   | -   | CP2-11 ■-10 | 1SFA619101R111            | 1     |
| Flush maintained red    |                   | -   | 1   | CP2-11 R-01 | 1SFA619101R1141           |       |
| Extended maintained     |                   | 1   | -   | CP4-11 ■-10 | 1SFA619101R111            | 1     |
| Extended maintained red |                   | -   | 1   | CP4-11 R-01 | 1SFA619101R1141           |       |
| Flush maintained        | 110-130V<br>AC/DC | 1   | -   | CP2-12 ■-10 | 1SFA619101R121            | 1     |
| Flush maintained red    |                   | -   | 1   | CP2-12 R-01 | 1SFA619101R1241           |       |
| Extended maintained     |                   | 1   | -   | CP4-12 ■-10 | 1SFA619101R121            | 1     |
| Extended maintained red |                   | -   | 1   | CP4-12 R-01 | 1SFA619101R1241           |       |
| Flush maintained        | 220V<br>AC/DC     | 1   | -   | CP2-13 ■-10 | 1SFA619101R131            | 1     |
| Flush maintained red    |                   | -   | 1   | CP2-13 R-01 | 1SFA619101R1341           |       |
| Extended maintained     |                   | 1   | -   | CP4-13 ■-10 | 1SFA619101R131            | 1     |
| Extended maintained red |                   | -   | 1   | CP4-13 R-01 | 1SFA619101R1341           |       |

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Select your colour by replacing 1 with a digit from the chart below

**Order example:**  
**Ex 1:** Type CP1-10■-10, to order color red replace ■ with R: CP1-10 R-10  
**Ex 2:** Order code 1SFA619100R101\_   
 To order color red replace \_ with 1: 1SFA619100R1011

| Color codes  |   |   |   |   |   |   |   |   |
|--------------|---|---|---|---|---|---|---|---|
|              | ● | ● | ● | ● | ○ | ● | ● | ○ |
| Type ■       | R | G | Y | L | W | B | U | C |
| Order Code □ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |



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**1SFC151004C0201**

# Pilot devices - compact 22mm

## Illuminated pushbuttons

1



### Illuminated pushbuttons with integrated LED CHROME metal bezel

| Type                    | Voltage           | N/O | N/C | Part No     | Product Hierarchy 1300001 |       |
|-------------------------|-------------------|-----|-----|-------------|---------------------------|-------|
|                         |                   |     |     |             | Order Code                | Price |
| Flush momentary         | 24V<br>AC/DC      | 1   | -   | CP1-31 ■-10 | 1SFA619100R111            | 1     |
| Flush momentary red     |                   | -   | 1   | CP1-31 R-01 | 1SFA619100R1141           |       |
| Extended momentary      |                   | 1   | -   | CP3-31 ■-10 | 1SFA619102R111            | 1     |
| Extended momentary red  |                   | -   | 1   | CP3-31 R-01 | 1SFA619102R1141           |       |
| Flush momentary         | 110-130V<br>AC/DC | 1   | -   | CP1-32 ■-10 | 1SFA619100R121            | 1     |
| Flush momentary red     |                   | -   | 1   | CP1-32 R-01 | 1SFA619100R1241           |       |
| Extended momentary      |                   | 1   | -   | CP3-32 ■-10 | 1SFA619102R121            | 1     |
| Extended momentary red  |                   | -   | 1   | CP3-32 R-01 | 1SFA619102R3241           |       |
| Flush momentary         | 220V<br>AC/DC     | 1   | -   | CP1-33 ■-10 | 1SFA619100R331            | 1     |
| Flush momentary red     |                   | -   | 1   | CP1-33 R-01 | 1SFA619100R1341           |       |
| Extended momentary      |                   | 1   | -   | CP3-33 ■-10 | 1SFA619102R131            | 1     |
| Extended momentary red  |                   | -   | 1   | CP3-33 R-01 | 1SFA619102R1341           |       |
| Flush maintained        | 24V<br>AC/DC      | 1   | -   | CP2-31 ■-10 | 1SFA619101R111            | 1     |
| Flush maintained red    |                   | -   | 1   | CP2-31 R-01 | 1SFA619101R1141           |       |
| Extended maintained     |                   | 1   | -   | CP4-31 ■-10 | 1SFA619101R111            | 1     |
| Extended maintained red |                   | -   | 1   | CP4-31 R-01 | 1SFA619101R1141           |       |
| Flush maintained        | 110-130V<br>AC/DC | 1   | -   | CP2-32 ■-10 | 1SFA619101R121            | 1     |
| Flush maintained red    |                   | -   | 1   | CP2-32 R-01 | 1SFA619101R1241           |       |
| Extended maintained     |                   | 1   | -   | CP4-32 ■-10 | 1SFA619101R121            | 1     |
| Extended maintained red |                   | -   | 1   | CP4-32 R-01 | 1SFA619101R1241           |       |
| Flush maintained        | 220V<br>AC/DC     | 1   | -   | CP2-33 ■-10 | 1SFA619101R131            | 1     |
| Flush maintained red    |                   | -   | 1   | CP2-33 R-01 | 1SFA619101R1341           |       |
| Extended maintained     |                   | 1   | -   | CP4-33 ■-10 | 1SFA619101R131            | 1     |
| Extended maintained red |                   | -   | 1   | CP4-33 R-01 | 1SFA619101R1341           |       |

Select your colour by replacing 1 with a digit from the chart below

**Order example:**  
**Ex 1:** Type CP1-10■-10, to order color red replace ■ with R: CP1-10 R-10  
**Ex 2:** Order code 1SFA619100R101\_   
 To order color red replace \_ with 1: 1SFA619100R1011

| Color codes  |     |       |        |      |       |       |      |       |
|--------------|-----|-------|--------|------|-------|-------|------|-------|
|              | Red | Green | Yellow | Blue | White | Black | Grey | Clear |
| Type ■       | R   | G     | Y      | L    | W     | B     | U    | C     |
| Order Code □ | 1   | 2     | 3      | 4    | 5     | 6     | 7    | 8     |

# Pilot devices - compact 22mm

## Selector switches



### Selector switches 2 position BLACK plastic bezel

| Type                    | Contacts |     | Part No       | Product Hierarchy 1300001 |       |
|-------------------------|----------|-----|---------------|---------------------------|-------|
|                         | N/O      | N/C |               | Order Code                | Price |
| Red Stay Put -BC        | 1        | -   | C2SS1-10 ■-10 | 1SFA619200R1011           |       |
|                         | 2        | -   | C2SS1-10 ■-20 | 1SFA619200R1021           |       |
|                         | 1        | 1   | C2SS1-10 ■-11 | 1SFA619200R1071           |       |
| Black Stay Put -AC      | 1        | 0   | C2SS2-10 ■-10 | 1SFA619201R1016           |       |
|                         | 2        | 0   | C2SS2-10 ■-20 | 1SFA619201R1026           |       |
| Red Stay Put -AC        | 1        | 1   | C2SS2-10 ■-11 | 1SFA619201R1071           |       |
| Red Spring Return -BC   | 1        | 0   | C2SS3-10 ■-10 | 1SFA619202R1011           |       |
| Black Spring Return -BC | 2        | 0   | C2SS3-10 ■-20 | 1SFA619202R1026           |       |
| Red Spring Return -BC   | 1        | 1   | C2SS3-10 ■-11 | 1SFA619202R1071           |       |

1

### Selector switches 3 position BLACK plastic bezel

|                          |   |   |               |                 |  |
|--------------------------|---|---|---------------|-----------------|--|
| Black Stay Put -ABC      | 2 | - | C3SS1-10 ■-20 | 1SFA619210R1026 |  |
| Red Stay Put -ABC        | 1 | 1 | C3SS1-10 ■-11 | 1SFA619210R1071 |  |
| Red Spring Return -ABC   | 2 | - | C3SS2-10 ■-20 | 1SFA619211R1021 |  |
| Black Spring Return -ABC | 1 | 1 | C3SS2-10 ■-11 | 1SFA619211R1076 |  |
| Red Spring Return -BC    | 2 | - | C3SS3-10 ■-20 | 1SFA619212R1021 |  |
|                          | 1 | 1 | C3SS3-10 ■-11 | 1SFA619212R1071 |  |

### Selector switches 2 position CHROME metal bezel

| Type                    | Contacts |     | Part No       | Product Hierarchy 1300001 |       |
|-------------------------|----------|-----|---------------|---------------------------|-------|
|                         | N/O      | N/C |               | Order Code                | Price |
| Red Stay Put -BC        | 1        | -   | C2SS1-30 ■-10 | 1SFA619200R3011           |       |
|                         | 2        | -   | C2SS1-30 ■-20 | 1SFA619200R3021           |       |
|                         | 1        | 1   | C2SS1-30 ■-11 | 1SFA619200R3071           |       |
| Black Stay Put -AC      | 1        | 0   | C2SS2-30 ■-10 | 1SFA619201R3016           |       |
|                         | 2        | 0   | C2SS2-30 ■-20 | 1SFA619201R3026           |       |
| Red Stay Put -AC        | 1        | 1   | C2SS2-30 ■-11 | 1SFA619201R3071           |       |
| Red Spring Return -BC   | 1        | 0   | C2SS3-30 ■-10 | 1SFA619202R3011           |       |
| Black Spring Return -BC | 2        | 0   | C2SS3-30 ■-20 | 1SFA619202R3026           |       |
| Red Spring Return -BC   | 1        | 1   | C2SS3-30 ■-11 | 1SFA619202R3071           |       |



### Selector switches 3 position CHROME metal bezel

|                          |   |   |               |                 |  |
|--------------------------|---|---|---------------|-----------------|--|
| Black Stay Put -ABC      | 2 | - | C3SS1-30 ■-20 | 1SFA619210R3026 |  |
| Red Stay Put -ABC        | 1 | 1 | C3SS1-30 ■-11 | 1SFA619210R3071 |  |
| Red Spring Return -ABC   | 2 | - | C3SS2-30 ■-20 | 1SFA619211R3021 |  |
| Black Spring Return -ABC | 1 | 1 | C3SS2-30 ■-11 | 1SFA619211R3076 |  |
| Red Spring Return -BC    | 2 | - | C3SS3-30 ■-20 | 1SFA619212R3021 |  |
|                          | 1 | 1 | C3SS3-30 ■-11 | 1SFA619212R3071 |  |



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# Pilot devices - compact 22mm

## Emergency stops, pilot lights & enclosures

1



### Emergency stop buttons

| Type                   | Contacts |     | Part No     | Product Hierarchy 1300001 |       |
|------------------------|----------|-----|-------------|---------------------------|-------|
|                        | N/O      | N/C |             | Order Code                | Price |
| 30mm Twist Release Red | -        | 1   | CE3T-10R-01 | 1SFA619500R1041           |       |
|                        | -        | 2   | CE3T-10R-02 | 1SFA619500R1051           |       |
|                        | 1        | 1   | CE3T-10R-11 | 1SFA619500R1071           |       |
| 40mm Twist Release Red | -        | 1   | CE4T-10R-01 | 1SFA619550R1041           |       |
|                        | -        | 2   | CE4T-10R-02 | 1SFA619550R1051           |       |
|                        | 1        | 1   | CE4T-10R-11 | 1SFA619550R1071           |       |
| 40mm Key Release Red   | -        | 1   | CE4K-10R-01 | 1SFA619552R1051           |       |
|                        | -        | 2   | CE4K-10R-02 | 1SFA619552R1071           |       |

### Pilot light complete

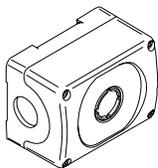


| Type                       | Part No | Product Hierarchy 1300001 |       |
|----------------------------|---------|---------------------------|-------|
|                            |         | Order Code                | Price |
| Integrated Led 24V AC/DC   | CL502   | 1SFA619402R5021           |       |
| Integrated Led 110-130V AC | CL513   | 1SFA619402R5131           |       |
| Integrated Led 220V DC     | CL520   | 1SFA619402R5201           |       |
| Integrated Led 230V AC     | CL523   | 1SFA619402R5231           |       |

### Pilot light lens only

|        |          |                 |  |
|--------|----------|-----------------|--|
| Red    | CL-100 R | 1SFA619402R1001 |  |
| Green  | CL-100 G | 1SFA619402R1002 |  |
| Yellow | CL-100 Y | 1SFA619402R1003 |  |
| Blue   | CL-100 B | 1SFA619402R1004 |  |
| White  | CL-100 W | 1SFA619402R1005 |  |
| Clear  | CL-100 C | 1SFA619402R1008 |  |

### Enclosures



| Type                                            | Part No    | Product Hierarchy 1300001 |       |
|-------------------------------------------------|------------|---------------------------|-------|
|                                                 |            | Order Code                | Price |
| Enclosure 1 hole - yellow                       | CEPY1-0    | 1SFA619821R1000           |       |
| Enclosed E-Stop (twist release 2NO)             | CEPY1-1001 | 1SFA619821R1001           |       |
| Enclosed E-Stop with shroud (twist release 2NC) | CEPY1-2001 | 1SFA619821R2001           |       |
| E-Stop shroud for compact enclosure             | CA1-8053   | 1SFA619920R8053           |       |



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# Pilot devices - modular 22mm

## Standard pushbuttons



### Standard pushbuttons BLACK plastic bezel

| Standard pushbuttons BLACK plastic bezel |            |                 | Product Hierarchy 1300001 |                             |       |
|------------------------------------------|------------|-----------------|---------------------------|-----------------------------|-------|
| Type                                     |            |                 | Part No                   | Order Code                  | Price |
| Flush                                    | Momentary  | Non illuminated | MP1-10 ■                  | 1SFA611100R100 <sup>1</sup> |       |
|                                          | Maintained |                 | MP2-10 ■                  | 1SFA611101R100 <sup>1</sup> |       |
|                                          | Momentary  | Illuminated     | MP1-11 ■                  | 1SFA611100R110 <sup>1</sup> |       |
|                                          | Maintained |                 | MP2-11 ■                  | 1SFA611101R110 <sup>1</sup> |       |
| Extended                                 | Momentary  | Non illuminated | MP3-10 ■                  | 1SFA611102R100 <sup>1</sup> |       |
|                                          | Maintained |                 | MP4-10 ■                  | 1SFA611103R100 <sup>1</sup> |       |
|                                          | Momentary  | Illuminated     | MP3-11 ■                  | 1SFA611102R110 <sup>1</sup> |       |
|                                          | Maintained |                 | MP4-11 ■                  | 1SFA611103R110 <sup>1</sup> |       |

### Standard pushbuttons CHROME plastic bezel

|          |            |                 |          |                             |  |
|----------|------------|-----------------|----------|-----------------------------|--|
| Flush    | Momentary  | Non illuminated | MP1-20 ■ | 1SFA611100R200 <sup>1</sup> |  |
|          | Maintained |                 | MP2-20 ■ | 1SFA611101R200 <sup>1</sup> |  |
|          | Momentary  | Illuminated     | MP1-21 ■ | 1SFA611100R210 <sup>1</sup> |  |
|          | Maintained |                 | MP2-21 ■ | 1SFA611101R210 <sup>1</sup> |  |
| Extended | Momentary  | Non illuminated | MP3-20 ■ | 1SFA611102R200 <sup>1</sup> |  |
|          | Maintained |                 | MP4-20 ■ | 1SFA611103R200 <sup>1</sup> |  |
|          | Momentary  | Illuminated     | MP3-21 ■ | 1SFA611102R210 <sup>1</sup> |  |
|          | Maintained |                 | MP4-21 ■ | 1SFA611103R210 <sup>1</sup> |  |

### Standard pushbuttons CHROME metal bezel

|          |            |                 |          |                             |  |
|----------|------------|-----------------|----------|-----------------------------|--|
| Flush    | Momentary  | Non illuminated | MP1-30 ■ | 1SFA611100R300 <sup>1</sup> |  |
|          | Maintained |                 | MP2-30 ■ | 1SFA611101R300 <sup>1</sup> |  |
|          | Momentary  | Illuminated     | MP1-31 ■ | 1SFA611100R310 <sup>1</sup> |  |
|          | Maintained |                 | MP2-31 ■ | 1SFA611101R310 <sup>1</sup> |  |
| Extended | Momentary  | Non illuminated | MP3-30 ■ | 1SFA611102R300 <sup>1</sup> |  |
|          | Maintained |                 | MP4-30 ■ | 1SFA611103R300 <sup>1</sup> |  |
|          | Momentary  | Illuminated     | MP3-31 ■ | 1SFA611102R310 <sup>1</sup> |  |
|          | Maintained |                 | MP4-31 ■ | 1SFA611103R310 <sup>1</sup> |  |

Select your colour by replacing <sup>1</sup> with a digit from the chart below

| How to order standard operators:                                                                                                                                                                                            | Color codes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Contact blocks including holder with 3 blocks |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|------|------------|-------|---|---|---------|---|---|----------|---|---|--------|---|---|---------|---|---|---------|---|---|--------|---|---|---------|---|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------|------------|------|---------|-----------------|------|---------|-----------------|------|---------|-----------------|------|---------|-----------------|-----------|---------|-----------------|-----------|---------|-----------------|----------------|--|--|------|--------|-----------------|------|--------|-----------------|------------------------------|--|--|--------|---------|-----------------|
| <ul style="list-style-type: none"> <li>Non- illuminated operator + holder + contact block(s)</li> <li>Illuminated operator + holder + contact block(s) + lamp block</li> </ul>                                              | <table border="1"> <thead> <tr> <th>Description</th> <th>Type</th> <th>Order Code</th> </tr> </thead> <tbody> <tr><td>● Red</td><td>R</td><td>1</td></tr> <tr><td>● Green</td><td>G</td><td>2</td></tr> <tr><td>● Yellow</td><td>Y</td><td>3</td></tr> <tr><td>● Blue</td><td>L</td><td>4</td></tr> <tr><td>○ White</td><td>W</td><td>5</td></tr> <tr><td>● Black</td><td>B</td><td>6</td></tr> <tr><td>● Grey</td><td>U</td><td>7</td></tr> <tr><td>○ Clear</td><td>C</td><td>8</td></tr> </tbody> </table> | Description                                   | Type | Order Code | ● Red | R | 1 | ● Green | G | 2 | ● Yellow | Y | 3 | ● Blue | L | 4 | ○ White | W | 5 | ● Black | B | 6 | ● Grey | U | 7 | ○ Clear | C | 8 | <table border="1"> <thead> <tr> <th>Description</th> <th>Type</th> <th>Order Code</th> </tr> </thead> <tbody> <tr><td>1 NO</td><td>MCBH-10</td><td>1SFA611605R1101</td></tr> <tr><td>1 NC</td><td>MCBH-01</td><td>1SFA611605R1110</td></tr> <tr><td>2 NC</td><td>MCBH-02</td><td>1SFA611605R1120</td></tr> <tr><td>2 NO</td><td>MCBH-20</td><td>1SFA611605R1102</td></tr> <tr><td>1 NO+1 NC</td><td>MCBH-11</td><td>1SFA611605R1111</td></tr> <tr><td>1 NO+2 NC</td><td>MCBH-12</td><td>1SFA611605R1121</td></tr> <tr><td colspan="3">Contact blocks</td></tr> <tr><td>1 NO</td><td>MCB-10</td><td>1SFA611610R1001</td></tr> <tr><td>1 NC</td><td>MCB-01</td><td>1SFA611610R1010</td></tr> <tr><td colspan="3">Separate holder for 3 blocks</td></tr> <tr><td>Holder</td><td>MCBH-00</td><td>1SFA611605R1100</td></tr> </tbody> </table> | Description | Type | Order Code | 1 NO | MCBH-10 | 1SFA611605R1101 | 1 NC | MCBH-01 | 1SFA611605R1110 | 2 NC | MCBH-02 | 1SFA611605R1120 | 2 NO | MCBH-20 | 1SFA611605R1102 | 1 NO+1 NC | MCBH-11 | 1SFA611605R1111 | 1 NO+2 NC | MCBH-12 | 1SFA611605R1121 | Contact blocks |  |  | 1 NO | MCB-10 | 1SFA611610R1001 | 1 NC | MCB-01 | 1SFA611610R1010 | Separate holder for 3 blocks |  |  | Holder | MCBH-00 | 1SFA611605R1100 |
| Description                                                                                                                                                                                                                 | Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Order Code                                    |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| ● Red                                                                                                                                                                                                                       | R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                                             |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| ● Green                                                                                                                                                                                                                     | G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2                                             |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| ● Yellow                                                                                                                                                                                                                    | Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3                                             |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| ● Blue                                                                                                                                                                                                                      | L                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4                                             |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| ○ White                                                                                                                                                                                                                     | W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 5                                             |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| ● Black                                                                                                                                                                                                                     | B                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6                                             |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| ● Grey                                                                                                                                                                                                                      | U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 7                                             |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| ○ Clear                                                                                                                                                                                                                     | C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 8                                             |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| Description                                                                                                                                                                                                                 | Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Order Code                                    |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| 1 NO                                                                                                                                                                                                                        | MCBH-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1SFA611605R1101                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| 1 NC                                                                                                                                                                                                                        | MCBH-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1SFA611605R1110                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| 2 NC                                                                                                                                                                                                                        | MCBH-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1SFA611605R1120                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| 2 NO                                                                                                                                                                                                                        | MCBH-20                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1SFA611605R1102                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| 1 NO+1 NC                                                                                                                                                                                                                   | MCBH-11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1SFA611605R1111                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| 1 NO+2 NC                                                                                                                                                                                                                   | MCBH-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1SFA611605R1121                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| Contact blocks                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| 1 NO                                                                                                                                                                                                                        | MCB-10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1SFA611610R1001                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| 1 NC                                                                                                                                                                                                                        | MCB-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1SFA611610R1010                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| Separate holder for 3 blocks                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| Holder                                                                                                                                                                                                                      | MCBH-00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1SFA611605R1100                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |
| <p>Ordering example:</p> <p>Ex 1: Type CP1-10■-10, to order color red replace ■ with R: CP1-10 R-10</p> <p>Ex 2: Order code 1SFA619100R101<sup>1</sup>, to order color red replace <sup>1</sup> with 1: 1SFA619100R1011</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |      |            |       |   |   |         |   |   |          |   |   |        |   |   |         |   |   |         |   |   |        |   |   |         |   |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |             |      |            |      |         |                 |      |         |                 |      |         |                 |      |         |                 |           |         |                 |           |         |                 |                |  |  |      |        |                 |      |        |                 |                              |  |  |        |         |                 |



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# Pilot devices - modular 22mm

## Double pushbuttons & selector switches

1



### Double pushbuttons BLACK plastic bezel

|                       |            |                 | Product Hierarchy 1300001 |                 |       |
|-----------------------|------------|-----------------|---------------------------|-----------------|-------|
| Type                  |            |                 | Part No                   | Order Code      | Price |
| Flush                 | No text    | Non illuminated | MPD1-11B                  | 1SFA611130R1106 |       |
|                       | I/O        |                 | MPD2-11B                  | 1SFA611131R1106 |       |
| Extended lower button | No text    | Non illuminated | MPD12-11B                 | 1SFA611141R1106 |       |
|                       | I/O        |                 | MPD13-11B                 | 1SFA611142R1106 |       |
|                       | Start/stop |                 | MPD15-11B                 | 1SFA611144R1106 |       |
|                       | No text    | Illuminated     | MPD12-11C                 | 1SFA611141R1108 |       |
|                       | I/O        |                 | MPD13-11C                 | 1SFA611142R1108 |       |
|                       | Start/stop |                 | MPD15-11C                 | 1SFA611142R1108 |       |



### Selectors switches BLACK plastic bezel

|                          |               |              | Product Hierarchy 1300001 |                    |       |
|--------------------------|---------------|--------------|---------------------------|--------------------|-------|
| Type                     |               |              | Part No                   | Order Code         | Price |
| Three position           | ABC           | Short handle | M3SSC1-10B                | 1SFA611250R1006    |       |
|                          | BC            |              | M3SSC3-10B                | 1SFA611252R1006    |       |
|                          | ABC           | Long handle  | M3SSC4-10B                | 1SFA611253R1006    |       |
|                          | BC            |              | M3SSC6-10B                | 1SFA611255R1006    |       |
| Two position             | BC maintained | Short handle | M2SS1-10 ■                | 1SFA611200R100 [1] |       |
|                          | BC momentary  |              | M2SS2-10 ■                | 1SFA611202R100 [1] |       |
|                          | BC maintained | Long handle  | M2SS4-10 ■                | 1SFA611203R100 [1] |       |
| Two position illuminated | BC maintained | Short handle | M2SS1-11 ■                | 1SFA611200R110 [1] |       |
|                          | AC maintained |              | M2SS2-11 ■                | 1SFA611201R110 [1] |       |
|                          | BC momentary  | Long handle  | M2SS3-11 ■                | 1SFA611202R110 [1] |       |
|                          | BC maintained |              | M2SS4-11 ■                | 1SFA611203R110 [1] |       |



### Selectors switches CHROME metal bezel

|                          |               |              |            |                    |  |
|--------------------------|---------------|--------------|------------|--------------------|--|
| Three position           | ABC           | Short handle | M3SSC1-10B | 1SFA611250R3006    |  |
|                          | BC            |              | M3SSC3-10B | 1SFA611252R3006    |  |
|                          | ABC           | Long handle  | M3SSC4-10B | 1SFA611253R1006    |  |
|                          | BC            |              | M3SSC6-10B | 1SFA611255R3006    |  |
| Two position             | BC maintained | Short handle | M2SS1-10 ■ | 1SFA611200R300 [1] |  |
|                          | BC momentary  |              | M2SS2-10 ■ | 1SFA611202R300 [1] |  |
|                          | BC maintained | Long handle  | M2SS4-10 ■ | 1SFA611203R300 [1] |  |
| Two position illuminated | BC maintained | Short handle | M2SS1-11 ■ | 1SFA611200R310 [1] |  |
|                          | AC maintained |              | M2SS2-11 ■ | 1SFA611201R310 [1] |  |
|                          | BC momentary  | Long handle  | M2SS3-11 ■ | 1SFA611202R310 [1] |  |
|                          | BC maintained |              | M2SS4-11 ■ | 1SFA611203R310 [1] |  |

| How to order standard operators:                                         |        | Color codes |             | Contact blocks including holder with 3 blocks |                         |
|--------------------------------------------------------------------------|--------|-------------|-------------|-----------------------------------------------|-------------------------|
| Description                                                              | Type   | Order Code  | Description | Type                                          | Order Code              |
| • Non-illuminated operator<br>+ holder<br>+ contact block(s)             | Red    | R           | 1           | 1 NO                                          | MCBH-10 1SFA611605R1101 |
|                                                                          | Green  | G           | 2           | 1 NC                                          | MCBH-01 1SFA611605R1110 |
|                                                                          | Yellow | Y           | 3           | 2 NC                                          | MCBH-02 1SFA611605R1120 |
| • Illuminated operator<br>+ holder<br>+ contact block(s)<br>+ lamp block | Blue   | L           | 4           | 2 NO                                          | MCBH-20 1SFA611605R1102 |
|                                                                          | White  | W           | 5           | 1 NO+1 NC                                     | MCBH-11 1SFA611605R1111 |
|                                                                          | Black  | B           | 6           | 1 NO+2 NC                                     | MCBH-12 1SFA611605R1121 |
|                                                                          | Grey   | U           | 7           | <b>Contact blocks</b>                         |                         |
|                                                                          | Clear  | C           | 8           | 1 NO                                          | MCBH-10 1SFA611610R1001 |
|                                                                          |        |             |             | 1 NC                                          | MCBH-01 1SFA611610R1010 |
|                                                                          |        |             |             | Separate holder for 3 blocks                  |                         |
|                                                                          |        |             |             | Holder                                        | MCBH-00 1SFA611605R1100 |

Ordering example:  
 Ex 1: Type CP1-10 ■-10, to order color red replace ■ with R: CP1-10 R-10  
 Ex 2: Order code 1SFA619100R101, to order color red replace [1] with 1: 1SFA619100R1011

Select your colour by replacing [1] with a digit from the chart below

# Pilot devices - modular 22mm

## Emergency, machine stops & mushroom pushbuttons



1

### Emergency stops

| Type                        |               | Part No   | Product Hierarchy 1300001 |       |
|-----------------------------|---------------|-----------|---------------------------|-------|
|                             |               |           | Order Code                | Price |
| 30mm Red<br>Non illuminated | Twist release | MPET3-10R | 1SFA611520R1001           |       |
|                             | Pull release  | MPEP3-10R | 1SFA611521R1001           |       |
|                             | Key release   | MPEK3-10R | 1SFA611522R1101           |       |
| 40mm Red<br>Non illuminated | Twist release | MPET4-10R | 1SFA611523R1001           |       |
|                             | Pull release  | MPEP4-10R | 1SFA611524R1001           |       |
|                             | Key release   | MPEK4-10R | 1SFA611525R1101           |       |
| 40mm Red<br>Illuminated     | Twist release | MPMT3-11R | 1SFA611510R1101           |       |
|                             | Pull release  | MPMP3-11R | 1SFA611511R1101           |       |
| 60mm Red<br>Illuminated     | Twist release | MPMT4-11R | 1SFA611513R1101           |       |
|                             | Pull release  | MPMP4-11R | 1SFA611514R1101           |       |

### Machine stops

|            |               |           |                 |  |
|------------|---------------|-----------|-----------------|--|
| 30mm Black | Twist release | MPET3-10B | 1SFA611520R1006 |  |
|            | Pull release  | MPEP3-10B | 1SFA611521R1006 |  |
|            | Key release   | MPEK3-10B | 1SFA611522R1106 |  |
| 40mm Black | Twist release | MPET4-10B | 1SFA611523R1006 |  |
|            | Pull release  | MPEP4-10B | 1SFA611524R1006 |  |
|            | Key release   | MPEK4-10B | 1SFA611525R1106 |  |

### Mushroom pushbuttons

|                                      |        |          |                 |  |
|--------------------------------------|--------|----------|-----------------|--|
| 40mm<br>Non illuminated<br>momentary | Red    | MPM1-10R | 1SFA611124R1001 |  |
|                                      | Green  | MPM1-10G | 1SFA611124R1002 |  |
|                                      | Yellow | MPM1-10Y | 1SFA611124R1003 |  |
|                                      | Black  | MPM1-10B | 1SFA611124R1006 |  |
| 60mm<br>Non illuminated<br>momentary | Red    | MPM2-10R | 1SFA611125R1001 |  |
|                                      | Yellow | MPM2-10Y | 1SFA611125R1003 |  |
|                                      | Black  | MPM2-10B | 1SFA611125R1006 |  |
| 40mm<br>Illuminated<br>momentary     | Red    | MPM1-11R | 1SFA611124R1001 |  |
|                                      | Green  | MPM1-11G | 1SFA611124R1002 |  |
|                                      | Yellow | MPM1-10Y | 1SFA611124R1003 |  |
| 60mm<br>Illuminated<br>momentary     | Red    | MPM2-11R | 1SFA611125R1101 |  |
|                                      | Yellow | MPM2-11Y | 1SFA611125R1103 |  |



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# Pilot devices - modular 22mm

## Key switches, pilot lights

1



### Key switches BLACK plastic bezel

| Type                                        |                 |                | Part No    | Product Hierarchy 1300001 |       |
|---------------------------------------------|-----------------|----------------|------------|---------------------------|-------|
|                                             |                 |                |            | Order Code                | Price |
| Two position<br>Key release in BC positions | 71/Ronis 455    | Maintained BC  | M2SSK1-101 | 1SFA611280R1001           |       |
|                                             | 72/Ronis 421    |                | M2SSK1-102 | 1SFA611280R1002           |       |
|                                             | 73/Ronis 3433-E |                | M2SSK1-103 | 1SFA611280R1003           |       |
| Two position<br>Key release in B positions  | 71/Ronis 455    |                | M2SSK2-101 | 1SFA611281R1001           |       |
|                                             | 72/Ronis 421    |                | M2SSK2-102 | 1SFA611281R1002           |       |
|                                             | 73/Ronis 3433-E |                | M2SSK2-103 | 1SFA611281R1003           |       |
| Two position                                | 71/Ronis 455    | Momentary BC   | M2SSK3-101 | 1SFA611282R1001           |       |
|                                             | 72/Ronis 421    |                | M2SSK3-102 | 1SFA611282R1002           |       |
|                                             | 73/Ronis 3433-E |                | M2SSK3-103 | 1SFA611282R1003           |       |
| Three position                              | 71/Ronis 455    | Maintained ABC | M3SSK1-101 | 1SFA611283R1001           |       |
|                                             | 72/Ronis 421    |                | M3SSK1-102 | 1SFA611283R1002           |       |
|                                             | 73/Ronis 3433-E |                | M3SSK1-103 | 1SFA611283R1003           |       |

### Key switches CHROME metal bezel

| Type                                        |                 |                | Part No    | Product Hierarchy 1300001 |       |
|---------------------------------------------|-----------------|----------------|------------|---------------------------|-------|
|                                             |                 |                |            | Order Code                | Price |
| Two position<br>Key release in BC positions | 71/Ronis 455    | Maintained BC  | M2SSK1-301 | 1SFA611280R1001           |       |
|                                             | 72/Ronis 421    |                | M2SSK1-302 | 1SFA611280R1002           |       |
|                                             | 73/Ronis 3433-E |                | M2SSK1-303 | 1SFA611280R1003           |       |
| Two position<br>Key release in B positions  | 71/Ronis 455    |                | M2SSK2-301 | 1SFA611281R1001           |       |
|                                             | 72/Ronis 421    |                | M2SSK2-302 | 1SFA611281R1002           |       |
|                                             | 73/Ronis 3433-E |                | M2SSK2-303 | 1SFA611281R1003           |       |
| Two position                                | 71/Ronis 455    | Momentary BC   | M2SSK3-301 | 1SFA611282R1001           |       |
|                                             | 72/Ronis 421    |                | M2SSK3-302 | 1SFA611282R1002           |       |
|                                             | 73/Ronis 3433-E |                | M2SSK3-303 | 1SFA611282R1003           |       |
| Three position                              | 71/Ronis 455    | Maintained ABC | M3SSK1-301 | 1SFA611283R1001           |       |
|                                             | 72/Ronis 421    |                | M3SSK1-302 | 1SFA611283R1002           |       |
|                                             | 73/Ronis 3433-E |                | M3SSK1-303 | 1SFA611283R1003           |       |



### Pilot lights

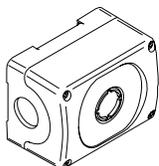
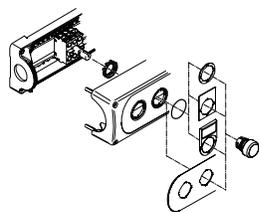
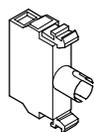
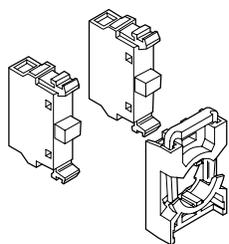
|                      |          |                 |  |
|----------------------|----------|-----------------|--|
| Red                  | ML-100 R | 1SFA611400R1001 |  |
| Green                | ML-100 G | 1SFA611400R1002 |  |
| Yellow               | ML-100 Y | 1SFA611400R1003 |  |
| Blue                 | ML-100 B | 1SFA611400R1004 |  |
| White                | ML-100 W | 1SFA611400R1005 |  |
| Clear                | ML-100 C | 1SFA611400R1008 |  |
| Light diffusing lens | KA1-8005 | 1SFA616920R8005 |  |



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# Pilot Devices - modular 22mm

## Contacts, lamp blocks and accessories



Full range of product and technical information place this part number in a search engine and download

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### Contact blocks with 3-holder included

| Type        | Part No | Product Hierarchy 1300001 |       |
|-------------|---------|---------------------------|-------|
|             |         | Order Code                | Price |
| 1 NO        | MCBH-10 | 1SFA611605R1101           |       |
| 1 NC        | MCBH-01 | 1SFA611605R1110           |       |
| 2 NO        | MCBH-20 | 1SFA611605R1102           |       |
| 2 NC        | MCBH-02 | 1SFA611605R1120           |       |
| 1 NO + 1 NC | MCBH-11 | 1SFA611605R1111           |       |
| 2 NO + 1 NC | MCBH-21 | 1SFA611605R1112           |       |

### Separate holder

|                     |         |                 |  |
|---------------------|---------|-----------------|--|
| Holder for 3 blocks | MCBH-00 | 1SFA611605R1100 |  |
|---------------------|---------|-----------------|--|

### Micro switch blocks

|      |         |                 |  |
|------|---------|-----------------|--|
| 1 NO | MCBL-10 | 1SFA611612R1010 |  |
| 1 NC | MCBL-01 | 1SFA611612R1001 |  |

### Contact blocks

|      |        |                 |  |
|------|--------|-----------------|--|
| 1 NO | MCB-10 | 1SFA611610R1001 |  |
| 1 NC | MCB-01 | 1SFA611610R1010 |  |

### Lamp blocks with integrated LED

|             |           |                                         |  |
|-------------|-----------|-----------------------------------------|--|
| 24V AC/DC   | MLBL-01 ■ | 1SFA611621R101 <input type="checkbox"/> |  |
| 110-130V AC | MLBL-04 ■ | 1SFA611621R104 <input type="checkbox"/> |  |
| 110-130V DC | MLBL-05 ■ | 1SFA611621R105 <input type="checkbox"/> |  |
| 220V DC     | MLBL-06 ■ | 1SFA611621R106 <input type="checkbox"/> |  |
| 230V AC     | MLBL-07 ■ | 1SFA611621R107 <input type="checkbox"/> |  |

### Legend plate holders

|                                             |          |                 |  |
|---------------------------------------------|----------|-----------------|--|
| Holder black                                | KA1-8120 | 1SFA616920R8120 |  |
| Inserts without text                        | KA1-8121 | 1SFA616920R8121 |  |
| Legend plate holder for plastic enclosures  | MA6-1060 | 1SFA611930R1060 |  |
| Inserts without text for plastic enclosures | MA6-1061 | 1SFA611930R1061 |  |

### General accessories

|                                      |          |                 |  |
|--------------------------------------|----------|-----------------|--|
| Shroud                               | MA1-8053 | 1SFA611920R8053 |  |
| Mounting tool                        | MA1-8015 | 1SFA611920R8015 |  |
| Membrane of silicone flush button    | KA1-8052 | 1SFA616920R8052 |  |
| Membrane of silicone extended button | KA1-8002 | 1SFA611920R8002 |  |
| Locking nut                          | MA1-8019 | 1SFA611920R8019 |  |
| Light diffusing lens                 | KA1-8005 | 1SFA616920R8005 |  |
| Adaptors 30mm black plastic          | KA1-8029 | 1SFA616920R8029 |  |
| Protective cover                     | KA1-8010 | 1SFA616920R8010 |  |
| Spacer                               | -        | SK615516-1      |  |
| Spacer for emergency stop            | KA1-8045 | 1SFA616920R8045 |  |

### Empty enclosures

|                                 |  |                 |  |
|---------------------------------|--|-----------------|--|
| Empty Grey Enclosure - 1 Seat   |  | 1SFA611811R1000 |  |
| Empty Grey Enclosure - 2 Seat   |  | 1SFA611812R1000 |  |
| Empty Grey Enclosure - 3 Seat   |  | 1SFA611813R1000 |  |
| Empty Grey Enclosure - 4 Seat   |  | 1SFA611814R1000 |  |
| Empty Yellow Enclosure - 1 Seat |  | 1SFA611821R1000 |  |

1

# Pilot Devices - modular 22mm

## Accessories

1



### LEDs

| Type                     | Product Hierarchy 1300001 |       |
|--------------------------|---------------------------|-------|
|                          | Order Code                | Price |
| White LED 12V            | 1SFA616921R2015           |       |
| Red LED 24V              | 1SFA616921R2021           |       |
| Green LED 24V            | 1SFA616921R2022           |       |
| Yellow LED 24V           | 1SFA616921R2023           |       |
| Blue LED 24V             | 1SFA616921R2024           |       |
| White LED 24V            | 1SFA616921R2025           |       |
| Red LED 110-130V AC      | 1SFA616921R2131           |       |
| Green LED 110-130V AC    | 1SFA616921R2132           |       |
| Yellow LED 110-130V AC   | 1SFA616921R2133           |       |
| KA2-2134 LED 110V AC     | 1SFA616921R2134           |       |
| White LED 110-130V AC    | 1SFA616921R2135           |       |
| KA2-2142 LED 110V AC/DC  | 1SFA616921R2142           |       |
| White LED 110-130V AC/DC | 1SFA616921R2145           |       |
| Red LED 230V             | 1SFA616921R2221           |       |
| Green LED 230V           | 1SFA616921R2222           |       |
| Yellow LED 230V          | 1SFA616921R2223           |       |
| Blue LED 230V            | 1SFA616921R2224           |       |
| White LED 230V           | 1SFA616921R2225           |       |

### Filaments

|                    |            |  |
|--------------------|------------|--|
| 6v Filament Bulb   | 5911086-11 |  |
| 12v Filament Bulb  | 5911086-12 |  |
| 24v Filament Bulb  | 5911086-13 |  |
| 60v Filament Bulb  | 5911086-14 |  |
| 130v Filament Bulb | 5911086-15 |  |
| 30v Filament Bulb  | 5911086-4  |  |
| 110v Filament Bulb | 5911086-7  |  |



Full range of product and technical information place this part number in a search engine and download

1SFC151004C0201

# Electronic products and relays



## Time relays, CT range ..... 1/46

Three ranges of electronic timers provide timing functions for all applications: the CT-D range with a width of just 17.5 mm; the CT-E range, the ideal solution for serial applications; and the CT-S range that has two different types of connection terminals and is ideally suited for universal use. The CT range has a wide variety of timing functions (from ON or OFF delay to star-delta changeover). The time relays are available with output relays, solid-state outputs and precise direct time adjustment.



## Measuring and monitoring, CM range ..... 1/55

State of the Art monitors for single and three-phase systems. Monitoring of: voltage, current, frequency, power factor (motor load), thermistors, temperature, liquid level, insulation resistance, and grid feeding. ABB has one of the world's widest product ranges of measuring and monitoring relays. The CM range is a key product line of the EPR range.



## Power supplies, CP range ..... 1/61

Modern power supply units are a vital component in most areas of energy management and automation technology. As your global partner in this area, ABB pays close attention to corresponding requirements. Innovation is the key to the substantial enlargement of our power supply product range. ABB offers four different product lines for single and three-phase supplies, output voltages 5/12/24, and 48 VDC in plastic and metal enclosure, as well as various accessories.



## Signal converters, CC range and ILPH ..... 1/64

The ABB serial data converters allow communication to be established between units with different communication standards. In order to assure process continuity, existing systems must be updated consistently or connected to new devices. Serial data enables communication to be established if the communication standard of the existing system and the connected device vary. As well as converting signals, analog signal converters and serial data converters can amplify, filter or separate signals.



## Interfaces & optocouplers, CR/R600 ..... 1/76

Interface relays and optocouplers are widely used in various industrial applications. As an interface, they link the controller, e.g. PLC (programmable logic controller), PC or field bus systems to the sensor/actuator level. Here, they have various functions: switching AC or DC loads with different resistive, inductive and capacitive parts, switching voltages from a few mV up to 250 V, switching currents from a few mA up to 16 A, amplification of weak control signals, electrical isolation of control and load circuits, and signal multiplying.



## Logic relays, CL range ..... 1/89

CL range logic relays are suitable for small and medium-sized control tasks and can substitute logic wiring quickly and easily. Three different ranges are available: stand alone, expandable and the display systems.



Full range of product and technical information place this part number in a search engine and download  
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1

# Timer ranges

1



CT-D

### LEDs for status indication

All actual operational states are displayed by front-face LEDs, thus simplifying commissioning and troubleshooting.

### Direct reading scales

Direct setting of the time delay without any additional calculation allows accurate time delay adjustment.



CT-E

### Connection screws in M3 (pozidrive)

Easy tightening and release of the connection screws using a pozidrive, panhead or crosshead screwdriver.



CT-S

### Double-chamber cage connection terminals

Double-chamber cage connection terminals make it possible to connect wires up to 2 x 2.5 mm<sup>2</sup> (2 x 14 AWG), rigid or fine-strand, with or without ferrules. Potential distribution does not require additional terminals.

### Time range preselection and fine adjustment

Direct assignment of the preselected time range to the fine adjustment potentiometer scale by multicolor scales.



CT-S

### Easy connect technology

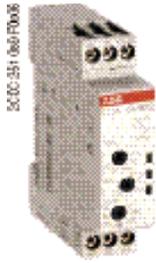
Innovative Push-in connection terminals for tool-free installation. The connection has the same connection direction as the double-chamber cage connection terminals.

The CT range includes 103 electronic timers and switching relays with 16 different functions. The electronic timers are divided into three ranges with their individual benefits. A lot of different connection terminals such as screw, chamber,

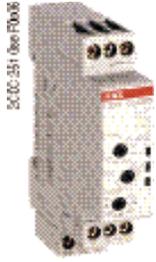
double-chamber cage and push-in connection terminals are available. Furthermore, relay outputs and solid-state outputs are also available.

# Timer relays

## CT-D



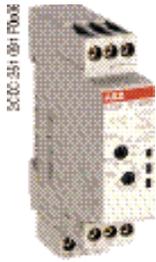
CT-MFD.12



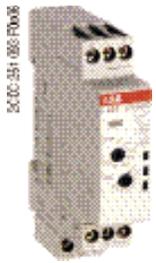
CT-MFD.21



CT-ERD.12



CT-ERD.22



CT-AHD.22



Full range of product and technical information place this part number in a search engine and download  
2CDC110004C0206

| Type | Rated control supply voltage | Control input | Order Code | Price |
|------|------------------------------|---------------|------------|-------|
|------|------------------------------|---------------|------------|-------|

### Multifunction timers

CT-MFD: 7 functions <sup>1)</sup>, 7 time ranges (0.05 s - 100 h), 1 c/o contact, 2 LEDs

|           |                            |   |                 |  |
|-----------|----------------------------|---|-----------------|--|
| CT-MFD.12 | 24-48 V DC,<br>24-240 V AC | • | 1SVR500020R0000 |  |
|-----------|----------------------------|---|-----------------|--|

CT-MFD: 7 functions <sup>1)</sup>, 7 time ranges (0.05 s - 100 h), 2 c/o contacts, 2 LEDs

|           |                |   |                 |  |
|-----------|----------------|---|-----------------|--|
| CT-MFD.21 | 12-240 V AC/DC | • | 1SVR500020R1100 |  |
|-----------|----------------|---|-----------------|--|

### ON-delay timers

CT-ERD: 7 time ranges (0.05 s - 100 h), 1 c/o contact, 2 LEDs

|           |                            |  |                 |  |
|-----------|----------------------------|--|-----------------|--|
| CT-ERD.12 | 24-48 V DC,<br>24-240 V AC |  | 1SVR500100R0000 |  |
|-----------|----------------------------|--|-----------------|--|

CT-ERD: 7 time ranges (0.05 s - 100 h), 2 c/o contacts, 2 LEDs

|           |                            |  |                 |  |
|-----------|----------------------------|--|-----------------|--|
| CT-ERD.22 | 24-48 V DC,<br>24-240 V AC |  | 1SVR500100R0100 |  |
|-----------|----------------------------|--|-----------------|--|

### OFF-delay timers

CT-AHD: 7 time ranges (0.05 s - 100 h), 1 c/o contact, 2 LEDs

|           |                            |   |                 |  |
|-----------|----------------------------|---|-----------------|--|
| CT-AHD.12 | 24-48 V DC,<br>24-240 V AC | • | 1SVR500110R0000 |  |
|-----------|----------------------------|---|-----------------|--|

CT-AHD: 7 time ranges (0.05 s - 100 h), 2 c/o contacts, 2 LEDs

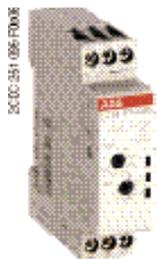
|           |                            |   |                 |  |
|-----------|----------------------------|---|-----------------|--|
| CT-AHD.22 | 24-48 V DC,<br>24-240 V AC | • | 1SVR500110R0100 |  |
|-----------|----------------------------|---|-----------------|--|

1

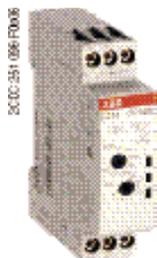
# Timer relays

## CT-D

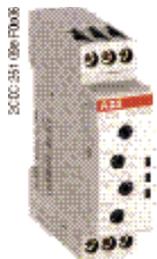
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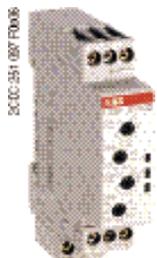
CT-VWD.12



CT-EBD.12



CT-TGD.12



CT-TGD.22

| Type | Rated control supply voltage | Control input | Order Code | Price |
|------|------------------------------|---------------|------------|-------|
|------|------------------------------|---------------|------------|-------|

### Impulse-ON timers

CT-VWD: 7 time ranges (0.05 s - 100 h), 1 c/o contact, 2 LEDs

|           |                            |  |                 |  |
|-----------|----------------------------|--|-----------------|--|
| CT-VWD.12 | 24-48 V DC,<br>24-240 V AC |  | 1SVR500130R0000 |  |
|-----------|----------------------------|--|-----------------|--|

### Flasher, starting with ON

CT-EBD: 7 time ranges (0.05 s - 100 h), 1 c/o contact, 2 LEDs

|           |                            |  |                 |  |
|-----------|----------------------------|--|-----------------|--|
| CT-EBD.12 | 24-48 V DC,<br>24-240 V AC |  | 1SVR500150R0000 |  |
|-----------|----------------------------|--|-----------------|--|

### Pulse generators

CT-TGD: 2 x 7 time ranges (0.05 s - 100 h)<sup>2)</sup>, 1 c/o contact, 2 LEDs

|           |                            |   |                 |  |
|-----------|----------------------------|---|-----------------|--|
| CT-TGD.12 | 24-48 V DC,<br>24-240 V AC | • | 1SVR500160R0000 |  |
|-----------|----------------------------|---|-----------------|--|

CT-TGD: 2 x 7 time ranges (0.05 s - 100 h)<sup>2)</sup>, 2 c/o contacts, 2 LEDs

|           |                            |   |                 |  |
|-----------|----------------------------|---|-----------------|--|
| CT-TGD.22 | 24-48 V DC,<br>24-240 V AC | • | 1SVR500160R0100 |  |
|-----------|----------------------------|---|-----------------|--|

### Star-delta timers

CT-SAD: 4 time ranges (0.05 s - 10 min), transition time adjustable, 2 n/o contacts, 3 LEDs

|           |                            |  |                 |  |
|-----------|----------------------------|--|-----------------|--|
| CT-SAD.22 | 24-48 V DC,<br>24-240 V AC |  | 1SVR500210R0100 |  |
|-----------|----------------------------|--|-----------------|--|



Full range of product and technical information place this part number in a search engine and download

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# Timer relays

## CT-E



CT-MFE



CT-ERE



CT-AHE



CT-ARE

| Type | Rated control supply voltage | Time range | Control input | Order Code | Price |
|------|------------------------------|------------|---------------|------------|-------|
|------|------------------------------|------------|---------------|------------|-------|

### Multifunction timer

CT-MFE: 6 functions<sup>1)</sup>, 8 time ranges (0.05 s - 100 h), 1 c/o contact, 2 LEDs

|        |                |                |   |                 |  |
|--------|----------------|----------------|---|-----------------|--|
| CT-MFE | 24-240 V AC/DC | 0.05 s - 100 h | • | 1SVR550029R8100 |  |
|--------|----------------|----------------|---|-----------------|--|

### ON-delay timers

CT-ERE: 1 c/o contact, 2 LEDs

|        |                          |            |   |                 |  |
|--------|--------------------------|------------|---|-----------------|--|
| CT-ERE | 24 V AC/DC, 220-240 V AC | 0.1-10 s   | • | 1SVR550107R1100 |  |
|        |                          | 0.3-30 s   |   | 1SVR550107R4100 |  |
|        |                          | 3-300 s    |   | 1SVR550107R2100 |  |
|        |                          | 0.3-30 min |   | 1SVR550107R5100 |  |
|        | 110-130 V AC             | 0.1-10 s   |   | 1SVR550100R1100 |  |
|        |                          | 0.3-30 s   |   | 1SVR550100R4100 |  |
|        |                          | 3-300 s    |   | 1SVR550100R2100 |  |
|        |                          | 0.3-30 min |   | 1SVR550100R5100 |  |

### OFF-delay timers

CT-AHE: 1 c/o contact, 2 LEDs

|        |              |          |   |                 |  |
|--------|--------------|----------|---|-----------------|--|
| CT-AHE | 24 V AC/DC   | 0.1-10 s | • | 1SVR550118R1100 |  |
|        |              | 0.3-30 s |   | 1SVR550118R4100 |  |
|        |              | 3-300 s  |   | 1SVR550118R2100 |  |
|        | 110-130 V AC | 0.1-10 s |   | 1SVR550110R1100 |  |
|        |              | 0.3-30 s |   | 1SVR550110R4100 |  |
|        |              | 3-300 s  |   | 1SVR550110R2100 |  |
|        | 220-240 V AC | 0.1-10 s |   | 1SVR550111R1100 |  |
|        |              | 0.3-30 s |   | 1SVR550111R4100 |  |
|        |              | 3-300 s  |   | 1SVR550111R2100 |  |

CT-ARE: without auxiliary voltage, 1 c/o contact, 1 LED

|        |                          |          |                 |  |
|--------|--------------------------|----------|-----------------|--|
| CT-ARE | 24 V AC/DC, 220-240 V AC | 0.1-10 s | 1SVR550127R1100 |  |
|        |                          | 0.3-30 s | 1SVR550127R4100 |  |



Full range of product and technical information place this part number in a search engine and download  
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# Timer relays

## CT-E

1



CT-WVE



CT-AWE



CT-EBE



CT-YDE

| Type | Rated control supply voltage | Time range | Control input | Order Code | Price |
|------|------------------------------|------------|---------------|------------|-------|
|------|------------------------------|------------|---------------|------------|-------|

### Impulse-ON timers

CT-WVE: 1 c/o contact, 2 LEDs

| Type   | Rated control supply voltage | Time range | Control input | Order Code      | Price |
|--------|------------------------------|------------|---------------|-----------------|-------|
| CT-WVE | 24 V AC/DC, 220-240 V AC     | 0.1-10 s   |               | 1SVR550137R1100 |       |
|        |                              | 0.3-30 s   |               | 1SVR550137R4100 |       |
|        |                              | 3-300 s    |               | 1SVR550137R2100 |       |
|        | 110-130 V AC                 | 0.1-10 s   |               | 1SVR550130R1100 |       |
|        |                              | 0.3-30 s   |               | 1SVR550130R4100 |       |
|        |                              | 3-300 s    |               | 1SVR550130R2100 |       |

### Impulse-OFF timers

CT-AWE: without auxiliary voltage, 1 c/o contact, 2 LEDs

| Type   | Rated control supply voltage | Time range | Control input | Order Code      | Price |
|--------|------------------------------|------------|---------------|-----------------|-------|
| CT-AWE | 24 V AC/DC                   | 0.05-1 s   |               | 1SVR550158R3100 |       |
|        | 110-130 V AC                 |            |               | 1SVR550150R3100 |       |
|        | 220-240 V AC                 |            |               | 1SVR550151R3100 |       |

CT-AWE: with auxiliary voltage, 1 c/o contact, 2 LEDs

| Type   | Rated control supply voltage | Time range | Control input | Order Code      | Price |
|--------|------------------------------|------------|---------------|-----------------|-------|
| CT-AWE | 24 V AC/DC                   | 0.1-10 s   | •             | 1SVR550148R1100 |       |
|        |                              | 0.3-30 s   |               | 1SVR550148R4100 |       |
|        |                              | 3-300 s    |               | 1SVR550148R2100 |       |
|        | 110-130 V AC                 | 0.1-10 s   |               | 1SVR550140R1100 |       |
|        |                              | 0.3-30 s   |               | 1SVR550140R4100 |       |
|        |                              | 3-300 s    |               | 1SVR550140R2100 |       |
|        | 220-240 V AC                 | 0.1-10 s   |               | 1SVR550141R1100 |       |
|        |                              | 0.3-30 s   |               | 1SVR550141R4100 |       |
|        |                              | 3-300 s    |               | 1SVR550141R2100 |       |

### Flasher, starting with OFF

CT-EBE: with symmetrical ON & OFF times, 1 c/o contact, 2 LEDs

| Type   | Rated control supply voltage | Time range | Control input | Order Code      | Price |
|--------|------------------------------|------------|---------------|-----------------|-------|
| CT-EBE | 24 V AC/DC, 220-240 V AC     | 0.1-10 s   |               | 1SVR550167R1100 |       |
|        | 110-130 V AC                 |            |               | 1SVR550160R1100 |       |

### Star-delta timers

CT-YDE: ON-delayed, OFF-delayed without auxiliary voltage, 1 c/o contact, 2 LEDs

| Type   | Rated control supply voltage | Time range | Control input | Order Code      | Price |
|--------|------------------------------|------------|---------------|-----------------|-------|
| CT-YDE | 24 V AC/DC, 220-240 V AC     | 0.1-10 s   |               | 1SVR550207R1100 |       |
|        |                              | 0.3-30 s   |               | 1SVR550207R4100 |       |
|        |                              | 3-300 s    |               | 1SVR550207R2100 |       |
|        | 110-130 V AC                 | 0.1-10 s   |               | 1SVR550200R1100 |       |
|        |                              | 0.3-30 s   |               | 1SVR550200R4100 |       |
|        |                              | 3-300 s    |               | 1SVR550200R2100 |       |



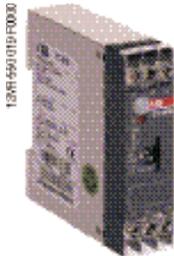
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# Timer relays

## CT-E



CT-SDE



CT-MKE



CT-EKE



CT-AKE

| Type | Rated control supply voltage | Time range | Control input | Order Code | Price |
|------|------------------------------|------------|---------------|------------|-------|
|------|------------------------------|------------|---------------|------------|-------|

CT-SDE: ON-delayed with fixed transition time, 1 n/c contact, 1 n/o contact, internally wired, 2 LEDs

|        |                          |          |  |                 |  |
|--------|--------------------------|----------|--|-----------------|--|
| CT-SDE | 24 V AC/DC, 220-240 V AC | 0.3-30 s |  | 1SVR550217R4100 |  |
|        | 110-130 V AC             |          |  | 1SVR550210R4100 |  |
|        | 380-415 V AC             |          |  | 1SVR550212R4100 |  |

Solid-state output / contactless  
Multifunction timer

CT-MKE: 4 functions<sup>1)</sup>, solid-state output, functions and time range selection via external jumpers, 1 LED

|        |                |                      |  |                 |  |
|--------|----------------|----------------------|--|-----------------|--|
| CT-MKE | 24-240 V AC/DC | 0.1-10 s,<br>3-300 s |  | 1SVR550019R0000 |  |
|--------|----------------|----------------------|--|-----------------|--|

ON-delay timers

CT-EKE: solid-state output, 1 LED

|        |                |          |  |                 |  |
|--------|----------------|----------|--|-----------------|--|
| CT-EKE | 24-240 V AC/DC | 0.1-10 s |  | 1SVR550509R1000 |  |
|        |                | 0.3-30 s |  | 1SVR550509R4000 |  |
|        |                | 3-300 s  |  | 1SVR550509R2000 |  |

OFF-delay timers

CT-AKE: solid-state output, 1 LED

|        |             |          |  |                 |  |
|--------|-------------|----------|--|-----------------|--|
| CT-AKE | 24-240 V AC | 0.1-10 s |  | 1SVR550519R1000 |  |
|        |             | 0.3-30 s |  | 1SVR550519R4000 |  |
|        |             | 3-300 s  |  | 1SVR550519R2000 |  |

**Notice:**

CT...KE are solid-state timers with thyristor output for 2-wire applications. They are connected directly in series with the control coil of contactors or relays. Voltage should not be applied without a load connected, because there is no current limiting in the unit.



Full range of product and technical information place this part number in a search engine and download  
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# The measuring monitoring and timer relays with innovative connection technologies

**New  
S CLASS**



1

## The new housing provides two different connection possibilities: Double-chamber cage connection screw terminals or push-in connection terminals

### General facts

ABB have developed a totally new housing for all time relays and measuring & monitoring relays in S range with innovative connection technologies. In form and design the new housing meets both: ABB's latest design standards and EPR's requirements

for a sophisticated product. All devices are available with either innovative Push-in Terminals or State of the Art Double-Chamber Cage Screw Connection Terminals.

### Easy Connect Technology

Thanks to the innovative new Push-in Terminals, the devices with Easy Connect Technology can be wired much more quickly and easily – without the need of tools. For example, rigid or flexible wires with wire-end ferrules can be connected without the need for a tool. Even flexible wires without ferrules can be directly connected, here the cage must be opened before wire insertion. To release the wires the cages have to be opened with a tool.

The Push-in Terminal is suitable for the following wire sizes: rigid or fine-strand with wire-end ferrule,  $1 \times 0.5 \dots 1.5 \text{ mm}^2$  or  $2 \times 0.5 \dots 1.5 \text{ mm}^2$  /  $1 \times 20 \dots 16 \text{ AWG}$  or  $2 \times 20 \dots 16 \text{ AWG}$ . These Push-in Terminals are completely secure, and are the perfect solution for high vibration environments.

### Double-Chamber Cage Connection Screw Terminals

The screw terminals can be connected with two wires with different wire diameters up to  $2,5 \text{ mm}^2$ . According to IEC/EN 60947-1 two rigid or fine-strand wires with ferrules up to  $2,5 \text{ mm}^2$  (AWG14) can be used.

### Flexibility

Both solutions, Double-Chamber Cage Connection Terminals and Push-in Terminals, have exactly the same design and size. Both versions can thus be interchanged at any time or positioned alongside each other in a switchboard. With this new housing ABB offers the world wide first complete range of industrial products with Push-in Terminals.

### Other Features

Snap on housing - Tool-less mounting and removal on / off the DIN rail. Housing meets UL94 VO classifications. Abrasion resistant terminal and front face marking.

Available now in Timer range. Coming soon in Measuring and Monitoring product range.

# Timer relays

## CT-S



CT-MVS.21



CT-MXS.22



CT-MFS.21



CT-MBS.22



CT-WBS.22



Full range of product and technical information place this part number in a search engine and download  
2CDC110004C0206

| Type | Rated control supply voltage | Control input | Remote potentiometer connection | 2nd c/o cont. selectable as inst. contact | Order Code | Price |
|------|------------------------------|---------------|---------------------------------|-------------------------------------------|------------|-------|
|------|------------------------------|---------------|---------------------------------|-------------------------------------------|------------|-------|

### Multifunction timers

CT-MVS: 11 functions <sup>1)</sup>, 10 time ranges (0.05 s- 300 h), 2 c/o contacts, 3 LEDs – 40 °C

|            |                |   |    |   |                 |  |
|------------|----------------|---|----|---|-----------------|--|
| CT-MVS.21S | 24-240 V AC/DC | ■ | 1x | ○ | 1SVR730020R0200 |  |
| CT-MVS.21P |                |   |    |   | 1SVR740020R0200 |  |

CT-MVS: 11 functions <sup>1)</sup>, 10 time ranges (0.05 s- 300 h), 2 c/o contacts, 2 LEDs

|            |              |   |  |  |                 |  |
|------------|--------------|---|--|--|-----------------|--|
| CT-MVS.22S | 24-48 V DC   | ■ |  |  | 1SVR730020R3300 |  |
| CT-MVS.22P | 24-240 V AC  |   |  |  | 1SVR740020R3300 |  |
| CT-MVS.23S | 380-440 V AC |   |  |  | 1SVR730021R2300 |  |
| CT-MVS.23P |              |   |  |  | 1SVR740021R2300 |  |

CT-MVS: 10 functions <sup>2)</sup>, 10 time ranges (0.05 s- 300 h), 1 c/o contact, 2 LEDs

|            |             |   |  |  |                 |  |
|------------|-------------|---|--|--|-----------------|--|
| CT-MVS.12S | 24-48 V DC  | ■ |  |  | 1SVR730020R3100 |  |
| CT-MVS.12P | 24-240 V AC |   |  |  | 1SVR740020R3100 |  |

CT-MXS: 5 functions <sup>3)</sup>, 2 x 10 time ranges (0.05 s- 300 h), 2 c/o contacts, 2 LEDs

|            |             |   |    |  |                 |  |
|------------|-------------|---|----|--|-----------------|--|
| CT-MXS.22S | 24-48 V DC  | ■ | 2x |  | 1SVR730030R3300 |  |
| CT-MXS.22P | 24-240 V AC |   |    |  | 1SVR740030R3300 |  |

CT-MFS: 10 functions <sup>4)</sup>, 10 time ranges (0.05 s- 300 h), 2 c/o contacts, 3 LEDs – 40 °C

|            |             |    |    |   |                 |  |
|------------|-------------|----|----|---|-----------------|--|
| CT-MFS.21S | 24-48 V DC  | □□ | 1x | • | 1SVR730010R0200 |  |
| CT-MFS.21P | 24-240 V AC |    |    |   | 1SVR740010R0200 |  |

CT-MBS: 10 functions <sup>4)</sup>, 10 time ranges (0.05 s- 300 h), 2 c/o contacts, 3 LEDs

|            |             |   |    |   |                 |  |
|------------|-------------|---|----|---|-----------------|--|
| CT-MBS.22S | 24-48 V DC  | □ | 1x | • | 1SVR730010R3200 |  |
| CT-MBS.22P | 24-240 V AC |   |    |   | 1SVR740010R3200 |  |

### Impulse and flasher timer

CT-WBS: 7 functions <sup>5)</sup>, 10 time ranges (0.05 s- 300 h), 2 c/o contacts, 2 LEDs

|            |             |  |  |  |                 |  |
|------------|-------------|--|--|--|-----------------|--|
| CT-WBS.22S | 24-48 V DC  |  |  |  | 1SVR730040R3300 |  |
| CT-WBS.22P | 24-240 V AC |  |  |  | 1SVR740040R3300 |  |

■ Control input with voltage-related triggering

□ Control input with volt-free triggering

<sup>1)</sup> Functions: ON-delay, OFF-delay with auxiliary voltage, Impulse-ON, Impulse-OFF with auxiliary voltage, Symmetrical ON- and OFF-delay, Flasher starting with ON or OFF, Star-delta change-over with impulse, Pulse former, Accumulative ON-delay, ON/OFF-function

<sup>2)</sup> Functions: ON-delay, OFF-delay with auxiliary voltage, Impulse-ON, Impulse-OFF with auxiliary voltage, Symmetrical ON- and OFF-delay, Flasher starting with ON or OFF, Pulse former, Accumulative ON-delay, ON/OFF-function

<sup>3)</sup> Functions: Select function via DIP switches behind the marker label on the front of the unit, asymmetrical ON- and OFF-delay, Impulse-ON/OFF, Pulse generator starting with ON or OFF, Single pulse generator, ON/OFF-function

<sup>4)</sup> Functions: ON-delay, OFF-delay with auxiliary voltage, Impulse-ON, Impulse-OFF with auxiliary voltage, Symmetrical ON- and OFF-delay, Flasher starting with ON, Flasher starting with OFF, Star-delta change-over with impulse, Pulse former, ON/OFF-function

<sup>5)</sup> Functions: Flasher starting with ON, Flasher starting with OFF, Impulse-ON, ON-delay, fixed impulse with adjustable time delay, Adjustable impulse with fixed time delay, ON/OFF-function

S - Screw connection

P - Easy connect - Push in connection

# Timer relays

## CT-S

1



CT-ERS.21



CT-ERS.12



CT-AHS.22



CT-SDS.23

| Type | Rated control supply voltage | Control input | Remote potentiometer connection | 2nd c/o cont. selectable as inst. contact | Order Code | Price |
|------|------------------------------|---------------|---------------------------------|-------------------------------------------|------------|-------|
|------|------------------------------|---------------|---------------------------------|-------------------------------------------|------------|-------|

### ON-delay timers

CT-ERS: 10 time ranges (0.05 s- 300 h), 2 c/o contacts, 2 LEDs -40 °C

|            |                |  |  |  |                 |  |
|------------|----------------|--|--|--|-----------------|--|
| CT-ERS.21S | 24-240 V AC/DC |  |  |  | 1SVR730100R0300 |  |
| CT-ERS.21P |                |  |  |  | 1SVR740100R0300 |  |
| CT-ERS.22S | 24-48 V DC     |  |  |  | 1SVR730100R3300 |  |
| CT-ERS.22P | 24-240 V AC    |  |  |  | 1SVR740100R3300 |  |

CT-ERS: 10 time ranges (0.05 s- 300 h), 1 c/o contact, 2 LEDs

|            |             |  |  |  |                 |  |
|------------|-------------|--|--|--|-----------------|--|
| CT-ERS.12S | 24-48 V DC  |  |  |  | 1SVR730100R3100 |  |
| CT-ERS.12P | 24-240 V AC |  |  |  | 1SVR740100R3100 |  |

### OFF-delay timers

CT-APS: 10 time ranges (0.05 s- 300 h), 2 c/o contacts, 2 LEDs -40 °C

|            |                |   |  |  |                 |  |
|------------|----------------|---|--|--|-----------------|--|
| CT-APS.21S | 24-240 V AC/DC | ■ |  |  | 1SVR730180R0300 |  |
| CT-APS.21P |                |   |  |  | 1SVR740180R0300 |  |
| CT-APS.22S | 24-48 V DC     | ■ |  |  | 1SVR730180R3300 |  |
| CT-APS.22P | 24-240 V AC    |   |  |  | 1SVR740180R3300 |  |

CT-APS: 10 time ranges (0.05 s- 300 h), 1 c/o contact, 2 LEDs

|            |             |   |  |  |                 |  |
|------------|-------------|---|--|--|-----------------|--|
| CT-APS.12S | 24-48 V DC  | ■ |  |  | 1SVR730180R3100 |  |
| CT-APS.12P | 24-240 V AC |   |  |  | 1SVR740180R3100 |  |

CT-AHS: 10 time ranges (0.05 s- 300 h), 2 c/o contacts, 2 LEDs

|            |             |   |  |  |                 |  |
|------------|-------------|---|--|--|-----------------|--|
| CT-AHS.22S | 24-48 V DC  | □ |  |  | 1SVR730110R3300 |  |
| CT-AHS.22P | 24-240 V AC |   |  |  | 1SVR740110R3300 |  |

CT-ARS: without auxiliary voltage, 7 time ranges (0.05 s- 10 min), 1 c/o contact, 1 LED

|            |                |  |  |  |                 |  |
|------------|----------------|--|--|--|-----------------|--|
| CT-ARS.11S | 24-240 V AC/DC |  |  |  | 1SVR730120R3300 |  |
| CT-ARS.11P |                |  |  |  | 1SVR740120R3300 |  |

### Star-delta timers

CT-SDS: 7 time ranges (0.05 s- 10 min), 50 ms transition time, 2 n/o contacts, 3 LEDs

|            |              |  |  |  |                 |  |
|------------|--------------|--|--|--|-----------------|--|
| CT-SDS.22S | 24-48 V DC   |  |  |  | 1SVR730210R3300 |  |
| CT-SDS.22P | 24-240 V AC  |  |  |  | 1SVR740210R3300 |  |
| CT-SDS.23S | 380-440 V AC |  |  |  | 1SVR730211R2300 |  |
| CT-SDS.23P |              |  |  |  | 1SVR740211R2300 |  |

■ Control input with voltage-related triggering

□ Control input with volt-free triggering

S - Screw connection

P - Easy connect - Push in connection



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2CDC110004C0206

# Measuring & monitoring relays

## Single phase current & voltage monitors



CM-SRS.1

| Type      | Order Code      | Priced |
|-----------|-----------------|--------|
| CM-SRS.11 | 1SVR430840R0200 | 129.99 |
| CM-SRS.11 | 1SVR430841R0200 | 109.22 |
| CM-SRS.11 | 1SVR430841R1200 | 109.22 |
| CM-SRS.11 | 1SVR430840R0300 | 129.99 |
| CM-SRS.11 | 1SVR430841R0300 | POA    |
| CM-SRS.11 | 1SVR430841R1300 | 120.96 |
| CM-SRS.11 | 1SVR430840R0400 | 141.72 |
| CM-SRS.11 | 1SVR430841R0400 | POA    |
| CM-SRS.11 | 1SVR430841R1400 | 120.96 |
| CM-SRS.11 | 1SVR430840R0500 | 141.72 |
| CM-SRS.11 | 1SVR430841R0500 | 120.96 |
| CM-SRS.11 | 1SVR430841R1500 | 120.96 |
| CM-SRS.11 | 1SVR430840R0600 | 153.46 |
| CM-SRS.11 | 1SVR430840R0700 | 153.46 |
| CM-SRS.11 | 1SVR430760R0400 | 153.46 |
| CM-SRS.11 | 1SVR430760R0500 | 153.46 |
| CM-SRS.11 | 1SVR430830R0300 | 130.00 |
| CM-SRS.11 | 1SVR430831R0300 | POA    |
| CM-SRS.11 | 1SVR430831R1300 | 109.22 |
| CM-SRS.11 | 1SVR430830R0400 | 141.72 |
| CM-SRS.11 | 1SVR430831R0400 | POA    |
| CM-SRS.11 | 1SVR430831R1400 | 120.96 |
| CM-SRS.11 | 1SVR430830R0500 | 153.46 |
| CM-SRS.11 | 1SVR430750R0400 | 153.46 |

|                                          |   |   |   |   |   |   |   |     |     |     |     |     |     |     |     |     |     |     |             |
|------------------------------------------|---|---|---|---|---|---|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------------|
| 5 - 50 ITPA                              | ■ | ■ | ■ |   | ■ | ■ | ■ |     | ■   | ■   |     | ■   | ■   |     |     |     |     |     |             |
| 10 - 100 mA                              | ■ | ■ | ■ |   | ■ | ■ | ■ |     | ■   | ■   |     | ■   | ■   |     |     |     |     |     |             |
| 0.1 - 1 A                                | ■ | ■ | ■ |   | ■ | ■ | ■ |     | ■   | ■   |     | ■   | ■   |     |     |     |     |     |             |
| 0.3 - 1.5 A                              |   |   |   | ■ | ■ | ■ | ■ |     |     |     | ■   | ■   | ■   |     |     |     |     |     |             |
| 1 - 5 A                                  |   |   |   | ■ | ■ | ■ | ■ |     |     |     | ■   | ■   | ■   |     |     |     |     |     |             |
| 3 - 15 A                                 |   |   |   | ■ | ■ | ■ | ■ |     |     |     | ■   | ■   | ■   |     |     |     |     |     |             |
| 3 - 30 V                                 |   |   |   |   |   |   |   |     |     |     |     |     |     | ■   | ■   | ■   | ■   | ■   | ■           |
| 6 - 60 V                                 |   |   |   |   |   |   |   |     |     |     |     |     |     | ■   | ■   | ■   | ■   | ■   | ■           |
| 30 - 300 V                               |   |   |   |   |   |   |   |     |     |     |     |     |     | ■   | ■   | ■   | ■   | ■   | ■           |
| 60 - 600 V                               |   |   |   |   |   |   |   |     |     |     |     |     |     | ■   | ■   | ■   | ■   | ■   | ■           |
| Monitoring function                      |   |   |   |   |   |   |   |     |     |     |     |     |     |     |     |     |     |     |             |
| Over- or undercurrent                    | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■   | ■   | ■   | ■   | ■   | ■   |     |     |     |     |     |             |
| Windows current monitoring               |   |   |   |   |   |   |   |     |     |     |     |     |     | ■   | ■   |     |     |     |             |
| Over- or undervoltage                    |   |   |   |   |   |   |   |     |     |     |     |     |     |     |     | ■   | ■   | ■   | ■           |
| Windows voltage monitoring               |   |   |   |   |   |   |   |     |     |     |     |     |     |     |     |     |     |     | ■           |
| Features                                 |   |   |   |   |   |   |   |     |     |     |     |     |     |     |     |     |     |     |             |
| Latching                                 |   |   |   |   |   |   |   |     |     |     |     |     |     | sel | sel | sel | sel |     | sel sel     |
| Open circuit or closed circuit principle |   |   |   |   |   |   |   |     |     |     |     |     |     | sel | sel | sel | sel |     | sel sel     |
| Timing functions for tripping delay      |   |   |   |   |   |   |   |     |     |     |     |     |     |     |     |     |     |     |             |
| ON delay, 0 or 0,1 - 30 s                |   |   |   |   |   |   |   | adj | adj | adj | adj | adj | adj |     |     |     |     | adj | adj adj adj |
| ON or OFF delay                          |   |   |   |   |   |   |   |     |     |     |     |     |     |     |     | sel | sel |     | sel         |
| Output                                   |   |   |   |   |   |   |   |     |     |     |     |     |     |     |     |     |     |     |             |
| c/o contact                              | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1   | 1   | 1   | 1   | 1   | 2   | 2   | 2   | 2   | 1   | 1   | 1 2 2 2 2 2 |



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# Measuring & monitoring relays

## Three phase monitors

1



CM-PBE

| Type   | Order Code      | Price  |
|--------|-----------------|--------|
| CM-PBE | 1SVR550881R9400 | 44.10  |
| CM-PBE | 1SVR550882R9500 | 44.10  |
| CM-PBE | 1SVR550870R9400 | 47.66  |
| CM-PBE | 1SVR550871R9500 | 43.27  |
| CM-PBE | 1SVR550824R9100 | 47.66  |
| CM-PBE | 1SVR430824R9300 | 62.12  |
| CM-PBE | 1SVR630784R2300 | 108.19 |
| CM-PBE | 1SVR630784R3300 | 108.19 |
| CM-PBE | 1SVR630794R1300 | 135.69 |
| CM-PBE | 1SVR630794R3300 | 135.69 |
| CM-PBE | 1SVR630774R1300 | 129.03 |
| CM-PBE | 1SVR630774R3300 | 129.03 |
| CM-PBE | 1SVR630885R1300 | 144.82 |
| CM-PBE | 1SVR630885R3300 | 144.82 |
| CM-PBE | 1SVR630884R1300 | 138.17 |
| CM-PBE | 1SVR630884R3300 | 138.17 |
| CM-PBE | 1SVR630885R4300 | 171.45 |
| CM-PBE | 1SVR630884R4300 | 164.80 |
| CM-PBE | 1SVR650487R8300 | 187.27 |
| CM-PBE | 1SVR650488R8300 | 187.27 |
| CM-PBE | 1SVR650489R8300 | 187.27 |
| CM-PBE | 1SVR630736R0300 | POA    |
| CM-PBE | 1SVR630736R1300 | 261.05 |

### Rated control supply voltage $U_c$

#### Phase to phase

|                |  |  |  |   |  |  |  |   |   |  |   |  |  |  |   |   |  |  |  |  |  |   |  |   |
|----------------|--|--|--|---|--|--|--|---|---|--|---|--|--|--|---|---|--|--|--|--|--|---|--|---|
| 160 - 300 V AC |  |  |  |   |  |  |  |   |   |  | ■ |  |  |  |   |   |  |  |  |  |  |   |  |   |
| 200 - 500 V AC |  |  |  |   |  |  |  | ■ |   |  |   |  |  |  |   |   |  |  |  |  |  |   |  |   |
| 208 - 440 V AC |  |  |  |   |  |  |  |   | ■ |  |   |  |  |  |   |   |  |  |  |  |  |   |  |   |
| 300 - 500 V AC |  |  |  |   |  |  |  |   |   |  |   |  |  |  | ■ |   |  |  |  |  |  | ■ |  |   |
| 320 - 460 V AC |  |  |  |   |  |  |  |   |   |  |   |  |  |  |   | ■ |  |  |  |  |  |   |  |   |
| 350 - 580 V AC |  |  |  |   |  |  |  |   |   |  |   |  |  |  |   |   |  |  |  |  |  |   |  |   |
| 380 V AC       |  |  |  |   |  |  |  |   |   |  |   |  |  |  |   |   |  |  |  |  |  |   |  |   |
| 380 - 440 V AC |  |  |  | ■ |  |  |  |   |   |  |   |  |  |  |   |   |  |  |  |  |  |   |  |   |
| 400 V AC       |  |  |  |   |  |  |  |   |   |  |   |  |  |  |   |   |  |  |  |  |  |   |  |   |
| 450 - 720 V AC |  |  |  |   |  |  |  |   |   |  |   |  |  |  |   |   |  |  |  |  |  |   |  | ■ |
| 530 - 820 V AC |  |  |  |   |  |  |  |   |   |  |   |  |  |  |   |   |  |  |  |  |  |   |  | ■ |

#### Phase to neutral

|                |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
|----------------|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| 90 - 170 V AC  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 180 - 280 V AC |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 185 - 265 V AC |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 220 - 240 V AC |  |  |  | ■ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |   |
| 230 V AC       |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ■ |

### Rated frequency

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50Hz         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | ■ | ■ |
| 50/60 Hz     | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 50/60/400 Hz |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | ■ |

### Suitable for monitoring

|                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single-phase mains | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Three-phase mains  | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

### Monitoring function

|                                     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Phase failure                       | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | fix | fix |
| Phase sequence                      |     |     |     |     | ■   | ■   | sel | sel | sel | sel | ■   | ■   | sel |     |     |
| Automatic phase sequence correction |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| Overvoltage                         |     |     | ■   | ■   |     |     | ■   | ■   | ■   | ■   |     |     | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | fix | fix |
| Undervoltage                        |     |     | ■   | ■   |     |     | ■   | ■   | ■   | ■   |     |     | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | fix | fix |
| Phase unbalance                     |     |     |     |     |     |     |     |     |     |     |     |     | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   |     |
| Neutral monitoring                  |     |     |     |     | ■   |     | ■   |     |     |     |     |     |     |     |     |     |     | ■   | ■   |     |     | ■   |     |     |     |
| Overfrequency                       |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | fix | fix |
| Underfrequency                      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     | fix | fix |
| Thresholds                          | fix | adj |     |

### Timing functions for tripping delay

|                  |     |     |     |     |     |     |  |  |  |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------|-----|-----|-----|-----|-----|-----|--|--|--|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|
| ON delay         |     |     |     |     |     | fix |  |  |  |     |     | adj | adj |  |  |  |  |  |  |  |  |  |  |  |  |
| ON and OFF delay | fix | fix | fix | fix | fix |     |  |  |  |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |
| ON or OFF delay  |     |     |     |     |     |     |  |  |  | adj | adj | adj | adj |  |  |  |  |  |  |  |  |  |  |  |  |

### Output

|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| n/o contact | 1 | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| c/o contact |   |   |   |   | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

# Measuring & monitoring relays Insulation & motor load monitors



CM-IWS

| Type     | Order Code      | Price  |
|----------|-----------------|--------|
| CM-IWS.2 | 1SVR630670R0200 | 134.57 |
| CM-IWS.1 | 1SVR630660R0100 | 192.10 |
| CM-IWN.1 | 1SVR650660R0200 | 417.86 |
| CM-IVN   | 1SVR650669R9400 | 241.34 |



CM-LWN

| Type   | Order Code      | Price  |
|--------|-----------------|--------|
| CM-LWN | 1SVR450335R0000 | 150.11 |
| CM-LWN | 1SVR450330R0000 | 130.38 |
| CM-LWN | 1SVR450331R0000 | POA    |
| CM-LWN | 1SVR450332R0000 | 130.38 |
| CM-LWN | 1SVR450334R0000 | POA    |
| CM-LWN | 1SVR450335R0100 | 159.13 |
| CM-LWN | 1SVR450330R0100 | POA    |
| CM-LWN | 1SVR450331R0100 | 139.40 |
| CM-LWN | 1SVR450332R0100 | 139.40 |
| CM-LWN | 1SVR450334R0100 | POA    |

## Rated control supply voltage $U_c$

|                 |   |   |   |  |
|-----------------|---|---|---|--|
| 24 - 240 VAC/DC | ■ | ■ | ■ |  |
|-----------------|---|---|---|--|

## Measuring voltages

|                 |   |   |   |   |
|-----------------|---|---|---|---|
| 250 V AC (L-PE) | ■ |   |   |   |
| 400 V AC (L-PE) |   | ■ | ■ |   |
| 690 V AC        |   |   |   | ■ |
| 300 V DC (L-PE) |   | ■ |   |   |
| 600 V DC (L-PE) |   |   | ■ |   |
| 1000 V DC       |   |   |   | ■ |

## Measuring range

|                    |   |   |   |   |
|--------------------|---|---|---|---|
| 1 - 100 k $\Omega$ | ■ | ■ | ■ |   |
| 2 - 200 k $\Omega$ |   |   |   | ■ |

## Output contacts

|                        |   |   |  |   |
|------------------------|---|---|--|---|
| 1 c/o                  | ■ | ■ |  |   |
| 1 x 2 c/o or 2 x 1 c/o |   |   |  | ■ |

## Working principle

|                                     |   |   |  |   |
|-------------------------------------|---|---|--|---|
| open circuit principle              | ■ | ■ |  |   |
| open or closed principle adjustable |   |   |  | ■ |

## Test

|                                    |  |   |   |   |
|------------------------------------|--|---|---|---|
| Front face button or control input |  | ■ | ■ | ■ |
|------------------------------------|--|---|---|---|

## Reset

|                                       |   |   |   |                 |
|---------------------------------------|---|---|---|-----------------|
| Front face button or control input    |   | ■ | ■ | ■               |
| Fault storage / latching configurable | ■ | ■ | ■ |                 |
| Non voltage storage configurable      |   |   |   | ■               |
| Interrupted wire detection            |   |   |   | fix : sel       |
| Threshold values configurable         | 1 | 1 | 2 |                 |
| Coupling unit                         |   |   |   | Yes<br>CM-IWN.1 |

## Rated control supply voltage $U_c$

|                |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 24-240 V AC/DC | ■ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

## 110 - 130 V AC

|  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  | ■ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

## 220 - 240 V AC

|  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  | ■ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

## 380 - 440 V AC

|  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  | ■ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

## 480 - 500 V AC

|  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  | ■ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

## Voltage range (Phase to phase)

|            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 110- 500 V | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
|------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Current range

|           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.5 - 5 A | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| 2 - 20 A  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

## Frequency range

|                   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50/60 Hz          |  | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| DC or 15 - 400 Hz |  | ■ |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

## Suitable for monitoring

|                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Single-phase mains | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Three-phase mains  | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

## Monitoring function

|                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Motor load // cos Phi | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

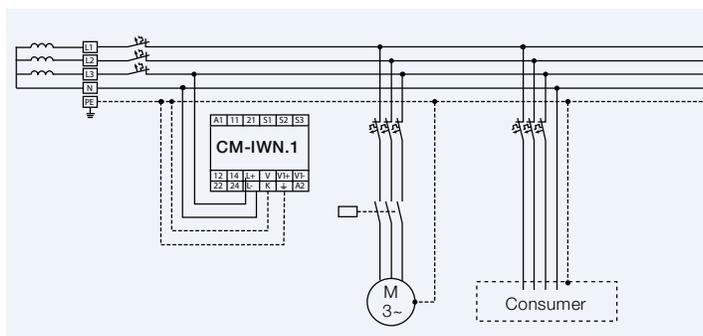
## Timing functions

|                           |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Start up delay (on delay) | adj |
| Response delay            | adj |

## Output contacts

|           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 x 1 c/o | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## Insulation monitors for unearthed supply systems (IT-Systems)



# Measuring & monitoring relays

## Motor protection - Thermistor relays

1



CM-MSE

| Type   | Order Code      | Price  |
|--------|-----------------|--------|
| CM-MSE | 1SVR50806R9300  | 37.78  |
| CM-MSE | 1SVR50800R9300  | 37.78  |
| CM-MSE | 1SVR50801R9300  | 37.78  |
| CM-MSE | 1SVR430800R9100 | 43.23  |
| CM-MSE | 1SVR430801R1100 | 43.23  |
| CM-MSE | 1SVR430810R9300 | 46.79  |
| CM-MSE | 1SVR430811R9300 | 46.79  |
| CM-MSE | 1SVR430811R0300 | 46.79  |
| CM-MSE | 1SVR430811R1300 | 46.79  |
| CM-MSE | 1SVR430710R9300 | 49.52  |
| CM-MSE | 1SVR430711R0300 | 49.52  |
| CM-MSE | 1SVR430711R1300 | 49.52  |
| CM-MSE | 1SVR430711R2300 | 56.68  |
| CM-MSE | 1SVR430720R0400 | 82.73  |
| CM-MSE | 1SVR430720R0300 | 87.62  |
| CM-MSE | 1SVR430710R0200 | 107.90 |
| CM-MSE | 1SVR430720R0500 | 117.77 |
| CM-MSE | 1SVR450025R0100 | 161.84 |

### Rated control supply voltage $U_c$

|                  |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
|------------------|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|--|
| 24 - 240 V AC/DC |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  | ■ | ■ | ■ | ■ | ■ |  |
| 24 V AC/DC       |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| 24 V AC          | ■ |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| 110 - 130 V AC   |   | ■ |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| 220 - 240 V AC   |   |   | ■ |   |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |
| 380 - 440 V AC   |   |   |   | ■ |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |   |   |   |  |

### Rated frequency

|             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 50/60 Hz    | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |   |
| 15 - 400 Hz |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | ■ | ■ | ■ |

### Measuring Circuits

|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|
| No of measuring/sensor circuits | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 6 |  |  |  |  |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|

### Monitoring Functions

|                            |   |   |   |   |   |   |     |     |     |     |     |     |     |     |     |   |   |   |   |   |   |   |
|----------------------------|---|---|---|---|---|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|---|---|---|---|---|---|
| Wire break monitoring      | ■ | ■ | ■ | ■ | ■ | ■ | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Short circuit detection    |   |   |   |   |   |   |     |     |     |     |     |     |     |     |     |   |   |   |   |   |   |   |
| Non-volatile fault storage |   |   |   |   |   |   | sel | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Auto reset                 | ■ | ■ | ■ | ■ | ■ | ■ | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Manual reset               |   |   |   |   |   |   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Remote reset               |   |   |   |   |   |   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■   | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Test button                |   |   |   |   |   |   |     |     |     |     |     |     |     |     |     |   |   | ■ | ■ | ■ | ■ | ■ |

### Output contacts

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 c/o         |   |   |   | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 1 n/o         | 1 | 1 | 1 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2 c/o         |   |   |   |   |   | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1 n/o + 1 n/c |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1 |   |   |   | 1 |

### Temperature sensor C011, standard version acc. to DIN 44081

| Type     | Rated response temperature $T_{NF}$ | Color coding | Order Code      | Price |
|----------|-------------------------------------|--------------|-----------------|-------|
| C011-70  | 70 °C                               | white-brown  | GHC0110003R0001 |       |
| C011-80  | 80 °C                               | white-white  | GHC0110003R0002 |       |
| C011-90  | 90 °C                               | green-green  | GHC0110003R0003 |       |
| C011-100 | 100 °C                              | red-red      | GHC0110003R0004 |       |
| C011-110 | 110 °C                              | brown-brown  | GHC0110003R0005 |       |
| C011-120 | 120 °C                              | gray-gray    | GHC0110003R0006 |       |
| C011-130 | 130 °C                              | blue-blue    | GHC0110003R0007 |       |
| C011-140 | 140 °C                              | white-blue   | GHC0110003R0011 |       |
| C011-150 | 150 °C                              | black-black  | GHC0110003R0008 |       |
| C011-160 | 160 °C                              | blue-red     | GHC0110003R0009 |       |
| C011-170 | 170 °C                              | white-green  | GHC0110003R0010 |       |

### Triple temperature sensor C011-3

| Type       | Rated response temperature $T_{NF}$ | Color coding | Order Code      | Price |
|------------|-------------------------------------|--------------|-----------------|-------|
| C011-3-150 | 150 °C                              | black-black  | GHC0110033R0008 |       |

# Measuring & monitoring relays

## Liquid level monitoring



CM-ENE MIN

| Type           | Order Code      | Price  |
|----------------|-----------------|--------|
| CM-ENE MIN     | 1SVR550855R9500 | 44.70  |
| CM-ENE MIN     | 1SVR550850R9500 | 44.70  |
| CM-ENE MIN     | 1SVR550851R9500 | 44.70  |
| CM-ENE MAX     | 1SVR550855R9400 | POA    |
| CM-ENE MAX     | 1SVR550855R9400 | POA    |
| CM-ENE MAX     | 1SVR550851R9400 | 44.94  |
| CM-ENS         | 1SVR430851R9100 | 59.40  |
| CM-ENS         | 1SVR430851R0100 | 59.40  |
| CM-ENS         | 1SVR430851R1100 | 59.40  |
| CM-ENS         | 1SVR430851R2100 | 65.87  |
| CM-ENS UP/DOWN | 1SVR430851R9200 | 64.71  |
| CM-ENS UP/DOWN | 1SVR430851R0200 | 64.71  |
| CM-ENS UP/DOWN | 1SVR430851R1200 | 64.71  |
| CM-ENN         | 1SVR450055R0000 | 112.32 |
| CM-ENN         | 1SVR450059R0000 | 91.85  |
| CM-ENN         | 1SVR450050R0000 | 88.05  |
| CM-ENN         | 1SVR450051R0000 | 91.85  |
| CM-ENN         | 1SVR450052R0000 | 99.24  |
| CM-ENN UP/DOWN | 1SVR450059R0100 | POA    |
| CM-ENN UP/DOWN | 1SVR450050R0100 | 119.75 |
| CM-ENN UP/DOWN | 1SVR450051R0100 | 125.36 |
| CM-ENN UP/DOWN | 1SVR450052R0100 | 126.30 |

1

### Rated control supply voltage $U_s$

|                  |   |   |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |
|------------------|---|---|---|--|--|--|--|---|--|--|--|--|--|--|--|--|--|--|--|
| 24 - 240 V AC/DC |   |   |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |
| 24 V AC          | ■ |   |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |
| 110 - 130 V AC   |   | ■ |   |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |
| 220 - 240 V AC   |   |   | ■ |  |  |  |  |   |  |  |  |  |  |  |  |  |  |  |  |
| 380 - 415 V AC   |   |   |   |  |  |  |  | ■ |  |  |  |  |  |  |  |  |  |  |  |

### Sensor circuits

|                                               |  |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------------------------------------|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No of electrodes (including ground reference) |  |  | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 | 5 |
|-----------------------------------------------|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

### Response sensitivity

|                  |   |   |   |   |   |   |  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|------------------|---|---|---|---|---|---|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0 - 100 kOhm     | ■ | ■ | ■ | ■ | ■ | ■ |  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 5 - 100 kOhm     |   |   |   |   |   |   |  | adj | adj | adj | adj | adj | adj |     |     |     |     | adj | adj | adj | adj |
| 250 Ohm - 5 kOhm |   |   |   |   |   |   |  |     |     |     |     |     |     | adj | adj | adj | adj | adj |     |     |     |
| 2,5 - 50 kOhm    |   |   |   |   |   |   |  |     |     |     |     |     |     | adj | adj | adj | adj | adj |     |     |     |
| 25 - 500 kOhm    |   |   |   |   |   |   |  |     |     |     |     |     |     | adj | adj | adj | adj | adj |     |     |     |

### Monitoring function

|                        |   |   |   |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dry-running protection | ■ | ■ | ■ |   |   |   |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Overflow protection    |   |   |   | ■ | ■ | ■ |  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Liquide level control  |   |   |   |   |   |   |  | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

### Operating principle

|                                  |   |   |   |   |   |   |   |   |   |   |     |     |     |   |   |   |   |     |     |     |     |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|-----|-----|-----|---|---|---|---|-----|-----|-----|-----|
| Open circuit principle           | ■ | ■ | ■ |   |   |   | ■ | ■ | ■ | ■ |     |     |     | ■ | ■ | ■ | ■ | ■   |     |     |     |
| Closed circuit principle         |   |   |   | ■ | ■ | ■ |   |   |   |   |     |     |     |   |   |   |   |     |     |     |     |
| Open or closed circuit principle |   |   |   |   |   |   |   |   |   |   | sel | sel | sel |   |   |   |   | sel | sel | sel | sel |

### Output contacts

|     |   |   |   |   |   |   |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |
|-----|---|---|---|---|---|---|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|
| n/o | 1 | 1 | 1 | 1 | 1 | 1 |  |  |  |  |   |   |   |   |   |   |   |   |   |   |   |   |
| n/c |   |   |   |   |   |   |  |  |  |  |   |   |   |   |   |   |   |   | 2 | 2 | 2 | 2 |
| c/o |   |   |   |   |   |   |  |  |  |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |   |

### Accessories – electrodes

| Type    | Description                          | Order Code      | Price |
|---------|--------------------------------------|-----------------|-------|
| CM-KH-3 | Compact support for 3 bar electrodes | 1SVR450056R6000 |       |
| CM-AH-3 | Distance plate for 3 bar electrodes  | 1SVR450056R7000 |       |
| CM-GM-1 | Counter nut for 1" thread            | 1SVR450056R8000 |       |

### Screw-in bar electrodes / Suspension electrode

|            |         |                 |  |
|------------|---------|-----------------|--|
| CM-SE-300  | 300 mm  | 1SVR450056R0000 |  |
| CM-SE-600  | 600 mm  | 1SVR450056R0100 |  |
| CM-SE-1000 | 1000 mm | 1SVR450056R0200 |  |

# Measuring & monitoring

## Accessories

1



CM-CT

### Plug-in current transformers CM-CT

- Without primary conductor though with foot angle, insulating protective cap and bar fastening screws
- Primary / rated current from 50 A to 600 A
- Secondary current of 1 A or 5 A
- Class 1

#### Secondary current 1 A

| Type        | Rated primary current | Burden class | Order Code      | Price |
|-------------|-----------------------|--------------|-----------------|-------|
| CM-CT 50/1  | 50 A                  | 1 VA/1       | 1SVR450116R1000 |       |
| CM-CT 75/1  | 75 A                  | 1.5 VA/1     | 1SVR450116R1100 |       |
| CM-CT 100/1 | 100 A                 | 2.5 VA/1     | 1SVR450116R1200 |       |
| CM-CT 150/1 | 150 A                 |              | 1SVR450116R1300 |       |
| CM-CT 200/1 | 200 A                 |              | 1SVR450116R1400 |       |
| CM-CT 300/1 | 300 A                 | 5 VA/1       | 1SVR450117R1100 |       |
| CM-CT 400/1 | 400 A                 |              | 1SVR450117R1200 |       |
| CM-CT 500/1 | 500 A                 |              | 1SVR450117R1300 |       |
| CM-CT 600/1 | 600 A                 |              | 1SVR450117R1400 |       |

#### Sealable transparent cover

| Type   | For type | Width mm | Order Code      | Price |
|--------|----------|----------|-----------------|-------|
| COV.01 | CM-S     | 22.5     | 1SVR430005R0100 |       |



Full range of product and technical information place this part number in a search engine and download

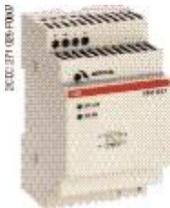
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# Primary switch mode power supplies

## CP-D and CP-E



CP-D 12/0.83,  
CP-D 24/0.42



CP-D 24/2.1  
CP-D 24/1.3



CP-E 5/3.0



CP-E 24/5.0



CP-RUD



Full range of product and technical information place this part number in a search engine and download  
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### CP-D range

| Type         | Input voltage range       | Rated output voltage / current | Order Code      | Price |
|--------------|---------------------------|--------------------------------|-----------------|-------|
| CP-D 12/0.83 | 90-264 V AC/ 120-370 V DC | 12 V DC /0.83 A                | 1SVR427041R1000 |       |
| CP-D 12/2.1  | 90-264 V AC/ 120-370 V DC | 12 V DC /2.1 A                 | 1SVR427043R1200 |       |

|              |                           |                 |                 |  |
|--------------|---------------------------|-----------------|-----------------|--|
| CP-D 24/0.42 | 90-264 V AC/ 120-370 V DC | 24 V DC /0.42 A | 1SVR427041R0000 |  |
| CP-D 24/1.3  | 90-264 V AC/ 120-370 V DC | 24 V DC /1.3 A  | 1SVR427043R0100 |  |
| CP-D 24/2.5  | 90-264 V AC/ 120-370 V DC | 24 V DC /2.5 A  | 1SVR427044R0200 |  |
| CP-D 24/4.2  | 90-264 V AC/ 120-370 V DC | 24 V DC /4.2 A  | 1SVR427045R0400 |  |

### CP-E range

| Type       | Input voltage range       | Rated output voltage / current | Order Code      | Price |
|------------|---------------------------|--------------------------------|-----------------|-------|
| CP-E 5/3.0 | 90-265 V AC/ 120-370 V DC | 5 V DC /3 A                    | 1SVR427033R3000 |       |

|              |                                            |                |                 |  |
|--------------|--------------------------------------------|----------------|-----------------|--|
| CP-E 12/2.5  | 85-264 V AC/ 90-375 V DC                   | 12 V DC /2.5 A | 1SVR427032R1000 |  |
| CP-E 12/10.0 | 90-132 V AC,<br>186-264 V AC/ 210-370 V DC | 12 V DC /10 A  | 1SVR427035R1000 |  |

|              |                                            |                 |                 |  |
|--------------|--------------------------------------------|-----------------|-----------------|--|
| CP-E 24/0.75 | 90-265 V AC/ 120-370 V DC                  | 24 V DC /0.75 A | 1SVR427030R0000 |  |
| CP-E 24/1.25 | 85-264 V AC/ 90-375 V DC                   | 24 V DC /1.25 A | 1SVR427031R0000 |  |
| CP-E 24/2.5  | 85-264 V AC/ 90-375 V DC                   | 24 V DC /2.5 A  | 1SVR427032R0000 |  |
| CP-E 24/5.0  | 90-132 V AC,<br>186-264 V AC/ 210-370 V DC | 24 V DC /5 A    | 1SVR427034R0000 |  |
| CP-E 24/10.0 | 93-132 V AC,<br>186-264 V AC/ 210-370 V DC | 24 V DC /10 A   | 1SVR427035R0000 |  |
| CP-E 24/20.0 | 90-264 V AC/ 120-370 V DC                  | 24 V DC /20 A   | 1SVR427036R0000 |  |

|              |                                            |                   |                 |  |
|--------------|--------------------------------------------|-------------------|-----------------|--|
| CP-E 48/0.62 | 85-264 V AC/ 90-375 V DC                   | 48 V DC / 0.625 A | 1SVR427030R2000 |  |
| CP-E 48/1.25 | 85-264 V AC/ 90-375 V DC                   | 48 V DC /1.25 A   | 1SVR427031R2000 |  |
| CP-E 48/5.0  | 93-132 V AC,<br>186-264 V AC/ 210-370 V DC | 48 V DC /5 A      | 1SVR427034R2000 |  |
| CP-E 48/10.0 | 90-264 V AC/ 120-370 V DC                  | 48 V DC /10 A     | 1SVR427035R2000 |  |

### Redundancy units

for decoupling of two CP-E power supply units

| Type | Suitable for decoupling of CP-E power supply units | Order Code | Price |
|------|----------------------------------------------------|------------|-------|
|------|----------------------------------------------------|------------|-------|

CP-RUD: 2 inputs each up to 2.5 A and 1 output up to 5 A

|        |                  |                 |  |
|--------|------------------|-----------------|--|
| CP-RUD | < 35 V and < 5 A | 1SVR423418R9000 |  |
|--------|------------------|-----------------|--|

CP-A RU: 2 inputs each up to 20 A and 1 output up to 40 A

|         |                  |                 |  |
|---------|------------------|-----------------|--|
| CP-A RU | < 40 V and > 5 A | 1SVR427071R0000 |  |
|---------|------------------|-----------------|--|

# Primary switch mode power supplies

## CP-T, CP-S and CP-C

1



CP-T 24/5.0



CP-T 24/10.0  
CP-T 48/5.0



CP-A RU



CP-S 24/5.0



CP-C 24/10.0



CP-A CM



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### CP-T range

| Type         | Three Phase Input voltage range | Rated output voltage / current | Order Code      | Price |
|--------------|---------------------------------|--------------------------------|-----------------|-------|
| CP-T 24/5.0  | 340-575 V AC/ 480-820 V DC      | 24 V DC /5 A                   | 1SVR427054R0000 |       |
| CP-T 24/10.0 | 340-575 V AC/ 480-820 V DC      | 24 V DC /10 A                  | 1SVR427055R0000 |       |
| CP-T 24/20.0 | 340-575 V AC/ 480-820 V DC      | 24 V DC /20 A                  | 1SVR427056R0000 |       |
| CP-T 24/40.0 | 340-575 V AC/ 480-820 V DC      | 24 V DC /40 A                  | 1SVR427057R0000 |       |
| CP-T 48/5.0  | 340-575 V AC/480-820 V DC       | 48 V DC /5 A                   | 1SVR427054R2000 |       |
| CP-T 48/10.0 | 340-575 V AC/ 480-820 V DC      | 48 V DC /10 A                  | 1SVR427055R2000 |       |
| CP-T 48/20.0 | 340-575 V AC/ 480-820 V DC      | 48 V DC /20 A                  | 1SVR427056R2000 |       |

| Type              | Input voltage range                        | Rated output voltage / current | Order Code      |  |
|-------------------|--------------------------------------------|--------------------------------|-----------------|--|
| <b>CP-S range</b> |                                            |                                |                 |  |
| CP-S 24/5.0       | 85-264 V AC/ 110-350 V DC                  | 24 V DC /5 A                   | 1SVR427014R0000 |  |
| CP-S 24/10.0      | 85-132 V AC,<br>184-264 V AC/ 220-350 V DC | 24 V DC /10 A                  | 1SVR427015R0100 |  |
| CP-S 24/20.0      | 85-132 V AC,<br>184-264 V AC/ 220-350 V DC | 24 V DC / 20 A                 | 1SVR427016R0100 |  |

### CP-C range

|              |                           |                |                 |  |
|--------------|---------------------------|----------------|-----------------|--|
| CP-C 24/5.0  | 85-264 V AC/ 110-350 V DC | 24 V DC /5 A   | 1SVR427024R0000 |  |
| CP-C 24/10.0 | 85-264 V AC/ 110-350 V DC | 24 V DC /10 A  | 1SVR427025R0000 |  |
| CP-C 24/20.0 | 85-264 V AC/ 110-350 V DC | 24 V DC / 20 A | 1SVR427026R0000 |  |

### Accessories

| Type                              | Description      | Order Code      |  |
|-----------------------------------|------------------|-----------------|--|
| <b>Accessories for CP-C range</b> |                  |                 |  |
| CP-C MM                           | Messaging module | 1SVR427081R0000 |  |
| CP-A CM                           | Control module   | 1SVR427075R0000 |  |

### Redundancy unit

| Type    | Suitable for decoupling CP-T, CP-S, CP-E, CP-C   | Order Code      |  |
|---------|--------------------------------------------------|-----------------|--|
| CP-A-RU | 2 inputs each up to 20 A and 1 output up to 40 A | 1SVR427071R0000 |  |

# Ultra capacitor based buffer modules

## CP-B

1

Product selection table

|                                                   |       | CP-B 24/3.0     | CP-B 24/10.0    | CP-B 24/20.0    | CP-B EXT.2      |
|---------------------------------------------------|-------|-----------------|-----------------|-----------------|-----------------|
| Order Code                                        |       | 1SVR427060R0300 | 1SVR427060R1000 | 1SVR427060R2000 | 1SVR427065R0000 |
| Price                                             |       |                 |                 |                 |                 |
| Rated input voltage                               |       | 24 V DC         | 24 V DC         | 24 V DC         | –               |
| Rated current                                     |       | 3 A DC          | 10 A DC         | 20 A DC         | –               |
| Energy storage (min.)                             |       | 1.000 Ws        | 10.000 Ws       | 8.000 Ws        | 2.000 Ws        |
| Typical charging time at load current             | 100 % | 65 s            | 120 s           | 68 s            |                 |
|                                                   | 0 %   | 56 s            | 82 s            | 62 s            |                 |
| Typical buffer time <sup>1)</sup> at load current | 100 % | 14 s            | 40 s            | 15 s            |                 |
|                                                   | 50 %  | 28 s            | 80 s            | 30 s            |                 |
|                                                   | 25 %  | 74 s            | 140 s           | 60 s            |                 |
|                                                   | 10 %  | 148 s           | 380 s           | 150 s           |                 |

### Dimensions

|        | CP-B 24/3.0 | CP-B 24/10.0 | CP-B 24/20.0 | CP-B EXT.2 |
|--------|-------------|--------------|--------------|------------|
| Width  | 60.00 mm    | 127.00 mm    | 84.00 mm     | 60.00 mm   |
| Height | 92.50 mm    | 163.00 mm    | 192.00 mm    | 92.50 mm   |
| Depth  | 116.00 mm   | 150.00 mm    | 198.00 mm    | 116.00 mm  |

$${}^1) \text{ buffering time} = \frac{\text{energy storage} \times 0.9}{\text{current} \times \text{output voltage}}$$



CP-B 24/3.0



CP-B 24/10.0

| Type              | Rated input voltage | Rated current | Order Code      | Price |
|-------------------|---------------------|---------------|-----------------|-------|
| <b>CP-B range</b> |                     |               |                 |       |
| CP-B 24/3.0       | 24 V DC             | 3 A DC        | 1SVR427060R0300 |       |
| CP-B 24/10.0      | 24 V DC             | 10 A DC       | 1SVR427060R1000 |       |
| CP-B 24/20.0      | 24 V DC             | 20 A DC       | 1SVR427060R2000 |       |
| CP-B EXT.2        | –                   | –             | 1SVR427060R2000 |       |



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# Analog standard signal converters

## Application, approvals & marks

1

### Applications for analog signal processing and correct solution using CC-E and CC-U converters

Nearly every process includes a control system that receives data by means of analog signals and then evaluates the data and sets the respective parameters correspondingly.

When transmitting analog signals numerous problems may arise which can disturb or even block an ideal behavior of the process.

Below we have listed some processing problems together with the respective solutions to solve these problems:

#### Signal conversion

Sometimes the available signals cannot be processed by the controller or the actuator. In this case, signal converters are required to convert the input signal (or different input signals) to the desired output signal.

#### Signal amplification

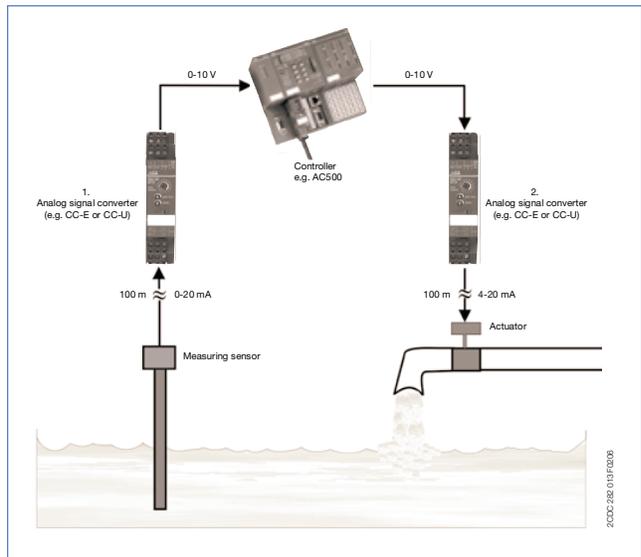
If long lines or high burdens have to be operated, it may be necessary to amplify the signal. CC analog signal converters require only low input power and provide high output power.

Thus, there are no restrictions for the converter's position on the line, i.e. it can be used

- for signal refreshing ① at the end of the line (low input power)
- or for signal amplification ② at the beginning of the line (high output power).

#### Signal filtering

Particularly on long lines or in rough industrial environments the signals are exposed to high electromagnetic interferences. The frequency of the coupled interference signals may be in the range of the common mains frequency (50 Hz) or even much higher (in case of frequency converters). According to the specific requirements, analog signal converters are available which provide reliable suppression of those interferences by means of an input low-pass filter.



#### Signal separation

##### Protection against overvoltage

The increased use of micro-electronics make controls much more sensitive against overvoltages, resulting from lightning discharges or switching processes. Suppression diodes are incorporated in the input of the CC analog signal converters which enable the converters to arrest overvoltages with low energy level (resulting from switching processes) by themselves. The products furthermore provide electrical isolation between input, output and supply circuit for protection of the controller connected to the output.

##### Protection against ground loops

If components are used which refer to ground, the measuring signals can be falsified by a so-called ground loop. In this case, certain parts of the signal are transmitted via earth and not via the analog transmission line, thus causing incorrect evaluation of the signal. The electrical isolation between the input and the output disconnects these ground loops and thus enables correct signal transmission.

| Approvals |                                                                     | CC-E/STD | CC-E/I | CC-U/STD | CC-U/STDR | CC-E/RTD | CC-U/RTD | CC-U/RTDR | CC-E/TC | CC-U/TC | CC-U/TCR | CC-E/I | CC-E <sub>AC</sub> /LPO | CC-U/I | CC-U/V | ■ existing<br>▲ existing for some devices<br>□ pending |
|-----------|---------------------------------------------------------------------|----------|--------|----------|-----------|----------|----------|-----------|---------|---------|----------|--------|-------------------------|--------|--------|--------------------------------------------------------|
|           | UL 508, CAN/CSA C22.2 No.14                                         | ■        | ■      | ■        | ■         | ■        | ■        | ■         | ■       | ■       | ■        | ■      | ■                       | ■      | ■      |                                                        |
|           | UL 1604 (Class I, Div 2, hazardous locations), CAN/CSA C22.2 No.213 | ▲        |        | ■        |           | ▲        | ■        |           | ▲       | ■       |          | ▲      |                         | ■      | ■      |                                                        |
|           | CB scheme                                                           |          |        |          | ■         |          |          | ■         |         |         | ■        |        |                         |        |        |                                                        |
|           | CCC                                                                 |          |        |          | ■         |          |          | ■         |         |         | ■        |        |                         |        |        |                                                        |
| Marks     |                                                                     |          |        |          |           |          |          |           |         |         |          |        |                         |        |        |                                                        |
|           | CE                                                                  | ■        | ■      | ■        | ■         | ■        | ■        | ■         | ■       | ■       | ■        | ■      | ■                       | ■      | ■      | ■                                                      |
|           | C-Tick                                                              | ■        | ■      | ■        | ■         | ■        | ■        | ■         | ■       | ■       | ■        | ■      | ■                       | ■      | ■      | ■                                                      |

# Analog standard signal converters

## CC-E/STD, CC-E x/x



**CC-E/STD**



**CC-E V/V**

- ① U: green LED - supply voltage
- ② Gain adjustment
- ③ Offset adjustment
- ④ DIP switch for input and output configuration (only available on universal devices)

<sup>1)</sup> 1604 Class I, Div.2 (universal device)

### CC-E/STD analog signal converter with 3-way electrical isolation

- 2 universally configurable devices (type CC-E/STD)
- 2x10 single-function devices "Plug and Work", no adjustment of single-function devices required

| Type                                     | Input signal                   | Output signal                  | Order Code                    | Price |
|------------------------------------------|--------------------------------|--------------------------------|-------------------------------|-------|
| <b>Supply voltage: 24 V DC universal</b> |                                |                                |                               |       |
| CC-E/STD                                 | 0-5 V, 0-10 V 0-20 mA, 4-20 mA | 0-5 V, 0-10 V 0-20 mA, 4-20 mA | 1SVR011700R0000 <sup>1)</sup> |       |

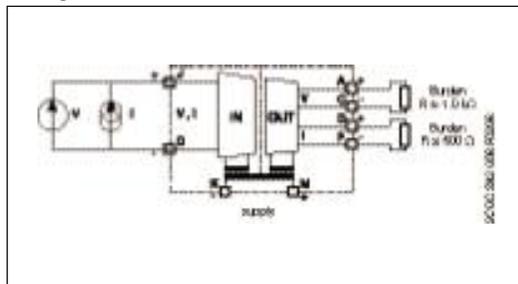
#### single-function

|          |              |              |                 |  |
|----------|--------------|--------------|-----------------|--|
| CC-E V/V | 0-10 V       | 0-10 V       | 1SVR011710R2100 |  |
| CC-E V/I |              | 0-20 mA      | 1SVR011711R1600 |  |
|          |              | 4-20 mA      | 1SVR011712R1700 |  |
| CC-E V/V | 0-20 mA      | 0-10 V       | 1SVR011713R1000 |  |
| CC-E V/I |              | 0-20 mA      | 1SVR011714R1100 |  |
|          |              | 4-20 mA      | 1SVR011715R1200 |  |
| CC-E V/V | 4-20 mA      | 0-10 V       | 1SVR011719R2600 |  |
| CC-E V/I |              | 0-20 mA      | 1SVR011719R2600 |  |
|          |              | 4-20 mA      | 1SVR011719R2600 |  |
| CC-E V/V | -10... +10 V | -10... +10 V | 1SVR011719R2600 |  |

#### Supply voltage: 110-240 V AC universal

|                        |                                |                                |                 |  |
|------------------------|--------------------------------|--------------------------------|-----------------|--|
| CC-E/STD               | 0-5 V, 0-10 V 0-20 mA, 4-20 mA | 0-5 V, 0-10 V 0-20 mA, 4-20 mA | 1SVR011705R2100 |  |
| <b>single-function</b> |                                |                                |                 |  |
| CC-E V/V               | 0-10 V                         | 0-10 V                         | 1SVR011720R2300 |  |
| CC-E V/I               |                                | 0-20 mA                        | 1SVR011721R1000 |  |
|                        |                                | 4-20 mA                        | 1SVR011722R1100 |  |
| CC-E V/V               | 0-20 mA                        | 0-10 V                         | 1SVR011723R1200 |  |
| CC-E V/I               |                                | 0-20 mA                        | 1SVR011724R1300 |  |
|                        |                                | 4-20 mA                        | 1SVR011725R1400 |  |
| CC-E V/V               | 4-20 mA                        | 0-10 V                         | 1SVR011726R1500 |  |
| CC-E V/I               |                                | 0-20 mA                        | 1SVR011727R1600 |  |
|                        |                                | 4-20 mA                        | 1SVR011728R2700 |  |
| CC-E V/V               | -10... +10 V                   | -10... +10 V                   | 1SVR011729R2000 |  |

### Wiring instruction



### DIP switch settings (universal devices)

| Input     | Output    | Supply    | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-----------|-----------|-----------|---|---|---|---|---|---|---|---|---|----|
| 0...5 V   | 0...10 V  | 0...10 V  |   |   |   |   |   |   |   |   |   |    |
|           | 0...20 mA | 0...20 mA |   |   |   |   |   |   |   |   |   |    |
|           | 4...20 mA | 4...20 mA |   |   |   |   |   |   |   |   |   |    |
| 0...10 V  | 0...10 V  | 0...10 V  |   |   |   |   |   |   |   |   |   |    |
|           | 0...20 mA | 0...20 mA |   |   |   |   |   |   |   |   |   |    |
|           | 4...20 mA | 4...20 mA |   |   |   |   |   |   |   |   |   |    |
| 0...20 mA | 0...10 V  | 0...10 V  |   |   |   |   |   |   |   |   |   |    |
|           | 0...20 mA | 0...20 mA |   |   |   |   |   |   |   |   |   |    |
|           | 4...20 mA | 4...20 mA |   |   |   |   |   |   |   |   |   |    |
| 4...20 mA | 0...5 V   | 0...5 V   |   |   |   |   |   |   |   |   |   |    |
|           | 0...10 V  | 0...10 V  |   |   |   |   |   |   |   |   |   |    |
|           | 0...20 mA | 0...20 mA |   |   |   |   |   |   |   |   |   |    |

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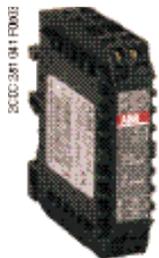
# Current/current isolator

## CC-E I/I-1 and CC-E I/I-2

1



CC-E I/I-1



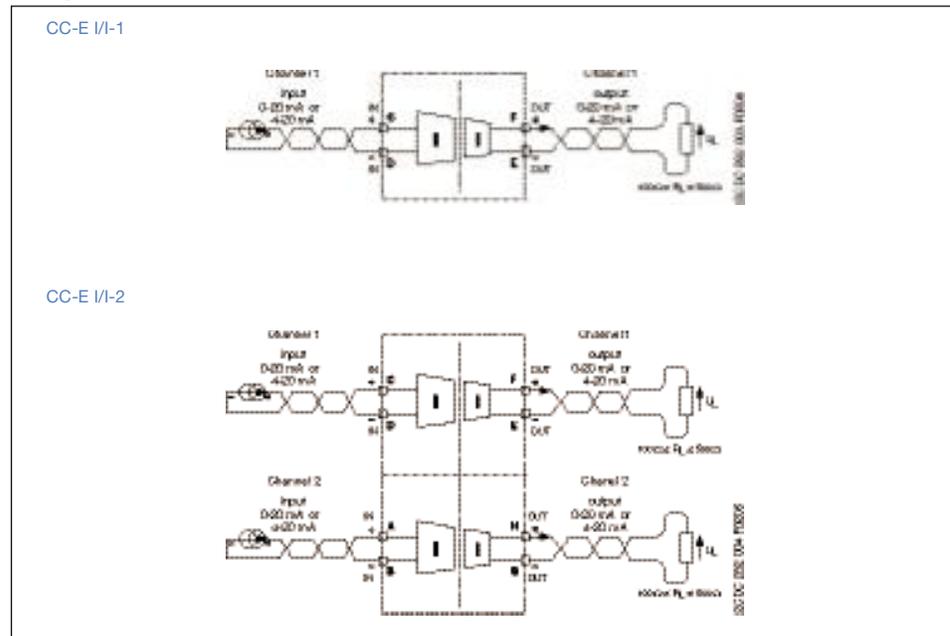
CC-E I/I-2

Loop-powered current/current isolator without external power supply for analog current signals of 0-20 mA and 4-20 mA

- Electrical isolation between input and output
- Very low internal voltage drop m 2.5 V
- Available with one or two independent channels
- Width only 18 mm (1 and 2 channels)

| Type             | Input signal     | Output signal    | Order Code      | Price |
|------------------|------------------|------------------|-----------------|-------|
| <b>1 channel</b> |                  |                  |                 |       |
| CC-E I/I-1       | 0-20 mA, 4-20 mA | 0-20 mA, 4-20 mA | 1SVR010200R1600 |       |
| <b>2 channel</b> |                  |                  |                 |       |
| CC-E I/I-2       | 0-20 mA, 4-20 mA | 0-20 mA, 4-20 mA | 1SVR010200R0300 |       |

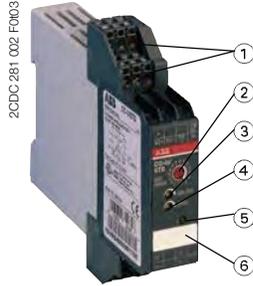
### Wiring instructions



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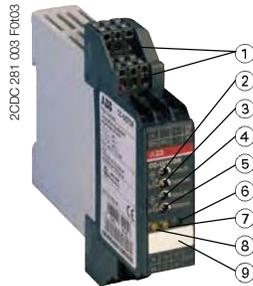
# Analog standard signal converter

## CC-U/STD & CC-U/STDR



**CC-U/STD**

- ① Plug-in terminals
- ② Gain: Coarse adjustment
- ③ Gain: Fine adjustment
- ④ Offset adjustment
- ⑤ U: green LED - supply voltage
- ⑥ Marker label



**CC-U/STDR**

- ① Plug-in connecting terminals
- ② Threshold value for R1
- ③ Hysteresis for R1
- ④ Threshold value for R2
- ⑤ Hysteresis for R2
- ⑥ U: green LED - supply voltage
- ⑦ R2: yellow LED - Relay 2 energized
- ⑧ R1: yellow LED - Relay 1 energized
- ⑨ Marker label



Full range of product and technical information place this part number in a search engine and download  
**2CDC110004C0206**

### CC-U/STD universal signal converter with 3-way electrical isolation

- More than 120 configurations possible
- Configurable output signal response on input voltage signal interruption (low fail safe / high fail safe)
- Adjustment and operating elements on the front
- Short-circuit proof signal outputs
- Plug-in connecting terminals for inputs, outputs and supply
- Very fast signal transmission enables use in control systems

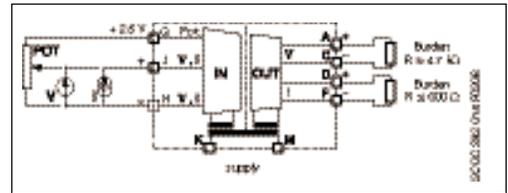
| Type     | Rated supply voltage | Order Code      | Price |
|----------|----------------------|-----------------|-------|
| CC-U/STD | 24-48 V DC           | 1SVR040000R1700 |       |
|          | 110-240 V AC         | 1SVR040001R0400 |       |

### DIP switch settings

| Input            | Switch |   |   |   |   |   | Gain  | Coarse Type |
|------------------|--------|---|---|---|---|---|-------|-------------|
|                  | 1      | 2 | 3 | 4 | 5 | 6 |       |             |
| Potentiometer    |        |   |   |   |   |   | 0     | 0           |
| 0...50 mV        |        |   |   |   |   |   | 4...5 | 5           |
| 0...500 mV       |        |   |   |   |   |   | 0...1 | 1           |
| 0...5000 mV      |        |   |   |   |   |   | 7...9 | 9           |
| 0...1 V          |        |   |   |   |   |   | 3...4 | 3           |
| 0...2.5 V        |        |   |   |   |   |   | 0     | 0           |
| 0...5 V          |        |   |   |   |   |   | 5...7 | 6           |
| 0...10 V         |        |   |   |   |   |   | 2     | 2           |
| 1...5 V          |        |   |   |   |   |   | 7...9 | 8           |
| 2...10 V         |        |   |   |   |   |   | 2...4 | 3           |
| -10...+10 V      |        |   |   |   |   |   | 0     | 0           |
| 0...120 mV       |        |   |   |   |   |   | 3...4 | 3           |
| 0...5 V          |        |   |   |   |   |   | 3...4 | 3           |
| 22.5...+22.5 mV  |        |   |   |   |   |   | B...F | D           |
| -11...+11 V      |        |   |   |   |   |   | 0     | 0           |
| 2...2.5 V        |        |   |   |   |   |   | 5...7 | 6           |
| 3.33...9.99 V    |        |   |   |   |   |   | 3...4 | 4           |
| 10...20 V        |        |   |   |   |   |   | 2     | 2           |
| 100...0 mV       |        |   |   |   |   |   | 4...5 | 5           |
| 0...1 mA         |        |   |   |   |   |   | A...B | B           |
| 0...20 mA        |        |   |   |   |   |   | 2...4 | 3           |
| 4...20 mA        |        |   |   |   |   |   | 4...5 | 4           |
| 10...50 mA       |        |   |   |   |   |   | 0...1 | 1           |
| 20...4 mA        |        |   |   |   |   |   | 4...5 | 4           |
| 20...0 mA        |        |   |   |   |   |   | 4...2 | 3           |
| 0.45...+0.45 mA  |        |   |   |   |   |   | B...F | D           |
| 25...25 mA       |        |   |   |   |   |   | 4...5 | 5           |
| High fail safe 1 |        |   |   |   |   |   | -     | -           |
| Low fail safe 1  |        |   |   |   |   |   | -     | -           |
| No fail safe 1   |        |   |   |   |   |   | -     | -           |

\*) Detection of input voltage signal interruptions:  
 If the input signal circuit is interrupted, the output signal changes to the adjusted minimum value (low fail safe) or maximum value (high fail safe).  
 If "No fail safe" is configured, input signal interruptions are not detected.

### Wiring instruction

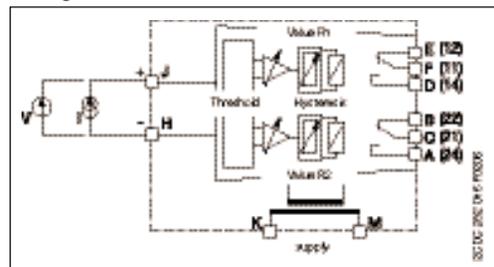


### CC-U/STDR universal signal converter for standard signals, with 2 threshold relay outputs and with 3-way electrical isolation

- Standard signal converter with 7 setting ranges
- 2 threshold relay outputs with one c/o contact each (threshold and respective hysteresis can be adjusted independently from each other)
- Open-circuit or closed-circuit principle configurable by means of a DIP switch
- 2 yellow LEDs for clear status indication of the output relays
- Plug-in connecting terminals for inputs, outputs and supply

| Type      | Rated supply voltage | Order Code      | Price |
|-----------|----------------------|-----------------|-------|
| CC-U/STDR | 24-48 V DC           | 1SVR040010R0000 |       |
|           | 110-240 V AC         | 1SVR040011R2500 |       |

### Wiring instruction



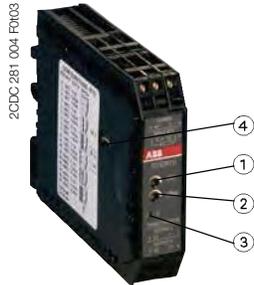
### DIP switch settings

| Input                    | Switch |   |   |   |   |   |
|--------------------------|--------|---|---|---|---|---|
|                          | 1      | 2 | 3 | 4 | 5 | 6 |
| 0...0 V                  |        |   |   |   |   |   |
| 0...5 V                  |        |   |   |   |   |   |
| 0...1 V                  |        |   |   |   |   |   |
| -10...+10 V              |        |   |   |   |   |   |
| 1...5 V                  |        |   |   |   |   |   |
| 0...20 mA                |        |   |   |   |   |   |
| 4...20 mA                |        |   |   |   |   |   |
| Output                   |        |   |   |   |   |   |
| Closed-circuit principle |        |   |   |   |   |   |
| Open-circuit principle   |        |   |   |   |   |   |

# Temperature signal converter for RTD sensors

## CC-E/RTD

1



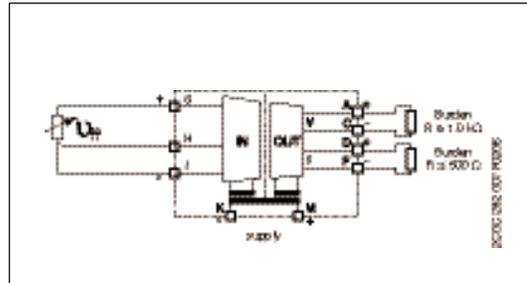
### CC-E/RTD

- ① Gain adjustment
- ② Offset adjustment
- ③ U: green LED - supply voltage
- ④ DIP switch for input and output configuration (only available on universal devices)

CC-E/RTD temperature signal converter for RTD sensors, linearized with 3-way electrical isolation

- 2 universally configurable devices (type CC-E/RTD)
- 2x12 single-function devices
- "Plug and Work", no adjustment of single-function devices required
- Temperature signal converter for PT100 sensors
- 2- or 3-wire connection

### Wiring instruction



### DIP switch settings (universal devices)

| Input      | Output  | 1 | 2 | 3 | 4 | 5 | 6 |
|------------|---------|---|---|---|---|---|---|
| 0...100 °C | 0-10 V  |   |   |   |   |   |   |
| 0...100 °C | 0-20 mA |   |   |   |   |   |   |
| 0...100 °C | 4-20 mA |   |   |   |   |   |   |
| 0...100 °C | 0-10 V  |   |   |   |   |   |   |
| 0...100 °C | 0-20 mA |   |   |   |   |   |   |
| 0...100 °C | 4-20 mA |   |   |   |   |   |   |
| 0...100 °C | 0-10 V  |   |   |   |   |   |   |
| 0...100 °C | 0-20 mA |   |   |   |   |   |   |
| 0...100 °C | 4-20 mA |   |   |   |   |   |   |
| 0...100 °C | 0-10 V  |   |   |   |   |   |   |
| 0...100 °C | 0-20 mA |   |   |   |   |   |   |
| 0...100 °C | 4-20 mA |   |   |   |   |   |   |
| 0...100 °C | 0-10 V  |   |   |   |   |   |   |
| 0...100 °C | 0-20 mA |   |   |   |   |   |   |
| 0...100 °C | 4-20 mA |   |   |   |   |   |   |
| 0...100 °C | 0-10 V  |   |   |   |   |   |   |
| 0...100 °C | 0-20 mA |   |   |   |   |   |   |
| 0...100 °C | 4-20 mA |   |   |   |   |   |   |

| Type | Input signal | Output signal | Order Code | Price |
|------|--------------|---------------|------------|-------|
|------|--------------|---------------|------------|-------|

### Supply voltage: 24 V DC universal

|          |                |                          |                               |  |
|----------|----------------|--------------------------|-------------------------------|--|
| CC-E/RTD | refer to table | 0-10 V, 0-20 mA, 4-20 mA | 1SVR011701R2500 <sup>1)</sup> |  |
|----------|----------------|--------------------------|-------------------------------|--|

### single-function

|            |                  |         |                 |  |
|------------|------------------|---------|-----------------|--|
| CC-E RTD/V | PT100 0...100 °C | 0-10 V  | 1SVR011730R2500 |  |
| CC-E RTD/I |                  | 0-20 mA | 1SVR011731R1200 |  |
| CC-E RTD/I |                  | 4-20 mA | 1SVR011732R1300 |  |

|            |                    |         |                 |  |
|------------|--------------------|---------|-----------------|--|
| CC-E RTD/V | PT100 -50...+50 °C | 0-10 V  | 1SVR011733R1400 |  |
| CC-E RTD/I |                    | 0-20 mA | 1SVR011734R1500 |  |
| CC-E RTD/I |                    | 4-20 mA | 1SVR011735R1600 |  |

|            |                  |         |                 |  |
|------------|------------------|---------|-----------------|--|
| CC-E RTD/V | PT100 0...300 °C | 0-10 V  | 1SVR011736R1700 |  |
| CC-E RTD/I |                  | 0-20 mA | 1SVR011737R1000 |  |
| CC-E RTD/I |                  | 4-20 mA | 1SVR011738R2100 |  |

|            |                   |         |                 |  |
|------------|-------------------|---------|-----------------|--|
| CC-E RTD/V | PT100 0...+250 °C | 0-10 V  | 1SVR011739R2200 |  |
| CC-E RTD/I |                   | 0-20 mA | 1SVR011740R0700 |  |
| CC-E RTD/I |                   | 4-20 mA | 1SVR011741R2400 |  |

### Supply voltage: 110-240 V AC universal

|          |                |                          |                 |  |
|----------|----------------|--------------------------|-----------------|--|
| CC-E/RTD | refer to table | 0-10 V, 0-20 mA, 4-20 mA | 1SVR011706R2200 |  |
|----------|----------------|--------------------------|-----------------|--|

### single-function

|            |                  |         |                 |  |
|------------|------------------|---------|-----------------|--|
| CC-E RTD/V | PT100 0...100 °C | 0-10 V  | 1SVR011788R2400 |  |
| CC-E RTD/I |                  | 0-20 mA | 1SVR011789R2500 |  |
| CC-E RTD/I |                  | 4-20 mA | 1SVR011790R2200 |  |

|            |                    |         |                 |  |
|------------|--------------------|---------|-----------------|--|
| CC-E RTD/V | PT100 -50...+50 °C | 0-10 V  | 1SVR011791R1700 |  |
| CC-E RTD/I |                    | 0-20 mA | 1SVR011792R1000 |  |
| CC-E RTD/I |                    | 4-20 mA | 1SVR011793R1100 |  |

|            |                  |         |                 |  |
|------------|------------------|---------|-----------------|--|
| CC-E RTD/V | PT100 0...300 °C | 0-10 V  | 1SVR011794R1200 |  |
| CC-E RTD/I |                  | 0-20 mA | 1SVR011795R1300 |  |
| CC-E RTD/I |                  | 4-20 mA | 1SVR011796R1400 |  |

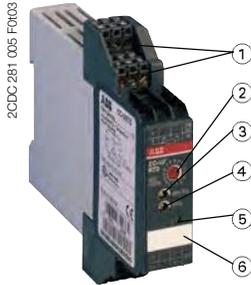
|            |                   |         |                 |  |
|------------|-------------------|---------|-----------------|--|
| CC-E RTD/V | PT100 0...+250 °C | 0-10 V  | 1SVR011797R1500 |  |
| CC-E RTD/I |                   | 0-20 mA | 1SVR011798R2600 |  |
| CC-E RTD/I |                   | 4-20 mA | 1SVR011799R2700 |  |



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# Temperature signal converter for RTD sensors CC-U/RTD & CC-U/RTDR with relay output



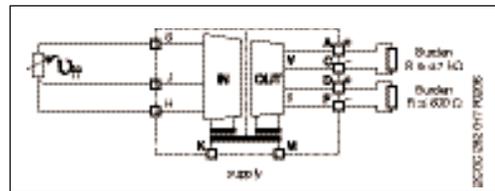
**CC-U/RTD**

- ① Plug-in connecting terminals
- ② Gain: Coarse adjustment
- ③ Gain: Fine adjustment
- ④ Offset adjustment
- ⑤ U: green LED - supply voltage
- ⑥ Marker label

CC-U/RTD universal signal converter for PT10, PT100, PT1000 temperature sensors (acc. to IEC 751 and JIS C 1604<sup>1)</sup>, linearized with 3-way electrical isolation

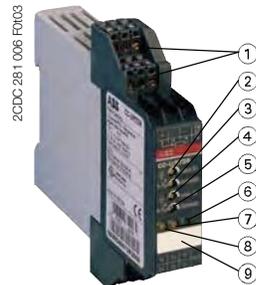
- Configurable output signal response on input signal interruption (low / high fail safe)
- Adjustment and operating elements on the front-side
- Short-circuit proof signal outputs
- Plug-in connecting terminals for inputs, outputs and supply
- 2- or 3-wire connection

**Wiring diagrams**



**DIP switch settings**

| Type                                                                                                                                                                                                  | Input Range | Switch 1 |   |   |   |   | Switch 2 |   |   |   |   | Gain Coarse | Switch 3       |        |   |                 |   |  |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------|---|---|---|---|----------|---|---|---|---|-------------|----------------|--------|---|-----------------|---|--|--|
|                                                                                                                                                                                                       |             | 1        | 2 | 3 | 4 | 5 | 1        | 2 | 3 | 4 | 5 |             | 6              | Output | 1 | 2               | 3 |  |  |
| PT10                                                                                                                                                                                                  | 0...500 °C  |          |   |   |   |   |          |   |   |   |   | F           |                |        |   | 0...5 V         |   |  |  |
|                                                                                                                                                                                                       | 0...550 °C  |          |   |   |   |   |          |   |   |   |   | E           |                |        |   | 0...10 V        |   |  |  |
|                                                                                                                                                                                                       | 0...600 °C  |          |   |   |   |   |          |   |   |   |   | D           |                |        |   | 1...5 V         |   |  |  |
|                                                                                                                                                                                                       | 0...650 °C  |          |   |   |   |   |          |   |   |   |   | C           |                |        |   | 2...10 V        |   |  |  |
|                                                                                                                                                                                                       | 0...700 °C  |          |   |   |   |   |          |   |   |   |   | B           |                |        |   | -10...+10 V     |   |  |  |
|                                                                                                                                                                                                       | 0...750 °C  |          |   |   |   |   |          |   |   |   |   | A           |                |        |   | -5...+5 V       |   |  |  |
| PT100                                                                                                                                                                                                 | 0...400 °C  |          |   |   |   |   |          |   |   |   |   | 9           |                |        |   | -10...0 V       |   |  |  |
|                                                                                                                                                                                                       | 0...450 °C  |          |   |   |   |   |          |   |   |   |   | 8           |                |        |   | -5...0 V        |   |  |  |
|                                                                                                                                                                                                       | 0...500 °C  |          |   |   |   |   |          |   |   |   |   | 7           |                |        |   | 0...4.88 V      |   |  |  |
|                                                                                                                                                                                                       | 0...550 °C  |          |   |   |   |   |          |   |   |   |   | 6           |                |        |   | -10...+3.33 V   |   |  |  |
|                                                                                                                                                                                                       | 0...600 °C  |          |   |   |   |   |          |   |   |   |   | 5           |                |        |   | -5...+1.66 V    |   |  |  |
|                                                                                                                                                                                                       | 0...650 °C  |          |   |   |   |   |          |   |   |   |   | 4           |                |        |   | 0...8 V         |   |  |  |
| PT1000                                                                                                                                                                                                | 0...10 °C   |          |   |   |   |   |          |   |   |   |   | 3           |                |        |   | 0...4 V         |   |  |  |
|                                                                                                                                                                                                       | 0...20 °C   |          |   |   |   |   |          |   |   |   |   | 2           |                |        |   | -10...2 V       |   |  |  |
|                                                                                                                                                                                                       | 0...30 °C   |          |   |   |   |   |          |   |   |   |   | 1           |                |        |   | 1.25...6.25 V   |   |  |  |
|                                                                                                                                                                                                       | 0...40 °C   |          |   |   |   |   |          |   |   |   |   | 0           |                |        |   | -7.5...+2.5 V   |   |  |  |
|                                                                                                                                                                                                       | 0...50 °C   |          |   |   |   |   |          |   |   |   |   | 0           |                |        |   | -3.75...+1.25 V |   |  |  |
|                                                                                                                                                                                                       | 0...60 °C   |          |   |   |   |   |          |   |   |   |   | 0           |                |        |   | 1.66...3.33 V   |   |  |  |
| *) Detection of input signal interruptions:<br>If the input signal circuit is interrupted, the output signal changes to the adjusted minimum value (low fail safe) or maximum value (high fail safe). |             |          |   |   |   |   |          |   |   |   |   |             | Legend         |        |   |                 |   |  |  |
|                                                                                                                                                                                                       |             |          |   |   |   |   |          |   |   |   |   |             | ■ ON           |        |   |                 |   |  |  |
|                                                                                                                                                                                                       |             |          |   |   |   |   |          |   |   |   |   |             | □ OFF          |        |   |                 |   |  |  |
|                                                                                                                                                                                                       |             |          |   |   |   |   |          |   |   |   |   |             | ○ no influence |        |   |                 |   |  |  |



**CC-U/RTDR**

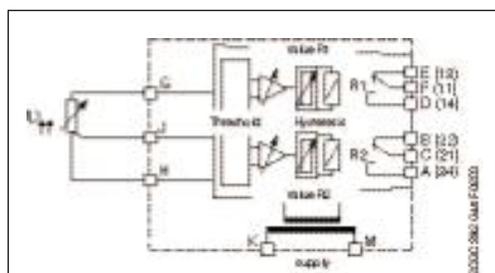
- ① Plug-in connecting terminals
- ② Threshold value for R1
- ③ Hysteresis for R1
- ④ Threshold value for R2
- ⑤ Hysteresis for R2
- ⑥ U: green LED - supply voltage
- ⑦ R2: yellow LED - Relay 2 energized
- ⑧ R1: yellow LED - Relay 1 energized
- ⑨ Marker label

CC-U/RTDR universal signal converter for temperature and resistance signals, with 2 threshold relay outputs and 3-way electrical isolation

- Temperature signal converter for PT100 signals (5 ranges up to 800 °C) and variable resistances from 0-380 Ω
- 2 threshold relay outputs with one c/o contact each (threshold and respective hysteresis can be adjusted independently from each other)
- Open-circuit or closed-circuit principle configurable by means of a DIP switch
- 2 yellow LEDs for clear status indication of the output relays
- Plug-in connecting terminals for inputs, outputs and supply
- 2- or 3-wire connection

| Type      | Rated supply voltage | Order Code      | Price |
|-----------|----------------------|-----------------|-------|
| CC-U/STD  | 24-48 V DC           | 1SVR040002R0500 |       |
|           | 110-240 V AC         | 1SVR040003R0600 |       |
| CC-U/RTDR | 24-48 V DC           | 1SVR040012R2500 |       |
|           | 110-240 V AC         | 1SVR040013R2700 |       |

**Wiring instruction**



**DIP switch settings**

| Input PT100 | Switch |   |   |   |   | Output      |
|-------------|--------|---|---|---|---|-------------|
|             | 1      | 2 | 3 | 4 | 5 |             |
| 0...100 °C  |        |   |   |   |   | 0...5 V     |
| 0...200 °C  |        |   |   |   |   | 0...10 V    |
| 0...300 °C  |        |   |   |   |   | 1...5 V     |
| 0...400 °C  |        |   |   |   |   | 2...10 V    |
| 0...500 °C  |        |   |   |   |   | -10...+10 V |
| 0...300 °C  |        |   |   |   |   | -5...0 V    |

Open-circuit principle

Legend: ■ ON, □ OFF, ○ no influence



# Temperature signal converter for thermocouples CC-E/TC

1



## CC-E/TC

- ① Gain adjustment
- ② Offset adjustment
- ③ U: green LED - supply voltage
- ④ DIP switch for input and output configuration (only available on universal devices)

CC-E/TC analog signal converter for thermocouple signals of the types J and K with 3-way electrical isolation

- 2 universally configurable devices (type CC-E/TC)
- 2x6 single-function devices
- "Plug and Work", no adjustment of single-function devices required

| Type | Input signal | Output signal | Order Code | Price |
|------|--------------|---------------|------------|-------|
|------|--------------|---------------|------------|-------|

Supply voltage: 24 V DC universal

|         |                            |                          |                               |  |
|---------|----------------------------|--------------------------|-------------------------------|--|
| CC-E/TC | thermocouple types J and K | 0-10 V, 0-20 mA, 4-20 mA | 1SVR011702R2600 <sup>1)</sup> |  |
|---------|----------------------------|--------------------------|-------------------------------|--|

single-function

|           |                      |         |                 |  |
|-----------|----------------------|---------|-----------------|--|
| CC-E TC/V | type J<br>0...600 °C | 0-10 V  | 1SVR011750R0100 |  |
| CC-E TC/I |                      | 0-20 mA | 1SVR011751R2600 |  |
| CC-E TC/I |                      | 4-20 mA | 1SVR011752R2700 |  |

|           |                       |         |                 |  |
|-----------|-----------------------|---------|-----------------|--|
| CC-E TC/V | type K<br>0...1000 °C | 0-10 V  | 1SVR011753R2000 |  |
| CC-E TC/I |                       | 0-20 mA | 1SVR011754R2100 |  |
| CC-E TC/I |                       | 4-20 mA | 1SVR011755R2200 |  |

Supply voltage: 110-240 V AC universal

|         |                            |                          |                 |  |
|---------|----------------------------|--------------------------|-----------------|--|
| CC-E/TC | thermocouple types J and K | 0-10 V, 0-20 mA, 4-20 mA | 1SVR011707R2300 |  |
|---------|----------------------------|--------------------------|-----------------|--|

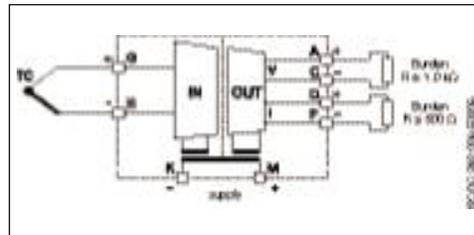
single-function

|           |                      |         |                 |  |
|-----------|----------------------|---------|-----------------|--|
| CC-E TC/V | type J<br>0...600 °C | 0-10 V  | 1SVR011760R0300 |  |
| CC-E TC/I |                      | 0-20 mA | 1SVR011761R2000 |  |
| CC-E TC/I |                      | 4-20 mA | 1SVR011762R2100 |  |

|           |                       |         |                 |  |
|-----------|-----------------------|---------|-----------------|--|
| CC-E TC/V | type K<br>0...1000 °C | 0-10 V  | 1SVR011763R2200 |  |
| CC-E TC/I |                       | 0-20 mA | 1SVR011764R2300 |  |
| CC-E TC/I |                       | 4-20 mA | 1SVR011765R2400 |  |

<sup>1)</sup> 1604 Class I, Div.2 (universal device)

## Wiring instruction



## DIP switch settings (universal devices)

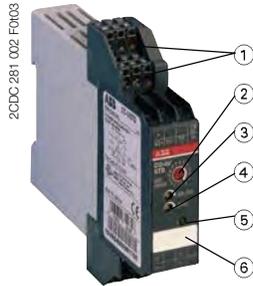
| Input                          | Output           | Switch |     |     |     |
|--------------------------------|------------------|--------|-----|-----|-----|
|                                |                  | T      | I   | S   | E   |
| TC-J<br>0...600 °C             | 0-10V            | ON     | ON  | ON  | ON  |
|                                | 0-20mA<br>4-20mA | OFF    | OFF | OFF | OFF |
| TC-K<br>0...1000 °C            | 0-10V            | ON     | ON  | ON  | ON  |
|                                | 0-20mA<br>4-20mA | OFF    | OFF | OFF | OFF |
| High impedance<br>Input/Output |                  | ON     | ON  | ON  | ON  |

Legend:  
 ON  
 OFF  
 No influence



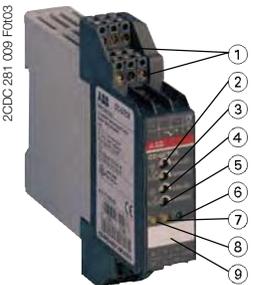
Full range of product and technical information place this part number in a search engine and download  
2CDC110004C0206

# Temperature signal converter for thermocouples CC-U/TC and CC-U/TCR



CC-U/TC

- ① Plug-in terminals
- ② Gain: Coarse adjustment
- ③ Gain: Fine adjustment
- ④ Offset adjustment
- ⑤ U: green LED - supply voltage
- ⑥ Marker label



CC-U/TCR

- ① Plug-in connecting terminals
- ② Threshold value for R1
- ③ Hysteresis for R1
- ④ Threshold value for R2
- ⑤ Hysteresis for R2
- ⑥ U: green LED - supply voltage
- ⑦ R2: yellow LED - Relay 2 energized
- ⑧ R1: yellow LED - Relay 1 energized
- ⑨ Marker label



Full range of product and technical information place this part number in a search engine and download  
2CDC110004C0206

## CC-U/TC universal signal converter for thermocouples with 3-way electrical isolation

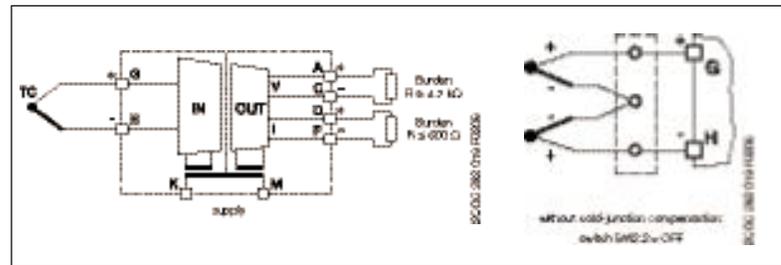
- Temperature signal converter for thermocouples of the types K, J, T, S, E, N, R, B
- Continuously adjustable voltage signal input 0-10 mV and 0-50 mV
- Differential temperature meas. possible <sup>1)</sup>
- Configurable output signal response on input signal interruption (low fail safe / high fail safe)
- Adjustment and operating elements on the front-side
- Short-circuit proof signal outputs
- Plug-in connecting terminals for inputs, outputs and supply

### DIP switch settings

| Type                         | Input Range     | Switch 1 |   |   |   |   |   | Switch 2 |   |   |   |   |   |  |  |
|------------------------------|-----------------|----------|---|---|---|---|---|----------|---|---|---|---|---|--|--|
|                              |                 | 1        | 2 | 3 | 4 | 5 | 6 | 1        | 2 | 3 | 4 | 5 | 6 |  |  |
| K                            | 0-100...900 °C  |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| K                            | 0-250...1850 °C |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| J                            | 0-100...750 °C  |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| T                            | 0-100...400 °C  |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| T                            | -150...-400 °C  |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| S                            | 0-250...1500 °C |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| S                            | 0-100...700 °C  |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| E                            | 0-200...1000 °C |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| N                            | 0-100...650 °C  |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| N                            | 0-200...1300 °C |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| R                            | 0-250...1850 °C |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| R                            | 0-450...1700 °C |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| B                            | 0-700...1750 °C |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| mV                           | 0-2...10 mV     |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| mV                           | 0-10...50 mV    |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| Low fail safe <sup>1)</sup>  |                 |          |   |   |   |   |   |          |   |   |   |   |   |  |  |
| High fail safe <sup>1)</sup> |                 |          |   |   |   |   |   |          |   |   |   |   |   |  |  |

| Output          | Switch 3 |   |   |   |   |   |
|-----------------|----------|---|---|---|---|---|
|                 | 1        | 2 | 3 | 4 | 5 | 6 |
| 0...5 V         |          |   |   |   |   |   |
| 0...10 V        |          |   |   |   |   |   |
| 1...5 V         |          |   |   |   |   |   |
| 2...10 V        |          |   |   |   |   |   |
| -10...+10 V     |          |   |   |   |   |   |
| -5...+5 V       |          |   |   |   |   |   |
| -10...0 V       |          |   |   |   |   |   |
| -5...0 V        |          |   |   |   |   |   |
| 0...6.66 V      |          |   |   |   |   |   |
| -10...+3.33 V   |          |   |   |   |   |   |
| -5...+1.66 V    |          |   |   |   |   |   |
| 0.8 V           |          |   |   |   |   |   |
| 0.4 V           |          |   |   |   |   |   |
| -10...-2 V      |          |   |   |   |   |   |
| -5...-1 V       |          |   |   |   |   |   |
| 1.25...6.25 V   |          |   |   |   |   |   |
| -7.5...+2.5 V   |          |   |   |   |   |   |
| -3.75...+1.25 V |          |   |   |   |   |   |
| 1.66...8.33 V   |          |   |   |   |   |   |
| -6.66...+6.66 V |          |   |   |   |   |   |
| -3.33...+3.33 V |          |   |   |   |   |   |
| -8...0 V        |          |   |   |   |   |   |
| -4...0 V        |          |   |   |   |   |   |
| 0...1 mA        |          |   |   |   |   |   |
| 0...20 mA       |          |   |   |   |   |   |
| 4...20 mA       |          |   |   |   |   |   |
| 0...10 mA       |          |   |   |   |   |   |
| 0...0.5 mA      |          |   |   |   |   |   |
| 0...13.33 mA    |          |   |   |   |   |   |
| 0...666 µA      |          |   |   |   |   |   |
| 0...16 mA       |          |   |   |   |   |   |
| 0...800 µA      |          |   |   |   |   |   |
| 0...8 mA        |          |   |   |   |   |   |
| 0...400 µA      |          |   |   |   |   |   |
| 2.5...12.5 mA   |          |   |   |   |   |   |
| 125...625 µA    |          |   |   |   |   |   |
| 3.33...16.66 mA |          |   |   |   |   |   |
| 166...833 µA    |          |   |   |   |   |   |
| 0...1 mA        |          |   |   |   |   |   |
| 2...10 mA       |          |   |   |   |   |   |
| 100...500 µA    |          |   |   |   |   |   |

### Wiring instruction

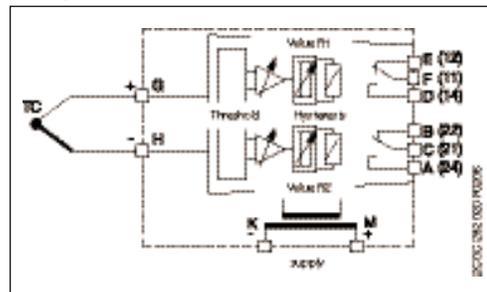


| Type    | Rated supply voltage | Order Code      | Price |
|---------|----------------------|-----------------|-------|
| CC-U/TC | 24-48 V DC           | 1SVR040004R0700 |       |
|         | 110-240 V AC         | 1SVR040005R0000 |       |

## CC-U/TCR universal signal converter for thermocouples, with 2 threshold relay outputs and 3-way electrical isolation

- Temperature signal converter for thermocouples of the types K, J, T, S
- 2 threshold relay outputs with one change-over contact each (threshold and respective hysteresis can be adjusted independently from each other)
- Open-circuit or closed-circuit principle configurable by means of a DIP switch
- 2 yellow LEDs for clear status indication of the output relays
- Plug-in connecting terminals for inputs, outputs and supply

### Wiring instruction



### DIP switch settings

| Type                     | Input Range    | Switch |   |   |   |   |   |
|--------------------------|----------------|--------|---|---|---|---|---|
|                          |                | 1      | 2 | 3 | 4 | 5 | 6 |
| J                        | 0...240 °C     |        |   |   |   |   |   |
| J                        | 0...480 °C     |        |   |   |   |   |   |
| J                        | 0...1200 °C    |        |   |   |   |   |   |
| K                        | 0...250 °C     |        |   |   |   |   |   |
| K                        | 0...500 °C     |        |   |   |   |   |   |
| K                        | 0...1350 °C    |        |   |   |   |   |   |
| T                        | -150...+120 °C |        |   |   |   |   |   |
| T                        | 0...220 °C     |        |   |   |   |   |   |
| T                        | 0...400 °C     |        |   |   |   |   |   |
| S                        | 0...210 °C     |        |   |   |   |   |   |
| S                        | 0...380 °C     |        |   |   |   |   |   |
| S                        | 0...860 °C     |        |   |   |   |   |   |
| S                        | 0...1550 °C    |        |   |   |   |   |   |
| Output                   |                |        |   |   |   |   |   |
| Closed-circuit principle |                |        |   |   |   |   |   |
| Open-circuit principle   |                |        |   |   |   |   |   |

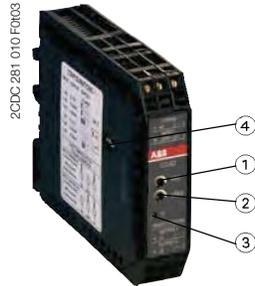
| Legend         |
|----------------|
| ■ ON           |
| □ OFF          |
| □ no influence |

| Type     | Rated supply voltage | Order Code      | Price |
|----------|----------------------|-----------------|-------|
| CC-U/TCR | 24-48 V DC           | 1SVR040014R2000 |       |
|          | 110-240 V AC         | 1SVR040015R2100 |       |

# Measuring converters

## CC-E I and CC-U/I

1



CC-E/I

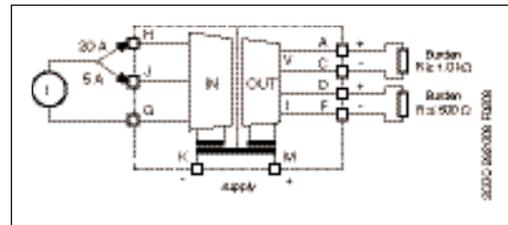
- ① Gain adjustment
- ② Offset adjustment
- ③ U: green LED - supply voltage
- ④ DIP switch for input and output configuration (only available on universal devices)

① 1604 Class I, Div.2 (universal device)

CC-E/I measuring converter for current signals 0-5 A, 0-20 A, AC/DC with 3-way electrical isolation

- 2 universally configurable devices (type CC-E/I)
- 2x6 single-function devices
- "Plug and Work", no adjustment of single-function devices required

### Wiring instruction



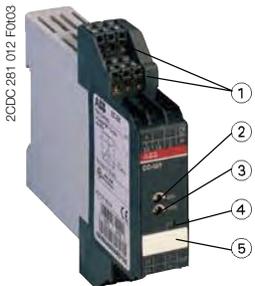
| Select input range by terminals |     |      |
|---------------------------------|-----|------|
| <b>Input range 5 A</b>          |     |      |
| Connected lines                 |     |      |
| Used terminals                  | 5 A | 20 A |
| Terminal marking                |     | C    |
| <b>Input range 20 A</b>         |     |      |
| Connected lines                 |     |      |
| Used terminals                  | 5 A | 20 A |
| Terminal marking                |     | C    |

### DIP switch settings

| Input  | Output    | Switch |   |   |   |   |   |
|--------|-----------|--------|---|---|---|---|---|
|        |           | 1      | 2 | 3 | 4 | 5 | 6 |
| 1 - DC | 0...10 V  | ■      |   |   |   |   |   |
| 1 - AC |           |        |   |   |   |   |   |
| 1 - DC | 0...20 mA | ■      |   |   |   |   |   |
| 1 - AC |           |        |   |   |   |   |   |
| 1 - DC | 4...20 mA | ■      | ■ | ■ | ■ | ■ | ■ |
| 1 - AC |           |        |   |   |   |   |   |

Legend: ■ ON, □ OFF

| Type                                   | Input signal         | Output signal            | Order Code                    | Price |
|----------------------------------------|----------------------|--------------------------|-------------------------------|-------|
| Supply voltage: 24 V DC universal      |                      |                          |                               |       |
| CC-E/I                                 | 0-5 A, 0-20 A, AC/DC | 0-10 V, 0-20 mA, 4-20 mA | 1SVR011703R2700 <sup>1)</sup> |       |
| Supply voltage: 110-240 V AC universal |                      |                          |                               |       |
| CC-E/I                                 | 0-5 A, 0-20 A, AC/DC | 0-10 V, 0-20 mA, 4-20 mA | 1SVR011708R0400               |       |



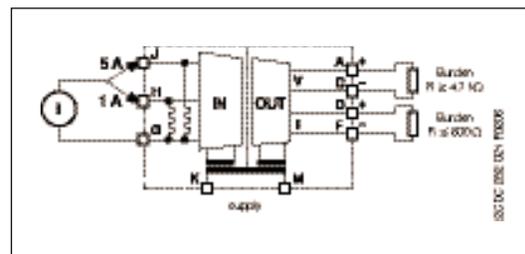
CC-U/I

- ① Plug-in connecting terminals
- ② Gain adjustment
- ③ Offset adjustment
- ④ U: green LED - supply voltage
- ⑤ Marker label

CC-U/I universal measuring converter for RMS values of 0-1 A and 0-5 A, with 3-way electrical isolation

- RMS converter for current signals up to 1 A and up to 5 A of any wave form (DC, DC with superimposed AC components, pure sinusoidal, triangular, phase-angle controlled, etc. in a measuring range of 0-600 Hz)
- Adjustment and operating elements on the front
- Short-circuit proof signal outputs
- Plug-in connecting terminals for inputs, outputs and supply

### Wiring instruction



### DIP switch settings

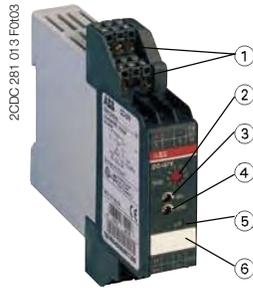
| Output            | Switch |   |   |   |   |   |
|-------------------|--------|---|---|---|---|---|
|                   | 1      | 2 | 3 | 4 | 5 | 6 |
| 0...5 V           | ■      |   |   |   |   |   |
| 0...10 V          | ■      |   |   |   |   |   |
| 1...5 V           | ■      | ■ |   |   |   |   |
| 2...10 V          | ■      | ■ |   |   |   |   |
| -10...+10 V       | ■      | ■ | ■ |   |   |   |
| -5...+5 V         | ■      | ■ | ■ |   |   |   |
| -10...0 V         | ■      | ■ | ■ |   |   |   |
| -5...0 V          | ■      | ■ | ■ |   |   |   |
| 0...6.66 V        | ■      | ■ | ■ |   |   |   |
| -10...+3.33 V     | ■      | ■ | ■ |   |   |   |
| -5...+1.66 V      | ■      | ■ | ■ |   |   |   |
| 0...8 V           | ■      | ■ | ■ |   |   |   |
| 0...4 V           | ■      | ■ | ■ |   |   |   |
| -10...-2 V        | ■      | ■ | ■ |   |   |   |
| -5...-1 V         | ■      | ■ | ■ |   |   |   |
| 1.25...6.25 V     | ■      | ■ | ■ |   |   |   |
| -7.5...+2.5 V     | ■      | ■ | ■ |   |   |   |
| -3.75...+1.25 V   | ■      | ■ | ■ |   |   |   |
| 1.66...8.33 V     | ■      | ■ | ■ |   |   |   |
| -6.66...+6.66 V   | ■      | ■ | ■ |   |   |   |
| -3.33...+3.33 V   | ■      | ■ | ■ |   |   |   |
| -8...0 V          | ■      | ■ | ■ |   |   |   |
| -4...0 V          | ■      | ■ | ■ |   |   |   |
| 0...1 mA          | ■      | ■ | ■ |   |   |   |
| 0...20 mA         | ■      | ■ | ■ |   |   |   |
| 4...20 mA         | ■      | ■ | ■ |   |   |   |
| 0...10 mA         | ■      | ■ | ■ |   |   |   |
| 0...0.5 mA        | ■      | ■ | ■ |   |   |   |
| 0...13.33 mA      | ■      | ■ | ■ |   |   |   |
| 0...666 $\mu$ A   | ■      | ■ | ■ |   |   |   |
| 0...16 mA         | ■      | ■ | ■ |   |   |   |
| 0...800 $\mu$ A   | ■      | ■ | ■ |   |   |   |
| 0...8 mA          | ■      | ■ | ■ |   |   |   |
| 0...400 $\mu$ A   | ■      | ■ | ■ |   |   |   |
| 2.5...12.5 mA     | ■      | ■ | ■ |   |   |   |
| 125...625 $\mu$ A | ■      | ■ | ■ |   |   |   |
| 3.33...16.66 mA   | ■      | ■ | ■ |   |   |   |
| 166...833 $\mu$ A | ■      | ■ | ■ |   |   |   |
| 0.2...1 mA        | ■      | ■ | ■ |   |   |   |
| 2...10 mA         | ■      | ■ | ■ |   |   |   |
| 100...500 $\mu$ A | ■      | ■ | ■ |   |   |   |

Legend: ■ ON, □ OFF, □ no influence

Full range of product and technical information place this part number in a search engine and download  
2CDC110004C0206

| Type   | Rated supply voltage | Order Code      | Price |
|--------|----------------------|-----------------|-------|
| CC-U/I | 24-48 V DC           | 1SVR040006R0100 |       |
|        | 110-240 V AC         | 1SVR040007R0200 |       |

# Measuring converter for voltage RMS values CC-U/V and accessories



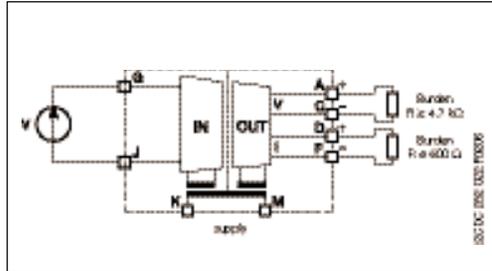
CC-U/V universal measuring converter for RMS values of 0-600 V, with 3-way electrical isolation

- RMS converter for voltage signals up to 600 V of any wave form (DC, DC with superimposed AC components, pure sinusoidal, triangular, phase-angle controlled, etc. in a measuring range of 0-600 Hz)
- Adjustment and operating elements on the front
- Short-circuit proof signal outputs
- Plug-in connecting terminals for inputs, outputs and supply

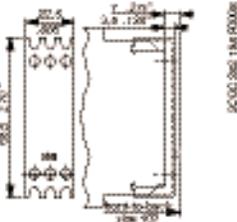
## CC-U/V

- 1 Plug-in connecting terminals
- 2 Input voltage range selection
- 3 Gain adjustment
- 4 Offset adjustment
- 5 U: green LED - supply voltage
- 6 Marker label

## Wiring instruction



| Type   | Rated supply voltage | Order Code      | Price |
|--------|----------------------|-----------------|-------|
| CC-U/V | 24-48 V DC           | 1SNA040008R1300 |       |
|        | 110-240 V AC         | 1SNA040009R1400 |       |



Sealable cover  
COV.01

## Accessories for CC-U

### Sealable transparent cover

| Type   | for type | Width mm | Order Code      | Price |
|--------|----------|----------|-----------------|-------|
| CC-U/I | CC-U     | 22.5     | 1SVR405600R4000 |       |



Full range of product and technical information place this part number in a search engine and download  
2CDC110004C0206

# Serial data converters

## ILPH

1



| Type                             | Order Code      | Price |
|----------------------------------|-----------------|-------|
| ILPH RS 232-RS 485 / Ethernet    | 1SNA684252R0200 |       |
|                                  | 1SNA684231R2500 |       |
|                                  | 1SNA684233R2700 |       |
| ILPH RS 232 / RS 422-485         | 1SNA684333R2300 |       |
|                                  | 1SNA684334R2400 |       |
| ILPH RS 232 / RS 232             | 1SNA684234R2000 |       |
|                                  | 1SNA684244R0200 |       |
| ILPH RS 422 - 485 / RS 422 - 485 | 1SNA684212R2200 |       |
|                                  | 1SNA684236R2200 |       |
| ILPH RS 232 / FO-S               | 1SNA684237R2300 |       |
|                                  | 1SNA684238R0400 |       |
| ILPH RS 232 / FO-P               | 1SNA684239R0500 |       |
|                                  | 1SNA684246R0400 |       |
| LPH RS 485 / FO-S                | 1SNA684247R0500 |       |
|                                  | 1SNA684248R1600 |       |
| ILPH RS 485 / FO-P               | 1SNA684249R1700 |       |
|                                  | 1SNA684232R2600 |       |
| ILPH RS 232 / Bdc                | 1SNA684202R0100 |       |

**Rated supply voltage U<sub>s</sub>**

|                   |                                     |                                     |                                     |                          |                                     |                          |                                     |                                     |                                     |                                     |                                     |                          |                          |                          |                          |                                     |                                     |
|-------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|
| 24 V DC           | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 115 - 230 V AC    | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 24 - 48 V DC      | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 24 - 42 V AC/DC   | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 10 - 34 V DC      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 10 - 24 V AC      | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| 110 - 240 V AC/DC | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |

**Input signal**

|              |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |
|--------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| RS 232       | <input checked="" type="checkbox"/> |
| RS 422       | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| RS 485       | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Current loop | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |

**Output signal**

|                     |                                     |                                     |                                     |                                     |                                     |                                     |                          |                                     |                                     |                                     |                          |                          |                          |                                     |                                     |                                     |                                     |
|---------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| RS 232              | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| RS 422              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| RS 485              | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| Current loop        | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| Fiber optic glass   | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Fiber optic plastic | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            |
| Ethernet            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |

**Galvanic isolation**

|                 |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |                                     |
|-----------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 3 way isolation | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| No isolation    | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |

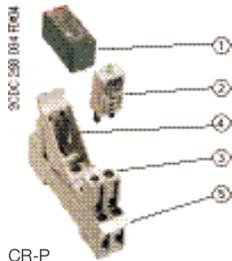


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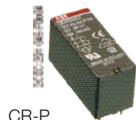
# Pluggable interface relays CR-P

## Pcb relays



CR-P

- 1 interface relay
- 2 Pluggable function module
- 3 Socket
- 4 Holder
- 5 Marker



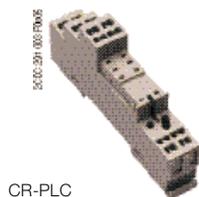
CR-P



CR-PLS



CR-PSS



CR-PLC



CR-PH

| Type | Rated control supply voltage | Order Code | Price |
|------|------------------------------|------------|-------|
|------|------------------------------|------------|-------|

### Interface relays

1 c/o contact: 250 V, 16 A

|            |          |                 |  |
|------------|----------|-----------------|--|
| CR-P012DC1 | 12 V DC  | 1SVR405600R4000 |  |
| CR-P024DC1 | 24 V DC  | 1SVR405600R0000 |  |
| CR-P024AC1 | 24 V AC  | 1SVR405600R1000 |  |
| CR-P110AC1 | 110 V AC | 1SVR405600R7000 |  |
| CR-P230AC1 | 230 V AC | 1SVR405600R3000 |  |

2 c/o contacts: 250 V, 8 A

|            |          |                 |  |
|------------|----------|-----------------|--|
| CR-P012DC2 | 12 V DC  | 1SVR405601R4000 |  |
| CR-P024DC2 | 24 V DC  | 1SVR405601R1000 |  |
| CR-P024AC2 | 24 V AC  | 1SVR405601R0000 |  |
| CR-P110AC2 | 110 V AC | 1SVR405601R7000 |  |
| CR-P230AC2 | 230 V AC | 1SVR405601R3000 |  |

### Interface relays with gold contacts

2 c/o gold contacts: 250 V, 8 A

|             |         |                 |  |
|-------------|---------|-----------------|--|
| CR-P024DC2G | 24 V DC | 1SVR405606R1000 |  |
|-------------|---------|-----------------|--|

### Accessories - Sockets

| Type | Version | Connection terminals | Order Code | Price |
|------|---------|----------------------|------------|-------|
|------|---------|----------------------|------------|-------|

#### Sockets

|        |                                           |       |                 |  |
|--------|-------------------------------------------|-------|-----------------|--|
| CR-PLS | Logical socket with protective separation | screw | 1SVR405650R0000 |  |
| CR-PSS | Standard socket                           | screw | 1SVR405650R1000 |  |

#### Socket accessories

|       |                |  |                 |  |
|-------|----------------|--|-----------------|--|
| CR-PH | Plastic Holder |  | 1SVR405659R0000 |  |
|-------|----------------|--|-----------------|--|

#### Markers

|      |        |  |                 |  |
|------|--------|--|-----------------|--|
| CR-P | Marker |  | 1SVR405658R0000 |  |
|------|--------|--|-----------------|--|



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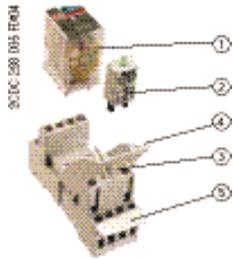
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1

# Pluggable interface relays CR-M

## Miniature relays

1



CR-M

- 1 Interface relay
- 2 Pluggable function module
- 3 Socket
- 4 Holder
- 5 Marker



CR-M

| Type                                                            | Rated control supply voltage | Order Code      | Price |
|-----------------------------------------------------------------|------------------------------|-----------------|-------|
| <b>Interface relays without LED 2 c/o contacts: 250 V, 12 A</b> |                              |                 |       |
| CR-M012DC2                                                      | 12 V DC                      | 1SVR405611R4000 |       |
| CR-M024DC2                                                      | 24 V DC                      | 1SVR405611R1000 |       |
| <b>3 c/o contacts: 250 V, 10 A</b>                              |                              |                 |       |
| CR-M012DC3                                                      | 12 V DC                      | 1SVR405612R4000 |       |
| CR-M024DC3                                                      | 24 V DC                      | 1SVR405612R1000 |       |
| CR-M024AC3                                                      | 24 V AC                      | 1SVR405612R0000 |       |
| CR-M110AC3                                                      | 110 V AC                     | 1SVR405612R7000 |       |
| CR-M230AC3                                                      | 230 V AC                     | 1SVR405612R3000 |       |
| <b>4 c/o contacts: 250 V, 6 A</b>                               |                              |                 |       |
| CR-M012DC4                                                      | 12 V DC                      | 1SVR405613R4000 |       |
| CR-M024DC4                                                      | 24 V DC                      | 1SVR405613R1000 |       |
| CR-M024AC4                                                      | 24 V AC                      | 1SVR405613R0000 |       |
| CR-M110AC4                                                      | 110 V AC                     | 1SVR405613R7000 |       |
| CR-M230AC4                                                      | 230 V AC                     | 1SVR405613R3000 |       |

| Type                                                         | Rated control supply voltage | Order Code      | Price |
|--------------------------------------------------------------|------------------------------|-----------------|-------|
| <b>Interface relays with LED 2 c/o contacts: 250 V, 12 A</b> |                              |                 |       |
| CR-M012DC2L                                                  | 12 V DC                      | 1SVR405611R4100 |       |
| CR-M024DC2L                                                  | 24 V DC                      | 1SVR405611R1100 |       |
| CR-M024AC2L                                                  | 24 V AC                      | 1SVR405611R0100 |       |
| CR-M110AC2L                                                  | 110 V AC                     | 1SVR405611R7100 |       |
| CR-M230AC2L                                                  | 230 V AC                     | 1SVR405611R3100 |       |
| <b>3 c/o contacts: 250 V, 10 A</b>                           |                              |                 |       |
| CR-M012DC3L                                                  | 12 V DC                      | 1SVR405612R4100 |       |
| CR-M024DC3L                                                  | 24 V DC                      | 1SVR405612R1100 |       |
| CR-M024AC3L                                                  | 24 V AC                      | 1SVR405612R0100 |       |
| CR-M110AC3L                                                  | 110 V AC                     | 1SVR405612R7100 |       |
| CR-M230AC3L                                                  | 230 V AC                     | 1SVR405612R3100 |       |
| <b>4 c/o contacts: 250 V, 6 A</b>                            |                              |                 |       |
| CR-M012DC4L                                                  | 12 V DC                      | 1SVR405613R4100 |       |
| CR-M024DC4L                                                  | 24 V DC                      | 1SVR405613R1100 |       |
| CR-M110DC4L                                                  | 110 V DC                     | 1SVR405613R8100 |       |
| CR-M024AC4L                                                  | 24 V AC                      | 1SVR405613R0100 |       |
| CR-M110AC4L                                                  | 110 V AC                     | 1SVR405613R7100 |       |
| CR-M230AC4L                                                  | 230 V AC                     | 1SVR405613R3100 |       |

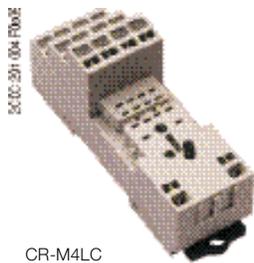
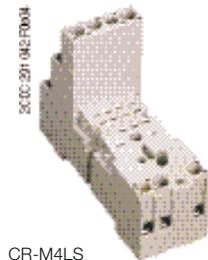


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# Pluggable interface relays CR-M

## Miniature relays



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| Type                                                                          | Rated control supply voltage | Order Code      | Price |
|-------------------------------------------------------------------------------|------------------------------|-----------------|-------|
| <b>Interface relays with gold contacts 4 c/o contacts: 250 V, 6 A</b>         |                              |                 |       |
| CR-M024DC4G                                                                   | 24 V DC                      | 1SVR405618R1000 |       |
| <b>Interface relays with gold contacts and LED 4 c/o contacts: 250 V, 6 A</b> |                              |                 |       |
| CR-M024DC4LG                                                                  | 24 V DC                      | 1SVR405618R1100 |       |
| CR-M024AC4LG                                                                  | 24 V AC                      | 1SVR405618R0100 |       |
| CR-M110AC4LG                                                                  | 110 V AC                     | 1SVR405618R7100 |       |
| CR-M230AC4LG                                                                  | 230 V AC                     | 1SVR405618R3100 |       |

### Accessories - Sockets

| Type           | Version                                  | Connection terminals | Order Code      | Price |
|----------------|------------------------------------------|----------------------|-----------------|-------|
| <b>Sockets</b> |                                          |                      |                 |       |
| CR-M2LS        | Logical socket <sup>1)</sup> for 2 c/o   | screw                | 1SVR405651R1100 |       |
| CR-M3LS        | Logical socket <sup>1)</sup> for 3 c/o   |                      | 1SVR405651R2100 |       |
| CR-M4LS        | Logical socket <sup>1)</sup> for 2/4 c/o |                      | 1SVR405651R3100 |       |
| CR-M2LC        | Logical socket <sup>1)</sup> for 2 c/o   | spring connection    | 1SVR405651R1200 |       |
| CR-M4LC        | Logical socket <sup>1)</sup> for 2/4 c/o |                      | 1SVR405651R3200 |       |
| CR-M2SS        | Standard socket for 2 c/o                | screw                | 1SVR405651R1000 |       |
| CR-M3SS        | Standard socket for 3 c/o                |                      | 1SVR405651R2000 |       |
| CR-M4SS        | Standard socket for 2/4 c/o              |                      | 1SVR405651R3000 |       |

### Socket accessories

|        |                |                 |  |
|--------|----------------|-----------------|--|
| CR-MH  | Plastic holder | 1SVR405659R1000 |  |
| CR-MH1 | Metal holder   | 1SVR405659R1100 |  |

### Markers

|      |        |                 |  |
|------|--------|-----------------|--|
| CR-M | Marker | 1SVR405658R1000 |  |
|------|--------|-----------------|--|

1

# Pluggable interface relays CR-P, CR-M - Accessories

## Pluggable function modules

1



CR-P/M ..

| Type | Rated control supply voltage | Version | Order Code | Price |
|------|------------------------------|---------|------------|-------|
|------|------------------------------|---------|------------|-------|

### Diode - Reverse polarity protection/free wheeling diode

|           |            |          |                 |  |
|-----------|------------|----------|-----------------|--|
| CR-P/M 22 | 6-230 V DC | A1+, A2- | 1SVR405651R0000 |  |
|-----------|------------|----------|-----------------|--|

### Diode and LED - Reverse polarity protection/free wheeling diode

|             |              |                 |                 |  |
|-------------|--------------|-----------------|-----------------|--|
| CR-P/M 42   | 6-24 V DC    | red, A1+, A2-   | 1SVR405652R0000 |  |
| CR-P/M 42V  | 6-24 V DC    | green, A1+, A2- | 1SVR405652R1000 |  |
| CR-P/M 42B  | 24-60 V DC   | red, A1+, A2-   | 1SVR405652R4000 |  |
| CR-P/M 42BV | 24-60 V DC   | green, A1+, A2- | 1SVR405652R4100 |  |
| CR-P/M 42C  | 110-230 V DC | red, A1+, A2-   | 1SVR405652R9000 |  |
| CR-P/M 42CV | 110-230 V DC | green, A1+, A2- | 1SVR405652R9100 |  |

### RC element - Spark quenching

|            |              |  |                 |  |
|------------|--------------|--|-----------------|--|
| CR-P/M 52B | 6-24 V AC    |  | 1SVR405653R0000 |  |
| CR-P/M 52D | 24-60 V AC   |  | 1SVR405653R4000 |  |
| CR-P/M 52C | 110-230 V AC |  | 1SVR405653R1000 |  |

### Diode and LED

|             |                 |                        |                 |  |
|-------------|-----------------|------------------------|-----------------|--|
| CR-P/M 62   | 6-24 V AC/DC    | red, for DC A1+, A2-   | 1SVR405654R0000 |  |
| CR-P/M 62V  | 6-24 V AC/DC    | green, for DC A1+, A2- | 1SVR405654R1000 |  |
| CR-P/M 62E  | 24-60 V AC/DC   | red, for DC A1+, A2-   | 1SVR405654R4000 |  |
| CR-P/M 62EV | 24-60 V AC/DC   | green, for DC A1+, A2- | 1SVR405654R4100 |  |
| CR-P/M 92   | 110-230 V AC/DC | red, for DC A1+, A2-   | 1SVR405654R0100 |  |
| CR-P/M 92V  | 110-230 V AC/DC | green, for DC A1+, A2- | 1SVR405654R1100 |  |

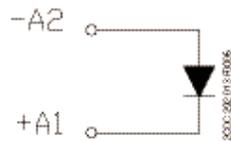
### Varistor and LED - Overvoltage protection

|             |                 |                        |                 |  |
|-------------|-----------------|------------------------|-----------------|--|
| CR-P/M 62C  | 6-24 V AC/DC    | red, for DC A1+, A2-   | 1SVR405655R0000 |  |
| CR-P/M 62CV | 6-24 V AC/DC    | green, for DC A1+, A2- | 1SVR405655R1000 |  |
| CR-P/M 62D  | 24-60 V AC/DC   | red, for DC A1+, A2-   | 1SVR405655R4000 |  |
| CR-P/M 62DV | 24-60 V AC/DC   | green, for DC A1+, A2- | 1SVR405655R4100 |  |
| CR-P/M 92C  | 110-230 V AC/DC | red, for DC A1+, A2-   | 1SVR405655R0100 |  |
| CR-P/M 92CV | 110-230 V AC/DC | green, for DC A1+, A2- | 1SVR405655R1100 |  |

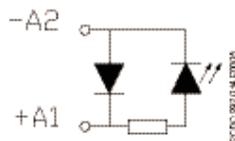
### Varistor - Overvoltage protection

|            |          |  |                 |  |
|------------|----------|--|-----------------|--|
| CR-P/M 72  | 24 V AC  |  | 1SVR405656R0000 |  |
| CR-P/M 72A | 115 V AC |  | 1SVR405656R1000 |  |
| CR-P/M 82  | 230 V AC |  | 1SVR405656R2000 |  |

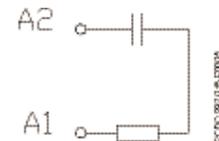
### Connection diagrams



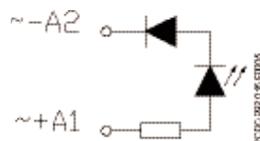
CR-P/M 22



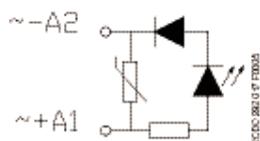
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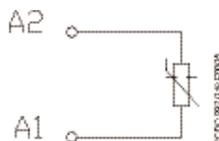
CR-P/M 52B, CR-P/M 52D



CR-P/M 62, CR-P/M 62E, CR-P/M 62V, CR-P/M 62EV, CR-P/M 92, CR-P/M 92V



CR-P/M 62C, CR-P/M 62D, CR-P/M 62CV, CR-P/M 62DV, CR-P/M 92C, CR-P/M 92CV



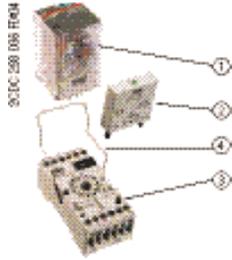
CR-P/M 72, CR-P/M 72A, CR-P/M 82



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# Pluggable interface relays CR-U

## Universal relays



CR-U

- 1 Interface relay
- 2 Pluggable function module
- 3 Socket
- 4 Holder



CR-U



CR-U3S



CR-U3E



CR-UH



Full range of product and technical information place this part number in a search engine and download  
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| Type                                                             | Rated control supply voltage | Order Code      | Price |
|------------------------------------------------------------------|------------------------------|-----------------|-------|
| <b>Interface relays without LED: 2 c/o contacts: 250 V, 10 A</b> |                              |                 |       |
| CR-U012DC2                                                       | 12 V DC                      | 1SVR405621R4000 |       |
| CR-U024DC2                                                       | 24 V DC                      | 1SVR405621R1000 |       |
| CR-U024AC2                                                       | 24 V AC                      | 1SVR405621R0000 |       |
| CR-U110AC2                                                       | 110 V AC                     | 1SVR405621R7000 |       |
| CR-U230AC2                                                       | 230 V AC                     | 1SVR405621R3000 |       |

|                                                                  |          |                 |  |
|------------------------------------------------------------------|----------|-----------------|--|
| <b>Interface relays without LED: 3 c/o contacts: 250 V, 10 A</b> |          |                 |  |
| CR-U012DC3                                                       | 12 V DC  | 1SVR405622R4000 |  |
| CR-U024DC3                                                       | 24 V DC  | 1SVR405622R1000 |  |
| CR-U024AC3                                                       | 24 V AC  | 1SVR405622R0000 |  |
| CR-U110AC3                                                       | 110 V AC | 1SVR405622R7000 |  |
| CR-U230AC3                                                       | 230 V AC | 1SVR405622R3000 |  |

|                                                               |          |                 |  |
|---------------------------------------------------------------|----------|-----------------|--|
| <b>Interface relays with LED: 2 c/o contacts: 250 V, 10 A</b> |          |                 |  |
| CR-U012DC2L                                                   | 12 V DC  | 1SVR405621R4100 |  |
| CR-U024DC2L                                                   | 24 V DC  | 1SVR405621R1100 |  |
| CR-U024AC2L                                                   | 24 V AC  | 1SVR405621R0100 |  |
| CR-U110AC2L                                                   | 110 V AC | 1SVR405621R7100 |  |
| CR-U230AC2L                                                   | 230 V AC | 1SVR405621R3100 |  |

|                                                               |          |                 |  |
|---------------------------------------------------------------|----------|-----------------|--|
| <b>Interface relays with LED: 3 c/o contacts: 250 V, 10 A</b> |          |                 |  |
| CR-U012DC3L                                                   | 12 V DC  | 1SVR405622R4100 |  |
| CR-U024DC3L                                                   | 24 V DC  | 1SVR405622R1100 |  |
| CR-U024AC3L                                                   | 24 V AC  | 1SVR405622R0100 |  |
| CR-U110AC3L                                                   | 110 V AC | 1SVR405622R7100 |  |
| CR-U230AC3L                                                   | 230 V AC | 1SVR405622R3100 |  |

### Accessories - Sockets + Function Modules

| Type           | Version                     | Order Code      | Price |
|----------------|-----------------------------|-----------------|-------|
| <b>Sockets</b> |                             |                 |       |
| CR-U2S         | Socket for 2 c/o and module | 1SVR405670R0000 |       |
| CR-U3S         | Socket for 3 c/o and module | 1SVR405660R0000 |       |
| CR-U3E         | Socket for 3 c/o            | 1SVR405660R0100 |       |

### Accessories Sockets

|       |                        |                 |  |
|-------|------------------------|-----------------|--|
| CR-UH | Holder for CR-U socket | 1SVR405669R0000 |  |
|-------|------------------------|-----------------|--|

### Diode - Reverse polarity protection/free wheeling diode

|        |                    |                 |  |
|--------|--------------------|-----------------|--|
| CR-U21 | 6-230v DC A1+, A2- | 1SVR405661R0000 |  |
|--------|--------------------|-----------------|--|

### Diode & LED - Reverse polarity protection/free wheeling diode

|         |                          |                 |  |
|---------|--------------------------|-----------------|--|
| CR-U41  | 6-24v DC Red, A1+, A2-   | 1SVR405662R0000 |  |
| CR-U41V | 6-24v DC Green, A1+, A2- | 1SVR405662R1000 |  |

### Varistor - Overvoltage protection

|        |          |                 |  |
|--------|----------|-----------------|--|
| CR-U71 | 6-24v AC | 1SVR405666R0000 |  |
|--------|----------|-----------------|--|

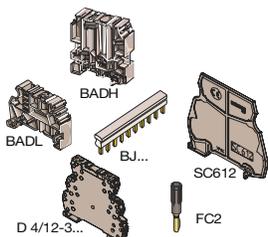
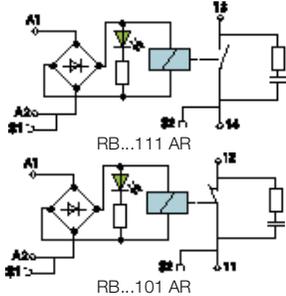
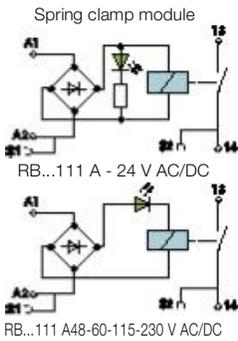
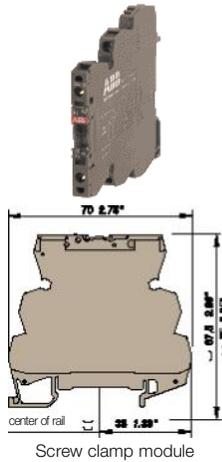
# Relays and optocouplers

## Relay Interfaces - R600 relay modules



DIN 3

1



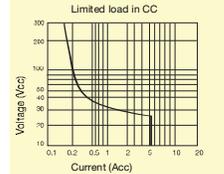
Relay : 1NO or 1NC high level contact 10 mA to 6 A - 6 mm .236» or 12 mm .472» spacing

### Characteristics

| Relay characteristics                             | RB 111 A                                         |            |            |            |                                                    | RB 111 AI  | RB 111 AR  | RB 101 AR  |           |
|---------------------------------------------------|--------------------------------------------------|------------|------------|------------|----------------------------------------------------|------------|------------|------------|-----------|
|                                                   | 24 VAC/DC                                        | 48 VAC/DC  | 60 VAC/DC  | 115 VAC/DC | 230 VAC/DC                                         | 24 VAC/DC  | 24 VAC/DC  | 24 VAC/DC  |           |
| <b>COIL</b>                                       |                                                  |            |            |            |                                                    |            |            |            |           |
| Rated voltage +20%, -15% on DC ; +10%, -10% on AC | ±10% on AC<br>+10% -15% on DC                    |            |            |            |                                                    |            |            |            |           |
| Frequency                                         | 50 / 60 Hz                                       | 50 / 60 Hz | 50 / 60 Hz | 50 / 60 Hz | 50 / 60 Hz                                         | 50 / 60 Hz | 50 / 60 Hz | 50 / 60 Hz |           |
| Power                                             | 0,24 W                                           | 0,34 W     | 0,54 W     | 0,46 W     | 0,8 W                                              | 0,24 W     | 0,24 W     | 0,24 W     |           |
| Rated current                                     | 10 mA                                            | 7 mA       | 9 mA       | 4 mA       | 3,5 mA                                             | 10 mA      | 10 mA      | 10 mA      |           |
| Drop-out voltage at 20°C                          | 4,5 V                                            | 8 V        | 8 V        | 17 V       | 27 V                                               | 4,5 V      | 4,5 V      | 4,5 V      |           |
| Status device                                     | green LED                                        |            |            |            |                                                    | green LED  |            | green LED  |           |
| <b>CONTACT</b>                                    |                                                  |            |            |            |                                                    |            |            |            |           |
| Type                                              | 1 NO                                             |            |            |            |                                                    |            |            | 1 NO + RC  | 1 NC + RC |
| Voltage switching range min./max.                 | 12 V / 250 V AC                                  |            |            |            |                                                    |            |            |            |           |
| Current switching range min./max.                 | 10 mA / 6 A                                      |            |            |            |                                                    |            |            |            |           |
| Load switching range                              | 0,6 VA / 1500 VA (ohmic load)                    |            |            |            |                                                    |            |            |            |           |
| AC1 min. / max.                                   | 0,6 W / 140 W                                    |            |            |            |                                                    |            |            |            |           |
| DC1 min. / max.                                   | 10 <sup>3</sup> on AC15                          |            |            |            |                                                    |            |            |            |           |
| Number of on-load operations                      | 10 <sup>7</sup>                                  |            |            |            |                                                    |            |            |            |           |
| Number of off-load operations                     | 10 <sup>7</sup>                                  |            |            |            |                                                    |            |            |            |           |
| Operating speed                                   | F 5 ms                                           | 5 ms       | 5 ms       | 6 ms       | 7 ms                                               | 5 ms       | 5 ms       | 5 ms       |           |
|                                                   | O 8 ms                                           | 8 ms       | 8 ms       | 15 ms      | 15 ms                                              | 8 ms       | 8 ms       | 8 ms       |           |
| Bounce                                            | 1,2 ms                                           |            |            |            |                                                    |            |            |            |           |
| Insulation coil / contact                         | 4000 V RMS                                       |            |            |            |                                                    |            |            |            |           |
| Resistance to shock coil / contact                | 4000 V RMS                                       |            |            |            |                                                    |            |            |            |           |
| Insulation contact / contact                      | 1000 V RMS                                       |            |            |            |                                                    |            |            |            |           |
| Ambient temperature storage                       | -40°C to +80°C                                   |            |            |            |                                                    |            |            |            |           |
| operating                                         | -20°C to +70°C (1)                               |            |            |            |                                                    |            |            |            |           |
| <b>Other characteristics</b>                      | Screw clamp                                      |            |            |            | Spring clamp                                       |            |            |            |           |
| Body material                                     | grey UL 94 V0                                    |            |            |            | grey UL 94 V0                                      |            |            |            |           |
| Wire size                                         | Solid wire 0,2 - 4 mm <sup>2</sup> / 24 - 12 AWG |            |            |            | Solid wire 0,2 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |            |            |            |           |
| Stranded wire                                     | 2,5 mm <sup>2</sup> / 24 - 12 AWG                |            |            |            | 2,5 mm <sup>2</sup> / 24 - 12 AWG                  |            |            |            |           |
| Rated wire size                                   | 2,5 mm <sup>2</sup> / 12 AWG                     |            |            |            | 2,5 mm <sup>2</sup> / 12 AWG                       |            |            |            |           |
| Wire stripping length                             | 9 mm .354"                                       |            |            |            | 9 mm .354"                                         |            |            |            |           |
| Recommended screwdriver                           | 3,5 mm .137"                                     |            |            |            | 3,5 mm .137"                                       |            |            |            |           |
| Protection                                        | IP20 NEMA1                                       |            |            |            | IP20 NEMA1                                         |            |            |            |           |
| Recommended torque                                | 0,4 - 0,6 Nm 3,5 - 5,3 lb.in                     |            |            |            | 0,4 - 0,6 Nm 3,5 - 5,3 lb.in                       |            |            |            |           |
| Approvals                                         | UL, (pending), LRS, CE                           |            |            |            |                                                    |            |            |            |           |

Reference standards CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6.

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.



|           | DC12  | AC12 | DC13  | AC15 |
|-----------|-------|------|-------|------|
| 24 V      | 6 A   | 6 A  | 1 A   | 3 A  |
| 110/120 V | 0,3 A | 6 A  | 0,2 A | 3 A  |
| 220/230 V | 0,2 A | 6 A  | 0,1 A | 3 A  |

| Description                                                   | Type                | Order Code      | Price |
|---------------------------------------------------------------|---------------------|-----------------|-------|
| Relay module 1 NO high level with safety switch 6 mm spacing  | RB 111 A1-24VAC/DC  | 1SNA645063R2000 |       |
|                                                               | RB 111 A-24VAC/DC   | 1SNA645014R2700 |       |
|                                                               | RB 111 A-48-60VAC/D | 1SNA645014R2700 |       |
|                                                               | RB 111 A-115VAC/DC  | 1SNA645016R2100 |       |
|                                                               | RB 111 A-230VAC/DC  | 1SNA645017R2200 |       |
| Relay mod. 1 NO high level w/contact protection 12 mm spacing | RB 111 AR-24VAC/DC  | 1SNA645018R0300 |       |
| Relay mod. 1 NC high level w/contact protection 12 mm spacing | RB 101 AR-24VAC/DC  | 1SNA645019R0400 |       |

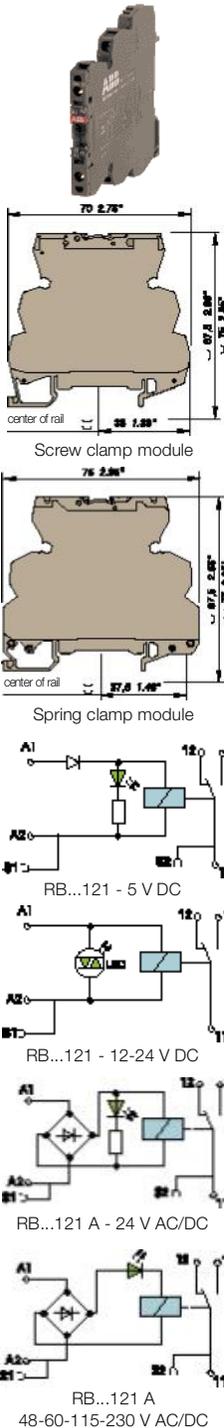
| Accessories                             | Type        | Order Code      | Price |
|-----------------------------------------|-------------|-----------------|-------|
| End stop                                | BADH V0     | 1SNA116900R2700 |       |
|                                         | BADL V0     | 1SNA399903R0200 |       |
|                                         | BAM2 V0     | 1SNA399067R0100 |       |
| Separator end section                   | SC612       | 1SNA290474R0200 |       |
| Divisible shunt 10 poles                | BJ612-10    | 1SNA290488R0100 |       |
| Divisible shunt 70 poles                | BJ612-70    | 1SNA290489R0200 |       |
| Screw clamp distribution block sp. 12mm | D4/12-3-3   | 1SNA345031R2000 |       |
|                                         | D4/12-3R-3R | 1SNA345631R2200 |       |
| Test plug DIA. 2mm                      | FC2         | 1SNA007865R2600 |       |
| Marking method                          | RC65 RC610  | see marking     |       |

# Relays and optocouplers

## Relay Interfaces - R600 relay modules



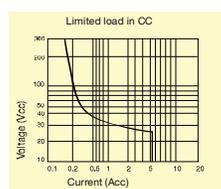
DIN 3



Relay : 1 SPDT high level contact 10 mA to 6 A - 6 mm .236» spacing

### Characteristics

| Relay characteristics                             | RB 121                                                                                                   |         |         |            | RB 121A                                  |            |             |             | ±10% on AC<br>+10% -15% on DC<br>230 V AC/DC<br>50 / 60 Hz |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------|---------|---------|------------|------------------------------------------|------------|-------------|-------------|------------------------------------------------------------|
|                                                   | 5 V DC                                                                                                   | 12 V DC | 24 V DC | 24 VAC/DC  | 48 V AC/DC                               | 60 V AC/DC | 115 V AC/DC | 230 V AC/DC |                                                            |
| <b>COIL</b>                                       |                                                                                                          |         |         |            |                                          |            |             |             |                                                            |
| Rated voltage +20%, -15% on DC ; +10%, -10% on AC | 5 V DC                                                                                                   | 12 V DC | 24 V DC | 24 VAC/DC  | 48 V AC/DC                               | 60 V AC/DC | 115 V AC/DC | 230 V AC/DC |                                                            |
| Frequency                                         |                                                                                                          |         |         | 50 / 60 Hz | 50 / 60 Hz                               | 50 / 60 Hz | 50 / 60 Hz  | 50 / 60 Hz  |                                                            |
| Power                                             | 0,2 W                                                                                                    | 0,2 W   | 0,28 W  | 0,24 W     | 0,33 W                                   | 0,54 W     | 0,46 W      | 0,8 W       |                                                            |
| Rated current                                     | 40 mA                                                                                                    | 16 mA   | 12 mA   | 10 mA      | 7 mA                                     | 9 mA       | 4 mA        | 3,5 mA      |                                                            |
| Drop-out voltage at 20°C                          | 1,2 V                                                                                                    | 2,2 V   | 1,2 V   | 4,5 V      | 8 V                                      | 8 V        | 17 V        | 27 V        |                                                            |
| Status device                                     | green LED                                                                                                |         |         |            |                                          |            |             |             |                                                            |
| <b>CONTACT</b>                                    |                                                                                                          |         |         |            |                                          |            |             |             |                                                            |
| Type                                              | 1 SPDT                                                                                                   |         |         |            |                                          |            |             |             |                                                            |
| Voltage switching range min./max.                 | 12 V / 250 V AC                                                                                          |         |         |            |                                          |            |             |             |                                                            |
| Current switching range min./max.                 | 10 mA / 6 A                                                                                              |         |         |            |                                          |            |             |             |                                                            |
| Load switching range                              | 0,6 VA / 1500 VA (ohmic load)                                                                            |         |         |            |                                          |            |             |             |                                                            |
| AC1 min. / max.                                   | 0,6 W / 140 W                                                                                            |         |         |            |                                          |            |             |             |                                                            |
| DC1 min. / max.                                   | 10 <sup>5</sup> on AC15                                                                                  |         |         |            |                                          |            |             |             |                                                            |
| Number of on-load operations                      | 10 <sup>7</sup>                                                                                          |         |         |            |                                          |            |             |             |                                                            |
| Number of off-load operations                     |                                                                                                          |         |         |            |                                          |            |             |             |                                                            |
| Operating speed                                   | F 5 ms                                                                                                   | 5 ms    | 5 ms    | 5 ms       | 5 ms                                     | 5 ms       | 6 ms        | 7 ms        |                                                            |
|                                                   | O 8 ms                                                                                                   | 8 ms    | 8 ms    | 8 ms       | 8 ms                                     | 8 ms       | 15 ms       | 16 ms       |                                                            |
| Bounce                                            | 1,2 ms                                                                                                   |         |         |            |                                          |            |             |             |                                                            |
| Insulation coil / contact                         | 4000 V RMS                                                                                               |         |         |            |                                          |            |             |             |                                                            |
| Resistance to shock coil / contact                | 4000 V RMS                                                                                               |         |         |            |                                          |            |             |             |                                                            |
| Insulation contact / contact                      | 1000 V RMS                                                                                               |         |         |            |                                          |            |             |             |                                                            |
| Ambient temperature storage                       | -40°C to +80°C                                                                                           |         |         |            |                                          |            |             |             |                                                            |
| operating                                         | -20°C to +70°C (1)                                                                                       |         |         |            |                                          |            |             |             |                                                            |
| <b>Other characteristics</b>                      | Screw clamp                                                                                              |         |         |            | Spring clamp                             |            |             |             |                                                            |
| Body material                                     | grey                                                                                                     |         |         |            | UL 94 V0                                 |            |             |             |                                                            |
| Wire                                              | Solid wire                                                                                               |         |         |            | 0,2 - 2,5 mm <sup>2</sup> / 24 - 12 AWG  |            |             |             |                                                            |
| size                                              | Stranded wire                                                                                            |         |         |            | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |            |             |             |                                                            |
| Rated wire size                                   | 2,5 mm <sup>2</sup> / 12 AWG                                                                             |         |         |            | 2,5 mm <sup>2</sup> / 12 AWG             |            |             |             |                                                            |
| Wire stripping length                             | 9 mm .354"                                                                                               |         |         |            | 9 mm .354"                               |            |             |             |                                                            |
| Recommended screwdriver                           | 3,5 mm .137"                                                                                             |         |         |            | 3,5 mm .137"                             |            |             |             |                                                            |
| Protection                                        | IP20 NEMA1                                                                                               |         |         |            | IP20 NEMA1                               |            |             |             |                                                            |
| Recommended torque                                | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in                                                                             |         |         |            | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in             |            |             |             |                                                            |
| Approvals                                         | (pending for 12 V DC),  (pending), ,                                                                     |         |         |            |                                          |            |             |             |                                                            |
| Reference standards                               | CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6. |         |         |            |                                          |            |             |             |                                                            |



|           | DC12  | AC12 | DC13  | AC15 |
|-----------|-------|------|-------|------|
| 24 V      | 6 A   | 6 A  | 1 A   | 3 A  |
| 110/120 V | 0,3 A | 6 A  | 0,2 A | 3 A  |
| 220/230 V | 0,2 A | 6 A  | 0,1 A | 3 A  |

| Description | Type                 | Order Code      | Price |
|-------------|----------------------|-----------------|-------|
|             | RB 121-5VDC          | 1SNA645034R2300 |       |
|             | RB 121-12VDC         | 1SNA645069R0000 |       |
|             | RB 121-24VDC         | 1SNA645064R0100 |       |
|             | RB 121 A-24VAC/DC    | 1SNA645001R0300 |       |
|             | RB 121 A-48-60VAC/DC | 1SNA645002R0400 |       |
|             | RB 121 A-115VAC/DC   | 1SNA645003R0500 |       |
|             | RB 121 A-230VAC/DC   | 1SNA645004R0400 |       |

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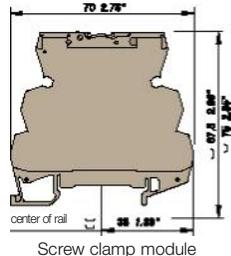
# Relays and optocouplers

## Relay Interfaces - R600 relay modules

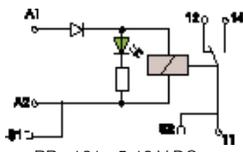


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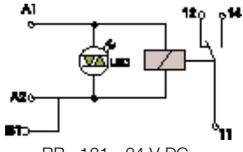
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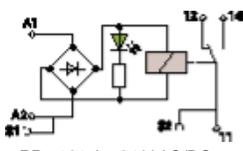
Screw clamp module



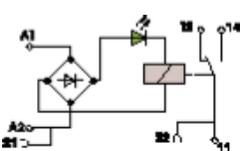
RB...121 - 5-12 V DC



RB...121 - 24 V DC



RB...121 A - 24 V AC/DC



RB...121 A

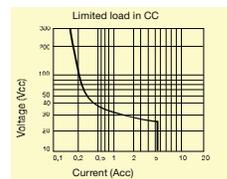
48-60-115-230 V AC/DC

Relay : 1 SPDT low level contact 1 mA upto 6 A - 6 mm .236» spacing

### Characteristics

| Relay characteristics<br>COIL      | RB 121                                                                                                   |        |         | RB 121 A                                 |            |            |            |             |
|------------------------------------|----------------------------------------------------------------------------------------------------------|--------|---------|------------------------------------------|------------|------------|------------|-------------|
|                                    | Rated voltage +20%, -15% on DC ; +10%, -10% on AC                                                        | 5 V DC | 12 V DC | 24 V DC                                  | 24 VAC/DC  | 48 V AC/DC | 60 V AC/DC | 115 V AC/DC |
| Frequency                          |                                                                                                          |        |         | 50 / 60 Hz                               | 50 / 60 Hz | 50 / 60 Hz | 50 / 60 Hz | 50 / 60 Hz  |
| Power                              | 0,2 W                                                                                                    | 0,2 W  | 0,28 W  | 0,24 W                                   | 0,33 W     | 0,54 W     | 0,46 W     | 0,8 W       |
| Rated current                      | 40 mA                                                                                                    | 16 mA  | 12 mA   | 10 mA                                    | 7 mA       | 9 mA       | 4 mA       | 3,5 mA      |
| Drop-out voltage at 20°C           | 1,2 V                                                                                                    | 2,2 V  | 1,2 V   | 4,5 V                                    | 8 V        | 8 V        | 17 V       | 27 V        |
| Status device                      | green LED                                                                                                |        |         |                                          |            |            |            |             |
| <b>CONTACT</b>                     |                                                                                                          |        |         |                                          |            |            |            |             |
| Type                               | 1 SPDT                                                                                                   |        |         |                                          |            |            |            |             |
| Voltage switching range min./max.  | 5 V / 250 V AC                                                                                           |        |         |                                          |            |            |            |             |
| Current switching range min./max.  | 1 mA / 6 A                                                                                               |        |         |                                          |            |            |            |             |
| Load switching range               | 0,05 VA / 1500 VA (ohmic load)<br>0,05 W / 140 W                                                         |        |         |                                          |            |            |            |             |
| Number of on-load operations       | 10 <sup>5</sup> on AC15                                                                                  |        |         |                                          |            |            |            |             |
| Number of off-load operations      | 10 <sup>7</sup>                                                                                          |        |         |                                          |            |            |            |             |
| Operating speed                    | F                                                                                                        | 5 ms   | 5 ms    | 5 ms                                     | 5 ms       | 5 ms       | 5 ms       | 6 ms        |
|                                    | O                                                                                                        | 8 ms   | 8 ms    | 8 ms                                     | 8 ms       | 8 ms       | 8 ms       | 15 ms       |
| Bounce                             | 1,2 ms                                                                                                   |        |         |                                          |            |            |            |             |
| Insulation coil / contact          | 4000 V RMS                                                                                               |        |         |                                          |            |            |            |             |
| Resistance to shock coil / contact | 4000 V RMS                                                                                               |        |         |                                          |            |            |            |             |
| Insulation contact / contact       | 1000 V RMS                                                                                               |        |         |                                          |            |            |            |             |
| Ambient temperature storage        | -40°C to +80°C                                                                                           |        |         |                                          |            |            |            |             |
| operating                          | -20°C to +70°C (1)                                                                                       |        |         |                                          |            |            |            |             |
| <b>Other characteristics</b>       | Screw clamp                                                                                              |        |         | Spring clamp                             |            |            |            |             |
| Body material                      | grey                                                                                                     |        |         | UL 94 V0                                 |            |            |            |             |
| Wire                               | Solid wire                                                                                               |        |         | 0,2 - 2,5 mm <sup>2</sup> / 24 - 12 AWG  |            |            |            |             |
| size                               | Stranded wire                                                                                            |        |         | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |            |            |            |             |
| Rated wire size                    | 2,5 mm <sup>2</sup> / 12 AWG                                                                             |        |         | 2,5 mm <sup>2</sup> / 12 AWG             |            |            |            |             |
| Wire stripping length              | 9 mm .354"                                                                                               |        |         | 9 mm .354"                               |            |            |            |             |
| Recommended screwdriver            | 3,5 mm .137"                                                                                             |        |         | 3,5 mm .137"                             |            |            |            |             |
| Protection                         | IP20 NEMA1                                                                                               |        |         | IP20 NEMA1                               |            |            |            |             |
| Recommended torque                 | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in                                                                             |        |         | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in             |            |            |            |             |
| Approvals                          | UL (pending for 24 V DC), CE (pending), LRS, CE                                                          |        |         |                                          |            |            |            |             |
| Reference standards                | CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6. |        |         |                                          |            |            |            |             |

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.



|           | DC12  | AC12 | DC13  | AC15 |
|-----------|-------|------|-------|------|
| 24 V      | 6 A   | 6 A  | 1 A   | 3 A  |
| 110/120 V | 0,3 A | 6 A  | 0,2 A | 3 A  |
| 220/230 V | 0,2 A | 6 A  | 0,1 A | 3 A  |

| Description                   | Type                 | Order Code      | Price |
|-------------------------------|----------------------|-----------------|-------|
|                               | RB 121-5VDC          | 1SNA645036R2500 |       |
|                               | RB 121-12VDC         | 1SNA645037R2600 |       |
|                               | RB 121-24VDC         | 1SNA645065R0200 |       |
| Relay module 1 SPDT low level | RB 121 A-24VAC/DC    | 1SNA645005R0700 |       |
|                               | RB 121 A-48-60VAC/DC | 1SNA645006R0000 |       |
|                               | RB 121 A-115VAC/DC   | 1SNA645007R0100 |       |
|                               | RB 121 A-230VAC/DC   | 1SNA645007R0100 |       |

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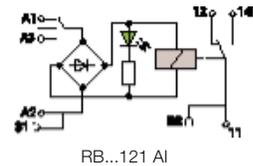
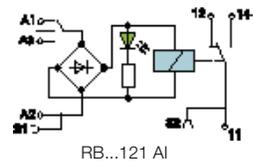
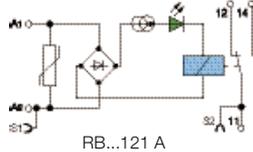
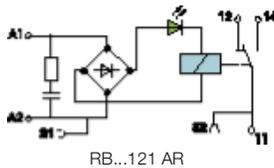
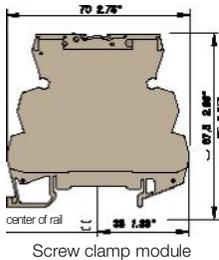
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# Relays and optocouplers

## Relay Interfaces - R600 relay modules



DIN 3

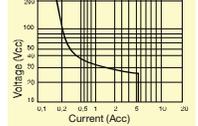


- Relay : 1 SPDT high level with switch or large coil voltage range or with leakage current protection  
12 mm .472» spacing
- Relay : 1 SPDT low level with switch  
12 mm .472» spacing

### Characteristics

| Relay characteristics                             | RB...121 AR                                            |             | RB...121 AI                  |                                          | RB...121 AI                  |                                          | RB...121 A                  |
|---------------------------------------------------|--------------------------------------------------------|-------------|------------------------------|------------------------------------------|------------------------------|------------------------------------------|-----------------------------|
|                                                   | 115 V AC/DC                                            | 230 V AC/DC | 24 VAC/DC                    | 24 VAC/DC                                | 24 VAC/DC                    | 24 VAC/DC                                | 60 to 253 VAC/DC            |
| <b>COIL</b>                                       |                                                        |             |                              |                                          |                              |                                          |                             |
| Rated voltage +20%, -15% on DC ; +10%, -10% on AC | ±10% on AC<br>+10% -15% on DC                          |             | 24 VAC/DC                    | 24 VAC/DC                                | 24 VAC/DC                    | 24 VAC/DC                                | 60 to 253 VAC/DC            |
| Frequency                                         | 50 / 60 Hz                                             | 50 / 60 Hz  | 50 / 60 Hz                   | 50 / 60 Hz                               | 50 / 60 Hz                   | 50 / 60 Hz                               | 50 / 60 Hz                  |
| Power                                             | 2 W                                                    | 2,8 W       | 0,24 W                       | 0,24 W                                   | 0,24 W                       | 0,24 W                                   | 1 W                         |
| Rated current                                     | 18 mA                                                  | 12 mA       | 10 mA                        | 10 mA                                    | 10 mA                        | 10 mA                                    | 4 mA max.                   |
| Drop-out voltage at 20°C                          | 17 V                                                   | 27 V        | 4,5 V                        | 4,5 V                                    | 4,5 V                        | 4,5 V                                    | 15 V                        |
| Permissible leakage current                       | 1,6 mA                                                 |             | 1 mA                         |                                          | 1 mA                         |                                          | 1 mA                        |
| Status device                                     | green LED                                              |             |                              |                                          |                              |                                          |                             |
| <b>CONTACT</b>                                    |                                                        |             |                              |                                          |                              |                                          |                             |
| Type                                              | 1 SPDT                                                 |             | 1 SPDT                       |                                          | 1 SPDT                       |                                          | 1 SPDT                      |
| Voltage switching range min./max.                 | 12 V / 250 V                                           |             | 5 V / 250 V                  |                                          | 5 V / 250 V                  |                                          | 12 V / 250 V                |
| Current switching range min./max.                 | 10 mA / 6 A                                            |             | 1 mA / 6 A                   |                                          | 1 mA / 6 A                   |                                          | 10 mA / 6 A                 |
| Load switching range                              |                                                        |             |                              |                                          |                              |                                          |                             |
| AC1 min. / max.                                   | 0,6 VA / 1500 VA (ohmic load)                          |             | 0,05 VA/1500 VA (ohmic load) |                                          | 0,05 VA/1500 VA (ohmic load) |                                          | 0,6 VA/1500 VA (ohmic load) |
| DC1 min. / max.                                   | 0,6 W / 140 W                                          |             | 0,05 W / 140 W               |                                          | 0,05 W / 140 W               |                                          | 0,6 W / 140 W               |
| Number of on-load operations                      | 10 <sup>5</sup> on AC15                                |             | 10 <sup>5</sup> on AC15      |                                          | 10 <sup>5</sup> on AC15      |                                          | 10 <sup>5</sup> on AC15     |
| Number of off-load operations                     | 10 <sup>7</sup>                                        |             |                              |                                          |                              |                                          |                             |
| Operating speed                                   | F 6 ms                                                 | 7 ms        | 5 ms                         | 5 ms                                     | 5 ms                         | 5 ms                                     | 7 ms                        |
|                                                   | O 15 ms                                                | 16 ms       | 8 ms                         | 8 ms                                     | 8 ms                         | 8 ms                                     | 20 ms                       |
| Bounce                                            |                                                        |             |                              |                                          |                              |                                          |                             |
| Insulation coil / contact                         | 4000 V RMS                                             |             |                              |                                          |                              |                                          |                             |
| Resistance to shock coil / contact                | 4000 V RMS                                             |             |                              |                                          |                              |                                          |                             |
| Insulation contact / contact                      | 1000 V RMS                                             |             |                              |                                          |                              |                                          |                             |
| Ambient temperature storage                       | -40°C to +80°C                                         |             |                              |                                          |                              |                                          |                             |
| operating                                         | -20°C to +70°C (1)                                     |             |                              |                                          |                              |                                          |                             |
| <b>Other characteristics</b>                      |                                                        |             |                              |                                          |                              |                                          |                             |
| Body material                                     | grey                                                   |             |                              | Screw clamp                              |                              | Spring clamp                             |                             |
| Wire                                              | UL 94 V0                                               |             |                              | UL 94 V0                                 |                              | UL 94 V0                                 |                             |
| Wire size                                         | Solid wire 0,2 - 4 mm <sup>2</sup> / 24 - 12 AWG       |             |                              | 0,2 - 2,5 mm <sup>2</sup> / 24 - 12 AWG  |                              | 0,2 - 2,5 mm <sup>2</sup> / 24 - 12 AWG  |                             |
| size                                              | Stranded wire 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |             |                              | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |                              | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |                             |
| Rated wire size                                   | 2,5 mm <sup>2</sup> / 12 AWG                           |             |                              | 2,5 mm <sup>2</sup> / 12 AWG             |                              | 2,5 mm <sup>2</sup> / 12 AWG             |                             |
| Wire stripping length                             | 9 mm .354"                                             |             |                              | 9 mm .354"                               |                              | 9 mm .354"                               |                             |
| Recommended screwdriver                           | 3,5 mm .137"                                           |             |                              | 3,5 mm .137"                             |                              | 3,5 mm .137"                             |                             |
| Protection                                        | IP20 NEMA1                                             |             |                              | IP20 NEMA1                               |                              | IP20 NEMA1                               |                             |
| Recommended torque                                | 0,4 - 0,6 Nm 3,5 - 5,3 lb.in                           |             |                              | 0,4 - 0,6 Nm 3,5 - 5,3 lb.in             |                              | 0,4 - 0,6 Nm 3,5 - 5,3 lb.in             |                             |
| Approvals                                         | c  us,  (pending),  ,                                  |             |                              |                                          |                              |                                          |                             |

Reference standards CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6.  
 (1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.



|           | DC12  | AC12 | DC13  | AC15 |
|-----------|-------|------|-------|------|
| 24 V      | 6 A   | 6 A  | 1 A   | 3 A  |
| 110/120 V | 0,3 A | 6 A  | 0,2 A | 3 A  |
| 220/230 V | 0,2 A | 6 A  | 0,1 A | 3 A  |

| Description                                           | Type                  | Order Code      | Price |
|-------------------------------------------------------|-----------------------|-----------------|-------|
| Relay mod. 1SPDT high level w/leakage current protec. | RB 121 AR-115VAC/DC   | 1SNA645046R0700 |       |
|                                                       | RB 121 AR-230VAC/DC   | 1SNA645011R2400 |       |
|                                                       | RB 121 A 60-230VAC/DC | 1SNA645020R0100 |       |
| Relay mod. 1SPDT high level with switch               | RB 121 AI-24VAC/DC    | 1SNA645032R2100 |       |
| Relay mod. 1SPDT high level with safety switch        |                       | 1SNA645009R1300 |       |
| Relay module 1SPDT low level with switch              |                       | 1SNA645033R2200 |       |
| Relay module 1SPDT low level with safety switch       |                       | 1SNA645010R0700 |       |

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# Relays and optocouplers

## Relay Interfaces - R600 relay modules



DIN 3

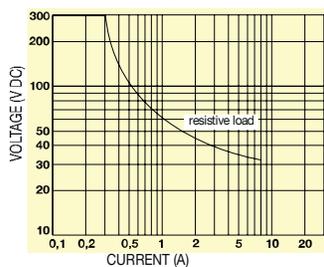
Relay : 1 DPDT low level contact 1 mA to 8 A - 12 mm .472» spacing

### Characteristics

| Relay characteristics                             | RB...122A                                                                                                |            |                                          |             |                                              |
|---------------------------------------------------|----------------------------------------------------------------------------------------------------------|------------|------------------------------------------|-------------|----------------------------------------------|
|                                                   | <b>COIL</b>                                                                                              |            |                                          |             |                                              |
| Rated voltage +20%, -15% on DC ; +10%, -10% on AC | 24 VAC/DC                                                                                                | 48 V AC/DC | 60 V AC/DC                               | 115 V AC/DC | ±10% on AC<br>+10% -15% on DC<br>230 V AC/DC |
| Frequency                                         | 50 / 60 Hz                                                                                               | 50 / 60 Hz | 50 / 60 Hz                               | 50 / 60 Hz  | 50 / 60 Hz                                   |
| Power                                             | 0,48 W                                                                                                   | 0,62 W     | 0,96 W                                   | 0,58 W      | 1,15 W                                       |
| Rated current                                     | 20 mA                                                                                                    | 13 mA      | 16 mA                                    | 5 mA        | 5 mA                                         |
| Drop-out voltage at 20°C                          | 5,4 V                                                                                                    | 8,8 V      | 8,8 V                                    | 20 V        | 10 V                                         |
| Status device                                     | green LED                                                                                                |            |                                          |             |                                              |
| <b>CONTACT</b>                                    |                                                                                                          |            |                                          |             |                                              |
| Type                                              | 1 DPDT                                                                                                   |            |                                          |             |                                              |
| Voltage switching range min./max.                 | 5 V / 250 V DC - 250 V AC                                                                                |            |                                          |             |                                              |
| Current switching range min./max.                 | 1 mA / 8 A                                                                                               |            | 1 mA / 5 A                               |             |                                              |
| Load switching range                              | 5 mA / 1500 VA                                                                                           |            |                                          |             |                                              |
| AC1 min. / max.                                   | 5 mW / 192 W                                                                                             |            |                                          |             |                                              |
| DC1 min. / max.                                   | 10 <sup>5</sup>                                                                                          |            |                                          |             |                                              |
| Number of on-load operations                      | 2 x 10 <sup>7</sup>                                                                                      |            |                                          |             |                                              |
| Number of off-load operations                     |                                                                                                          |            |                                          |             |                                              |
| Operating speed                                   | F                                                                                                        | 6 ms       | 10 ms                                    | 10 ms       | 6 ms                                         |
|                                                   | O                                                                                                        | 10 ms      | 14 ms                                    | 14 ms       | 15 ms                                        |
| Bounce                                            | 1 ms                                                                                                     |            |                                          |             |                                              |
| Insulation coil / contact                         | 3500 V RMS                                                                                               |            |                                          |             |                                              |
| Resistance to shock coil / contact                | 3500 V RMS                                                                                               |            |                                          |             |                                              |
| Insulation contact / contact                      | 3500 V RMS (between 2 contacts)                                                                          |            |                                          |             |                                              |
| Ambient temperature storage                       | -40°C to +80°C                                                                                           |            |                                          |             |                                              |
| operating                                         | -20°C to +70°C (1)                                                                                       |            |                                          |             |                                              |
| <b>Other characteristics</b>                      | Screw clamp                                                                                              |            | Spring clamp                             |             |                                              |
| Body material                                     | grey                                                                                                     |            | UL 94 V0                                 |             |                                              |
| Wire                                              | Solid wire                                                                                               |            | UL 94 V0                                 |             |                                              |
| size                                              | Stranded wire                                                                                            |            | 0,2 - 2,5 mm <sup>2</sup> / 24 - 12 AWG  |             |                                              |
| Rated wire size                                   | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG                                                                 |            | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |             |                                              |
| Wire stripping length                             | 2,5 mm <sup>2</sup> / 12 AWG                                                                             |            | 2,5 mm <sup>2</sup> / 12 AWG             |             |                                              |
| Recommended screwdriver                           | 9 mm .354"                                                                                               |            | 9 mm .354"                               |             |                                              |
| Protection                                        | 3,5 mm .137"                                                                                             |            | 3,5 mm .137"                             |             |                                              |
| Recommended torque                                | IP20 NEMA 1                                                                                              |            | IP20 NEMA 1                              |             |                                              |
| Approvals                                         | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in                                                                             |            | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in             |             |                                              |
| Reference standards                               | CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6. |            |                                          |             |                                              |

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.

### Max. DC load breaking capacity



| Description                    | Type                 | Order Code      | Price |
|--------------------------------|----------------------|-----------------|-------|
| Relay module 1 DPDT low level. | RB 122 A-24VAC/DC    | 1SNA645012R2500 |       |
|                                | RB 122 A-48-60VAC/DC | 1SNA645040R1500 |       |
|                                | RB 122 A-115VAC/DC   | 1SNA645041R0200 |       |
|                                | RB 122 A-230VAC/DC   | 1SNA645013R2600 |       |

Accessories see page 1/80



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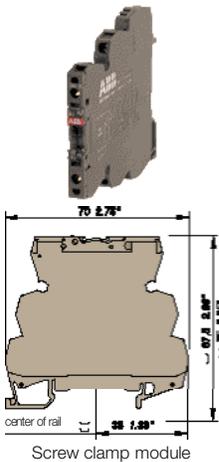
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# Relays and optocouplers

## Optocouplers - R600



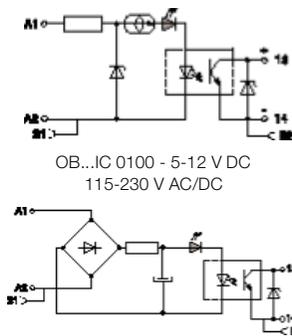
DIN 3



Optocoupler : 5 to 58 V DC output / 100 mA - 6 mm .236" spacing

### Characteristics

| Opto. characteristics                          | OB...IC 0100                                                                                             |      |                |                              |            |                             |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------|------|----------------|------------------------------|------------|-----------------------------|
| <b>INPUT</b>                                   |                                                                                                          |      |                |                              |            |                             |
| Input voltage +20% -15% on DC, +10% -10% on AC | 5 V DC - 12 V DC                                                                                         |      | 24 V DC        | 48 V AC/DC                   | 60 V AC/DC | 115 V AC/DC 230 V AC/DC     |
| Frequency                                      |                                                                                                          |      |                | 50 / 60 Hz                   | 50 / 60 Hz | 50 / 60 Hz                  |
| Input current AC/DC                            | 5 mA                                                                                                     | 9 mA | 4 mA           | 4 mA                         | 5 mA       | 7 mA / 16mA 11,5 mA/25 mA   |
| Pull-in voltage at Is=100%                     | 4 V                                                                                                      | 4 V  | 15 V           | 25 V                         | 25 V       | 60 VAC/70 VDC 60 VAC/70 VDC |
| Switching time C / O                           | 10 µs / 500 µs                                                                                           |      | 10 µs / 500 µs | 5 ms / 20 ms                 |            | 5 ms / 15 ms                |
| Permissible leakage current                    | 1000 Hz                                                                                                  |      | 1000 Hz        | 20 Hz                        |            | 20 Hz                       |
| <b>OUTPUT</b>                                  | 0,9 mA                                                                                                   |      | 1 mA           | 0,9 mA                       |            | 1,6 mA                      |
| Output voltage                                 | 4,5 to 58 VDC                                                                                            |      |                |                              |            |                             |
| Output current min.                            | 1 mA                                                                                                     |      |                |                              |            |                             |
| Output current max.                            | 100 mA                                                                                                   |      |                |                              |            |                             |
| Output leakage current at Umax.                | < 50 µA                                                                                                  |      |                |                              |            |                             |
| Residual voltage at I max and U rated          | 1 V                                                                                                      |      |                |                              |            |                             |
| Frequency on inductive load                    | 1,3 V                                                                                                    |      |                |                              |            |                             |
| Isolation Input / Output                       | 2500 V RMS                                                                                               |      |                |                              |            |                             |
| <b>TEMPERATURE</b>                             |                                                                                                          |      |                |                              |            |                             |
| Ambient temperature storage                    | -40°C to +80°C                                                                                           |      |                |                              |            |                             |
| operating                                      | -20°C to +70°C (1)                                                                                       |      |                |                              |            |                             |
| <b>Other characteristics</b>                   | Screw clamp                                                                                              |      |                | Spring clamp                 |            |                             |
| Body material                                  | grey UL 94 V0                                                                                            |      |                | grey UL 94 V0                |            |                             |
| Wire size                                      | 0,2 - 4 mm² / 24 - 12 AWG                                                                                |      |                | 0,2 - 2,5 mm² / 24 - 12 AWG  |            |                             |
| size                                           | Stranded wire 0,22 - 2,5 mm² / 24 - 12 AWG                                                               |      |                | 0,22 - 2,5 mm² / 24 - 12 AWG |            |                             |
| Rated wire size                                | 2,5 mm² / 12 AWG                                                                                         |      |                | 2,5 mm² / 12 AWG             |            |                             |
| Wire stripping length                          | 9 mm .354"                                                                                               |      |                | 9 mm .354"                   |            |                             |
| Recommended screwdriver                        | 3,5 mm .137"                                                                                             |      |                | 3,5 mm .137"                 |            |                             |
| Protection                                     | IP20 NEMA1                                                                                               |      |                | IP20 NEMA1                   |            |                             |
| Recommended torque                             | 0,4 - 0,6 Nm 3,5 - 5,3 lb.in                                                                             |      |                | 0,4 - 0,6 Nm 3,5 - 5,3 lb.in |            |                             |
| Approvals                                      | cULus (pending), LRS, CE                                                                                 |      |                |                              |            |                             |
| Reference standards                            | CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6. |      |                |                              |            |                             |



OB...IC 0100  
24 V DC  
24-48-60 V AC/DC

1

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.

| Description                  | Type                    | Order Code      | Price |
|------------------------------|-------------------------|-----------------|-------|
| Optocoupler module 100 mA/DC | OBIC 0100-5-12VDC       | 1SNA645047R0000 |       |
|                              | OBIC 0100-24VDC         | 1SNA645021R2600 |       |
|                              | OBIC 0100-48-60VAC/DC   | 1SNA645049R1200 |       |
|                              | OBIC 0100-115-230VAC/DC | 1SNA645022R2700 |       |

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# Relays and optocouplers

## Optocouplers - R600



DIN 3

Optocoupler : 5 to 58 V DC output / 2 A - 6 mm .236" spacing

### Characteristics

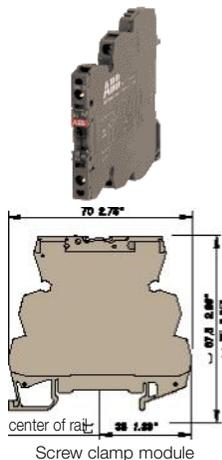
| Opto. characteristics                          | OB...OC 1000                                                                                             |              | OB...OC 1500                             | OB...OC 1000             |                          |                           |                           |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------|------------------------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
|                                                | 5 V DC - 12 V DC                                                                                         | 24 V DC      | 24 V AC/DC<br>50 / 60 Hz                 | 48 V AC/DC<br>50 / 60 Hz | 60 V AC/DC<br>50 / 60 Hz | 115 V AC/DC<br>50 / 60 Hz | 230 V AC/DC<br>50 / 60 Hz |
| INPUT                                          |                                                                                                          |              |                                          |                          |                          |                           |                           |
| Input voltage +20% -15% on DC, +10% -10% on AC |                                                                                                          |              |                                          |                          |                          |                           |                           |
| Frequency                                      |                                                                                                          |              |                                          |                          |                          |                           |                           |
| Input current                                  | 5 mA   9 mA                                                                                              | 5,4 mA       | 6,3 mA                                   | 4 mA                     | 5,1 mA                   | 4,2 mA                    | 4 mA                      |
| Pull-in voltage at Is=100%                     | 4 V                                                                                                      | 12 V         | 15 V                                     | 27 V                     | 27 V                     | 50 V                      | 80 V                      |
| Switching time C / O                           | 15 µs / 250 µs                                                                                           | 30 µs/400 µs | 1 ms/7 ms                                | 5 ms/20 ms               | 5 ms/20 ms               | 500 µs/10 ms              | 1 ms / 15 ms              |
| Operating frequency                            | 2000 Hz                                                                                                  | 1000 Hz      | 60 Hz                                    | 20 Hz                    | 20 Hz                    | 50 Hz                     | 35 Hz                     |
| Permissible leakage current                    | 1 mA                                                                                                     | 0,8 mA       | 0,9 mA                                   | 1 mA                     | 1 mA                     | 0,3 mA                    | 0,3 mA                    |
| OUTPUT                                         |                                                                                                          |              |                                          |                          |                          |                           |                           |
| Output voltage                                 | 4,5 to 58 VDC                                                                                            |              |                                          |                          |                          |                           |                           |
| Output current min.                            | 1 mA                                                                                                     |              |                                          |                          |                          |                           |                           |
| Output current max.                            | 2 A                                                                                                      |              |                                          |                          |                          |                           |                           |
| Output leakage current at Umax.                | < 50 µA                                                                                                  |              |                                          |                          |                          |                           |                           |
| Residual voltage at I max and U rated          | typical<br>0,1 V<br>max.<br>0,5 V                                                                        |              |                                          |                          |                          |                           |                           |
| Frequency on inductive load                    | 2500 V RMS                                                                                               |              |                                          |                          |                          |                           |                           |
| Isolation Input / Output                       | 2500 V RMS                                                                                               |              |                                          |                          |                          |                           |                           |
| TEMPERATURE                                    |                                                                                                          |              |                                          |                          |                          |                           |                           |
| Ambient temperature storage                    | -40°C to +80°C                                                                                           |              |                                          |                          |                          |                           |                           |
| operating                                      | -20°C to +70°C (1)                                                                                       |              |                                          |                          |                          |                           |                           |
| Other characteristics                          | Screw clamp                                                                                              |              | Spring clamp                             |                          |                          |                           |                           |
| Body material                                  | grey                                                                                                     |              | UL 94 V0                                 |                          |                          |                           |                           |
| Wire                                           | Solid wire                                                                                               |              | UL 94 V0                                 |                          |                          |                           |                           |
| size                                           | 0,2 - 4 mm <sup>2</sup> / 24 - 12 AWG                                                                    |              | 0,2 - 2,5 mm <sup>2</sup> / 24 - 12 AWG  |                          |                          |                           |                           |
| Rated wire size                                | Stranded wire                                                                                            |              | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |                          |                          |                           |                           |
| Wire stripping length                          | 2,5 mm <sup>2</sup> / 12 AWG                                                                             |              | 2,5 mm <sup>2</sup> / 12 AWG             |                          |                          |                           |                           |
| Recommended screwdriver                        | 9 mm .354"                                                                                               |              | 9 mm .354"                               |                          |                          |                           |                           |
| Protection                                     | 3,5 mm .137"                                                                                             |              | 3,5 mm .137"                             |                          |                          |                           |                           |
| Recommended torque                             | IP20 NEMA1                                                                                               |              | IP20 NEMA1                               |                          |                          |                           |                           |
| Approvals                                      | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in                                                                             |              | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in             |                          |                          |                           |                           |
| Reference standards                            | CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6. |              |                                          |                          |                          |                           |                           |

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.

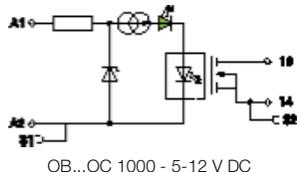
| Description               | Type                  | Order Code      | Price |
|---------------------------|-----------------------|-----------------|-------|
| Optocoupler module 2 A/DC | OBOC 1000-5-12VDC     | 1SNA645050R1700 |       |
|                           | OBOC 1000-24VDC       | 1SNA645051R0400 |       |
|                           | OBOC 1500-24VAC/DC    | 1SNA645025R2200 |       |
|                           | OBOC 1000-48-60VAC/DC | 1SNA645053R0600 |       |
|                           | OBOC 1000-115VAC/DC   | 1SNA645026R2300 |       |
|                           | OBOC 1000-230VAC/DC   | 1SNA645026R2300 |       |

Accessories see page 1/80

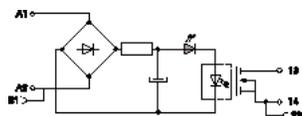
1



Screw clamp module



OB...OC 1000 - 5-12 V DC



OB...OC 1500 - 24 V AC/DC  
OB...OC 1000  
24 V DC  
48-60-115-230 V AC/DC



Full range of product and technical information place this part number in a search engine and download

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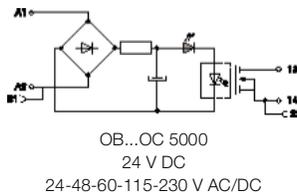
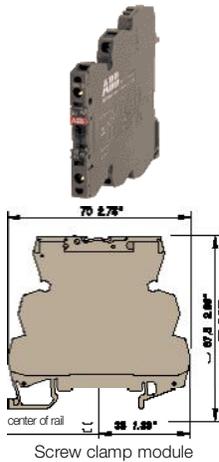
# Relays and optocouplers

## Optocouplers - R600



DIN 3

Optocoupler : 5 to 58 V DC output / 5A - 6 mm .236" spacing



### Characteristics

| Opto. characteristics                          | OB...OC 5000 |                                                                                                          |                                          |              |
|------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------|------------------------------------------|--------------|
| <b>INPUT</b>                                   |              |                                                                                                          |                                          |              |
| Input voltage +20% -15% on DC, +10% -10% on AC | 24 V DC      |                                                                                                          | 115 V AC/DC                              | 230 V AC/DC  |
| Frequency                                      |              |                                                                                                          | 50 / 60 Hz                               | 50 / 60 Hz   |
| Input current                                  | 5,4 mA       |                                                                                                          | 4,2 mA                                   | 4 mA         |
| Pull-in voltage at Is=100%                     | 12 V         |                                                                                                          | 50 V                                     | 80 V         |
| Switching time C / O                           | 30 µs/400 µs |                                                                                                          | 500 µs/10 ms                             | 1 ms / 15 ms |
| Operating frequency                            | 1000 Hz      |                                                                                                          | 50 Hz                                    | 35 Hz        |
| Permissible leakage current                    | 0,8 mA       |                                                                                                          | 0,3 mA                                   | 0,3 mA       |
| <b>OUTPUT</b>                                  |              |                                                                                                          |                                          |              |
| Output voltage                                 |              | 4,5 to 58 VDC                                                                                            |                                          |              |
| Output current min.                            |              | 1 mA                                                                                                     |                                          |              |
| Output current max.                            |              | 5 A                                                                                                      |                                          |              |
| Output leakage current at Umax.                |              | < 50 µA                                                                                                  |                                          |              |
| Residual voltage at I max and U rated          |              | typical                                                                                                  | 0,1 V                                    |              |
|                                                |              | max.                                                                                                     | 0,5 V                                    |              |
| Frequency on inductive load                    |              |                                                                                                          |                                          |              |
| Isolation Input / Output                       |              | 2500 V RMS                                                                                               |                                          |              |
| <b>TEMPERATURE</b>                             |              |                                                                                                          |                                          |              |
| Ambient temperature storage                    |              | -40°C to +80°C                                                                                           |                                          |              |
| operating                                      |              | -20°C to +70°C (1)                                                                                       |                                          |              |
| <b>Other characteristics</b>                   |              | Screw clamp                                                                                              | Spring clamp                             |              |
| Body material                                  |              | grey                                                                                                     | grey                                     |              |
| Wire                                           |              | UL 94 V0                                                                                                 | UL 94 V0                                 |              |
| Wire size                                      |              | 0,2 - 4 mm <sup>2</sup> / 24 - 12 AWG                                                                    | 0,2 - 2,5 mm <sup>2</sup> / 24 - 12 AWG  |              |
| size                                           |              | Stranded wire                                                                                            | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |              |
| Rated wire size                                |              | 2,5 mm <sup>2</sup> / 12 AWG                                                                             | 2,5 mm <sup>2</sup> / 12 AWG             |              |
| Wire stripping length                          |              | 9 mm .354"                                                                                               | 9 mm .354"                               |              |
| Recommended screwdriver                        |              | 3,5 mm .137"                                                                                             | 3,5 mm .137"                             |              |
| Protection                                     |              | IP20 NEMA1                                                                                               | IP20 NEMA1                               |              |
| Recommended torque                             |              | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in                                                                             | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in             |              |
| Approvals                                      |              | (pending),                                                                                               |                                          |              |
| Reference standards                            |              | CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6. |                                          |              |

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.

| Description               | Type                | Order Code      | Price |
|---------------------------|---------------------|-----------------|-------|
| Optocoupler module 5 A/DC | OBOC 5000-24VDC     | 1SNA645024R2100 |       |
|                           | OBOC 5000-115VAC/DC | 1SNA645058R1300 |       |
|                           | OBOC 5000-230VAC/DC | 1SNA645059R1400 |       |

Accessories see page 1/80



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# Relays and optocouplers

## Optocouplers - R600



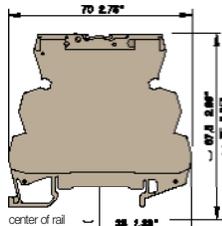
DIN 3

Optocoupler : 24 to 400 V AC output / 2 A max. - 6 or 12 mm spacing

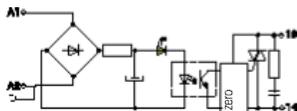
### Characteristics

| Opto. characteristics                          | OB...OA 1000                                                                                             |              |            |                                          |              |             | OB...OA 2000 |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------|------------|------------------------------------------|--------------|-------------|--------------|
|                                                | <b>INPUT</b>                                                                                             |              |            |                                          |              |             |              |
| Input voltage +20% -15% on DC, +10% -10% on AC | 24 V DC                                                                                                  | 48 V AC/DC   | 60 V AC/DC | 115 V AC/DC                              | 230 V AC/DC  | 24 V DC     |              |
| Frequency                                      |                                                                                                          | 50 / 60 Hz   | 50 / 60 Hz | 50 / 60 Hz                               | 50 / 60 Hz   |             |              |
| Input current                                  | 3,6 mA                                                                                                   | 4,3 mA       | 5,5 mA     | 4,15 mA                                  | 4,6 mA       | 3,6 mA      |              |
| Pull-in voltage at Is=100%                     | 14 V                                                                                                     | 15 V         | 18 V       | 60 V                                     | 135 V        | 14 V        |              |
| Switching time C / O                           | 150 μs/1ms                                                                                               | 3 ms / 30 ms |            | 2,2 ms/18 ms                             | 2,5 ms/25 ms | 150 μs/1 ms |              |
| Operating frequency                            | 500 Hz                                                                                                   | 20 Hz        |            | 25 Hz                                    | 20 Hz        | 500 Hz      |              |
| Permissible leakage current                    | 1 mA                                                                                                     | 1 mA         |            | 1 mA                                     | 1 mA         | 1 mA        |              |
| <b>OUTPUT</b>                                  |                                                                                                          |              |            |                                          |              |             |              |
| Output voltage                                 | 24 to 400 V AC                                                                                           |              |            |                                          |              |             |              |
| Frequency                                      | 50 / 60 Hz                                                                                               |              |            |                                          |              |             |              |
| Output current min.                            | 25 mA                                                                                                    |              |            |                                          |              |             |              |
| Output current max.                            | 1 A                                                                                                      |              |            |                                          |              |             | 2 A          |
| Output leakage current at Umax.                | < 0,5 mA                                                                                                 |              |            |                                          |              |             |              |
| Residual voltage at I max and U rated          | 1 V                                                                                                      |              |            |                                          |              |             |              |
|                                                | max. 1,6 V                                                                                               |              |            |                                          |              |             |              |
| Frequency on inductive load                    |                                                                                                          |              |            |                                          |              |             |              |
| Isolation Input / Output                       | 2500 V RMS                                                                                               |              |            |                                          |              |             |              |
| <b>TEMPERATURE</b>                             |                                                                                                          |              |            |                                          |              |             |              |
| Ambient temperature storage                    | - 40°C to + 80°C                                                                                         |              |            |                                          |              |             |              |
| operating                                      | -20°C to +70°C (1)                                                                                       |              |            |                                          |              |             |              |
| <b>Other characteristics</b>                   | Screw clamp                                                                                              |              |            | Spring clamp                             |              |             |              |
| Body material                                  | grey                                                                                                     |              |            | UL 94 V0                                 |              |             |              |
| Wire                                           | Solid wire                                                                                               |              |            | UL 94 V0                                 |              |             |              |
| size                                           | 0,2 - 4 mm <sup>2</sup> / 24 - 12 AWG                                                                    |              |            | 0,2 - 2,5 mm <sup>2</sup> / 24 - 12 AWG  |              |             |              |
| Stranded wire                                  | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG                                                                 |              |            | 0,22 - 2,5 mm <sup>2</sup> / 24 - 12 AWG |              |             |              |
| Rated wire size                                | 2,5 mm <sup>2</sup> / 12 AWG                                                                             |              |            | 2,5 mm <sup>2</sup> / 12 AWG             |              |             |              |
| Wire stripping length                          | 9 mm .354"                                                                                               |              |            | 9 mm .354"                               |              |             |              |
| Recommended screwdriver                        | 3,5 mm .137"                                                                                             |              |            | 3,5 mm .137"                             |              |             |              |
| Protection                                     | IP20 NEMA1                                                                                               |              |            | IP20 NEMA1                               |              |             |              |
| Recommended torque                             | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in                                                                             |              |            | 0,4 - 0,6 Nm 3.5 - 5.3 lb.in             |              |             |              |
| Approvals                                      | (pending),  ,                                                                                            |              |            |                                          |              |             |              |
| Reference standards                            | CEI 947-7-1 / CEI 947-1 / CEI 1131-2 (in relevant parts) / CEI 60664-1 / CEM : IRC 1000-4-2, 3, 4, 5, 6. |              |            |                                          |              |             |              |

(1) Over 55°C, blocks have to be mounted on horizontal rail with 10 mm spacing between each block. For vertical rail mounting use temperature is 15°C less decreased.



Screw clamp module



OB...OA 1000  
24 V DC  
48-60-115-230 V AC/DC  
OB...OA 2000 - 24 V DC

| Description                          | Type                  | Order Code      | Price |
|--------------------------------------|-----------------------|-----------------|-------|
| Optocoupler module 1 A/AC 6 mm spac. | OBOA 1000-24VDC       | 1SNA645027R2400 |       |
|                                      | OBOA 1000-48-60VAC/DC | 1SNA645061R0600 |       |
|                                      | OBOA 1000-115VAC/DC   | 1SNA645062R0700 |       |
|                                      | OBOA 1000-230VAC/DC   | 1SNA645028R0500 |       |
| Optocoupler module 2A/AC 12 mm spac. | OBOA 2000-24VDC       | 1SNA645029R0600 |       |

Accessories see page 1/80



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# Logic relays

## CL Range

## Stand Alone

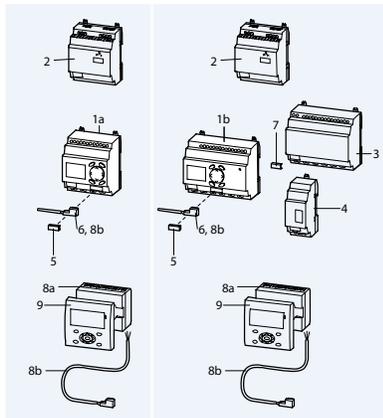
## Expandable

## Expansions

|                           | Type           | Order Code      | Price |
|---------------------------|----------------|-----------------|-------|
|                           | CL-LSR.C12AC1  | 1SVR440712R0300 |       |
|                           | CL-LSR.CX12AC1 | 1SVR440712R0200 |       |
|                           | CL-LSR.12AC2   | 1SVR440713R0100 |       |
|                           | CL-LSR.C12AC2  | 1SVR440713R0300 |       |
|                           | CL-LSR.CX12AC2 | 1SVR440713R0200 |       |
|                           | CL-LSR.C12DC1  | 1SVR440710R0300 |       |
|                           | CL-LSR.CX12DC1 | 1SVR440710R0200 |       |
|                           | CL-LSR.12DC2   | 1SVR440711R0100 |       |
|                           | CL-LSR.C12DC2  | 1SVR440711R0300 |       |
|                           | CL-LSR.CX12DC2 | 1SVR440711R0200 |       |
|                           | CL-LST.C12DC2  | 1SVR440711R1300 |       |
|                           | CL-LST.CX12DC2 | 1SVR440711R1200 |       |
| Digital inputs            |                |                 | 8     |
| Usable as Analogue inputs |                |                 | 2     |
| Relay outputs             |                |                 | 4     |
| Transistor outputs        |                |                 | 4     |
| Display and keypad        |                |                 | ■     |
| Realtime clock            |                |                 | ■     |
| Expandable                |                |                 | 1     |
| 12 V DC                   |                |                 | ■     |
| 24 V DC                   |                |                 | ■     |
| 24 V AC                   |                |                 | ■     |
| 110 - 240 V AC            |                |                 | ■     |

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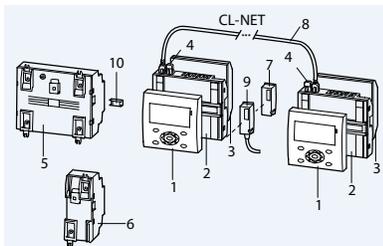
### Stand alone Expandable



- 1a Logic relay CL-LS..
- 1b Expandable logic relay CL-LM..
- 2 Power supply CP-D...
- 3 I/O expansion CL-LER.., CL-LET.. for logic relays CL-LM..
- 4 Coupler unit CL-LEC.. for remote expansion of logic relays CL-LM..
- 5 Memory module CL-LAS.MD003 for logic relays CL-LS.., CL-LM..
- 6 Connecting cable CL-LAS.TK001, CL-LAS.TK002 to connect PC
- 7 CL-LINK plug CL-LAS.TK011 to connect expansion to logic relays CL-LM..
- 8a Remote display connection module CL-LDC.S..
- 8b Connecting cable CL-LAD.TK007 to connect a remote displays to a logic relay
- 9 Display module CL-LDD..

## Display Systems

### Display system → Compact HMI logic relay



- 1 Display module CL-LDD..
  - 2 Display base module CL-LDC.LN..
  - 3 Display I/O module CL-LDR.., CL-LDT..
  - 4 Termination resistor CL-LAD.TK009
  - 5 I/O expansion CL-LER.., CL-LET..
  - 6 Coupler unit CL-LEC.. for remote expansion
  - 7 Memory module CL-LAD.MD004 for display base module
  - 8 Connecting cable CL-LAD.TK002, CL-LAD.TK003, CL-LAD.TK004
  - 9 Connecting cable CL-LAD.TK001, CL-LAD.TK011 to connect PC
  - 10 CL-LINK plug CL-LAS.TK011 for expansion of logic relays CL-LM..
- e.g. door of switchgear cabinet

| Type         | Order Code      |
|--------------|-----------------|
| CL-LDR.16AC2 | 1SVR440853R0000 |
| CL-LDR.16DC2 | 1SVR440851R0000 |
| CL-LDR.17DC2 | 1SVR440851R2000 |
| CL-LDT.16DC2 | 1SVR440851R1000 |
| CL-LDT.17DC2 | 1SVR440851R3000 |

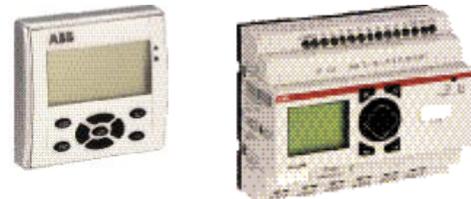
|                    |    |    |    |    |    |
|--------------------|----|----|----|----|----|
| Digital inputs     | 12 | 12 | 12 | 12 | 12 |
| Analogue inputs    |    | 4  | 4  | 4  | 4  |
| Analogue outputs   |    |    | 1  |    | 1  |
| Relay outputs      | 4  | 4  | 4  |    |    |
| Transistor outputs |    |    |    | 4  | 4  |

| Rated supply voltage U <sub>e</sub> |   |
|-------------------------------------|---|
| 24 V DC                             | ■ |
| 110 - 240 V AC                      | ■ |



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# Accessories

## CL range

| Type                                                   | For logic relay | For display system | Description                                                                                                                                | Order Code      | Price |
|--------------------------------------------------------|-----------------|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------|
| <b>Display modules</b>                                 |                 |                    |                                                                                                                                            |                 |       |
| CL-LDD.XK                                              | ■               | ■                  | Graphic display, 132 x 64 pixels                                                                                                           | 1SVR440839R4500 |       |
| CL-LDD.K                                               | ■               | ■                  | Graphic display, 132 x 64 pixels, with keypad                                                                                              | 1SVR440839R4400 |       |
| <b>Remote display connection modules</b>               |                 |                    |                                                                                                                                            |                 |       |
| CL-LDC.SDC2                                            | ■               | ■                  | Module to displace display from the logic relay, 5 m, length adjustable, 24 V DC                                                           | 1SVR440841R0000 |       |
| CL-LDC.SAC2                                            | ■               | ■                  | Module to displace display from the logic relay, 5 m, length adjustable, 100-240 V AC                                                      | 1SVR440843R0000 |       |
| <b>Display base modules</b>                            |                 |                    |                                                                                                                                            |                 |       |
| CL-LDC.LDC2                                            | -               | ■                  | CPU / power supply, 24 V DC                                                                                                                | 1SVR440821R0000 |       |
| CL-LDC.LAC2                                            | -               | ■                  | CPU / power supply, 100-240 V AC                                                                                                           | 1SVR440823R0000 |       |
| CL-LDC.LNDC2                                           | -               | ■                  | CPU / power supply, networking-compatible (CL-NET), 24 V DC                                                                                | 1SVR440821R1000 |       |
| CL-LDC.LNAC2                                           | -               | ■                  | CPU / power supply, networking-compatible (CL-NET), 100-240 V AC                                                                           | 1SVR440823R1000 |       |
| <b>Accessories for logic relays and display system</b> |                 |                    |                                                                                                                                            |                 |       |
| CL-LAS.PS002                                           | ■               | ■                  | Software for programming and control of CL range devices                                                                                   | 1SVR440799R8000 |       |
| CL-LAS.MD003                                           | ■               | -                  | Memory module for logic relays (32 kB)                                                                                                     | 1SVR440799R7000 |       |
| CL-LAD.MD004                                           | -               | ■                  | Memory module for display base modules (256 kB)                                                                                            | 1SVR440899R7000 |       |
| CL-LAS.TK001                                           | ■               | -                  | Cable with serial interface to connect PC and logic relay (length 2m)                                                                      | 1SVR440799R6000 |       |
| CL-LAD.TK001                                           | -               | ■                  | Cable with serial interface to connect PC and display base module (length 2 m)                                                             | 1SVR440899R6000 |       |
| CL-LAS.TK002                                           | ■               | -                  | Cable with USB interface to connect PC and logic relay                                                                                     | 1SVR440799R6100 |       |
| CL-LAD.TK011                                           | -               | ■                  | Cable with USB interface to connect PC and display base module                                                                             | 1SVR440899R6700 |       |
| CL-LAD.TK002                                           | -               | ■                  | Network cable (CL-NET) to connect 2 display base modules (length 0.3 m)                                                                    | 1SVR440899R6100 |       |
| CL-LAD.TK003                                           | -               | ■                  | Network cable (CL-NET) to connect 2 display base modules (length 0.8 m)                                                                    | 1SVR440899R6200 |       |
| CL-LAD.TK004                                           | -               | ■                  | Network cable (CL-NET) to connect 2 display base modules (length 1.5 m)                                                                    | 1SVR440899R6300 |       |
| CL-LAD.TK007                                           | ■               | -                  | Cable for point-to-point connection of remote-display connection module and logic relay, length adaptable (length 2 m)                     | 1SVR440899R6600 |       |
| CL-LAD.TK005                                           | -               | ■                  | Cable for point-to-point connection of remote display connection modules and display base module, length adaptable (length 5 m)            | 1SVR440899R6400 |       |
| CL-LAD.TK006                                           | -               | ■                  | Cable for point-to-point connection of 2 display base modules, length adaptable (length 5 m)                                               | 1SVR440899R6500 |       |
| CL-LAS.TK011                                           | ■               | ■                  | Spare plug (CL-LINK) for connection of logic relay to expansion                                                                            | 1SVR440799R5100 |       |
| CL-LAD.TK009                                           | -               | ■                  | Termination resistor (2 pieces)                                                                                                            | 1SVR440899R6900 |       |
| CL-LAS.FD001                                           | ■               | -                  | Fixing brackets for screw mounting of logic relay, expansion, display base module (9 pieces)                                               | 1SVR440799R5000 |       |
| CL-LAD.FD002                                           | -               | ■                  | Tool for mounting of display modules                                                                                                       | 1SVR440899R3000 |       |
| CL-LAS.TD001                                           | ■               | -                  | Input-/ output simulator with wall power supply, fits to CL-LSR and CL-LST. Rated input voltage 100-240 V AC, rated output voltage 24 V DC | 1SVR440793R0000 |       |
| CL-LAD.FD001                                           | -               | ■                  | Protective cover, transparent, for harsh environmental conditions and application in the food industry                                     | 1SVR440899R1000 |       |
| CL-LAD.FD011                                           | -               | ■                  | Protective cover, transparent, and sealable                                                                                                | 1SVR440899R2000 |       |
| <b>Power supplies</b>                                  |                 |                    |                                                                                                                                            |                 |       |
| CL-D 24/0.42                                           | ■               | -                  | 24 V DC / 0.42 A; Input 100 - 240 V AC                                                                                                     | 1SVR427041R0000 |       |
| CL-D 24/1.3                                            | ■               | -                  | 24 V DC / 1.3 A; Input 100 - 240 V AC                                                                                                      |                 |       |



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# Installation equipment



## Miniature circuit breakers

|                        |      |
|------------------------|------|
| S200 series MCBs ..... | 2/4  |
| S280 series MCBs ..... | 2/26 |
| S800 series MCBs ..... | 2/27 |

## Earth leakage protection

|                               |      |
|-------------------------------|------|
| F200 series RCCBs.....        | 2/47 |
| DDA200 series RCB blocks..... | 2/49 |
| DS201 series RCBOs .....      | 2/51 |
| DS800 series RCBOs .....      | 2/54 |
| DS271 series RCBOs .....      | 2/55 |
| Accessories.....              | 2/57 |

## Digital meters

|                             |      |
|-----------------------------|------|
| ODIN and DELTA meters ..... | 2/60 |
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## Modular devices

|                       |      |
|-----------------------|------|
| Modular devices ..... | 2/61 |
|-----------------------|------|

Installation equipment



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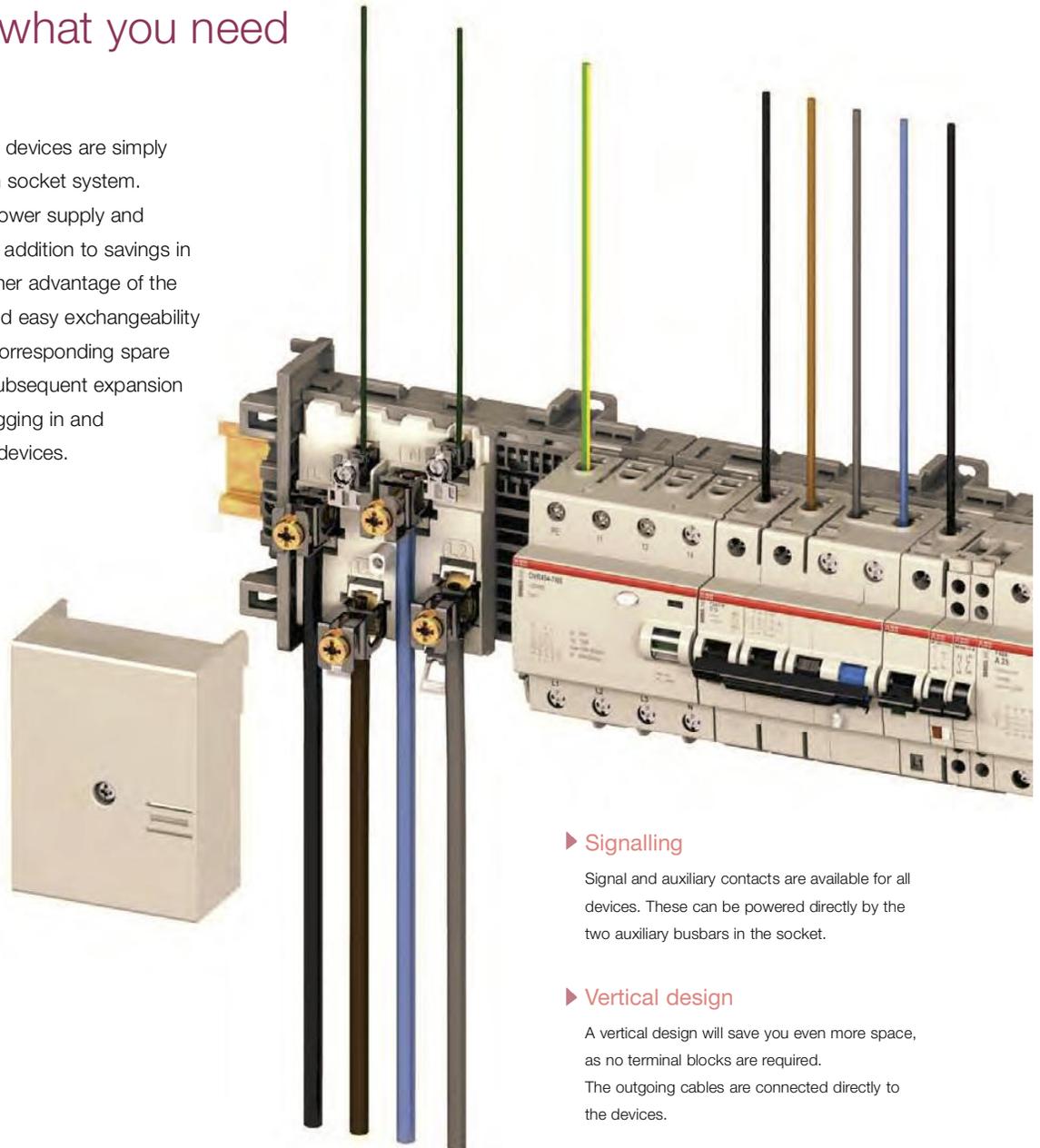
# New Product Smisline TP - coming soon

## Plan exactly what you need

### ► The idea

SMISLINE protection devices are simply snapped into a plug-in socket system. The arduous task of power supply and connection is done. In addition to savings in time and money, another advantage of the system is the quick and easy exchangeability of the devices. If the corresponding spare capacity is planned, subsequent expansion consists merely of plugging in and connecting additional devices.

2



### ► Signalling

Signal and auxiliary contacts are available for all devices. These can be powered directly by the two auxiliary busbars in the socket.

### ► Vertical design

A vertical design will save you even more space, as no terminal blocks are required.

The outgoing cables are connected directly to the devices.

### ► Collective alarm

A collective alarm can easily be implemented using the signal contact SK400 SA. A very good space-saving arrangement is created when the signal contact is mounted to the left or right of the miniature circuit breaker.

► Flexibility up to the last minute

SMISLINE makes it possible to press ahead with planning, even before all the details of a system are known. Loads can be easily reassigned. Even if the usage of an entire installation is completely changed, the effort involved remains small.

► Motor starter units or external devices

You can create varied combinations of devices using a combi module. For example, a motor protection switch, together with a contactor can be combined to form one single unit and plugged in as a whole. External devices can be integrated into the system via universal adapters.

► Freedom to design and arrange

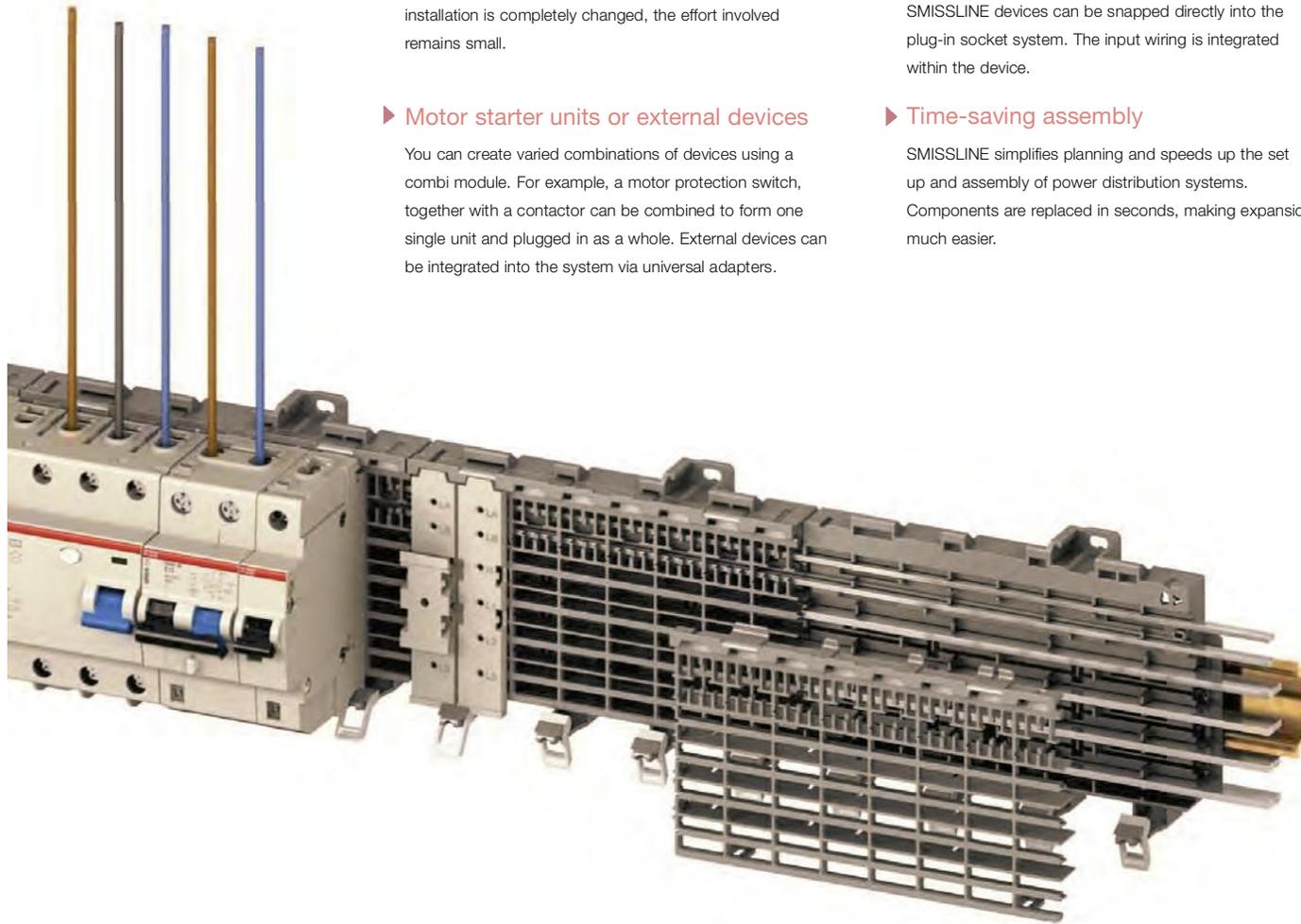
SMISLINE gives you freedom of choice: Mixed-pole arrangement of all devices next to each other. Plugs in directly

SMISLINE devices can be snapped directly into the plug-in socket system. The input wiring is integrated within the device.

► Time-saving assembly

SMISLINE simplifies planning and speeds up the set up and assembly of power distribution systems.

Components are replaced in seconds, making expansion much easier.



► The new pluggable touch proof busbar system, bringing power and safety together.

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# Installation equipment

## Tripping characteristics

### Tripping characteristics

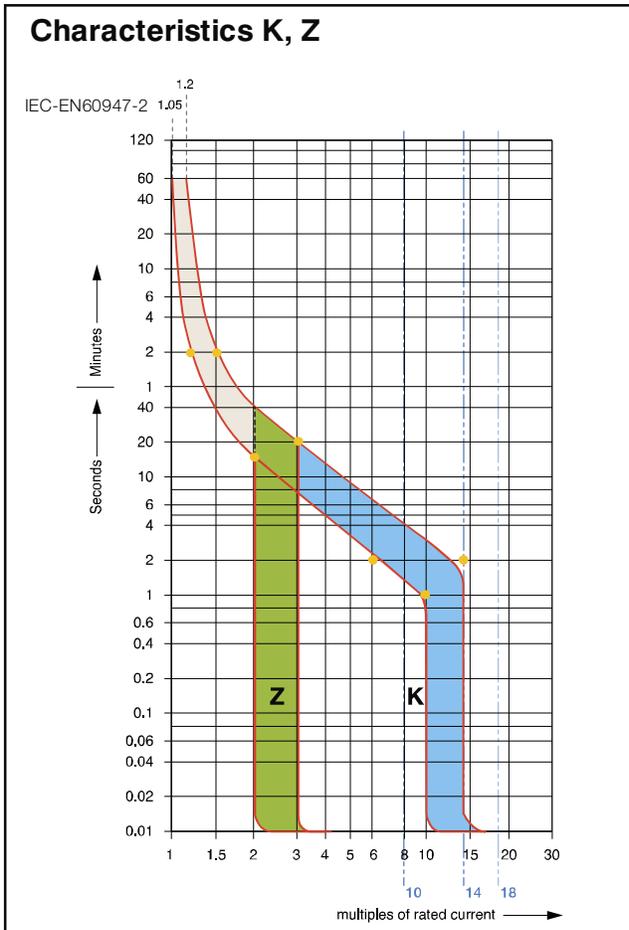
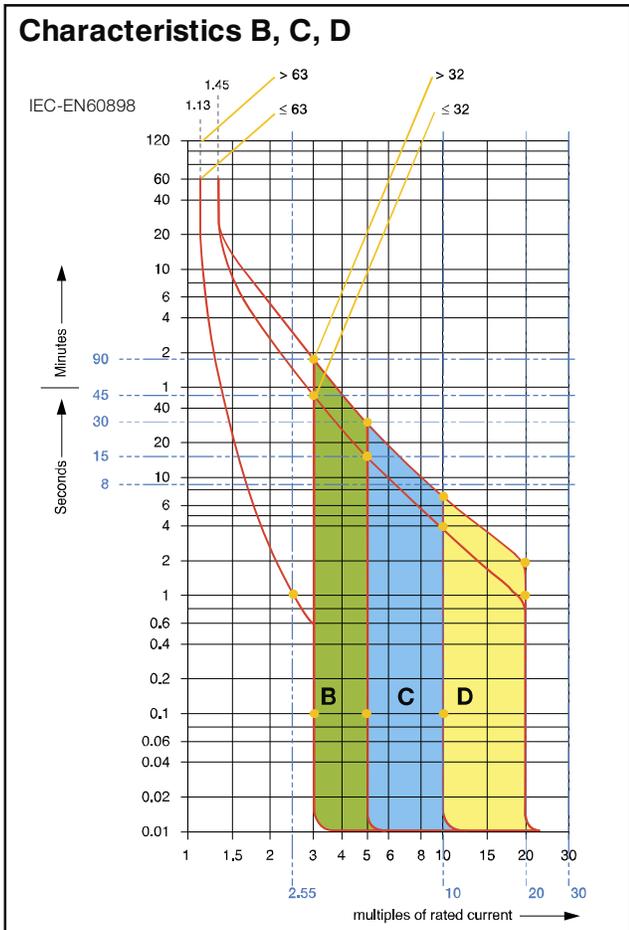
| Acc. to                                            | Tripping characteristic and rated current | Thermal release <sup>2)</sup>         |                                    | Tripping time                        | Electromagnetic release <sup>1)</sup> |                  | Tripping time      |
|----------------------------------------------------|-------------------------------------------|---------------------------------------|------------------------------------|--------------------------------------|---------------------------------------|------------------|--------------------|
|                                                    |                                           | Current: conventional non-tripping c. | conventional tripping c.           |                                      | Currents: hold current surges         | trip at least at |                    |
| IEC/EN 60898                                       | <b>B</b> 6 to 63 A                        | $1.13 \cdot I_n$                      | $1.45 \cdot I_n$                   | > 1 h<br>< 1 h                       | $3 \cdot I_n$                         | $5 \cdot I_n$    | > 0.1 s<br>< 0.1 s |
|                                                    | <b>C</b> 0.5 to 63 A                      | $1.13 \cdot I_n$                      | $1.45 \cdot I_n$                   | > 1 h<br>< 1 h                       | $5 \cdot I_n$                         | $10 \cdot I_n$   | > 0.1 s<br>< 0.1 s |
|                                                    | <b>D</b> 0.5 to 63 A                      | $1.13 \cdot I_n$                      | $1.45 \cdot I_n$                   | > 1 h<br>< 1 h                       | $10 \cdot I_n$                        | $20 \cdot I_n$   | > 0.1 s<br>< 0.1 s |
| DIN VDE 0660/9.82                                  | <b>K</b> 0.5 to 63 A                      | $1.05 \cdot I_n$                      | $1.2 \cdot I_n$                    | > 1 h<br>< 1 h                       | not applicable                        |                  |                    |
| IEC/EN 60947-2<br>DIN VDE 0660<br>8/69<br>Part 101 |                                           | $1.05 \cdot I_n$                      | $1.2 \cdot I_n$                    | > 2 h<br>< 1 h <sup>3)</sup>         | $10 \cdot I_n$                        | $14 \cdot I_n$   | > 0.2 s<br>< 0.2 s |
|                                                    |                                           |                                       | $1.5 \cdot I_n$<br>$6.0 \cdot I_n$ | < 2 min. <sup>3)</sup><br>> 2 s (T1) |                                       |                  |                    |
| DIN VDE 0660/9.82                                  | <b>Z</b> 0.5 to 63 A                      | $1.05 \cdot I_n$                      | $1.2 \cdot I_n$                    | > 1 h<br>< 1 h                       | not applicable                        |                  |                    |
| IEC/EN 60947-2<br>DIN VDE 0660<br>8/69<br>Part 101 |                                           | $1.05 \cdot I_n$                      | $1.2 \cdot I_n$                    | > 2 h<br>< 1 h <sup>3)</sup>         | $2 \cdot I_n$                         | $3 \cdot I_n$    | > 0.2 s<br>< 0.2 s |
|                                                    |                                           |                                       | $1.5 \cdot I_n$<br>$6.0 \cdot I_n$ | < 2 min. <sup>3)</sup><br>> 2 s (T1) |                                       |                  |                    |

2

1) The indicated tripping values of electromagnetic tripping devices apply to a frequency range of 16 2/3...60 Hz. In the case of diverging frequencies or direct current, see paragraph "Variation of tripping threshold of MCBs, according to network frequency" (page 6/7)

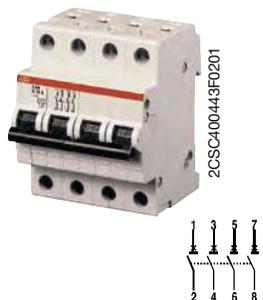
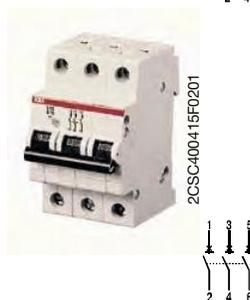
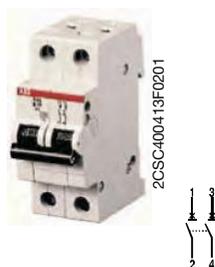
2) The thermal releases are calibrated to a nominal reference ambient temperature; for Z and K, the value is 20 °C, for B and C = 30 °C. In the case of higher ambient temperatures, the current values fall by ca. 6 % for each 10 K temperature rise.

3) As from operating temperature (after  $I_1 > 1$  h or, as applicable, 2 h).



# System ProM compact

## S200-B series 6kA



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### Type B 6kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 6                 | S201-B6     | 2CDS251001R0065           |       |
| 10                | S201-B10    | 2CDS251001R0105           |       |
| 16                | S201-B16    | 2CDS251001R0165           |       |
| 20                | S201-B20    | 2CDS251001R0205           |       |
| 25                | S201-B25    | 2CDS251001R0255           |       |
| 32                | S201-B32    | 2CDS251001R0325           |       |
| 40                | S201-B40    | 2CDS251001R0405           |       |
| 50                | S201-B50    | 2CDS251001R0505           |       |
| 63                | S201-B63    | 2CDS251001R0635           |       |

| Rated Current (A) | Double Pole | Order Code      |  |
|-------------------|-------------|-----------------|--|
| 6                 | S202-B6     | 2CDS252001R0065 |  |
| 10                | S202-B10    | 2CDS252001R0105 |  |
| 16                | S202-B16    | 2CDS252001R0165 |  |
| 20                | S202-B20    | 2CDS252001R0205 |  |
| 25                | S202-B25    | 2CDS252001R0255 |  |
| 32                | S202-B32    | 2CDS252001R0325 |  |
| 40                | S202-B40    | 2CDS252001R0405 |  |
| 50                | S202-B50    | 2CDS252001R0505 |  |
| 63                | S202-B63    | 2CDS252001R0635 |  |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 6                 | S203-B6     | 2CDS253001R0065 |       |
| 10                | S203-B10    | 2CDS253001R0105 |       |
| 16                | S203-B16    | 2CDS253001R0165 |       |
| 20                | S203-B20    | 2CDS253001R0205 |       |
| 25                | S203-B25    | 2CDS253001R0255 |       |
| 32                | S203-B32    | 2CDS253001R0325 |       |
| 40                | S203-B40    | 2CDS253001R0405 |       |
| 50                | S203-B50    | 2CDS253001R0505 |       |
| 63                | S203-B63    | 2CDS253001R0635 |       |

| Rated Current (A) | Four Pole | Order Code      |  |
|-------------------|-----------|-----------------|--|
| 6                 | S204-B6   | 2CDS254001R0065 |  |
| 10                | S204-B10  | 2CDS254001R0105 |  |
| 16                | S204-B16  | 2CDS254001R0165 |  |
| 20                | S204-B20  | 2CDS254001R0205 |  |
| 25                | S204-B25  | 2CDS254001R0255 |  |
| 32                | S204-B32  | 2CDS254001R0325 |  |
| 40                | S204-B40  | 2CDS254001R0405 |  |
| 50                | S204-B50  | 2CDS254001R0505 |  |
| 63                | S204-B63  | 2CDS254001R0635 |  |

# System ProM compact

## S200-C series 6kA

2



2CSC400411F0201



2CSC400413F0201



2CSC400415F0201



### Type C 6kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 1                 | S201-C1     | 2CDS251001R0014           |       |
| 2                 | S201-C2     | 2CDS251001R0024           |       |
| 3                 | S201-C3     | 2CDS251001R0034           |       |
| 4                 | S201-C4     | 2CDS251001R0044           |       |
| 6                 | S201-C6     | 2CDS251001R0064           |       |
| 8                 | S201-C8     | 2CDS251001R0084           |       |
| 10                | S201-C10    | 2CDS251001R0104           |       |
| 13                | S201-C13    | 2CDS251001R0134           |       |
| 16                | S201-C16    | 2CDS251001R0164           |       |
| 20                | S201-C20    | 2CDS251001R0204           |       |
| 25                | S201-C25    | 2CDS251001R0254           |       |
| 32                | S201-C32    | 2CDS251001R0324           |       |
| 40                | S201-C40    | 2CDS251001R0404           |       |
| 50                | S201-C50    | 2CDS251001R0504           |       |
| 63                | S201-C63    | 2CDS251001R0634           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S202-C1     | 2CDS252001R0014 |       |
| 2                 | S202-C2     | 2CDS252001R0024 |       |
| 3                 | S202-C3     | 2CDS252001R0034 |       |
| 4                 | S202-C4     | 2CDS252001R0044 |       |
| 6                 | S202-C6     | 2CDS252001R0064 |       |
| 8                 | S202-C8     | 2CDS252001R0084 |       |
| 10                | S202-C10    | 2CDS252001R0104 |       |
| 13                | S202-C13    | 2CDS252001R0134 |       |
| 16                | S202-C16    | 2CDS252001R0164 |       |
| 20                | S202-C20    | 2CDS252001R0204 |       |
| 25                | S202-C25    | 2CDS252001R0254 |       |
| 32                | S202-C32    | 2CDS252001R0324 |       |
| 40                | S202-C40    | 2CDS252001R0404 |       |
| 50                | S202-C50    | 2CDS252001R0504 |       |
| 63                | S202-C63    | 2CDS252001R0634 |       |

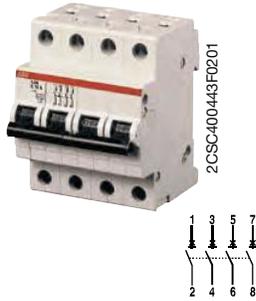
| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S203-C1     | 2CDS253001R0014 |       |
| 2                 | S203-C2     | 2CDS253001R0024 |       |
| 3                 | S203-C3     | 2CDS253001R0034 |       |
| 4                 | S203-C4     | 2CDS253001R0044 |       |
| 6                 | S203-C6     | 2CDS253001R0064 |       |
| 8                 | S203-C8     | 2CDS253001R0084 |       |
| 10                | S203-C10    | 2CDS253001R0104 |       |
| 13                | S203-C13    | 2CDS253001R0134 |       |
| 16                | S203-C16    | 2CDS253001R0164 |       |
| 20                | S203-C20    | 2CDS253001R0204 |       |
| 25                | S203-C25    | 2CDS253001R0254 |       |
| 32                | S203-C32    | 2CDS253001R0324 |       |
| 40                | S203-C40    | 2CDS253001R0404 |       |
| 50                | S203-C50    | 2CDS253001R0504 |       |
| 63                | S203-C63    | 2CDS253001R0634 |       |



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# System ProM compact S200 C series 6kA



| Type C 6kA        |           | Product Hierarchy 2400004 |       |
|-------------------|-----------|---------------------------|-------|
| Rated Current (A) | Four Pole | Order Code                | Price |
| 1                 | S204-C1   | 2CDS251004R0014           |       |
| 2                 | S204-C2   | 2CDS251004R0024           |       |
| 3                 | S204-C3   | 2CDS251004R0034           |       |
| 4                 | S204-C4   | 2CDS251004R0044           |       |
| 6                 | S204-C6   | 2CDS251004R0064           |       |
| 8                 | S204-C8   | 2CDS251004R0084           |       |
| 10                | S204-C10  | 2CDS251004R0104           |       |
| 13                | S204-C13  | 2CDS251004R0134           |       |
| 16                | S204-C16  | 2CDS251004R0164           |       |
| 20                | S204-C20  | 2CDS251004R0204           |       |
| 25                | S204-C25  | 2CDS251004R0254           |       |
| 32                | S204-C32  | 2CDS251004R0324           |       |
| 40                | S204-C40  | 2CDS251004R0404           |       |
| 50                | S204-C50  | 2CDS251004R0504           |       |
| 63                | S204-C63  | 2CDS251004R0634           |       |

2



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# System ProM compact

## S200-D series 6kA

2



### Type D 6kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 1                 | S201-D1     | 2CDS251001R0011           |       |
| 2                 | S201-D2     | 2CDS251001R0021           |       |
| 3                 | S201-D3     | 2CDS251001R0031           |       |
| 4                 | S201-D4     | 2CDS251001R0041           |       |
| 6                 | S201-D6     | 2CDS251001R0061           |       |
| 8                 | S201-D8     | 2CDS251001R0081           |       |
| 10                | S201-D10    | 2CDS251001R0101           |       |
| 13                | S201-D13    | 2CDS251001R0131           |       |
| 16                | S201-D16    | 2CDS251001R0161           |       |
| 20                | S201-D20    | 2CDS251001R0201           |       |
| 25                | S201-D25    | 2CDS251001R0251           |       |
| 32                | S201-D32    | 2CDS251001R0321           |       |
| 40                | S201-D40    | 2CDS251001R0401           |       |
| 50                | S201-D50    | 2CDS251001R0501           |       |
| 63                | S201-D63    | 2CDS251001R0631           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S202-D1     | 2CDS252001R0011 |       |
| 2                 | S202-D2     | 2CDS252001R0021 |       |
| 3                 | S202-D3     | 2CDS252001R0031 |       |
| 4                 | S202-D4     | 2CDS252001R0041 |       |
| 6                 | S202-D6     | 2CDS252001R0061 |       |
| 8                 | S202-D8     | 2CDS252001R0081 |       |
| 10                | S202-D10    | 2CDS252001R0101 |       |
| 13                | S202-D13    | 2CDS252001R0131 |       |
| 16                | S202-D16    | 2CDS252001R0161 |       |
| 20                | S202-D20    | 2CDS252001R0201 |       |
| 25                | S202-D25    | 2CDS252001R0251 |       |
| 32                | S202-D32    | 2CDS252001R0321 |       |
| 40                | S202-D40    | 2CDS252001R0401 |       |
| 50                | S202-D50    | 2CDS252001R0501 |       |
| 63                | S202-D63    | 2CDS252001R0631 |       |

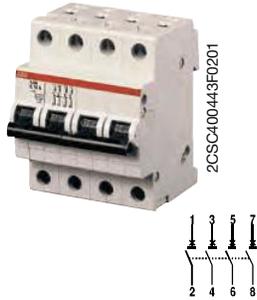
| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S203-D1     | 2CDS253001R0011 |       |
| 2                 | S203-D2     | 2CDS253001R0021 |       |
| 3                 | S203-D3     | 2CDS253001R0031 |       |
| 4                 | S203-D4     | 2CDS253001R0041 |       |
| 6                 | S203-D6     | 2CDS253001R0061 |       |
| 8                 | S203-D8     | 2CDS253001R0081 |       |
| 10                | S203-D10    | 2CDS253001R0101 |       |
| 13                | S203-D13    | 2CDS253001R0131 |       |
| 16                | S203-D16    | 2CDS253001R0161 |       |
| 20                | S203-D20    | 2CDS253001R0201 |       |
| 25                | S203-D25    | 2CDS253001R0251 |       |
| 32                | S203-D32    | 2CDS253001R0321 |       |
| 40                | S203-D40    | 2CDS253001R0401 |       |
| 50                | S203-D50    | 2CDS253001R0501 |       |
| 63                | S203-D63    | 2CDS253001R0631 |       |



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# System ProM compact S200-D series 6kA



| Type D 6kA        |           | Product Hierarchy 2400004 |       |
|-------------------|-----------|---------------------------|-------|
| Rated Current (A) | Four Pole | Order Code                | Price |
| 1                 | S204-D1   | 2CDS254001R0011           |       |
| 2                 | S204-D2   | 2CDS254001R0021           |       |
| 3                 | S204-D3   | 2CDS254001R0031           |       |
| 4                 | S204-D4   | 2CDS254001R0041           |       |
| 6                 | S204-D6   | 2CDS254001R0061           |       |
| 8                 | S204-D8   | 2CDS254001R0081           |       |
| 10                | S204-D10  | 2CDS254001R0101           |       |
| 13                | S204-D13  | 2CDS254001R0131           |       |
| 16                | S204-D16  | 2CDS254001R0161           |       |
| 20                | S204-D20  | 2CDS254001R0201           |       |
| 25                | S204-D25  | 2CDS254001R0251           |       |
| 32                | S204-D32  | 2CDS254001R0321           |       |
| 40                | S204-D40  | 2CDS254001R0401           |       |
| 50                | S204-D50  | 2CDS254001R0501           |       |
| 63                | S204-D63  | 2CDS254001R0631           |       |

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# System ProM compact S200-K series 6kA

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2CSC400411F0201



2CSC400413F0201



2CSC400415F0201



## Type K 6kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 1                 | S201-K1     | 2CDS251001R0217           |       |
| 2                 | S201-K2     | 2CDS251001R0277           |       |
| 3                 | S201-K3     | 2CDS251001R0317           |       |
| 4                 | S201-K4     | 2CDS251001R0337           |       |
| 6                 | S201-K6     | 2CDS251001R0377           |       |
| 8                 | S201-K8     | 2CDS251001R0407           |       |
| 10                | S201-K10    | 2CDS251001R0427           |       |
| 13                | S201-K13    | 2CDS251001R0447           |       |
| 16                | S201-K16    | 2CDS251001R0467           |       |
| 20                | S201-K20    | 2CDS251001R0487           |       |
| 25                | S201-K25    | 2CDS251001R0517           |       |
| 32                | S201-K32    | 2CDS251001R0537           |       |
| 40                | S201-K40    | 2CDS251001R0557           |       |
| 50                | S201-K50    | 2CDS251001R0577           |       |
| 63                | S201-K63    | 2CDS251001R0607           |       |

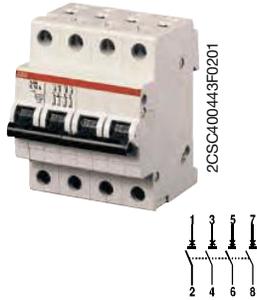
| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S202-K1     | 2CDS252001R0217 |       |
| 2                 | S202-K2     | 2CDS252001R0277 |       |
| 3                 | S202-K3     | 2CDS252001R0317 |       |
| 4                 | S202-K4     | 2CDS252001R0337 |       |
| 6                 | S202-K6     | 2CDS252001R0377 |       |
| 8                 | S202-K8     | 2CDS252001R0407 |       |
| 10                | S202-K10    | 2CDS252001R0427 |       |
| 13                | S202-K13    | 2CDS252001R0447 |       |
| 16                | S202-K16    | 2CDS252001R0467 |       |
| 20                | S202-K20    | 2CDS252001R0487 |       |
| 25                | S202-K25    | 2CDS252001R0517 |       |
| 32                | S202-K32    | 2CDS252001R0537 |       |
| 40                | S202-K40    | 2CDS252001R0557 |       |
| 50                | S202-K50    | 2CDS252001R0577 |       |
| 63                | S202-K63    | 2CDS252001R0607 |       |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S203-K1     | 2CDS253001R0217 |       |
| 2                 | S203-K2     | 2CDS253001R0277 |       |
| 3                 | S203-K3     | 2CDS253001R0317 |       |
| 4                 | S203-K4     | 2CDS253001R0337 |       |
| 6                 | S203-K6     | 2CDS253001R0377 |       |
| 8                 | S203-K8     | 2CDS253001R0407 |       |
| 10                | S203-K10    | 2CDS253001R0427 |       |
| 13                | S203-K13    | 2CDS253001R0447 |       |
| 16                | S203-K16    | 2CDS253001R0467 |       |
| 20                | S203-K20    | 2CDS253001R0487 |       |
| 25                | S203-K25    | 2CDS253001R0517 |       |
| 32                | S203-K32    | 2CDS253001R0537 |       |
| 40                | S203-K40    | 2CDS253001R0557 |       |
| 50                | S203-K50    | 2CDS253001R0577 |       |
| 63                | S203-K63    | 2CDS253001R0607 |       |



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# System ProM compact S200-K series 6kA



| Type K 6kA        |           | Product Hierarchy 2400004 |       |
|-------------------|-----------|---------------------------|-------|
| Rated Current (A) | Four Pole | Order Code                | Price |
| 1                 | S204-K1   | 2CDS254001R0217           |       |
| 2                 | S204-K2   | 2CDS254001R0277           |       |
| 3                 | S204-K3   | 2CDS254001R0317           |       |
| 4                 | S204-K4   | 2CDS254001R0337           |       |
| 6                 | S204-K6   | 2CDS254001R0377           |       |
| 8                 | S204-K8   | 2CDS254001R0407           |       |
| 10                | S204-K10  | 2CDS254001R0427           |       |
| 13                | S204-K13  | 2CDS254001R0447           |       |
| 16                | S204-K16  | 2CDS254001R0467           |       |
| 20                | S204-K20  | 2CDS254001R0487           |       |
| 25                | S204-K25  | 2CDS254001R0517           |       |
| 32                | S204-K32  | 2CDS254001R0537           |       |
| 40                | S204-K40  | 2CDS254001R0557           |       |
| 50                | S204-K50  | 2CDS254001R0577           |       |
| 63                | S204-K63  | 2CDS254001R0607           |       |

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# System ProM compact S200-Z series 6kA

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2CSC400411F0201



2CSC400413F0201



2CSC400415F0201



## Type Z 6kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 1                 | S201-Z1     | 2CDS251001R0218           |       |
| 2                 | S201-Z2     | 2CDS251001R0278           |       |
| 3                 | S201-Z3     | 2CDS251001R0318           |       |
| 4                 | S201-Z4     | 2CDS251001R0338           |       |
| 6                 | S201-Z6     | 2CDS251001R0378           |       |
| 8                 | S201-Z8     | 2CDS251001R0408           |       |
| 10                | S201-Z10    | 2CDS251001R0428           |       |
| 13                | S201-Z13    | 2CDS251001R0448           |       |
| 16                | S201-Z16    | 2CDS251001R0468           |       |
| 20                | S201-Z20    | 2CDS251001R0488           |       |
| 25                | S201-Z25    | 2CDS251001R0518           |       |
| 32                | S201-Z32    | 2CDS251001R0538           |       |
| 40                | S201-Z40    | 2CDS251001R0558           |       |
| 50                | S201-Z50    | 2CDS251001R0578           |       |
| 63                | S201-Z63    | 2CDS251001R0608           |       |

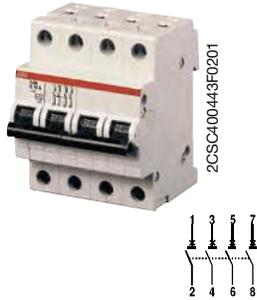
| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S202-Z1     | 2CDS252001R0218 |       |
| 2                 | S202-Z2     | 2CDS252001R0278 |       |
| 3                 | S202-Z3     | 2CDS252001R0318 |       |
| 4                 | S202-Z4     | 2CDS252001R0338 |       |
| 6                 | S202-Z6     | 2CDS252001R0378 |       |
| 8                 | S202-Z8     | 2CDS252001R0408 |       |
| 10                | S202-Z10    | 2CDS252001R0428 |       |
| 13                | S202-Z13    | 2CDS252001R0448 |       |
| 16                | S202-Z16    | 2CDS252001R0468 |       |
| 20                | S202-Z20    | 2CDS252001R0488 |       |
| 25                | S202-Z25    | 2CDS252001R0518 |       |
| 32                | S202-Z32    | 2CDS252001R0538 |       |
| 40                | S202-Z40    | 2CDS252001R0558 |       |
| 50                | S202-Z50    | 2CDS252001R0578 |       |
| 63                | S202-Z63    | 2CDS252001R0608 |       |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S203-Z1     | 2CDS253001R0218 |       |
| 2                 | S203-Z2     | 2CDS253001R0278 |       |
| 3                 | S203-Z3     | 2CDS253001R0318 |       |
| 4                 | S203-Z4     | 2CDS253001R0338 |       |
| 6                 | S203-Z6     | 2CDS253001R0378 |       |
| 8                 | S203-Z8     | 2CDS253001R0408 |       |
| 10                | S203-Z10    | 2CDS253001R0428 |       |
| 13                | S202K13     | 2CDS253001R0448 |       |
| 16                | S203-Z16    | 2CDS253001R0468 |       |
| 20                | S203-Z20    | 2CDS253001R0488 |       |
| 25                | S203-Z25    | 2CDS253001R0518 |       |
| 32                | S203-Z32    | 2CDS253001R0538 |       |
| 40                | S203-Z40    | 2CDS253001R0558 |       |
| 50                | S203-Z50    | 2CDS253001R0578 |       |
| 63                | S203-Z63    | 2CDS253001R0608 |       |



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# System ProM compact S200-Z series 6kA



| Type Z 6kA        |           | Product Hierarchy 2400004 |       |
|-------------------|-----------|---------------------------|-------|
| Rated Current (A) | Four Pole | Order Code                | Price |
| 1                 | S204-Z1   | 2CDS254001R0218           |       |
| 2                 | S204-Z2   | 2CDS254001R0278           |       |
| 3                 | S204-Z3   | 2CDS254001R0318           |       |
| 4                 | S204-Z4   | 2CDS254001R0338           |       |
| 6                 | S204-Z6   | 2CDS254001R0378           |       |
| 8                 | S204-Z8   | 2CDS254001R0408           |       |
| 10                | S204-Z10  | 2CDS254001R0428           |       |
| 13                | S204-Z13  | 2CDS254001R0448           |       |
| 16                | S204-Z16  | 2CDS254001R0468           |       |
| 20                | S204-Z20  | 2CDS254001R0468           |       |
| 25                | S204-Z25  | 2CDS254001R0518           |       |
| 32                | S204-Z32  | 2CDS254001R0538           |       |
| 40                | S204-Z40  | 2CDS254001R0558           |       |
| 50                | S204-Z50  | 2CDS254001R0578           |       |
| 63                | S204-Z63  | 2CDS254001R0608           |       |

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# System ProM compact S200M-B series 10kA

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## Type MB 10kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 6                 | S201M-B6    | 2CDS271001R0065           |       |
| 10                | S201M-B10   | 2CDS271001R0105           |       |
| 16                | S201M-B16   | 2CDS271001R0165           |       |
| 20                | S201M-B20   | 2CDS271001R0205           |       |
| 25                | S201M-B25   | 2CDS271001R0255           |       |
| 32                | S201M-B32   | 2CDS271001R0325           |       |
| 40                | S201M-B40   | 2CDS271001R0405           |       |
| 50                | S201M-B50   | 2CDS271001R0505           |       |
| 63                | S201M-B63   | 2CDS271001R0635           |       |

| Rated Current (A) | Double Pole | Order Code      | Price    |
|-------------------|-------------|-----------------|----------|
|                   |             | 6               | S202M-B6 |
| 10                | S202M-B10   | 2CDS272001R0105 |          |
| 16                | S202M-B16   | 2CDS272001R0165 |          |
| 20                | S202M-B20   | 2CDS272001R0205 |          |
| 25                | S202M-B25   | 2CDS272001R0255 |          |
| 32                | S202M-B32   | 2CDS272001R0325 |          |
| 40                | S202M-B40   | 2CDS272001R0405 |          |
| 50                | S202M-B50   | 2CDS272001R0505 |          |
| 63                | S202M-B63   | 2CDS272001R0635 |          |

| Rated Current (A) | Triple Pole | Order Code      | Price    |
|-------------------|-------------|-----------------|----------|
|                   |             | 6               | S203M-B6 |
| 10                | S203M-B10   | 2CDS273001R0105 |          |
| 16                | S203M-B16   | 2CDS273001R0165 |          |
| 20                | S203M-B20   | 2CDS273001R0205 |          |
| 25                | S203M-B25   | 2CDS273001R0255 |          |
| 32                | S203M-B32   | 2CDS273001R0325 |          |
| 40                | S203M-B40   | 2CDS273001R0405 |          |
| 50                | S203M-B50   | 2CDS273001R0505 |          |
| 63                | S203M-B63   | 2CDS273001R0635 |          |

| Rated Current (A) | Four Pole | Order Code      | Price    |
|-------------------|-----------|-----------------|----------|
|                   |           | 6               | S204M-B6 |
| 10                | S204M-B10 | 2CDS274001R0105 |          |
| 16                | S204M-B16 | 2CDS274001R0165 |          |
| 20                | S204M-B20 | 2CDS274001R0205 |          |
| 25                | S204M-B25 | 2CDS274001R0255 |          |
| 32                | S204M-B32 | 2CDS274001R0325 |          |
| 40                | S204M-B40 | 2CDS274001R0405 |          |
| 50                | S204M-B50 | 2CDS274001R0505 |          |
| 63                | S204M-B63 | 2CDS274001R0635 |          |



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# System ProM compact S200M-C series 10kA

## Type MC 10kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 1                 | S201M-C1    | 2CDS271001R0014           |       |
| 2                 | S201M-C2    | 2CDS271001R0024           |       |
| 3                 | S201M-C3    | 2CDS271001R0034           |       |
| 4                 | S201M-C4    | 2CDS271001R0044           |       |
| 6                 | S201M-C6    | 2CDS271001R0064           |       |
| 8                 | S201M-C8    | 2CDS271001R0084           |       |
| 10                | S201M-C10   | 2CDS271001R0104           |       |
| 13                | S201M-C13   | 2CDS271001R0134           |       |
| 16                | S201M-C16   | 2CDS271001R0164           |       |
| 20                | S201M-C20   | 2CDS271001R0204           |       |
| 25                | S201M-C25   | 2CDS271001R0254           |       |
| 32                | S201M-C32   | 2CDS271001R0324           |       |
| 40                | S201M-C40   | 2CDS271001R0404           |       |
| 50                | S201M-C50   | 2CDS271001R0504           |       |
| 63                | S201M-C63   | 2CDS271001R0634           |       |



| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S202M-C1    | 2CDS272001R0014 |       |
| 2                 | S202M-C2    | 2CDS272001R0024 |       |
| 3                 | S202M-C3    | 2CDS272001R0034 |       |
| 4                 | S202M-C4    | 2CDS272001R0044 |       |
| 6                 | S202M-C6    | 2CDS272001R0064 |       |
| 8                 | S202M-C8    | 2CDS272001R0084 |       |
| 10                | S202M-C10   | 2CDS272001R0104 |       |
| 13                | S202M-C13   | 2CDS272001R0134 |       |
| 16                | S202M-C16   | 2CDS272001R0164 |       |
| 20                | S202M-C20   | 2CDS272001R0204 |       |
| 25                | S202M-C25   | 2CDS272001R0254 |       |
| 32                | S202M-C32   | 2CDS272001R0324 |       |
| 40                | S202M-C40   | 2CDS272001R0404 |       |
| 50                | S202M-C50   | 2CDS272001R0504 |       |
| 63                | S202M-C63   | 2CDS272001R0634 |       |

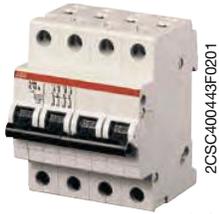
| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S203M-C1    | 2CDS273001R0014 |       |
| 2                 | S203M-C2    | 2CDS273001R0024 |       |
| 3                 | S203M-C3    | 2CDS273001R0034 |       |
| 4                 | S203M-C4    | 2CDS273001R0044 |       |
| 6                 | S203M-C6    | 2CDS273001R0064 |       |
| 8                 | S203M-C8    | 2CDS273001R0084 |       |
| 10                | S203M-C10   | 2CDS273001R0104 |       |
| 13                | S203M-C13   | 2CDS273001R0134 |       |
| 16                | S203M-C16   | 2CDS273001R0164 |       |
| 20                | S203M-C20   | 2CDS273001R0204 |       |
| 25                | S203M-C25   | 2CDS273001R0254 |       |
| 32                | S203M-C32   | 2CDS273001R0324 |       |
| 40                | S203M-C40   | 2CDS273001R0404 |       |
| 50                | S203M-C50   | 2CDS273001R0504 |       |
| 63                | S203M-C63   | 2CDS273001R0634 |       |



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# System ProM compact S200M-C series 10kA

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2CSC400443F0201



## Type MC 10kA

| Rated Current (A) | Four Pole | Product Hierarchy 2400004 |       |
|-------------------|-----------|---------------------------|-------|
|                   |           | Order Code                | Price |
| 1                 | S204M-C1  | 2CDS274004R0014           |       |
| 2                 | S204M-C2  | 2CDS274004R0024           |       |
| 3                 | S204M-C3  | 2CDS274004R0034           |       |
| 4                 | S204M-C4  | 2CDS274004R0044           |       |
| 6                 | S204M-C6  | 2CDS274004R0064           |       |
| 8                 | S204M-C8  | 2CDS274004R0084           |       |
| 10                | S204M-C10 | 2CDS274004R0104           |       |
| 13                | S204M-C13 | 2CDS274004R0134           |       |
| 16                | S204M-C16 | 2CDS274004R0164           |       |
| 20                | S204M-C20 | 2CDS274004R0204           |       |
| 25                | S204M-C25 | 2CDS274004R0254           |       |
| 32                | S204M-C32 | 2CDS274004R0324           |       |
| 40                | S204M-C40 | 2CDS274004R0404           |       |
| 50                | S204M-C50 | 2CDS274004R0504           |       |
| 63                | S204M-C63 | 2CDS274004R0634           |       |



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# System ProM compact S200M-D series 10kA



2CSC400411F0201



2CSC400413F0201



2CSC400415F0201



## Type MD 10kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 1                 | S201M-D1    | 2CDS271001R0011           |       |
| 2                 | S201M-D2    | 2CDS271001R0021           |       |
| 3                 | S201M-D3    | 2CDS271001R0031           |       |
| 4                 | S201M-D4    | 2CDS271001R0041           |       |
| 6                 | S201M-D6    | 2CDS271001R0061           |       |
| 8                 | S201M-D8    | 2CDS271001R0081           |       |
| 10                | S201M-D10   | 2CDS271001R0101           |       |
| 13                | S201M-D13   | 2CDS271001R0131           |       |
| 16                | S201M-D16   | 2CDS271001R0161           |       |
| 20                | S201M-D20   | 2CDS271001R0201           |       |
| 25                | S201M-D25   | 2CDS271001R0251           |       |
| 32                | S201M-D32   | 2CDS271001R0321           |       |
| 40                | S201M-D40   | 2CDS271001R0401           |       |
| 50                | S201M-D50   | 2CDS271001R0501           |       |
| 63                | S201M-D63   | 2CDS271001R0631           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S202M-D1    | 2CDS272001R0011 |       |
| 2                 | S202M-D2    | 2CDS272001R0021 |       |
| 3                 | S202M-D3    | 2CDS272001R0031 |       |
| 4                 | S202M-D4    | 2CDS272001R0041 |       |
| 6                 | S202M-D6    | 2CDS272001R0061 |       |
| 8                 | S202M-D8    | 2CDS272001R0081 |       |
| 10                | S202M-D10   | 2CDS272001R0101 |       |
| 13                | S202M-D13   | 2CDS272001R0131 |       |
| 16                | S202M-D16   | 2CDS272001R0161 |       |
| 20                | S202M-D20   | 2CDS272001R0201 |       |
| 25                | S202M-D25   | 2CDS272001R0251 |       |
| 32                | S202M-D32   | 2CDS272001R0321 |       |
| 40                | S202M-D40   | 2CDS272001R0401 |       |
| 50                | S202M-D50   | 2CDS272001R0501 |       |
| 63                | S202M-D63   | 2CDS272001R0631 |       |

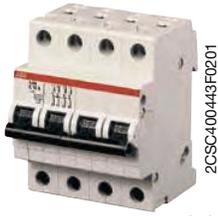
| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S203M-D1    | 2CDS273001R0011 |       |
| 2                 | S203M-D2    | 2CDS273001R0021 |       |
| 3                 | S203M-D3    | 2CDS273001R0031 |       |
| 4                 | S203M-D4    | 2CDS273001R0041 |       |
| 6                 | S203M-D6    | 2CDS273001R0061 |       |
| 6                 | S203M-D8    | 2CDS273001R0081 |       |
| 10                | S203M-D10   | 2CDS273001R0101 |       |
| 13                | S202M-D13   | 2CDS273001R0131 |       |
| 16                | S203M-D16   | 2CDS273001R0161 |       |
| 20                | S203M-D20   | 2CDS273001R0201 |       |
| 25                | S203M-D25   | 2CDS273001R0251 |       |
| 32                | S203M-D32   | 2CDS273001R0321 |       |
| 40                | S203M-D40   | 2CDS273001R0401 |       |
| 50                | S203M-D50   | 2CDS273001R0501 |       |
| 63                | S203M-D63   | 2CDS273001R0631 |       |



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# System ProM compact S200M-D series 10kA

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2CSC400443F0201



## Type MD 10kA

| Rated Current (A) | Four Pole | Product Hierarchy 2400004 |       |
|-------------------|-----------|---------------------------|-------|
|                   |           | Order Code                | Price |
| 1                 | S204M-D1  | 2CDS274001R0011           |       |
| 2                 | S204M-D2  | 2CDS274001R0021           |       |
| 3                 | S204M-D3  | 2CDS274001R0031           |       |
| 4                 | S204M-D4  | 2CDS274001R0041           |       |
| 6                 | S204M-D6  | 2CDS274001R0061           |       |
| 8                 | S204M-D8  | 2CDS274001R0081           |       |
| 10                | S204M-D10 | 2CDS274001R0101           |       |
| 13                | S204M-D13 | 2CDS274001R0131           |       |
| 16                | S204M-D16 | 2CDS274001R0161           |       |
| 20                | S204M-D20 | 2CDS274001R0201           |       |
| 25                | S204M-D25 | 2CDS274001R0251           |       |
| 32                | S204M-D32 | 2CDS274001R0321           |       |
| 40                | S204M-D40 | 2CDS274001R0401           |       |
| 50                | S204M-D50 | 2CDS274001R0501           |       |
| 63                | S204M-D63 | 2CDS274001R0631           |       |



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# System ProM compact S200M-K series 10kA



2CSC400411F0201



2CSC400413F0201



2CSC400415F0201



## Type MK 10kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 0.5               | S201M-K0.5  | 2CDS271001R0157           |       |
| 1                 | S201M-K1    | 2CDS271001R0217           |       |
| 2                 | S201M-K2    | 2CDS271001R0277           |       |
| 3                 | S201M-K3    | 2CDS271001R0317           |       |
| 4                 | S201M-K4    | 2CDS271001R0337           |       |
| 6                 | S201M-K6    | 2CDS271001R0377           |       |
| 8                 | S201M-K8    | 2CDS271001R0407           |       |
| 10                | S201M-K10   | 2CDS271001R0427           |       |
| 13                | S201M-K13   | 2CDS271001R0447           |       |
| 16                | S201M-K16   | 2CDS271001R0467           |       |
| 20                | S201M-K20   | 2CDS271001R0487           |       |
| 25                | S201M-K25   | 2CDS271001R0517           |       |
| 32                | S201M-K32   | 2CDS271001R0537           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 0.5               | S202M-K0.5  | 2CDS272001R0157 |       |
| 1                 | S202M-K1    | 2CDS272001R0217 |       |
| 2                 | S202M-K2    | 2CDS272001R0277 |       |
| 3                 | S202M-K3    | 2CDS272001R0317 |       |
| 4                 | S202M-K4    | 2CDS272001R0337 |       |
| 6                 | S202M-K6    | 2CDS272001R0377 |       |
| 8                 | S202M-K8    | 2CDS272001R0407 |       |
| 10                | S202M-K10   | 2CDS272001R0427 |       |
| 13                | S202M-K13   | 2CDS272001R0447 |       |
| 16                | S202M-K16   | 2CDS272001R0467 |       |
| 20                | S202M-K20   | 2CDS272001R0487 |       |
| 25                | S202M-K25   | 2CDS272001R0517 |       |
| 32                | S202M-K32   | 2CDS272001R0537 |       |
| 40                | S202M-K40   | 2CDS272001R0557 |       |
| 50                | S202M-K50   | 2CDS272001R0577 |       |
| 63                | S202M-K63   | 2CDS272001R0607 |       |

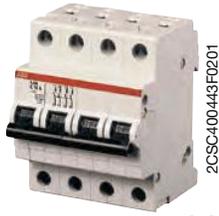
| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 1                 | S203M-K1    | 2CDS273001R0217 |       |
| 2                 | S203M-K2    | 2CDS273001R0277 |       |
| 4                 | S203M-K4    | 2CDS273001R0337 |       |
| 6                 | S203M-K6    | 2CDS273001R0377 |       |
| 8                 | S203M-K8    | 2CDS273001R0407 |       |
| 10                | S203M-K10   | 2CDS273001R0427 |       |
| 13                | S203M-K13   | 2CDS273001R0447 |       |
| 16                | S203M-K16   | 2CDS273001R0467 |       |
| 20                | S203M-K20   | 2CDS273001R0487 |       |
| 32                | S203M-K32   | 2CDS273001R0537 |       |
| 40                | S203M-K40   | 2CDS273001R0557 |       |
| 50                | S203M-K50   | 2CDS273001R0577 |       |
| 63                | S203M-K63   | 2CDS273001R0607 |       |



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# System ProM compact S200M-K series 10kA

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## Type MK 10kA

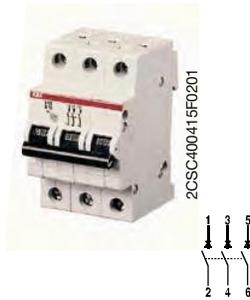
| Rated Current (A) | Four Pole | Product Hierarchy 2400004 |       |
|-------------------|-----------|---------------------------|-------|
|                   |           | Order Code                | Price |
| 1                 | S204M-K1  | 2CDS274001R0217           |       |
| 2                 | S204M-K2  | 2CDS274001R0277           |       |
| 3                 | S204M-K3  | 2CDS274001R0317           |       |
| 4                 | S204M-K4  | 2CDS274001R0337           |       |
| 6                 | S204M-K6  | 2CDS274001R0377           |       |
| 8                 | S204M-K8  | 2CDS274001R0407           |       |
| 10                | S204M-K10 | 2CDS274001R0427           |       |
| 13                | S204M-K13 | 2CDS274001R0447           |       |
| 16                | S204M-K16 | 2CDS274001R0467           |       |
| 20                | S204M-K20 | 2CDS274001R0487           |       |
| 25                | S204M-K25 | 2CDS274001R0517           |       |
| 32                | S204M-K32 | 2CDS274001R0537           |       |
| 40                | S204M-K40 | 2CDS274001R0557           |       |
| 50                | S204M-K50 | 2CDS274001R0577           |       |
| 63                | S204M-K63 | 2CDS274001R0607           |       |



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# System ProM compact S200M-Z series 10kA



## Type MZ 10kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 0.5               | S201M-Z0.5  | 2CDS271001R0158           |       |
| 1                 | S201M-Z1    | 2CDS271001R0218           |       |
| 2                 | S201M-Z2    | 2CDS271001R0278           |       |
| 3                 | S201M-Z3    | 2CDS271001R0318           |       |
| 4                 | S201M-Z4    | 2CDS271001R0338           |       |
| 6                 | S201M-Z6    | 2CDS271001R0378           |       |
| 8                 | S201M-Z8    | 2CDS271001R0408           |       |
| 10                | S201M-Z10   | 2CDS271001R0428           |       |
| 13                | S201M-Z13   | 2CDS271001R0448           |       |
| 16                | S201M-Z16   | 2CDS271001R0468           |       |
| 20                | S201M-Z20   | 2CDS271001R0488           |       |
| 25                | S201M-Z25   | 2CDS271001R0518           |       |
| 32                | S201M-Z32   | 2CDS271001R0538           |       |
| 40                | S201M-Z40   | 2CDS271001R0558           |       |
| 50                | S201M-Z50   | 2CDS271001R0578           |       |
| 63                | S201M-Z63   | 2CDS271001R0608           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 0.5               | S202M-Z0.5  | 2CDS272001R0158 |       |
| 1                 | S202M-Z1    | 2CDS272001R0218 |       |
| 2                 | S202M-Z2    | 2CDS272001R0278 |       |
| 3                 | S202M-Z3    | 2CDS272001R0318 |       |
| 4                 | S202M-Z4    | 2CDS272001R0338 |       |
| 6                 | S202M-Z6    | 2CDS272001R0378 |       |
| 8                 | S202M-Z8    | 2CDS272001R0408 |       |
| 10                | S202M-Z10   | 2CDS272001R0428 |       |
| 13                | S202M-Z13   | 2CDS272001R0448 |       |
| 16                | S202M-Z16   | 2CDS272001R0468 |       |
| 20                | S202M-Z20   | 2CDS272001R0488 |       |
| 25                | S202M-Z25   | 2CDS272001R0518 |       |
| 32                | S202M-Z32   | 2CDS272001R0538 |       |
| 40                | S202M-Z40   | 2CDS272001R0558 |       |
| 50                | S202M-Z50   | 2CDS272001R0578 |       |
| 63                | S202M-Z63   | 2CDS272001R0608 |       |

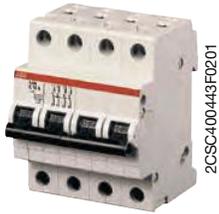
| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 0.5               | S203M-Z0.5  | 2CDS273001R0158 |       |
| 1                 | S203M-Z1    | 2CDS273001R0218 |       |
| 2                 | S203M-Z2    | 2CDS273001R0278 |       |
| 3                 | S203M-Z3    | 2CDS273001R0318 |       |
| 4                 | S203M-Z4    | 2CDS273001R0338 |       |
| 6                 | S203M-Z6    | 2CDS273001R0378 |       |
| 8                 | S203M-Z8    | 2CDS273001R0408 |       |
| 10                | S203M-Z10   | 2CDS273001R0428 |       |
| 13                | S203M-Z13   | 2CDS273001R0448 |       |
| 16                | S203M-Z16   | 2CDS273001R0468 |       |
| 20                | S203M-Z20   | 2CDS273001R0488 |       |
| 25                | S203M-Z25   | 2CDS273001R0518 |       |
| 32                | S203M-Z32   | 2CDS273001R0538 |       |
| 40                | S203M-Z40   | 2CDS273001R0558 |       |
| 50                | S203M-Z50   | 2CDS273001R0578 |       |
| 63                | S203M-Z63   | 2CDS273001R0608 |       |



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# System ProM compact S200M-Z series 10kA

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2CSC400443F0201



## Type MZ 10kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400004 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 0.5               | S204M-Z0.5 | 2CDS274001R0158           |       |
| 1                 | S204M-Z1   | 2CDS274001R0218           |       |
| 2                 | S204M-Z2   | 2CDS274001R0278           |       |
| 3                 | S204M-Z3   | 2CDS274001R0318           |       |
| 4                 | S204M-Z4   | 2CDS274001R0338           |       |
| 6                 | S204M-Z6   | 2CDS274001R0378           |       |
| 8                 | S204M-Z8   | 2CDS274001R0408           |       |
| 10                | S204M-Z10  | 2CDS274001R0428           |       |
| 13                | S204M-Z13  | 2CDS274001R0448           |       |
| 16                | S204M-Z16  | 2CDS274001R0468           |       |
| 20                | S204M-Z20  | 2CDS274001R0488           |       |
| 25                | S204M-Z25  | 2CDS274001R0518           |       |
| 32                | S204M-Z32  | 2CDS274001R0538           |       |
| 40                | S204M-Z40  | 2CDS274001R0558           |       |
| 50                | S204M-Z50  | 2CDS274001R0578           |       |
| 63                | S204M-Z63  | 2CDS274001R0608           |       |



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# System ProM compact S200P-K & C series 25kA



## Type PK

| Rated Current (A) | Single Pole    | Product Hierarchy 2400002 |       |
|-------------------|----------------|---------------------------|-------|
|                   |                | Order Code                | Price |
| 3                 | S201P-K3 25kA  | 2CDS281001R0317           |       |
| 6                 | S201P-K6 25kA  | 2CDS281001R0377           |       |
| 10                | S201P-K10 25kA | 2CDS281001R0427           |       |
| 20                | S201P-K20 25kA | 2CDS281001R0487           |       |
| 32                | S201P-K32 15kA | 2CDS281001R0537           |       |
| 40                | S201P-K40 15kA | 2CDS281001R0557           |       |

| Rated Current (A) | Double Pole    | Order Code      | Price |
|-------------------|----------------|-----------------|-------|
| 1                 | S202P-K1 25kA  | 2CDS282001R0217 |       |
| 2                 | S202P-K2 25kA  | 2CDS282001R0277 |       |
| 3                 | S202P-K3 25kA  | 2CDS282001R0317 |       |
| 4                 | S202P-K4 25kA  | 2CDS282001R0337 |       |
| 6                 | S202P-K6 25kA  | 2CDS282001R0377 |       |
| 8                 | S202P-K8 25kA  | 2CDS282001R0407 |       |
| 16                | S202P-K16 25kA | 2CDS282001R0467 |       |
| 20                | S202P-K20 25kA | 2CDS282001R0487 |       |
| 25                | S202P-K25 25kA | 2CDS282001R0517 |       |
| 40                | S202P-K40 15kA | 2CDS282001R0557 |       |
| 50                | S202P-K50 15kA | 2CDS282001R0577 |       |

| Rated Current (A) | Triple Pole    | Order Code      | Price |
|-------------------|----------------|-----------------|-------|
| 6                 | S203P-K6 25kA  | 2CDS283001R0377 |       |
| 16                | S203P-K16 25kA | 2CDS283001R0467 |       |
| 32                | S203P-K32 15kA | 2CDS283001R0537 |       |

## Type PC

| Rated Current (A) | Single Pole    | Product Hierarchy 2400002 |       |
|-------------------|----------------|---------------------------|-------|
|                   |                | Order Code                | Price |
| 16                | S201P-C16 25kA | 2CDS281001R0164           |       |
| 20                | S201P-C20 25kA | 2CDS281001R0204           |       |
| 32                | S201P-C32 15kA | 2CDS281001R0324           |       |



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# System ProM compact

## SN201-B, C, D series 6kA - single pole & switched neutral

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| Type B 6kA        |                                | Product Hierarchy 2400002 |       |
|-------------------|--------------------------------|---------------------------|-------|
| Rated Current (A) | Single Pole + Switched Neutral | Order Code                | Price |
| 6                 | SN201-B6                       | 2CSS255101R0065           |       |
| 10                | SN201-B10                      | 2CSS255101R0105           |       |
| 16                | SN201-B16                      | 2CSS255101R0165           |       |
| 20                | SN201-B20                      | 2CSS255101R0205           |       |
| 25                | SN201-B25                      | 2CSS255101R0255           |       |
| 32                | SN201-B32                      | 2CSS255101R0325           |       |
| 40                | SN201-B40                      | 2CSS255101R0405           |       |

| Type C 6kA        |                                | Product Hierarchy 2400002 |       |
|-------------------|--------------------------------|---------------------------|-------|
| Rated Current (A) | Single Pole + Switched Neutral | Order Code                | Price |
| 2                 | SN201-C2                       | 2CSS255101R0024           |       |
| 4                 | SN201-C4                       | 2CSS255101R0044           |       |
| 6                 | SN201-C6                       | 2CSS255101R0064           |       |
| 10                | SN201-C10                      | 2CSS255101R0104           |       |
| 13                | SN201-C13                      | 2CSS255101R0134           |       |
| 16                | SN201-C16                      | 2CSS255101R0164           |       |
| 20                | SN201-C20                      | 2CSS255101R0204           |       |
| 25                | SN201-C25                      | 2CSS255101R0254           |       |
| 32                | SN201-C32                      | 2CSS255101R0324           |       |
| 40                | SN201-C40                      | 2CSS255101R0404           |       |

| Type D 6kA        |                                | Product Hierarchy 2400002 |       |
|-------------------|--------------------------------|---------------------------|-------|
| Rated Current (A) | Single Pole + Switched Neutral | Order Code                | Price |
| 6                 | SN201-D6                       | 2CSS255101R0061           |       |
| 10                | SN201-D10                      | 2CSS255101R0101           |       |
| 16                | SN201-D16                      | 2CSS255101R0161           |       |
| 20                | SN201-D20                      | 2CSS255101R0201           |       |
| 25                | SN201-D25                      | 2CSS255101R0251           |       |
| 32                | SN201-D32                      | 2CSS255101R0321           |       |
| 40                | SN201-D40                      | 2CSS255101R0401           |       |



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# System ProM compact

## SN201M-B & C series 10kA - single pole & switched neutral



### Type B 10kA

| Rated Current (A) | Single Pole + Switched Neutral | Product Hierarchy 2400002 |       |
|-------------------|--------------------------------|---------------------------|-------|
|                   |                                | Order Code                | Price |
| 6                 | SN201M-B6                      | 2CSS275101R0065           |       |
| 10                | SN201M-B10                     | 2CSS275101R0105           |       |
| 16                | SN201M-B16                     | 2CSS275101R0165           |       |
| 20                | SN201M-B20                     | 2CSS275101R0205           |       |
| 25                | SN201M-B25                     | 2CSS275101R0255           |       |
| 32                | SN201M-B32                     | 2CSS275101R0325           |       |
| 40                | SN201M-B40                     | 2CSS275101R0405           |       |

### Type C 10kA

| Rated Current (A) | Single Pole + Switched Neutral | Product Hierarchy 2400002 |       |
|-------------------|--------------------------------|---------------------------|-------|
|                   |                                | Order Code                | Price |
| 2                 | SN201M-C2                      | 2CSS275101R0024           |       |
| 4                 | SN201M-C4                      | 2CSS275101R0044           |       |
| 6                 | SN201M-C6                      | 2CSS275101R0064           |       |
| 10                | SN201M-C10                     | 2CSS275101R0104           |       |
| 16                | SN201M-C16                     | 2CSS275101R0134           |       |
| 20                | SN201M-C20                     | 2CSS275101R0204           |       |
| 25                | SN201M-C25                     | 2CSS275101R0254           |       |
| 32                | SN201M-C32                     | 2CSS275101R0324           |       |
| 40                | SN201M-C40                     | 2CSS275101R0404           |       |



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# System ProM compact S280 B & C series 6kA

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2CSC400411F0201



2CSC400413F0201



2CSC400415F0201



2CSC400443F0201



## Type B 6kA

|                   |             | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
| Rated Current (A) |             | Order Code                | Price |
| 80                | Single Pole | GHS2810001R0805           |       |
| 100               | S281-B100   | GHS2810001R0825           |       |
| 80                | Double Pole | GHS2820001R0805           |       |
| 100               | S282-B100   | GHS2820001R0825           |       |
| 80                | Triple Pole | GHS2830001R0805           |       |
| 100               | S283-B100   | GHS2830001R0825           |       |
| 80                | Four Pole   | GHS2840001R0805           |       |
| 100               | S284-B100   | GHS2840001R0825           |       |

## Type C 6kA

|                   |             | Product Hierarchy 2400004 |       |
|-------------------|-------------|---------------------------|-------|
| Rated Current (A) |             | Order Code                | Price |
| 80                | Single Pole | GHS2810001R0804           |       |
| 100               | S281-C100   | GHS2810001R0824           |       |
| 80                | Double Pole | GHS2820001R0804           |       |
| 100               | S282-C100   | GHS2820001R0824           |       |
| 80                | Triple Pole | GHS2830001R0804           |       |
| 100               | S283-C100   | GHS2830001R0824           |       |
| 80                | Four Pole   | GHS2840001R0804           |       |
| 100               | S284-C100   | GHS2840001R0824           |       |



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# System ProM compact

## S800S series - type B 50kA



### Type SB 50kA

Product Hierarchy 2400003

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 6                 | S801S-B6    | 2CCS861001R0065           |       |
| 8                 | S801S-B8    | 2CCS861001R0085           |       |
| 10                | S801S-B10   | 2CCS861001R0105           |       |
| 16                | S801S-B16   | 2CCS861001R0165           |       |
| 20                | S801S-B20   | 2CCS861001R0205           |       |
| 25                | S801S-B25   | 2CCS861001R0255           |       |
| 32                | S801S-B32   | 2CCS861001R0325           |       |
| 40                | S801S-B40   | 2CCS861001R0405           |       |
| 50                | S801S-B50   | 2CCS861001R0505           |       |
| 63                | S801S-B63   | 2CCS861001R0635           |       |
| 80                | S801S-B80   | 2CCS861001R0805           |       |
| 100               | S801S-B100  | 2CCS861001R0825           |       |
| 125               | S801S-B125  | 2CCS861001R0845           |       |

| Rated Current (A) | Dou-Blé Pole | Order Code      | Price |
|-------------------|--------------|-----------------|-------|
| 6                 | S802S-B6     | 2CCS862001R0065 |       |
| 8                 | S802S-B8     | 2CCS862001R0085 |       |
| 10                | S802S-B10    | 2CCS862001R0105 |       |
| 16                | S802S-B16    | 2CCS862001R0165 |       |
| 20                | S802S-B20    | 2CCS862001R0205 |       |
| 25                | S802S-B25    | 2CCS862001R0255 |       |
| 32                | S802S-B32    | 2CCS862001R0325 |       |
| 40                | S802S-B40    | 2CCS862001R0405 |       |
| 50                | S802S-B50    | 2CCS862001R0505 |       |
| 63                | S802S-B63    | 2CCS862001R0635 |       |
| 80                | S802S-B80    | 2CCS862001R0805 |       |
| 100               | S802S-B100   | 2CCS862001R0825 |       |
| 125               | S802S-B125   | 2CCS862001R0845 |       |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 6                 | S803S-B6    | 2CCS863001R0065 |       |
| 8                 | S803S-B8    | 2CCS863001R0085 |       |
| 10                | S803S-B10   | 2CCS863001R0105 |       |
| 16                | S803S-B16   | 2CCS863001R0165 |       |
| 20                | S803S-B20   | 2CCS863001R0205 |       |
| 25                | S803S-B25   | 2CCS863001R0255 |       |
| 32                | S803S-B32   | 2CCS863001R0325 |       |
| 40                | S803S-B40   | 2CCS863001R0405 |       |
| 50                | S803S-B50   | 2CCS863001R0505 |       |
| 63                | S803S-B63   | 2CCS863001R0635 |       |
| 80                | S803S-B80   | 2CCS863001R0805 |       |
| 100               | S803S-B100  | 2CCS863001R0825 |       |
| 125               | S803S-B125  | 2CCS863001R0845 |       |



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# System ProM compact

## S800S series - type B 50kA

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### Type B 50kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 6                 | S804S-B6   | 2CCS864001R0065           |       |
| 8                 | S804S-B8   | 2CCS864001R0085           |       |
| 10                | S804S-B10  | 2CCS864001R0105           |       |
| 16                | S804S-B16  | 2CCS864001R0165           |       |
| 20                | S804S-B20  | 2CCS864001R0205           |       |
| 25                | S804S-B25  | 2CCS864001R0255           |       |
| 32                | S804S-B32  | 2CCS864001R0325           |       |
| 40                | S804S-B40  | 2CCS864001R0405           |       |
| 50                | S804S-B50  | 2CCS864001R0505           |       |
| 63                | S804S-B63  | 2CCS864001R0635           |       |
| 80                | S804S-B80  | 2CCS864001R0805           |       |
| 100               | S804S-B100 | 2CCS864001R0825           |       |
| 125               | S804S-B125 | 2CCS864001R0845           |       |



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# System ProM compact

## S800S series - type C 50kA



### Type C 50kA

#### Product Hierarchy 2400003

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 6                 | S801S-C6    | 2CCS861001R0064           |       |
| 8                 | S801S-C8    | 2CCS861001R0084           |       |
| 10                | S801S-C10   | 2CCS861001R0104           |       |
| 16                | S801S-C16   | 2CCS861001R0164           |       |
| 20                | S801S-C20   | 2CCS861001R0204           |       |
| 25                | S801S-C25   | 2CCS861001R0254           |       |
| 32                | S801S-C32   | 2CCS861001R0324           |       |
| 40                | S801S-C40   | 2CCS861001R0404           |       |
| 50                | S801S-C50   | 2CCS861001R0504           |       |
| 63                | S801S-C63   | 2CCS861001R0634           |       |
| 80                | S801S-C80   | 2CCS861001R0804           |       |
| 100               | S801S-C100  | 2CCS861001R0824           |       |
| 125               | S801S-C125  | 2CCS861001R0844           |       |

| Rated Current (A) | Double Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 6                 | S802S-C6    | 2CCS862001R0064           |       |
| 8                 | S802S-C8    | 2CCS862001R0084           |       |
| 10                | S802S-C10   | 2CCS862001R0104           |       |
| 16                | S802S-C16   | 2CCS862001R0164           |       |
| 20                | S802S-C20   | 2CCS862001R0204           |       |
| 25                | S802S-C25   | 2CCS862001R0254           |       |
| 32                | S802S-C32   | 2CCS862001R0324           |       |
| 40                | S802S-C40   | 2CCS862001R0404           |       |
| 50                | S802S-C50   | 2CCS862001R0504           |       |
| 63                | S802S-C63   | 2CCS862001R0634           |       |
| 80                | S802S-C80   | 2CCS862001R0804           |       |
| 100               | S802S-C100  | 2CCS862001R0824           |       |
| 125               | S802S-C125  | 2CCS862001R0844           |       |

| Rated Current (A) | Triple Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 6                 | S803S-C6    | 2CCS863001R0064           |       |
| 8                 | S803S-C8    | 2CCS863001R0084           |       |
| 10                | S803S-C10   | 2CCS863001R0104           |       |
| 16                | S803S-C16   | 2CCS863001R0164           |       |
| 20                | S803S-C20   | 2CCS863001R0204           |       |
| 25                | S803S-C25   | 2CCS863001R0254           |       |
| 32                | S803S-C32   | 2CCS863001R0324           |       |
| 40                | S803S-C40   | 2CCS863001R0404           |       |
| 50                | S803S-C50   | 2CCS863001R0504           |       |
| 63                | S803S-C63   | 2CCS863001R0634           |       |
| 80                | S803S-C80   | 2CCS863001R0804           |       |
| 100               | S803S-C100  | 2CCS863001R0824           |       |
| 125               | S803S-C125  | 2CCS863001R0844           |       |



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# System ProM compact

## S800S series - type C 50kA

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### Type C 50kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 6                 | S804S-C6   | 2CCS864001R0064           |       |
| 8                 | S804S-C8   | 2CCS864001R0084           |       |
| 10                | S804S-C10  | 2CCS864001R0104           |       |
| 16                | S804S-C16  | 2CCS864001R0164           |       |
| 20                | S804S-C20  | 2CCS864001R0204           |       |
| 25                | S804S-C25  | 2CCS864001R0254           |       |
| 32                | S804S-C32  | 2CCS864001R0324           |       |
| 40                | S804S-C40  | 2CCS864001R0404           |       |
| 50                | S804S-C50  | 2CCS864001R0504           |       |
| 63                | S804S-C63  | 2CCS864001R0634           |       |
| 80                | S804S-C80  | 2CCS864001R0804           |       |
| 100               | S804S-C100 | 2CCS864001R0824           |       |
| 125               | S804S-C125 | 2CCS864001R0844           |       |



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# System ProM compact

## S800S series - type K 50kA



### Type K 50kA

#### Product Hierarchy 2400003

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 6                 | S801S-K6    | 2CCS861001R0067           |       |
| 8                 | S801S-K8    | 2CCS861001R0407           |       |
| 10                | S801S-K10   | 2CCS861001R0427           |       |
| 16                | S801S-K16   | 2CCS861001R0467           |       |
| 20                | S801S-K20   | 2CCS861001R0487           |       |
| 25                | S801S-K25   | 2CCS861001R0517           |       |
| 32                | S801S-K32   | 2CCS861001R0537           |       |
| 40                | S801S-K40   | 2CCS861001R0557           |       |
| 50                | S801S-K50   | 2CCS861001R0577           |       |
| 63                | S801S-K63   | 2CCS861001R0597           |       |
| 80                | S801S-K80   | 2CCS861001R0627           |       |
| 100               | S801S-K100  | 2CCS861001R0637           |       |
| 125               | S801S-K125  | 2CCS861001R0647           |       |

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| Rated Current (A) | Double Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 6                 | S802S-K6    | 2CCS862001R0067           |       |
| 8                 | S802S-K8    | 2CCS862001R0407           |       |
| 10                | S802S-K10   | 2CCS862001R0427           |       |
| 16                | S802S-K16   | 2CCS862001R0467           |       |
| 20                | S802S-K20   | 2CCS862001R0487           |       |
| 25                | S802S-K25   | 2CCS862001R0517           |       |
| 32                | S802S-K32   | 2CCS862001R0537           |       |
| 40                | S802S-K40   | 2CCS862001R0557           |       |
| 50                | S802S-K50   | 2CCS862001R0577           |       |
| 63                | S802S-K63   | 2CCS862001R0597           |       |
| 80                | S802S-K80   | 2CCS862001R0627           |       |
| 100               | S802S-K100  | 2CCS862001R0637           |       |
| 125               | S802S-K125  | 2CCS862001R0647           |       |

| Rated Current (A) | Triple Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 6                 | S803S-K6    | 2CCS863001R0067           |       |
| 8                 | S803S-K8    | 2CCS863001R0407           |       |
| 10                | S803S-K10   | 2CCS863001R0427           |       |
| 16                | S803S-K16   | 2CCS863001R0467           |       |
| 20                | S803S-K20   | 2CCS863001R0487           |       |
| 25                | S803S-K25   | 2CCS863001R0517           |       |
| 32                | S803S-K32   | 2CCS863001R0537           |       |
| 40                | S803S-K40   | 2CCS863001R0557           |       |
| 50                | S803S-K50   | 2CCS863001R0577           |       |
| 63                | S803S-K63   | 2CCS863001R0597           |       |
| 80                | S803S-K80   | 2CCS863001R0627           |       |
| 100               | S803S-K100  | 2CCS863001R0637           |       |
| 125               | S803S-K125  | 2CCS863001R0647           |       |

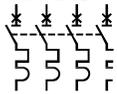


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# System ProM compact S800S series - type K 50kA

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## Type C 50kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 6                 | S804S-K6   | 2CCS864001R0067           |       |
| 8                 | S804S-K8   | 2CCS864001R0407           |       |
| 10                | S804S-K10  | 2CCS864001R0427           |       |
| 16                | S804S-K16  | 2CCS864001R0467           |       |
| 20                | S804S-K20  | 2CCS864001R0487           |       |
| 25                | S804S-K25  | 2CCS864001R0517           |       |
| 32                | S804S-K32  | 2CCS864001R0537           |       |
| 40                | S804S-K40  | 2CCS864001R0557           |       |
| 50                | S804S-K50  | 2CCS864001R0577           |       |
| 63                | S804S-K63  | 2CCS864001R0597           |       |
| 80                | S804S-K80  | 2CCS864001R0627           |       |
| 100               | S804S-K100 | 2CCS864001R0637           |       |
| 125               | S804S-K125 | 2CCS864001R0647           |       |



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# System ProM compact

## S800N series - type B 36kA



### Type B 36kA

#### Product Hierarchy 2400003

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 10                | S801N-B10   | 2CCS891001R0105           |       |
| 13                | S801N-B13   | 2CCS891001R0135           |       |
| 16                | S801N-B16   | 2CCS891001R0165           |       |
| 20                | S801N-B20   | 2CCS891001R0205           |       |
| 25                | S801N-B25   | 2CCS891001R0255           |       |
| 32                | S801N-B32   | 2CCS891001R0325           |       |
| 40                | S801N-B40   | 2CCS891001R0405           |       |
| 50                | S801N-B50   | 2CCS891001R0505           |       |
| 63                | S801N-B63   | 2CCS891001R0635           |       |
| 80                | S801N-B80   | 2CCS891001R0805           |       |
| 100               | S801N-B100  | 2CCS891001R0825           |       |
| 125               | S801N-B125  | 2CCS891001R0845           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S802N-B10   | 2CCS892001R0105 |       |
| 13                | S802N-B13   | 2CCS892001R0135 |       |
| 16                | S802N-B16   | 2CCS892001R0165 |       |
| 20                | S802N-B20   | 2CCS892001R0205 |       |
| 25                | S802N-B25   | 2CCS892001R0255 |       |
| 32                | S802N-B32   | 2CCS892001R0325 |       |
| 40                | S802N-B40   | 2CCS892001R0405 |       |
| 50                | S802N-B50   | 2CCS892001R0505 |       |
| 63                | S802N-B63   | 2CCS892001R0635 |       |
| 80                | S802N-B80   | 2CCS892001R0805 |       |
| 100               | S802N-B100  | 2CCS892001R0825 |       |
| 125               | S802N-B125  | 2CCS892001R0845 |       |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S803N-B10   | 2CCS893001R0105 |       |
| 13                | S803N-B13   | 2CCS893001R0135 |       |
| 16                | S803N-B16   | 2CCS893001R0165 |       |
| 20                | S803N-B20   | 2CCS893001R0205 |       |
| 25                | S803N-B25   | 2CCS893001R0255 |       |
| 32                | S803N-B32   | 2CCS893001R0325 |       |
| 40                | S803N-B40   | 2CCS893001R0405 |       |
| 50                | S803N-B50   | 2CCS893001R0505 |       |
| 63                | S803N-B63   | 2CCS893001R0635 |       |
| 80                | S803N-B80   | 2CCS893001R0805 |       |
| 100               | S803N-B100  | 2CCS893001R0825 |       |
| 125               | S803N-B125  | 2CCS893001R0845 |       |

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# System ProM compact

## S800N series - type B 36kA



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### Type B 36kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 10                | S804N-B10  | 2CCS894001R0105           |       |
| 13                | S804N-B13  | 2CCS894001R0135           |       |
| 16                | S804N-B16  | 2CCS894001R0165           |       |
| 20                | S804N-B20  | 2CCS894001R0205           |       |
| 25                | S804N-B25  | 2CCS894001R0255           |       |
| 32                | S804N-B32  | 2CCS894001R0325           |       |
| 40                | S804N-B40  | 2CCS894001R0405           |       |
| 50                | S804N-B50  | 2CCS894001R0505           |       |
| 63                | S804N-B63  | 2CCS894001R0635           |       |
| 80                | S804N-B80  | 2CCS894001R0805           |       |
| 100               | S804N-B100 | 2CCS894001R0825           |       |
| 125               | S804N-B125 | 2CCS894001R0845           |       |



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# System ProM compact

## S800N series - type C 36kA



### Type C 36kA

#### Product Hierarchy 2400003

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 10                | S801N-C10   | 2CCS891001R0104           |       |
| 13                | S801N-C13   | 2CCS891001R0134           |       |
| 16                | S801N-C16   | 2CCS891001R0164           |       |
| 20                | S801N-C20   | 2CCS891001R0204           |       |
| 25                | S801N-C25   | 2CCS891001R0254           |       |
| 32                | S801N-C32   | 2CCS891001R0324           |       |
| 40                | S801N-C40   | 2CCS891001R0404           |       |
| 50                | S801N-C50   | 2CCS891001R0504           |       |
| 63                | S801N-C63   | 2CCS891001R0634           |       |
| 80                | S801N-C80   | 2CCS891001R0804           |       |
| 100               | S801N-C100  | 2CCS891001R0824           |       |
| 125               | S801N-C125  | 2CCS891001R0844           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S802N-C10   | 2CCS892001R0104 |       |
| 13                | S802N-C13   | 2CCS892001R0134 |       |
| 16                | S802N-C16   | 2CCS892001R0164 |       |
| 20                | S802N-C20   | 2CCS892001R0204 |       |
| 25                | S802N-C25   | 2CCS892001R0254 |       |
| 32                | S802N-C32   | 2CCS892001R0324 |       |
| 40                | S802N-C40   | 2CCS892001R0404 |       |
| 50                | S802N-C50   | 2CCS892001R0504 |       |
| 63                | S802N-C63   | 2CCS892001R0634 |       |
| 80                | S802N-C80   | 2CCS892001R0804 |       |
| 100               | S802N-C100  | 2CCS892001R0824 |       |
| 125               | S802N-C125  | 2CCS892001R0844 |       |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S803N-C10   | 2CCS893001R0104 |       |
| 13                | S803N-C13   | 2CCS893001R0134 |       |
| 16                | S803N-C16   | 2CCS893001R0164 |       |
| 20                | S803N-C20   | 2CCS893001R0204 |       |
| 25                | S803N-C25   | 2CCS893001R0254 |       |
| 32                | S803N-C32   | 2CCS893001R0324 |       |
| 40                | S803N-C40   | 2CCS893001R0404 |       |
| 50                | S803N-C50   | 2CCS893001R0504 |       |
| 63                | S803N-C63   | 2CCS893001R0634 |       |
| 80                | S803N-C80   | 2CCS893001R0804 |       |
| 100               | S803N-C100  | 2CCS893001R0824 |       |
| 125               | S803N-C125  | 2CCS893001R0844 |       |

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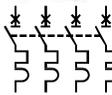
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# System ProM compact S800N series - type C 36kA



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## Type C 36kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 10                | S804N-C10  | 2CCS894001R0104           |       |
| 13                | S804N-C13  | 2CCS894001R0134           |       |
| 16                | S804N-C16  | 2CCS894001R0164           |       |
| 20                | S804N-C20  | 2CCS894001R0204           |       |
| 25                | S804N-C25  | 2CCS894001R0254           |       |
| 32                | S804N-C32  | 2CCS894001R0324           |       |
| 40                | S804N-C40  | 2CCS894001R0404           |       |
| 50                | S804N-C50  | 2CCS894001R0504           |       |
| 63                | S804N-C63  | 2CCS894001R0634           |       |
| 80                | S804N-C80  | 2CCS894001R0804           |       |
| 100               | S804N-C100 | 2CCS894001R0824           |       |
| 125               | S804N-C125 | 2CCS894001R0844           |       |



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# System ProM compact

## S800N series - type D 36kA



### Type D 36kA

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 10                | S801N-D10   | 2CCS891001R0101           |       |
| 13                | S801N-D13   | 2CCS891001R0131           |       |
| 16                | S801N-D16   | 2CCS891001R0161           |       |
| 20                | S801N-D20   | 2CCS891001R0201           |       |
| 25                | S801N-D25   | 2CCS891001R0251           |       |
| 32                | S801N-D32   | 2CCS891001R0321           |       |
| 40                | S801N-D40   | 2CCS891001R0401           |       |
| 50                | S801N-D50   | 2CCS891001R0501           |       |
| 63                | S801N-D63   | 2CCS891001R0631           |       |
| 80                | S801N-D80   | 2CCS891001R0801           |       |
| 100               | S801N-D100  | 2CCS891001R0821           |       |
| 125               | S801N-D125  | 2CCS891001R0841           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S802N-D10   | 2CCS892001R0101 |       |
| 13                | S802N-D13   | 2CCS892001R0131 |       |
| 16                | S802N-D16   | 2CCS892001R0161 |       |
| 20                | S802N-D20   | 2CCS892001R0201 |       |
| 25                | S802N-D25   | 2CCS892001R0251 |       |
| 32                | S802N-D32   | 2CCS892001R0321 |       |
| 40                | S802N-D40   | 2CCS892001R0401 |       |
| 50                | S802N-D50   | 2CCS892001R0501 |       |
| 63                | S802N-D63   | 2CCS892001R0631 |       |
| 80                | S802N-D80   | 2CCS892001R0801 |       |
| 100               | S802N-D100  | 2CCS892001R0821 |       |
| 125               | S802N-D125  | 2CCS892001R0841 |       |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S803N-D10   | 2CCS893001R0101 |       |
| 13                | S803N-D13   | 2CCS893001R0131 |       |
| 16                | S803N-D16   | 2CCS893001R0161 |       |
| 20                | S803N-D20   | 2CCS893001R0201 |       |
| 25                | S803N-D25   | 2CCS893001R0251 |       |
| 32                | S803N-D32   | 2CCS893001R0321 |       |
| 40                | S803N-D40   | 2CCS893001R0401 |       |
| 50                | S803N-D50   | 2CCS893001R0501 |       |
| 63                | S803N-D63   | 2CCS893001R0631 |       |
| 80                | S803N-D80   | 2CCS893001R0801 |       |
| 100               | S803N-D100  | 2CCS893001R0821 |       |
| 125               | S803N-D125  | 2CCS893001R0841 |       |

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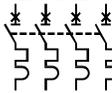
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# System ProM compact

## S800N series - type D 36kA



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### Type D 36kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 10                | S804N-D10  | 2CCS894001R0101           |       |
| 13                | S804N-D13  | 2CCS894001R0131           |       |
| 16                | S804N-D16  | 2CCS894001R0161           |       |
| 20                | S804N-D20  | 2CCS894001R0201           |       |
| 25                | S804N-D25  | 2CCS894001R0251           |       |
| 32                | S804N-D32  | 2CCS894001R0321           |       |
| 40                | S804N-D40  | 2CCS894001R0401           |       |
| 50                | S804N-D50  | 2CCS894001R0501           |       |
| 63                | S804N-D63  | 2CCS894001R0631           |       |
| 80                | S804N-D80  | 2CCS894001R0801           |       |
| 100               | S804N-D100 | 2CCS894001R0821           |       |
| 125               | S804N-D125 | 2CCS894001R0841           |       |



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# System ProM compact

## S800C series - type B 25kA



### Type B 25kA

#### Product Hierarchy 2400003

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 10                | S801C-B10   | 2CCS881001R0105           |       |
| 13                | S801C-B13   | 2CCS881001R0135           |       |
| 16                | S801C-B16   | 2CCS881001R0165           |       |
| 20                | S801C-B20   | 2CCS881001R0205           |       |
| 25                | S801C-B25   | 2CCS881001R0255           |       |
| 32                | S801C-B32   | 2CCS881001R0325           |       |
| 40                | S801C-B40   | 2CCS881001R0405           |       |
| 50                | S801C-B50   | 2CCS881001R0505           |       |
| 63                | S801C-B63   | 2CCS883001R0635           |       |
| 80                | S801C-B80   | 2CCS883001R0805           |       |
| 100               | S801C-B100  | 2CCS883001R0825           |       |
| 125               | S801C-B125  | 2CCS883001R0845           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S802C-B10   | 2CCS882001R0105 |       |
| 13                | S802C-B13   | 2CCS882001R0135 |       |
| 16                | S802C-B16   | 2CCS882001R0165 |       |
| 20                | S802C-B20   | 2CCS882001R0205 |       |
| 25                | S802C-B25   | 2CCS882001R0255 |       |
| 32                | S802C-B32   | 2CCS882001R0325 |       |
| 40                | S802C-B40   | 2CCS882001R0405 |       |
| 50                | S802C-B50   | 2CCS882001R0505 |       |
| 63                | S802C-B63   | 2CCS882001R0635 |       |
| 80                | S802C-B80   | 2CCS882001R0805 |       |
| 100               | S802C-B100  | 2CCS882001R0825 |       |
| 125               | S802C-B125  | 2CCS882001R0845 |       |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S803C-B10   | 2CCS883001R0105 |       |
| 13                | S803C-B13   | 2CCS883001R0135 |       |
| 16                | S803C-B16   | 2CCS883001R0165 |       |
| 20                | S803C-B20   | 2CCS883001R0205 |       |
| 25                | S803C-B25   | 2CCS883001R0255 |       |
| 32                | S803C-B32   | 2CCS883001R0325 |       |
| 40                | S803C-B40   | 2CCS883001R0405 |       |
| 50                | S803C-B50   | 2CCS883001R0505 |       |
| 63                | S803C-B63   | 2CCS883001R0635 |       |
| 80                | S803C-B80   | 2CCS883001R0805 |       |
| 100               | S803C-B100  | 2CCS883001R0825 |       |
| 125               | S803C-B125  | 2CCS883001R0845 |       |



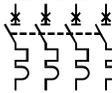
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# System ProM compact S800C series - type B 25kA



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## Type B 25kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 10                | S804B-B10  | 2CCS884001R0105           |       |
| 13                | S804B-B13  | 2CCS884001R0135           |       |
| 16                | S804B-B16  | 2CCS884001R0165           |       |
| 20                | S804B-B20  | 2CCS884001R0205           |       |
| 25                | S804B-B25  | 2CCS884001R0255           |       |
| 32                | S804B-B32  | 2CCS884001R0325           |       |
| 40                | S804B-B40  | 2CCS884001R0405           |       |
| 50                | S804B-B50  | 2CCS884001R0505           |       |
| 63                | S804B-B63  | 2CCS884001R0635           |       |
| 80                | S804B-B80  | 2CCS884001R0805           |       |
| 100               | S804B-B100 | 2CCS884001R0825           |       |
| 125               | S804B-B125 | 2CCS884001R0845           |       |



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# System ProM compact

## S800C series - type C 25kA



### Type C 25kA

#### Product Hierarchy 2400003

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 10                | S801C-C10   | 2CCS881001R0104           |       |
| 13                | S801C-C13   | 2CCS881001R0134           |       |
| 16                | S801C-C16   | 2CCS881001R0164           |       |
| 20                | S801C-C20   | 2CCS881001R0204           |       |
| 25                | S801C-C25   | 2CCS881001R0254           |       |
| 32                | S801C-C32   | 2CCS881001R0324           |       |
| 40                | S801C-C40   | 2CCS881001R0404           |       |
| 50                | S801C-C50   | 2CCS881001R0504           |       |
| 63                | S801C-C63   | 2CCS881001R0634           |       |
| 80                | S801C-C80   | 2CCS881001R0804           |       |
| 100               | S801C-C100  | 2CCS881001R0824           |       |
| 125               | S801C-C125  | 2CCS881001R0844           |       |

| Rated Current (A) | Double Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 10                | S802C-C10   | 2CCS882001R0104           |       |
| 13                | S802C-C13   | 2CCS882001R0134           |       |
| 16                | S802C-C16   | 2CCS882001R0164           |       |
| 20                | S802C-C20   | 2CCS882001R0204           |       |
| 25                | S802C-C25   | 2CCS882001R0254           |       |
| 32                | S802C-C32   | 2CCS882001R0324           |       |
| 40                | S802C-C40   | 2CCS882001R0404           |       |
| 50                | S802C-C50   | 2CCS882001R0504           |       |
| 63                | S802C-C63   | 2CCS882001R0634           |       |
| 80                | S802C-C80   | 2CCS882001R0804           |       |
| 100               | S802C-C100  | 2CCS882001R0824           |       |
| 125               | S802C-C125  | 2CCS882001R0844           |       |

| Rated Current (A) | Triple Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 10                | S803C-C10   | 2CCS883001R0104           |       |
| 13                | S803C-C13   | 2CCS883001R0134           |       |
| 16                | S803C-C16   | 2CCS883001R0164           |       |
| 20                | S803C-C20   | 2CCS883001R0204           |       |
| 25                | S803C-C25   | 2CCS883001R0254           |       |
| 32                | S803C-C32   | 2CCS883001R0324           |       |
| 40                | S803C-C40   | 2CCS883001R0404           |       |
| 50                | S803C-C50   | 2CCS883001R0504           |       |
| 63                | S803C-C63   | 2CCS883001R0634           |       |
| 80                | S803C-C80   | 2CCS883001R0804           |       |
| 100               | S803C-C100  | 2CCS883001R0824           |       |
| 125               | S803C-C125  | 2CCS883001R0844           |       |

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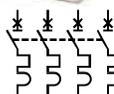
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# System ProM compact

## S800C series - type C 25kA



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### Type C 25kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 10                | S804C-C10  | 2CCS884001R0104           |       |
| 13                | S804C-C13  | 2CCS884001R0134           |       |
| 16                | S804C-C16  | 2CCS884001R0164           |       |
| 20                | S804C-C20  | 2CCS884001R0204           |       |
| 25                | S804C-C25  | 2CCS884001R0254           |       |
| 32                | S804C-C32  | 2CCS884001R0324           |       |
| 40                | S804C-C40  | 2CCS884001R0404           |       |
| 50                | S804C-C50  | 2CCS884001R0504           |       |
| 63                | S804C-C63  | 2CCS884001R0634           |       |
| 80                | S804C-C80  | 2CCS884001R0804           |       |
| 100               | S804C-C100 | 2CCS884001R0824           |       |
| 125               | S804C-C125 | 2CCS884001R0844           |       |



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# System ProM compact

## S800C series - type D 25kA



### Type D 25kA

#### Product Hierarchy 2400003

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 10                | S801C-D10   | 2CCS881001R0101           |       |
| 13                | S801C-D13   | 2CCS881001R0131           |       |
| 16                | S801C-D16   | 2CCS881001R0161           |       |
| 20                | S801C-D20   | 2CCS881001R0201           |       |
| 25                | S801C-D25   | 2CCS881001R0251           |       |
| 32                | S801C-D32   | 2CCS881001R0321           |       |
| 40                | S801C-D40   | 2CCS881001R0401           |       |
| 50                | S801C-D50   | 2CCS881001R0501           |       |
| 63                | S801C-D63   | 2CCS881001R0631           |       |
| 80                | S801C-D80   | 2CCS881001R0801           |       |
| 100               | S801C-D100  | 2CCS881001R0821           |       |
| 125               | S801C-D125  | 2CCS881001R0841           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S802C-D10   | 2CCS882001R0101 |       |
| 13                | S802C-D13   | 2CCS882001R0131 |       |
| 16                | S802C-D16   | 2CCS882001R0161 |       |
| 20                | S802C-D20   | 2CCS882001R0201 |       |
| 25                | S802C-D25   | 2CCS882001R0251 |       |
| 32                | S802C-D32   | 2CCS882001R0321 |       |
| 40                | S802C-D40   | 2CCS882001R0401 |       |
| 50                | S802C-D50   | 2CCS882001R0501 |       |
| 63                | S802C-D63   | 2CCS882001R0631 |       |
| 80                | S802C-D80   | 2CCS882001R0801 |       |
| 100               | S802C-D100  | 2CCS882001R0821 |       |
| 125               | S802C-D125  | 2CCS882001R0841 |       |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S803C-D10   | 2CCS883001R0101 |       |
| 13                | S803C-D13   | 2CCS883001R0131 |       |
| 16                | S803C-D16   | 2CCS883001R0161 |       |
| 20                | S803C-D20   | 2CCS883001R0201 |       |
| 25                | S803C-D25   | 2CCS883001R0251 |       |
| 32                | S803C-D32   | 2CCS883001R0321 |       |
| 40                | S803C-D40   | 2CCS883001R0401 |       |
| 50                | S803C-D50   | 2CCS883001R0501 |       |
| 63                | S803C-D63   | 2CCS883001R0631 |       |
| 80                | S803C-D80   | 2CCS883001R0801 |       |
| 100               | S803C-D100  | 2CCS883001R0821 |       |
| 125               | S803C-D125  | 2CCS883001R0841 |       |

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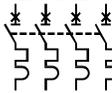
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# System ProM compact S800C series - type D 25kA



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## Type D 25kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 10                | S804C-D10  | 2CCS884001R0101           |       |
| 13                | S804C-D13  | 2CCS884001R0131           |       |
| 16                | S804C-D16  | 2CCS884001R0161           |       |
| 20                | S804C-D20  | 2CCS884001R0201           |       |
| 25                | S804C-D25  | 2CCS884001R0251           |       |
| 32                | S804C-D32  | 2CCS884001R0321           |       |
| 40                | S804C-D40  | 2CCS884001R0401           |       |
| 50                | S804C-D50  | 2CCS884001R0501           |       |
| 63                | S804C-D63  | 2CCS884001R0631           |       |
| 80                | S804C-D80  | 2CCS884001R0801           |       |
| 100               | S804C-D100 | 2CCS884001R0821           |       |
| 125               | S804C-D125 | 2CCS884001R0841           |       |



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# System ProM compact

## S800C series - type K 25kA



### Type K 25kA

#### Product Hierarchy 2400003

| Rated Current (A) | Single Pole | Product Hierarchy 2400003 |       |
|-------------------|-------------|---------------------------|-------|
|                   |             | Order Code                | Price |
| 10                | S801C-K10   | 2CCS881001R0427           |       |
| 13                | S801C-K13   | 2CCS881001R0447           |       |
| 16                | S801C-K16   | 2CCS881001R0467           |       |
| 20                | S801C-K20   | 2CCS881001R0487           |       |
| 25                | S801C-K25   | 2CCS881001R0517           |       |
| 32                | S801C-K32   | 2CCS881001R0537           |       |
| 40                | S801C-K40   | 2CCS881001R0557           |       |
| 50                | S801C-K50   | 2CCS881001R0577           |       |
| 63                | S801C-K63   | 2CCS881001R0597           |       |
| 80                | S801C-K80   | 2CCS881001R0627           |       |
| 100               | S801C-K100  | 2CCS881001R0637           |       |
| 125               | S801C-K125  | 2CCS881001R0647           |       |

| Rated Current (A) | Double Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S802C-K10   | 2CCS882001R0427 |       |
| 13                | S802C-K13   | 2CCS882001R0447 |       |
| 16                | S802C-K16   | 2CCS882001R0467 |       |
| 20                | S802C-K20   | 2CCS882001R0487 |       |
| 25                | S802C-K25   | 2CCS882001R0517 |       |
| 32                | S802C-K32   | 2CCS882001R0537 |       |
| 40                | S802C-K40   | 2CCS882001R0557 |       |
| 50                | S802C-K50   | 2CCS882001R0577 |       |
| 63                | S802C-K63   | 2CCS882001R0597 |       |
| 80                | S802C-K80   | 2CCS882001R0627 |       |
| 100               | S802C-K100  | 2CCS882001R0637 |       |
| 125               | S802C-K125  | 2CCS882001R0647 |       |

| Rated Current (A) | Triple Pole | Order Code      | Price |
|-------------------|-------------|-----------------|-------|
| 10                | S803C-K10   | 2CCS883001R0427 |       |
| 13                | S803C-K13   | 2CCS883001R0447 |       |
| 16                | S803C-K16   | 2CCS883001R0467 |       |
| 20                | S803C-K20   | 2CCS883001R0487 |       |
| 25                | S803C-K25   | 2CCS883001R0517 |       |
| 32                | S803C-K32   | 2CCS883001R0537 |       |
| 40                | S803C-K40   | 2CCS883001R0557 |       |
| 50                | S803C-K50   | 2CCS883001R0577 |       |
| 63                | S803C-K63   | 2CCS883001R0597 |       |
| 80                | S803C-K80   | 2CCS883001R0627 |       |
| 100               | S803C-K100  | 2CCS883001R0637 |       |
| 125               | S803C-K125  | 2CCS883001R0647 |       |

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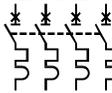
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# System ProM compact S800C series - type K 25kA



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## Type K 25kA

| Rated Current (A) | Four Pole  | Product Hierarchy 2400003 |       |
|-------------------|------------|---------------------------|-------|
|                   |            | Order Code                | Price |
| 10                | S804C-K10  | 2CCS884001R0427           |       |
| 13                | S804C-K13  | 2CCS884001R0447           |       |
| 16                | S804C-K16  | 2CCS884001R0467           |       |
| 20                | S804C-K20  | 2CCS884001R0487           |       |
| 25                | S804C-K25  | 2CCS884001R0517           |       |
| 32                | S804C-K32  | 2CCS884001R0537           |       |
| 40                | S804C-K40  | 2CCS884001R0557           |       |
| 50                | S804C-K50  | 2CCS884001R0577           |       |
| 63                | S804C-K63  | 2CCS884001R0597           |       |
| 80                | S804C-K80  | 2CCS884001R0627           |       |
| 100               | S804C-K100 | 2CCS884001R0637           |       |
| 125               | S804C-K125 | 2CCS884001R0647           |       |



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# System ProM compact

## F200 AC type - 2 & 4 pole RCCBs



### F200 AC Type RCCBs 2 Pole

AC - BS/EN 61008

Product Hierarchy 2500001

| Rated Current | Tripping mA | Part No          | Product Hierarchy 2500001 |       |
|---------------|-------------|------------------|---------------------------|-------|
|               |             |                  | Order Code                | Price |
| 25            | 30          | F202 AC-25/0.03  | 2CSF202001R1250           |       |
| 40            |             | F202 AC-40/0.03  | 2CSF202001R1400           |       |
| 63            |             | F202 AC-63/0.03  | 2CSF202001R1630           |       |
| 80            |             | F202 AC-80/0.03  | 2CSF202001R1800           |       |
| 100           |             | F202 AC-100/0.03 | 2CSF202001R1900           |       |
| 25            | 100         | F202 AC-25/0.1   | 2CSF202001R2250           |       |
| 40            |             | F202 AC-40/0.1   | 2CSF202001R2400           |       |
| 63            |             | F202 AC-63/0.1   | 2CSF202001R2630           |       |
| 80            |             | F202 AC-80/0.1   | 2CSF202001R2800           |       |
| 100           |             | F202 AC-100/0.1  | 2CSF202001R2900           |       |
| 25            | 300         | F202 AC-25/0.3   | 2CSF202001R3250           |       |
| 40            |             | F202 AC-40/0.3   | 2CSF202001R3400           |       |
| 63            |             | F202 AC-63/0.3   | 2CSF202001R3630           |       |
| 80            |             | F202 AC-80/0.3   | 2CSF202001R3800           |       |
| 100           |             | F202 AC-100/0.3  | 2CSF202001R3900           |       |

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### F200 AC Type RCCBs 4 Pole

AC - BS/EN 61008

|     |     |                  |                 |  |
|-----|-----|------------------|-----------------|--|
| 25  | 30  | F204 AC-25/0.03  | 2CSF204001R1250 |  |
| 40  |     | F204 AC-40/0.03  | 2CSF204001R1400 |  |
| 63  |     | F204 AC-63/0.03  | 2CSF204001R1630 |  |
| 80  |     | F204 AC-80/0.03  | 2CSF204001R1800 |  |
| 100 |     | F204 AC-100/0.03 | 2CSF204001R1900 |  |
| 125 |     | F204 AC-125/0.03 | 2CSF204001R1950 |  |
| 25  | 100 | F204 AC-25/0.1   | 2CSF204001R2250 |  |
| 40  |     | F204 AC-40/0.1   | 2CSF204001R2400 |  |
| 63  |     | F204 AC-63/0.1   | 2CSF204001R2630 |  |
| 80  |     | F204 AC-80/0.1   | 2CSF204001R2800 |  |
| 100 |     | F204 AC-100/0.1  | 2CSF204001R2900 |  |
| 125 |     | F204 AC-125/0.1  | 2CSF204001R2950 |  |
| 25  | 300 | F204 AC-25/0.3   | 2CSF204001R3250 |  |
| 40  |     | F204 AC-40/0.3   | 2CSF204001R3400 |  |
| 63  |     | F204 AC-63/0.3   | 2CSF204001R3630 |  |
| 80  |     | F204 AC-80/0.3   | 2CSF204001R3800 |  |
| 100 |     | F204 AC-100/0.3  | 2CSF204001R3900 |  |
| 125 |     | F204 AC-125/0.3  | 2CSF204001R3950 |  |



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# System ProM compact

## F200 A type - 2 & 4 pole RCCBs

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### F200 A type RCCBs 2 Pole AC - BS/EN 61008

| Rated Current | Tripping mA    | Part No         | Product Hierarchy 2500001 |       |
|---------------|----------------|-----------------|---------------------------|-------|
|               |                |                 | Order Code                | Price |
| 16            | 10             | F202 A-16/0.01  | 2CSF202101R0160           |       |
| 25            | 30             | F202 A-25/0.03  | 2CSF202101R1250           |       |
| 40            |                | F202 A-40/0.03  | 2CSF202101R1400           |       |
| 63            |                | F202 A-63/0.03  | 2CSF202101R1630           |       |
| 80            |                | F202 A-80/0.03  | 2CSF202101R1800           |       |
| 100           | 100            | F202 A-100/0.03 | 2CSF202101R1900           |       |
| 25            |                | F202 A-25/0.1   | 2CSF202101R2250           |       |
| 40            |                | F202 A-40/0.1   | 2CSF202101R2400           |       |
| 63            |                | F202 A-63/0.1   | 2CSF202101R2630           |       |
| 80            |                | F202 A-80/0.1   | 2CSF202101R2800           |       |
| 100           | 300            | F202 A-100/0.1  | 2CSF202101R2900           |       |
| 25            |                | F202 A-25/0.3   | 2CSF202101R3250           |       |
| 40            |                | F202 A-40/0.3   | 2CSF202101R3400           |       |
| 63            |                | F202 A-63/0.3   | 2CSF202101R3630           |       |
| 80            |                | F202 A-80/0.3   | 2CSF202101R3800           |       |
| 100           | F202 A-100/0.3 | 2CSF202101R3900 |                           |       |



### F200 A type RCCBs 4 Pole AC - BS/EN 61008

|     |                |                 |                 |  |
|-----|----------------|-----------------|-----------------|--|
| 25  | 30             | F204 A-25/0.03  | 2CSF204101R1250 |  |
| 40  |                | F204 A-40/0.03  | 2CSF204101R1400 |  |
| 63  |                | F204 A-63/0.03  | 2CSF204101R1630 |  |
| 80  |                | F204 A-80/0.03  | 2CSF204101R1800 |  |
| 100 |                | F204 A-100/0.03 | 2CSF204101R1900 |  |
| 125 |                | F204 A-125/0.03 | 2CSF204101R1950 |  |
| 25  | 100            | F204 A-25/0.1   | 2CSF204101R2250 |  |
| 40  |                | F204 A-40/0.1   | 2CSF204101R2400 |  |
| 63  |                | F204 A-63/0.1   | 2CSF204101R2630 |  |
| 80  |                | F204 A-80/0.1   | 2CSF204101R2800 |  |
| 100 |                | F204 A-100/0.1  | 2CSF204101R2900 |  |
| 125 | 300            | F204 A-125/0.1  | 2CSF204101R2950 |  |
| 25  |                | F204 A-25/0.3   | 2CSF204101R3250 |  |
| 40  |                | F204 A-40/0.3   | 2CSF204101R3400 |  |
| 63  |                | F204 A-63/0.3   | 2CSF204101R3630 |  |
| 80  |                | F204 A-80/0.3   | 2CSF204101R3800 |  |
| 100 |                | F204 A-100/0.3  | 2CSF204101R3900 |  |
| 125 | F204 A-125/0.3 | 2CSF204101R3950 |                 |  |

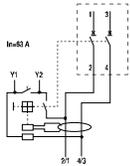


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# System ProM compact

## DDA200 AC type - 2, 3, 4 pole RCD block



### 2 pole - DDA 200 AC type

| Rated Current | Tripping mA | Number of poles | Part No           | Product Hierarchy 2500001 |       |
|---------------|-------------|-----------------|-------------------|---------------------------|-------|
|               |             |                 |                   | Order Code                | Price |
| 16            | 10          | 2               | DDA202 AC-16/0.01 | 2CSB202001R0250           |       |
| 25            | 30          | 2               | DDA202 AC-25/0.03 | 2CSB202001R1250           |       |
| 40            |             |                 | DDA202 AC-40/0.03 | 2CSB202001R1400           |       |
| 63            |             |                 | DDA202 AC-63/0.03 | 2CSB202001R1630           |       |
| 25            | 100         | 2               | DDA202 AC-25/0.1  | 2CSB202001R2250           |       |
| 40            |             |                 | DDA202 AC-40/0.1  | 2CSB202001R2400           |       |
| 63            |             |                 | DDA202 AC-63/0.1  | 2CSB202001R2630           |       |
| 25            | 300         | 2               | DDA204 AC-25/0.3  | 2CSB202001R3250           |       |
| 40            |             |                 | DDA204 AC-40/0.3  | 2CSB202001R3400           |       |
| 63            |             |                 | DDA204 AC-63/0.3  | 2CSB202001R3630           |       |

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### 3 pole - DDA 200 AC type

| Rated Current | Tripping mA | Number of poles | Part No           | Product Hierarchy 2500001 |       |
|---------------|-------------|-----------------|-------------------|---------------------------|-------|
|               |             |                 |                   | Order Code                | Price |
| 25            | 30          | 3               | DDA203 AC-25/0.03 | 2CSB203001R1250           |       |
| 40            |             |                 | DDA203 AC-40/0.03 | 2CSB203001R1400           |       |
| 63            |             |                 | DDA203 AC-63/0.03 | 2CSB203001R1630           |       |
| 25            | 100         | 3               | DDA203 AC-25/0.1  | 2CSB203001R2250           |       |
| 40            |             |                 | DDA203 AC-40/0.1  | 2CSB203001R2400           |       |
| 63            |             |                 | DDA203 AC-63/0.1  | 2CSB203001R2630           |       |
| 25            | 300         | 3               | DDA203 AC-25/0.3  | 2CSB203001R3250           |       |
| 40            |             |                 | DDA203 AC-40/0.3  | 2CSB203001R3400           |       |
| 63            |             |                 | DDA203 AC-63/0.3  | 2CSB203001R3630           |       |

### 4 pole - DDA 200 AC type

| Rated Current | Tripping mA | Number of poles | Part No           | Product Hierarchy 2500001 |       |
|---------------|-------------|-----------------|-------------------|---------------------------|-------|
|               |             |                 |                   | Order Code                | Price |
| 25            | 30          | 4               | DDA204 AC-25/0.03 | 2CSB204001R1250           |       |
| 40            |             |                 | DDA204 AC-40/0.03 | 2CSB204001R1400           |       |
| 63            |             |                 | DDA204 AC-63/0.03 | 2CSB204001R1630           |       |
| 25            | 100         | 4               | DDA204 AC-25/0.1  | 2CSB204001R2250           |       |
| 40            |             |                 | DDA204 AC-40/0.1  | 2CSB204001R2400           |       |
| 63            |             |                 | DDA204 AC-63/0.1  | 2CSB204001R2630           |       |
| 25            | 300         | 4               | DDA204 AC-25/0.3  | 2CSB204001R3250           |       |
| 40            |             |                 | DDA204 AC-40/0.3  | 2CSB204001R3400           |       |
| 63            |             |                 | DDA204 AC-63/0.3  | 2CSB204001R3630           |       |

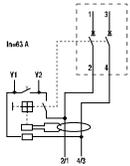


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# System ProM compact

## DDA200 A type - 2, 3, 4 pole RCD block

2



### 2 pole - DDA 200 A type

| Rated Current | Tripping mA | Number of poles | Part No          | Product Hierarchy 2500001 |       |
|---------------|-------------|-----------------|------------------|---------------------------|-------|
|               |             |                 |                  | Order Code                | Price |
| 16            | 10          | 2               | DDA202 A-16/0.01 | 2CSB202101R0250           |       |
| 25            |             |                 | DDA202 A-25/0.03 | 2CSB202101R1250           |       |
| 40            |             |                 | DDA202 A-40/0.03 | 2CSB202101R1400           |       |
| 63            |             |                 | DDA202 A-63/0.03 | 2CSB202101R1630           |       |
| 25            | 100         | 2               | DDA202 A-25/0.1  | 2CSB202101R2250           |       |
| 40            |             |                 | DDA202 A-40/0.1  | 2CSB202101R2400           |       |
| 63            |             |                 | DDA202 A-63/0.1  | 2CSB202101R2630           |       |
| 25            | 300         | 2               | DDA204 A-25/0.3  | 2CSB202101R3250           |       |
| 40            |             |                 | DDA204 A-40/0.3  | 2CSB202101R3400           |       |
| 63            |             |                 | DDA204 A-63/0.3  | 2CSB202101R3630           |       |

### 3 pole - DDA 200 A type

| Rated Current | Tripping mA | Number of poles | Part No          | Product Hierarchy 2500001 |       |
|---------------|-------------|-----------------|------------------|---------------------------|-------|
|               |             |                 |                  | Order Code                | Price |
| 25            | 30          | 3               | DDA203 A-25/0.03 | 2CSB203101R1250           |       |
| 40            |             |                 | DDA203 A-40/0.03 | 2CSB203101R1400           |       |
| 63            |             |                 | DDA203 A-63/0.03 | 2CSB203101R1630           |       |
| 25            | 100         | 3               | DDA203 A-25/0.1  | 2CSB203101R2250           |       |
| 40            |             |                 | DDA203 A-40/0.1  | 2CSB203101R2400           |       |
| 63            |             |                 | DDA203 A-63/0.1  | 2CSB203101R2630           |       |
| 25            | 300         | 3               | DDA203 A-25/0.3  | 2CSB203101R3250           |       |
| 40            |             |                 | DDA203 A-40/0.3  | 2CSB203101R3400           |       |
| 63            |             |                 | DDA203 A-63/0.3  | 2CSB203101R3630           |       |

### 4 pole - DDA 200 A type

| Rated Current | Tripping mA | Number of poles | Part No          | Product Hierarchy 2500001 |       |
|---------------|-------------|-----------------|------------------|---------------------------|-------|
|               |             |                 |                  | Order Code                | Price |
| 25            | 30          | 4               | DDA204 A-25/0.03 | 2CSB204101R1250           |       |
| 40            |             |                 | DDA204 A-40/0.03 | 2CSB204101R1400           |       |
| 63            |             |                 | DDA204 A-63/0.03 | 2CSB204101R1630           |       |
| 25            | 100         | 4               | DDA204 A-25/0.1  | 2CSB204101R2250           |       |
| 40            |             |                 | DDA204 A-40/0.1  | 2CSB204101R2400           |       |
| 63            |             |                 | DDA204 A-63/0.1  | 2CSB204101R2630           |       |
| 25            | 300         | 4               | DDA204 A-25/0.3  | 2CSB204101R3250           |       |
| 40            |             |                 | DDA204 A-40/0.3  | 2CSB204101R3400           |       |
| 63            |             |                 | DDA204 A-63/0.3  | 2CSB204101R3630           |       |



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# System ProM compact

## DS201M AC type - 1+N pole RCBO

### 1+N - Type B 10kA

| 1+N - Type B 10kA |                  |                 |                  | Product Hierarchy 2500001 |                 |
|-------------------|------------------|-----------------|------------------|---------------------------|-----------------|
| Rated Current     | Tripping mA      | Number of poles | Part No          | Order Code                | Price           |
| 6                 | 30               | 1+N             | DS201M-B6 AC30   | 2CSR275040R1065           |                 |
| 10                |                  |                 | DS201M-B10 AC30  | 2CSR275040R1105           |                 |
| 13                |                  |                 | DS201M-B13 AC30  | 2CSR275040R1135           |                 |
| 16                |                  |                 | DS201M-B16 AC30  | 2CSR275040R1165           |                 |
| 20                |                  |                 | DS201M-B20 AC30  | 2CSR275040R1205           |                 |
| 25                |                  |                 | DS201M-B25 AC30  | 2CSR275040R1255           |                 |
| 32                |                  |                 | DS201M-B32 AC30  | 2CSR275040R1325           |                 |
| 40                |                  |                 | DS201M-B40 AC30  | 2CSR275040R1405           |                 |
| 6                 |                  |                 | 100              | 1+N                       | DS201M-B6 AC100 |
| 10                | DS201M-B10 AC100 | 2CSR275040R2105 |                  |                           |                 |
| 13                | DS201M-B13 AC100 | 2CSR275040R2135 |                  |                           |                 |
| 16                | DS201M-B16 AC100 | 2CSR275040R2165 |                  |                           |                 |
| 20                | DS201M-B20 AC100 | 2CSR275040R2205 |                  |                           |                 |
| 25                | DS201M-B25 AC100 | 2CSR275040R2255 |                  |                           |                 |
| 32                | DS201M-B32 AC100 | 2CSR275040R2325 |                  |                           |                 |
| 40                | DS201M-B40 AC100 | 2CSR275040R2405 |                  |                           |                 |
| 6                 | 300              | 1+N             |                  |                           | DS201M-B6 AC300 |
| 10                |                  |                 | DS201M-B10 AC300 | 2CSR275040R3105           |                 |
| 13                |                  |                 | DS201M-B13 AC300 | 2CSR275040R3135           |                 |
| 16                |                  |                 | DS201M-B16 AC300 | 2CSR275040R3165           |                 |
| 20                |                  |                 | DS201M-B20 AC300 | 2CSR275040R3205           |                 |
| 25                |                  |                 | DS201M-B25 AC300 | 2CSR275040R3255           |                 |
| 32                |                  |                 | DS201M-B32 AC300 | 2CSR275040R3325           |                 |
| 40                |                  |                 | DS201M-B40 AC300 | 2CSR275040R3405           |                 |

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### 1+N - Type C 10kA

|    |                  |                 |                  |                 |                 |
|----|------------------|-----------------|------------------|-----------------|-----------------|
| 6  | 30               | 1+N             | DS201M-C6 AC30   | 2CSR275040R1064 |                 |
| 10 |                  |                 | DS201M-C10 AC30  | 2CSR275040R1104 |                 |
| 13 |                  |                 | DS201M-C13 AC30  | 2CSR275040R1134 |                 |
| 16 |                  |                 | DS201M-C16 AC30  | 2CSR275040R1164 |                 |
| 20 |                  |                 | DS201M-C20 AC30  | 2CSR275040R1204 |                 |
| 25 |                  |                 | DS201M-C25 AC30  | 2CSR275040R1254 |                 |
| 32 |                  |                 | DS201M-C32 AC30  | 2CSR275040R1324 |                 |
| 40 |                  |                 | DS201M-C40 AC30  | 2CSR275040R1404 |                 |
| 6  |                  |                 | 100              | 1+N             | DS201M-C6 AC100 |
| 10 | DS201M-C10 AC100 | 2CSR275040R2104 |                  |                 |                 |
| 13 | DS201M-C13 AC100 | 2CSR275040R2134 |                  |                 |                 |
| 16 | DS201M-C16 AC100 | 2CSR275040R2164 |                  |                 |                 |
| 20 | DS201M-C20 AC100 | 2CSR275040R2204 |                  |                 |                 |
| 25 | DS201M-C25 AC100 | 2CSR275040R2254 |                  |                 |                 |
| 32 | DS201M-C32 AC100 | 2CSR275040R2324 |                  |                 |                 |
| 40 | DS201M-C40 AC100 | 2CSR275040R2404 |                  |                 |                 |
| 6  | 300              | 1+N             |                  |                 | DS201M-C6 AC300 |
| 10 |                  |                 | DS201M-C10 AC300 | 2CSR275040R3104 |                 |
| 13 |                  |                 | DS201M-C13 AC300 | 2CSR275040R3134 |                 |
| 16 |                  |                 | DS201M-C16 AC300 | 2CSR275040R3164 |                 |
| 20 |                  |                 | DS201M-C20 AC300 | 2CSR275040R3204 |                 |
| 25 |                  |                 | DS201M-C25 AC300 | 2CSR275040R3254 |                 |
| 32 |                  |                 | DS201M-C32 AC300 | 2CSR275040R3324 |                 |
| 40 |                  |                 | DS201M-C40 AC300 | 2CSR275040R3404 |                 |



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## DS 201M-B A type - 1+N pole RCBO

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| 1+N - Type B 10kA |             |                 |                 | Product Hierarchy 2500001 |       |
|-------------------|-------------|-----------------|-----------------|---------------------------|-------|
| Rated Current     | Tripping mA | Number of poles | Part No         | Order Code                | Price |
| 10                | 10          | 1+N             | DS201M-B10 A10  | 2CSR275140R0105           |       |
| 16                |             |                 | DS201M-B16 A10  | 2CSR275140R0165           |       |
| 6                 | 30          | 1+N             | DS201M-B6 A30   | 2CSR275140R1065           |       |
| 10                |             |                 | DS201M-B10 A30  | 2CSR275140R1105           |       |
| 13                |             |                 | DS201M-B13 A30  | 2CSR275140R1135           |       |
| 16                |             |                 | DS201M-B16 A30  | 2CSR275140R1165           |       |
| 20                |             |                 | DS201M-B20 A30  | 2CSR275140R1205           |       |
| 25                |             |                 | DS201M-B25 A30  | 2CSR275140R1255           |       |
| 32                |             |                 | DS201M-B32 A30  | 2CSR275140R1325           |       |
| 40                |             |                 | DS201M-B40 A30  | 2CSR275140R1405           |       |
| 6                 | 100         | 1+N             | DS201M-B6 A100  | 2CSR275140R2065           |       |
| 10                |             |                 | DS201M-B10 A100 | 2CSR275140R2105           |       |
| 13                |             |                 | DS201M-B13 A100 | 2CSR275140R2135           |       |
| 16                |             |                 | DS201M-B16 A100 | 2CSR275140R2165           |       |
| 20                |             |                 | DS201M-B20 A100 | 2CSR275140R2205           |       |
| 25                |             |                 | DS201M-B25 A100 | 2CSR275140R2255           |       |
| 32                |             |                 | DS201M-B32 A100 | 2CSR275140R2325           |       |
| 40                |             |                 | DS201M-B40 A100 | 2CSR275140R2405           |       |
| 6                 | 300         | 1+N             | DS201M-B6 A300  | 2CSR275140R3065           |       |
| 10                |             |                 | DS201M-B10 A300 | 2CSR275140R3105           |       |
| 13                |             |                 | DS201M-B13 A300 | 2CSR275140R3135           |       |
| 16                |             |                 | DS201M-B16 A300 | 2CSR275140R3165           |       |
| 20                |             |                 | DS201M-B20 A300 | 2CSR275140R3205           |       |
| 25                |             |                 | DS201M-B25 A300 | 2CSR275140R3255           |       |
| 32                |             |                 | DS201M-B32 A300 | 2CSR275140R3325           |       |
| 40                |             |                 | DS201M-B40 A300 | 2CSR275140R3405           |       |



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## DS 201M-C A type - 1+N pole RCBO

| 1+N - Type C 10kA |             |                 |                  | Product Hierarchy 2500001 |       |
|-------------------|-------------|-----------------|------------------|---------------------------|-------|
| Rated Current     | Tripping mA | Number of poles | Part No          | Order Code                | Price |
| 10                | 10          | 1+N             | DS201M-C10 A10   | 2CSR275140R0104           |       |
| 16                |             |                 | DS201M-C16 A10   | 2CSR275140R0164           |       |
| 6                 | 30          | 1+N             | DS201M-C6 A30    | 2CSR275140R1064           |       |
| 10                |             |                 | DS201M-C10 A30   | 2CSR275140R1104           |       |
| 13                |             |                 | DS201M-C13 A30   | 2CSR275140R1134           |       |
| 16                |             |                 | DS201M-C16 A30   | 2CSR275140R1164           |       |
| 20                |             |                 | DS201M-C20 A30   | 2CSR275140R1204           |       |
| 25                |             |                 | DS201M-C25 A30   | 2CSR275140R1254           |       |
| 32                |             |                 | DS201M-C32 A30   | 2CSR275140R1324           |       |
| 40                |             |                 | DS201M-C40 A30   | 2CSR275140R1404           |       |
| 6                 | 100         | 1+N             | DS201M-C6 A100   | 2CSR275140R2064           |       |
| 10                |             |                 | DS201M-C10 A100  | 2CSR275140R2104           |       |
| 13                |             |                 | DS201M-C13 A100  | 2CSR275140R2134           |       |
| 16                |             |                 | DS201M-C16 A100  | 2CSR275140R2164           |       |
| 20                |             |                 | DS201M-C20 A100  | 2CSR275140R2204           |       |
| 25                |             |                 | DS201M-C25 A100  | 2CSR275140R2254           |       |
| 32                |             |                 | DS201M-C32 A100  | 2CSR275140R2324           |       |
| 40                |             |                 | DS201M-C40 A100  | 2CSR275140R2404           |       |
| 6                 | 300         | 1+N             | DS201M-C6 A300   | 2CSR275140R3064           |       |
| 10                |             |                 | DS201M-C10 A300  | 2CSR275140R3104           |       |
| 13                |             |                 | DS201M-C13 A300  | 2CSR275140R3134           |       |
| 16                |             |                 | DS201M-C16 A300  | 2CSR275140R3164           |       |
| 20                |             |                 | DS201M-C20 A300  | 2CSR275140R3204           |       |
| 25                |             |                 | DS201M-C25 A300  | 2CSR275140R3254           |       |
| 32                |             |                 | DS201M-C32 A300  | 2CSR275140R3324           |       |
| 40                |             |                 | DS201M-C40 AC300 | 2CSR275140R3404           |       |

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# System ProM compact

## DDA800 A\_ type - 2, 3, 4 RCBO

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| DDA800 50kA     |      |                 |                 |                     | Product Hierarchy 2500001 |                 |  |
|-----------------|------|-----------------|-----------------|---------------------|---------------------------|-----------------|--|
| Number of Poles | Type | Rating In A     | Tripping mA     | Part No             | Order Code                | Price           |  |
| 2               | A    | 63              | 30              | DDA802A-63/0,03AP-R | 2CSB802401R1630           |                 |  |
|                 |      |                 |                 | DDA802A-63/0,03     | 2CSB802101R1630           |                 |  |
|                 | AC   |                 | 300             | DDA802AC-63/0,3     | 2CSB802001R3630           |                 |  |
|                 | AS   |                 |                 | DDA802AS-63/0,3     | 2CSB802201R3630           |                 |  |
|                 | A    |                 |                 | DDA802A-63/0,3      | 2CSB802101R3630           |                 |  |
|                 | AS   |                 |                 | 500                 | DDA802A-63/0,5            | 2CSB802101R4630 |  |
|                 | 1000 |                 | DDA802AS-63/1   | 2CSB802201R5630     |                           |                 |  |
| 3               | A    |                 | 63              | 30                  | DDA803A-63/0,03AP-R       | 2CSB803401R1630 |  |
|                 |      |                 |                 |                     | DDA803A-63/0,03           | 2CSB803101R1630 |  |
|                 | AC   |                 |                 |                     | DDA803AC-63/0,03          | 2CSB803001R1630 |  |
|                 | A    |                 |                 | 300                 | DDA803A-63/0,3            | 2CSB803101R3630 |  |
|                 | AC   |                 |                 |                     | DDA803AC-63/0,3           | 2CSB803001R3630 |  |
|                 | AS   | DDA803AS-63/0,3 |                 |                     | 2CSB803201R3630           |                 |  |
| A               | 500  | DDA803A-63/0,5  |                 | 2CSB803101R4630     |                           |                 |  |
| AS              | 1000 | DDA803AS-63/1   |                 | 2CSB803201R5630     |                           |                 |  |
| 4               | A    | 63              |                 | 30                  | DDA804A-63/0,03AP-R       | 2CSB804401R1630 |  |
|                 |      |                 |                 |                     | DDA804A-63/0,03           | 2CSB804101R1630 |  |
|                 | AC   |                 |                 |                     | DDA804AC-63/0,03          | 2CSB804001R1630 |  |
|                 | A    |                 |                 | 300                 | DDA804A-63/0,3            | 2CSB804101R3630 |  |
|                 | AC   |                 | DDA804AC-63/0,3 |                     | 2CSB804001R3630           |                 |  |
|                 | AS   |                 | DDA804AS-63/0,3 |                     | 2CSB804201R3630           |                 |  |
|                 | A    |                 | 500             | DDA804A-63/0,5      | 2CSB804101R4630           |                 |  |
|                 | AS   |                 | 1000            | DDA804AS-63/1       | 2CSB804201R5630           |                 |  |
| A               | 100  |                 | 300             | DDA804 A-100/0,3    | 2CSB804101R3000           |                 |  |



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# System ProM compact DS271 AC Type RCBOs



## DS271 AC type B 10kA

| DS271 AC type B 10kA |             |                   | Product Hierarchy 2500002 |       |
|----------------------|-------------|-------------------|---------------------------|-------|
| Current (A)          | Sensitivity | Type B - 10kA     | Order Code                | Price |
| 6                    | 10mA        | DS271 AC-B6/0.01  | 2CSR175092R0065           |       |
| 10                   |             | DS271 AC-B10/0.01 | 2CSR175092R0105           |       |
| 16                   |             | DS271 AC-B16/0.01 | 2CSR175092R0165           |       |
| 20                   |             | DS271 AC-B20/0.01 | 2CSR175092R0205           |       |
| 25                   |             | DS271 AC-B25/0.01 | 2CSR175092R0255           |       |
| 32                   |             | DS271 AC-B32/0.01 | 2CSR175092R0325           |       |
| 6                    | 30mA        | DS271 AC-B6/0.03  | 2CSR175092R1065           |       |
| 10                   |             | DS271 AC-B10/0.03 | 2CSR175092R1105           |       |
| 16                   |             | DS271 AC-B16/0.03 | 2CSR175092R1165           |       |
| 20                   |             | DS271 AC-B20/0.03 | 2CSR175092R1205           |       |
| 25                   |             | DS271 AC-B25/0.03 | 2CSR175092R1255           |       |
| 32                   |             | DS271 AC-B32/0.03 | 2CSR175092R1325           |       |

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## DS271 AC type C 10kA

|    |       |                   |                 |  |
|----|-------|-------------------|-----------------|--|
| 6  | 10mA  | DS271 AC-C6/0.01  | 2CSR175092R0064 |  |
| 10 |       | DS271 AC-C10/0.01 | 2CSR175092R0104 |  |
| 16 |       | DS271 AC-C16/0.01 | 2CSR175092R0164 |  |
| 20 |       | DS271 AC-C20/0.01 | 2CSR175092R0204 |  |
| 25 |       | DS271 AC-C25/0.01 | 2CSR175092R0254 |  |
| 32 |       | DS271 AC-C32/0.01 | 2CSR175092R0324 |  |
| 6  | 30mA  | DS271 AC-C6/0.03  | 2CSR175092R1064 |  |
| 10 |       | DS271 AC-C10/0.03 | 2CSR175092R1104 |  |
| 16 |       | DS271 AC-C16/0.03 | 2CSR175092R1164 |  |
| 20 |       | DS271 AC-C20/0.03 | 2CSR175092R1204 |  |
| 25 |       | DS271 AC-C25/0.03 | 2CSR175092R1254 |  |
| 32 |       | DS271 AC-C32/0.03 | 2CSR175092R1324 |  |
| 6  | 100mA | DS271 AC-C6/0.1   | 2CSR175092R2064 |  |
| 10 |       | DS271 AC-C10/0.1  | 2CSR175092R2104 |  |
| 16 |       | DS271 AC-C16/0.1  | 2CSR175092R2164 |  |
| 20 |       | DS271 AC-C20/0.1  | 2CSR175092R2204 |  |
| 25 |       | DS271 AC-C25/0.1  | 2CSR175092R2254 |  |
| 32 |       | DS271 AC-C32/0.1  | 2CSR175092R2324 |  |
| 6  | 300mA | DS271 AC-C6/0.3   | 2CSR175092R3064 |  |
| 10 |       | DS271 AC-C10/0.3  | 2CSR175092R3104 |  |
| 16 |       | DS271 AC-C16/0.3  | 2CSR175092R3164 |  |
| 20 |       | DS271 AC-C20/0.3  | 2CSR175092R3204 |  |
| 25 |       | DS271 AC-C25/0.3  | 2CSR175092R3254 |  |
| 32 |       | DS271 AC-C32/0.3  | 2CSR175092R3324 |  |



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# System ProM compact DS271 A Type RCBOs

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## DS271 A type B 10kA

| Current (A) | Sensitivity | Type B - 10k A   | Product Hierarchy 2500002 |       |
|-------------|-------------|------------------|---------------------------|-------|
|             |             |                  | Order Code                | Price |
| 6           | 10mA        | DS271 A-B6/0.01  | 2CSR175192R0065           |       |
| 10          |             | DS271 A-B10/0.01 | 2CSR175192R0105           |       |
| 16          |             | DS271 A-B16/0.01 | 2CSR175192R0165           |       |
| 20          |             | DS271 A-B20/0.01 | 2CSR175192R0205           |       |
| 25          |             | DS271 A-B25/0.01 | 2CSR175192R0255           |       |
| 32          |             | DS271 A-B32/0.01 | 2CSR175192R0325           |       |
| 6           | 30mA        | DS271 A-B6/0.03  | 2CSR175192R1065           |       |
| 10          |             | DS271 A-B10/0.03 | 2CSR175192R1105           |       |
| 16          |             | DS271 A-B16/0.03 | 2CSR175192R1165           |       |
| 20          |             | DS271 A-B20/0.03 | 2CSR175192R1205           |       |
| 25          |             | DS271 A-B25/0.03 | 2CSR175192R1255           |       |
| 32          |             | DS271 A-B32/0.03 | 2CSR175192R1325           |       |

## DS271 A type C 10kA

|    |       |                  |                 |  |
|----|-------|------------------|-----------------|--|
| 6  | 10mA  | DS271 A-C6/0.01  | 2CSR175192R0064 |  |
| 10 |       | DS271 A-C10/0.01 | 2CSR175192R0104 |  |
| 16 |       | DS271 A-C16/0.01 | 2CSR175192R0164 |  |
| 20 |       | DS271 A-C20/0.01 | 2CSR175192R0204 |  |
| 25 |       | DS271 A-C25/0.01 | 2CSR175192R0254 |  |
| 32 |       | DS271 A-C32/0.01 | 2CSR175192R0324 |  |
| 6  | 30mA  | DS271 A-C6/0.03  | 2CSR175192R1064 |  |
| 10 |       | DS271 A-C10/0.03 | 2CSR175192R1104 |  |
| 16 |       | DS271 A-C16/0.03 | 2CSR175192R1164 |  |
| 20 |       | DS271 A-C20/0.03 | 2CSR175192R1204 |  |
| 25 |       | DS271 A-C25/0.03 | 2CSR175192R1254 |  |
| 32 |       | DS271 A-C32/0.03 | 2CSR175192R1324 |  |
| 6  | 100mA | DS271 A-C6/0.1   | 2CSR175192R2064 |  |
| 10 |       | DS271 A-C10/0.1  | 2CSR175192R2104 |  |
| 16 |       | DS271 A-C16/0.1  | 2CSR175192R2164 |  |
| 20 |       | DS271 A-C20/0.1  | 2CSR175192R2204 |  |
| 25 |       | DS271 A-C25/0.1  | 2CSR175192R2254 |  |
| 32 |       | DS271 A-C32/0.1  | 2CSR175192R2324 |  |
| 6  | 300mA | DS271 A-C6/0.3   | 2CSR175192R3064 |  |
| 10 |       | DS271 A-C10/0.3  | 2CSR175192R3104 |  |
| 16 |       | DS271 A-C16/0.3  | 2CSR175192R3164 |  |
| 20 |       | DS271 A-C20/0.3  | 2CSR175192R3204 |  |
| 25 |       | DS271 A-C25/0.3  | 2CSR175192R3254 |  |
| 32 |       | DS271 A-C32/0.3  | 2CSR175192R3324 |  |



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# System ProM compact

## Accessories S200, SN201, F200, DS200



### Accessories

Product Hierarchy 2400002

| Description                  | Suitable for:              | Part No      | Product Hierarchy 2400002 |       |
|------------------------------|----------------------------|--------------|---------------------------|-------|
|                              |                            |              | Order Code                | Price |
| <b>Auxiliary contacts</b>    |                            |              |                           |       |
| Aux switch 1 c/o             | S200, SN201, F200<br>DS200 | S2C-S/H6R    | 2CDS200922R0001           |       |
| Aux contact 1 c/o            |                            | S2C-H6R      | 2CDS200912R0001           |       |
| Aux contact 1no/1nc          |                            | S2C-H6-11R   | 2CDS200946R0001           |       |
| Aux contact 2no              |                            | S2C-H6-20R   | 2CDS200946R0002           |       |
| Aux contact 2nc              |                            | S2C-H6-02R   | 2CDS200946R0003           |       |
| Aux contact 1nc              | S200, S200M, S200P         | S2C-H01      | 2CDS200970R0001           |       |
| Aux contact 1no              |                            | S2C-H10      | 2CDS200970R0002           |       |
| Aux contact 1nc (15 pieces)  | S200, S200M, S200P         | S2C-H01 15x  | 2CDS200970R0011           |       |
| Aux contact 1no (15 pieces)  |                            | S2C-H10 15x  | 2CDS200970R0012           |       |
| Signal contact 1no/1nc       | SN201                      | SN201-S      | 2CDS200924R0001           |       |
| <b>Shunt trips</b>           |                            |              |                           |       |
| AC/DC 12-60v                 | All                        | S2C-A1       | 2CDS200909R0001           |       |
| AC110-415v DC110-250v        |                            | S2C-A2       | 2CDS200909R0002           |       |
| <b>Under voltage release</b> |                            |              |                           |       |
| 12-DC                        | All                        | S2C-UA 12-DC | 2CSS200911R0001           |       |
| 24AC                         |                            | S2C-UA 24AC  | 2CSS200911R0002           |       |
| 24-DC                        |                            | S2C-UA 24-DC | 2CSS200911R0007           |       |
| 48AC                         |                            | S2C-UA 48AC  | 2CSS200911R0003           |       |
| 48DC                         |                            | S2C-UA 48DC  | 2CSS200911R0008           |       |
| 110AC                        |                            | S2C-UA 110AC | 2CSS200911R0004           |       |
| 110DC                        |                            | S2C-UA 110DC | 2CSS200911R0009           |       |
| 230AC                        |                            | S2C-UA 230AC | 2CSS200911R0005           |       |
| 230DC                        |                            | S2C-UA 230DC | 2CSS200911R0010           |       |
| 440AC                        |                            | S2C-UA 440AC | 2CSS200911R0006           |       |
| <b>Overvoltage release</b>   |                            |              |                           |       |
| 275AC max tripping voltage   | All                        | S2C-OVP1     | 2CSS200910R0005           |       |
| 290AC max tripping voltage   |                            | S2C-OVP2     | 2CSS200993R0005           |       |
| <b>Motor operator</b>        |                            |              |                           |       |
| Motor operator               | 2/3 pole S200 MCB          | S2C-CM2/3    | 2CSS203997R0013           |       |
| <b>Auto-reclosing unit</b>   |                            |              |                           |       |
| Auto re-closing unit         | 2/4 F200 RCCB              | F2C-ARI      | 2CSR200996R0013           |       |

2

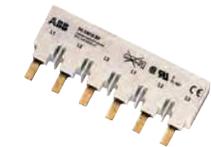


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# System ProM compact

## Accessories S200, SN201, F200, DS200

2



END 1.1



PS-END 0



PS-END



END



SZ-FDT 2



SZ-FST 2 + SZ-FDT 2



SZ-BP 1



SZ-BP



SZ-BP 2



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### Accessories

Product Hierarchy 2400002

|                                              | No of pins | Phases | mm <sup>2</sup> | Part No                    | Order Code      | Price           |
|----------------------------------------------|------------|--------|-----------------|----------------------------|-----------------|-----------------|
|                                              |            |        |                 |                            |                 |                 |
| <b>Busbars</b>                               |            |        |                 |                            |                 |                 |
| Pin distance 17.6mm<br>end caps PS-END       | 58         | 2      | 10              | PS2/58                     | 2CDL220001R1058 |                 |
|                                              |            |        | 16              | PS2/58/16                  | 2CDL220001R1658 |                 |
| 2 pole + aux<br>end caps PS-END              | 48         | 2      | 16              | PS2/48/16H                 | 2CDL220001R1648 |                 |
| Pin distance 17.6mm<br>end caps PS-END       | 60         | 3      | 16              | PS3/60/16                  | 2CDL230001R1660 |                 |
| 3 pole + aux<br>end caps PS-END              | 48         | 3      | 16              | PS3/48/16H                 | 2CDL230001R1640 |                 |
| Pin distance 17.6mm<br>end caps PS-END       | 60         | 4      | 16              | PS4/60/16                  | 2CDL240101R1660 |                 |
| <b>Pre assembled busbars (not to be cut)</b> |            |        |                 |                            |                 |                 |
| 1-phase busbars<br>pin distance 17.6mm       | 6          | 1      | 16              | PS1/6/16BP                 | 2CDL210489R1606 |                 |
|                                              | 12         |        |                 | PS1/12/16BP                | 2CDL210489R1612 |                 |
|                                              | 18         |        |                 | PS1/18/16BP                | 2CDL210489R1618 |                 |
| 2-phase busbars<br>pin distance 17.6mm       | 6          | 2      | 16              | PS2/6/16BP                 | 2CDL220489R1606 |                 |
|                                              | 12         |        |                 | PS2/12/16BP                | 2CDL220489R1612 |                 |
|                                              | 18         |        |                 | PS2/18/16BP                | 2CDL220489R1618 |                 |
| 3-phase busbars<br>pin distance 17.6mm       | 6          | 3      | 16              | PS3/6/16BP                 | 2CDL230489R1606 |                 |
|                                              | 12         |        |                 | PS3/12/16BP                | 2CDL230489R1612 |                 |
|                                              | 18         |        |                 | PS3/18/16BP                | 2CDL230489R1618 |                 |
| <b>Busbars suitable for cutting</b>          |            |        |                 |                            |                 |                 |
| 1-phase busbars<br>pin distance 17.6mm       | 60         | 1      | 16              | PS1/60                     | 2CDL210001R1060 |                 |
| 1-phase busbars<br>connection 1 pole + aux   | 38         |        |                 | PS1/38/16H                 | 2CDL210001R1638 |                 |
| <b>End caps</b>                              |            |        |                 |                            |                 |                 |
|                                              |            |        |                 | END 1.1                    | 2CDL200011R0011 |                 |
|                                              |            |        |                 | PS-END 0                   | 2CDL200011R0004 |                 |
|                                              |            |        |                 | PS-END                     | 2CDL200011R0001 |                 |
|                                              |            |        |                 | PS-END 1                   | 2CDL200011R0002 |                 |
|                                              |            |        |                 | PS-END SP                  | 2CDL200110R0001 |                 |
|                                              |            |        |                 | PS-END 1 SP                | 2CDL200110R0002 |                 |
|                                              |            |        |                 | PS-END 3                   | 2CDL200001R3001 |                 |
|                                              |            |        |                 | PS-END 3.1                 | 2CDL200001R3002 |                 |
|                                              |            |        |                 | PSB-END 3                  | GHVO361325R0001 |                 |
|                                              |            |        |                 | PSB-END 4                  | GHVO361325R0002 |                 |
|                                              |            |        |                 | Protection caps (5 pieces) | SZ-BSK          | 2CDL200001R0011 |
| <b>Feeder terminals</b>                      |            |        |                 |                            |                 |                 |
|                                              |            |        | 6-35            | SZ-ESK 2                   | 2CDL200001R3501 |                 |
|                                              |            |        | 6-50            | SZ-ESK 3                   | 2CDL200003R5001 |                 |
|                                              |            |        |                 | SZ-ESK 3S                  | 2CDL200003R5003 |                 |

# System ProM compact

## Accessories S800



### Accessories

Product Hierarchy 2400002

| Description                   | Part No      | Product Hierarchy 2400002 |       |
|-------------------------------|--------------|---------------------------|-------|
|                               |              | Order Code                | Price |
| <b>Signal contacts</b>        |              |                           |       |
| Aux contact                   | S800-AUX     | 2CCS800900R0011           |       |
| Aux/signal contact            | S800-AUX/ALT | 2CCS800900R0021           |       |
| Separating neutral 63A        | S800-NT      | 2CCS800900R0061           |       |
| <b>Shunt trips</b>            |              |                           |       |
| 12v AC/DC                     | S800-SOR12   | 2CCS800900R0191           |       |
| 24v AC/DC                     | S800-SOR24   | 2CCS800900R0191           |       |
| 48...130v AC/DC               | S800-SOR130  | 2CCS800900R0221           |       |
| 110...250v AC/DC              | S800-SOR250  | 2CCS800900R0211           |       |
| 220...400v AC/DC              | S800-SOR400  | 2CCS800900R0231           |       |
| <b>Under voltage release</b>  |              |                           |       |
| 24...36v AC/DC                | S800-UVR36   | 2CCS800900R0241           |       |
| 48...60v AC/DC                | S800-UVR60   | 2CCS800900R0251           |       |
| 110...130v AC/DC              | S800-UVR130  | 2CCS800900R0261           |       |
| 220...250v AC/DC              | S800-UVR250  | 2CCS800900R0271           |       |
| <b>Handles</b>                |              |                           |       |
| Rotary drive                  | S800-RD      | 2CCS800900R0041           |       |
| Black rotary handle           | S800-RHE-H   | 1SDA060150R1              |       |
| Red/emergency rotary handle   | S800-RHE-EM  | 1SDA060151R1              |       |
| Axial extension 500mm for RHE | S800-RHE-S   | 1SDA060179R1              |       |
| <b>General accessories</b>    |              |                           |       |
| Intermediate piece 9mm        | S800-IP9     | 2CCS800900R0031           |       |
| Padlock device with 4mm hasp  | S800-PLL     | 2CCS800900R0051           |       |
| UL locking device             | S800U-PPL    | 2CCS800017R0001           |       |
| Busbar 250A                   | S803-BB250   | 2CCS800900R0071           |       |

2



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# System ProM compact

## Digital energy meters



DCB13000

2

### Digital Meters

| Description                                                            | Part No  | Product Hierarchy 2700001 |       |
|------------------------------------------------------------------------|----------|---------------------------|-------|
|                                                                        |          | Order Code                | Price |
| ODIN Single Phase, Direct Connected                                    | OD1065   | 2CMA131040R1000           |       |
| ODIN Single Phase, Pulse Output, Direct Connected                      | OD1365   | 2CMA131041R1000           |       |
| DELTA Single Phase - 2 Tariff with Pulse Output                        | FBB11205 | 2CMA180894R1000           |       |
| DELTA Single Phase - 2 Tariff                                          | FBU11205 | 2CMA180893R1000           |       |
| ODIN 3 Phase + N - 1 Pulse Output, Direct Connected                    | OD4165   | 2CMA131024R1000           |       |
| ODIN 3 Phase + N - 1 Pulse Output, CT Connected                        | OD4110   | 2CMA131025R1000           |       |
| DELTA Plus 3 phase + N - 1 Tariff with Pulse Output                    | DAB13000 | 2CMA180806R1000           |       |
| DELTA Max 3 phase + N - 2 Tariff with Internal Clock and THD           | DEB13005 | 2CMA139495R1000           |       |
| DELTA Max 3 phase + N - 2 Tariff with Time Dependant Functions and THD | DEB13007 | 2CMA139497R1000           |       |

### Communication Adaptors

| Description               | Part No   | Product Hierarchy 2700001 |       |
|---------------------------|-----------|---------------------------|-------|
|                           |           | Order Code                | Price |
| LON PLC A-Band Adaptor    | CAL 06000 | 2CMA137100R1000           |       |
| Ethernet Adaptor          | CEM 05100 | 2CMA137121R1000           |       |
| M-bus (Meter Bus) Adaptor | CTM 04000 | 2CMA137090R1000           |       |
| LON PLC C-Band Adaptor    | CCL 06000 | 2CMA137103R1000           |       |
| RS232 Adaptor             | CRM04000  | 2CMA137091R1000           |       |



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# System ProM compact

## Modular devices



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### Timers

|                                          | Product Hierarchy 2700001 |       |
|------------------------------------------|---------------------------|-------|
|                                          | Order Code                | Price |
| Analogue AT3-7R timer 7 day c/w reserve  | 2CSM204245R0601           |       |
| Analogue AT3-R daily timer with reserve  | 2CSM204235R0601           |       |
| Digital DT1 1 channel weekly time switch | 2CSM204255R0611           |       |

### Isolators

|                   |                 |  |
|-------------------|-----------------|--|
| E202/100R 2P 100A | 2CDE282001R0100 |  |
| E202/125R 2P 125A | 2CDE282001R0125 |  |
| E202/63R 2P 63A   | 2CDE282001R0063 |  |
| E203/100R 3P 100A | 2CDE283001R0100 |  |
| E203/125R 3P 125A | 2CDE283001R0125 |  |
| E204/125R 4P 125A | 2CDE284001R0125 |  |
| E204/63R 4P 63A   | 2CDE284001R0063 |  |

### Contactors

|                            |                 |  |
|----------------------------|-----------------|--|
| EH04-20 ESB Aux 2no        | GHE3401321R0001 |  |
| ESB20-02 Contactor 2nc 24V | GHE3211202R0001 |  |
| ESB24-04 Contactor 4no 24V | GHE3291202R0001 |  |
| ESB-DIS Distance Piece     | GHE3201902R0001 |  |

### Fuseholders

|                                  |                 |  |
|----------------------------------|-----------------|--|
| E91/32 SP Fuseholder 32A 10.3x38 | 2CSM200923R1801 |  |
| E931/125 E931/125A Fuse Carrier  | 2CSM371710R1801 |  |

### Toroidal Transformers

|           |                 |  |
|-----------|-----------------|--|
| TR2 60mm  | 2CSG060100R1211 |  |
| TR3 80mm  | 2CSG080100R1211 |  |
| TR4 110mm | 2CSG110100R1211 |  |

### Twilight Switch

|     |                 |  |
|-----|-----------------|--|
| TW1 | 2CSM204135R1341 |  |
|-----|-----------------|--|

### Surge Suppressors

|                                   | Product Hierarchy 6000002 |       |
|-----------------------------------|---------------------------|-------|
|                                   | Order Code                | Price |
| OVR T1 3N 255 25TS Type1 3P&N     | 2CTB815101R0700           |       |
| OVR T2 3N 40 275 SPTS Type 2 3P&N | 2CTB803953R0200           |       |



# Power Breakers



## Tmax MCCBs

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## Emax ACBs

- Emax X1 ACBs and X1 disconnectors..... 3/35
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- E4/f 100% 4th pole switch disconnectors ..... 3/47
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3



Tmax MCCBs



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1SDC210015D0204

Emax ACBs



Full range of product and technical information place this part number in a search engine and download

1SDC200009D0203

# New Tmax XT

## XTraordinarily powerful

3



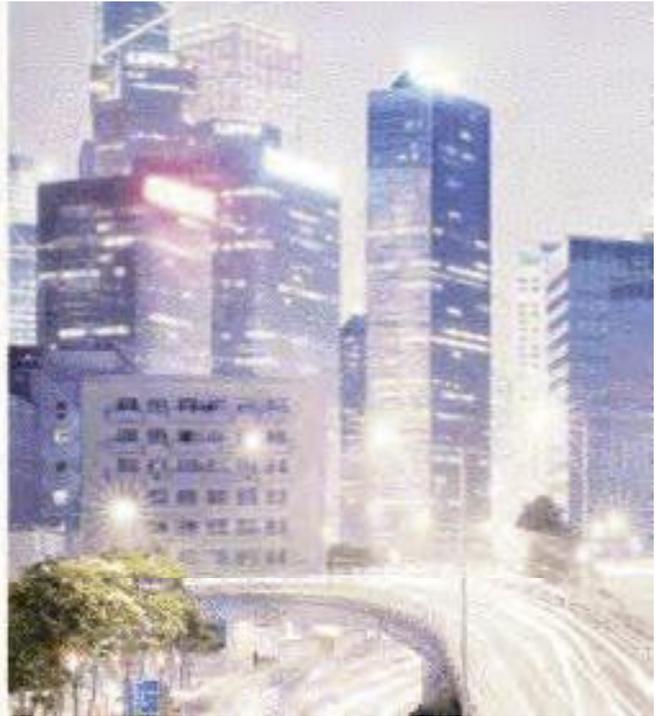
There are 4 frame sizes in the Tmax XT range

- the small XT1 up to 160A
- the high-performing XT2 up to 160A
- the reliable XT3 up to 250A
- the powerful XT4 up to 250A.



# Tmax XT1 to XT3

## XTraordinarily reliable



3

The new Tmax XT1 and XT3 are XTraordinary reliable. They are circuit-breakers that excell in industrial, marine and commercial installations. Available in the fixed and plug-in, three-pole and four-pole versions with a variety protection trip units.

Tmax XT1 and XT3 can be used in installations for large-scale distribution, in hospitals and in all the service sector applications which require great reliability. The Tmax XT3 circuit-breakers can be used for motor protection, for generator protection and as switch-disconnectors.



# Tmax XT2 to XT4

## XTraordinarily advanced

3



You are looking at two even more extraordinary circuit breakers. Tmax XT2 and XT4 which offer advanced performances up to 150kA and functionality that can be used in the most technologically advanced installations heavy industry, metallurgy and marine, in the fixed, plug-in and withdrawable versions with both thermomagnetic and electronic interchangeable trip units.

- the Ekip Display, to be applied onto the front of the electronic trip unit for simpler setting and for better reading of information
- the Ekip LED Meter, a device to be installed on the front of the trip unit to simplify current readings
- the Ekip TT, the new trip test unit
- the Ekip T&P, the extraordinary testing and programming unit.



# Tmax accessories

## XTraordinarily versatile



3

Welcome to the world of opportunities offered by the brand-new and standardised range of accessories made for all the frames in the Tmax XT family.

XTraordinary versatile range of accessories with simple installation

- magnetic only releases
- electronic releases
- shunt trips
- under voltage release
- time delayed UVR
- signal contacts, trip contacts, position contacts
- motor operators
- various terminal arrangements
- rotary handles
- keylocks for circuit breaker, handles, motor operator, position of circuit breaker



# Power distribution circuit breakers

## Tmax XT1 - C, N, S thermomagnetic



### Ratings @ 400V

|      | Icu  | Ics  |
|------|------|------|
| XT1C | 25kA | 100% |
| XT1N | 36kA | 75%  |
| XT1S | 50kA | 75%  |

### Protection types available

| Type                             | Settings        |                        |
|----------------------------------|-----------------|------------------------|
|                                  | I <sub>th</sub> | I <sub>m</sub>         |
| Standard Distribution (3&4 pole) | 70-100%         | 10xI <sub>th</sub> (*) |

\*Subject to a minimum value of 450A

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

## Thermomagnetic TMA

3

| Model       | Current [A]                     |                | Product Hierarchy 3000004 |              |              |       |
|-------------|---------------------------------|----------------|---------------------------|--------------|--------------|-------|
|             | I <sub>th</sub> /I <sub>n</sub> | I <sub>3</sub> | 3 Pole                    | Price        | 4 Pole       | Price |
| XT1C        | XT1C160R25                      | 450A           | 1SDA067391R1              |              | 1SDA067400R1 |       |
|             | XT1C160R32                      |                | 1SDA067392R1              |              | 1SDA067401R1 |       |
|             | XT1C160R40                      |                | 1SDA067393R1              |              | 1SDA067402R1 |       |
|             | XT1C160R50                      | 500A           | 1SDA067394R1              |              | 1SDA067403R1 |       |
|             | XT1C160R63                      | 630A           | 1SDA067395R1              |              | 1SDA067404R1 |       |
|             | XT1C160R80                      | 800A           | 1SDA067396R1              |              | 1SDA067405R1 |       |
|             | XT1C160R100                     | 1000A          | 1SDA067397R1              |              | 1SDA067406R1 |       |
|             | XT1C160R125                     | 1250A          | 1SDA067398R1              |              | 1SDA067409R1 |       |
| XT1C160R160 | 1600A                           | 1SDA067399R1   |                           | 1SDA067410R1 |              |       |
| XT1N        | XT1N160R32                      | 450A           | 1SDA067411R1              |              | 1SDA067419R1 |       |
|             | XT1N160R40                      |                | 1SDA067412R1              |              | 1SDA067470R1 |       |
|             | XT1N160R50                      | 500A           | 1SDA067413R1              |              | 1SDA067421R1 |       |
|             | XT1N160R63                      | 630A           | 1SDA067414R1              |              | 1SDA067422R1 |       |
|             | XT1N160R80                      | 800A           | 1SDA067415R1              |              | 1SDA067423R1 |       |
|             | XT1N160R100                     | 1000A          | 1SDA067416R1              |              | 1SDA067424R1 |       |
|             | XT1N160R125                     | 1250A          | 1SDA067417R1              |              | 1SDA067427R1 |       |
|             | XT1N160R160                     | 1600A          | 1SDA067418R1              |              | 1SDA067428R1 |       |
| XT1S        | XT1S160R50                      | 500A           | 1SDA067431R1              |              | 1SDA067439R1 |       |
|             | XT1S160R63                      | 630A           | 1SDA067432R1              |              | 1SDA067440R1 |       |
|             | XT1S160R80                      | 800A           | 1SDA067433R1              |              | 1SDA067441R1 |       |
|             | XT1S160R100                     | 1000A          | 1SDA067434R1              |              | 1SDA067442R1 |       |
|             | XT1S160R125                     | 1250A          | 1SDA067435R1              |              | 1SDA067445R1 |       |
|             | XT1S160R160                     | 1600A          | 1SDA067436R1              |              | 1SDA067446R1 |       |



Full range of product and technical information place this part number in a search engine and download

1SDC210015D0204

# Power distribution circuit breakers

## Tmax XT2 - N, S, H thermomagnetic



### Ratings @ 400V

|      | Icu  | Ics  |
|------|------|------|
| XT2N | 36kA | 100% |
| XT2S | 50kA | 100% |
| XT2H | 70kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Thermomagnetic TMA

| Model | Current [A] |       | Product Hierarchy 3000004 |       |              |       |
|-------|-------------|-------|---------------------------|-------|--------------|-------|
|       | Ith/In      | I3    | 3 Pole                    | Price | 4 Pole       | Price |
| XT2N  | 160R32      | 320A  | 1SDA067013R1              |       | 1SDA067034R1 |       |
|       | 160R40      | 400A  | 1SDA067014R1              |       | 1SDA067035R1 |       |
|       | 160R50      | 500A  | 1SDA067015R1              |       | 1SDA067036R1 |       |
|       | 160R63      | 630A  | 1SDA067016R1              |       | 1SDA067037R1 |       |
|       | 160R80      | 800A  | 1SDA067017R1              |       | 1SDA067038R1 |       |
|       | 160R100     | 1000A | 1SDA067018R1              |       | 1SDA067039R1 |       |
|       | 160R125     | 1250A | 1SDA067019R1              |       | 1SDA067042R1 |       |
|       | 160R160     | 1600A | 1SDA067020R1              |       | 1SDA067043R1 |       |
| XT2S  | 160R32      | 320A  | 1SDA067553R1              |       | 1SDA067574R1 |       |
|       | 160R40      | 400A  | 1SDA067554R1              |       | 1SDA067575R1 |       |
|       | 160R50      | 500A  | 1SDA067555R1              |       | 1SDA067576R1 |       |
|       | 160R63      | 630A  | 1SDA067556R1              |       | 1SDA067577R1 |       |
|       | 160R80      | 800A  | 1SDA067557R1              |       | 1SDA067578R1 |       |
|       | 160R100     | 1000A | 1SDA067558R1              |       | 1SDA067579R1 |       |
|       | 160R125     | 1250A | 1SDA067559R1              |       | 1SDA067582R1 |       |
|       | 160R160     | 1600A | 1SDA067560R1              |       | 1SDA067583R1 |       |
| XT2H  | 160R32      | 320A  | 1SDA067597R1              |       | 1SDA067618R1 |       |
|       | 160R40      | 400A  | 1SDA067598R1              |       | 1SDA067619R1 |       |
|       | 160R50      | 500A  | 1SDA067599R1              |       | 1SDA067620R1 |       |
|       | 160R63      | 630A  | 1SDA067600R1              |       | 1SDA067621R1 |       |
|       | 160R80      | 800A  | 1SDA067601R1              |       | 1SDA067622R1 |       |
|       | 160R100     | 1000A | 1SDA067602R1              |       | 1SDA067623R1 |       |
|       | 160R125     | 1250A | 1SDA067603R1              |       | 1SDA067626R1 |       |
|       | 160R160     | 1600A | 1SDA067604R1              |       | 1SDA067627R1 |       |

3

# Power distribution circuit breakers

## Tmax XT2 - N, S, H electronic releases



### Ratings @ 400V

|      | Icu  | Ics  |
|------|------|------|
| XT2N | 36kA | 100% |
| XT2S | 50kA | 100% |
| XT2H | 70kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Electronic Release

3

| Model | Type          | In   | Product Hierarchy 3000004 |       |              |       |
|-------|---------------|------|---------------------------|-------|--------------|-------|
|       |               |      | 3 Pole                    | Price | 4 Pole       | Price |
| XT2N  | 160 Ekip LS/I | 63A  | 1SDA067056R1              |       | 1SDA067092R1 |       |
|       | 160 Ekip LS/I | 100A | 1SDA067057R1              |       | 1SDA067093R1 |       |
|       | 160 Ekip LS/I | 160A | 1SDA067058R1              |       | 1SDA067095R1 |       |
| XT2S  | 160 Ekip LS/I | 63A  | 1SDA067802R1              |       | 1SDA067835R1 |       |
|       | 160 Ekip LS/I | 100A | 1SDA067803R1              |       | 1SDA067836R1 |       |
|       | 160 Ekip LS/I | 160A | 1SDA067804R1              |       | 1SDA067838R1 |       |
| XT2H  | 160 Ekip LS/I | 63A  | 1SDA067859R1              |       | 1SDA067892R1 |       |
|       | 160 Ekip LS/I | 100A | 1SDA067860R1              |       | 1SDA067893R1 |       |
|       | 160 Ekip LS/I | 160A | 1SDA067861R1              |       | 1SDA067895R1 |       |

# Power distribution circuit breakers

## Tmax XT3 - N, S thermomagnetic & magnetic only



### Ratings @ 400V

|      | Icu  | Ics |
|------|------|-----|
| XT3N | 36kA | 75% |
| XT3S | 50kA | 50% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Thermomagnetic TMA

| Model | Current [A] |       | Product Hierarchy 3000004 |       |              |       |
|-------|-------------|-------|---------------------------|-------|--------------|-------|
|       | Ith/In      | I3    | 3 Pole                    | Price | 4 Pole       | Price |
| XT3N  | 250R63      | 630A  | 1SDA068053R1              |       | 1SDA068060R1 |       |
|       | 250R80      | 800A  | 1SDA068054R1              |       | 1SDA068061R1 |       |
|       | 250R100     | 1000A | 1SDA068055R1              |       | 1SDA068062R1 |       |
|       | 250R125     | 1250A | 1SDA068056R1              |       | 1SDA068067R1 |       |
|       | 250R160     | 1600A | 1SDA068057R1              |       | 1SDA068068R1 |       |
|       | 250R200     | 2000A | 1SDA068058R1              |       | 1SDA068069R1 |       |
|       | 250R250     | 2500A | 1SDA068059R1              |       | 1SDA068070R1 |       |
| XT3S  | 250R63      | 630A  | 1SDA068215R1              |       | 1SDA068222R1 |       |
|       | 250R80      | 800A  | 1SDA068216R1              |       | 1SDA068223R1 |       |
|       | 250R100     | 1000A | 1SDA068217R1              |       | 1SDA068224R1 |       |
|       | 250R125     | 1250A | 1SDA068221R1              |       | 1SDA068229R1 |       |
|       | 250R160     | 1600A | 1SDA068219R1              |       | 1SDA068230R1 |       |
|       | 250R200     | 2000A | 1SDA068220R1              |       | 1SDA068231R1 |       |
|       | 250R250     | 2500A | 1SDA068221R1              |       | 1SDA068232R1 |       |

3

# Power distribution circuit breakers

## Tmax XT4 - N, S, H thermomagnetic & magnetic only



### Ratings @ 400V

|      | Icu  | Ics  |
|------|------|------|
| XT4N | 36kA | 100% |
| XT4S | 50kA | 100% |
| XT4H | 70kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

**3**

### Thermomagnetic TMA Magnetic Only TMD

| Model       | Current [A] |        |              | Product Hierarchy 3000004 |              |              |              |  |
|-------------|-------------|--------|--------------|---------------------------|--------------|--------------|--------------|--|
|             | Ith/In      | I3     | %N           | 3 Pole                    | Price        | 4 Pole       | Price        |  |
| XT4N<br>TMD | 160R20      | 300A   | 100          | 1SDA068080R1              |              | 1SDA068094R1 |              |  |
|             | 160R32      | 320A   |              | 1SDA068082R1              |              | 1SDA068096R1 |              |  |
|             | 160R50      | 500A   |              | 1SDA068084R1              |              | 1SDA068098R1 |              |  |
|             | 160R80      | 800A   |              | 1SDA068086R1              |              | 1SDA068100R1 |              |  |
| XT4N<br>TMA | 160R100     | 1000A  |              | 1SDA068087R1              |              | 1SDA068101R1 |              |  |
|             | 160R125     | 1250A  |              | 1SDA068088R1              |              | 1SDA068107R1 |              |  |
|             | 160R160     | 1600A  |              | 1SDA068089R1              |              | 1SDA068108R1 |              |  |
|             | N250R200    | 2000A  |              | 1SDA068090R1              |              | 1SDA068109R1 |              |  |
|             | N250R250    | 2500A  |              | 1SDA068092R1              |              | 1SDA068111R1 |              |  |
|             | XT4S<br>TMD | 160R20 |              | 300A                      | 1SDA068300R1 |              | 1SDA068314R1 |  |
|             |             | 160R32 |              | 320A                      | 1SDA068302R1 |              | 1SDA068316R1 |  |
|             |             | 160R50 |              | 500A                      | 1SDA068304R1 |              | 1SDA068318R1 |  |
| 160R80      |             | 800A   | 1SDA068306R1 |                           | 1SDA068320R1 |              |              |  |
| XT4S<br>TMA | 160R100     | 1000A  | 1SDA068307R1 |                           | 1SDA068321R1 |              |              |  |
|             | 160R125     | 1250A  | 1SDA068308R1 |                           | 1SDA068327R1 |              |              |  |
|             | 160R160     | 1600A  | 1SDA068309R1 |                           | 1SDA068328R1 |              |              |  |
|             | 250R200     | 2000A  | 1SDA068310R1 |                           | 1SDA068329R1 |              |              |  |
|             | 250R250     | 2500A  | 1SDA068312R1 |                           | 1SDA068331R1 |              |              |  |
|             | XT4H<br>TMD | 160R20 | 300A         | 1SDA068333R1              |              | 1SDA068347R1 |              |  |
|             |             | 160R32 | 320A         | 1SDA068335R1              |              | 1SDA068349R1 |              |  |
|             |             | 160R50 | 500A         | 1SDA068337R1              |              | 1SDA068351R1 |              |  |
| 160R80      |             | 800A   | 1SDA068339R1 |                           | 1SDA068353R1 |              |              |  |
| XT4H<br>TMA | 160R100     | 1000A  | 1SDA068340R1 |                           | 1SDA068354R1 |              |              |  |
|             | 160R125     | 1250A  | 1SDA068341R1 |                           | 1SDA068360R1 |              |              |  |
|             | 160R160     | 1600A  | 1SDA068342R1 |                           | 1SDA068361R1 |              |              |  |
|             | 250R200     | 2000A  | 1SDA068343R1 |                           | 1SDA068362R1 |              |              |  |
|             | 250R250     | 2500A  | 1SDA068345R1 |                           | 1SDA068364R1 |              |              |  |

# Power distribution circuit breakers

## Tmax XT4 - N, S, H electronic releases



### Ratings @ 400V

|      | Icu  | Ics  |
|------|------|------|
| XT4N | 36kA | 100% |
| XT4S | 50kA | 100% |
| XT4H | 70kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Electronic Release

| Model        | Type             | In   | Product Hierarchy 3000004 |       |              |       |
|--------------|------------------|------|---------------------------|-------|--------------|-------|
|              |                  |      | 3 Pole                    |       | 4 Pole       |       |
|              |                  |      |                           | Price |              | Price |
| XT4N<br>LS/I | 160 Ekip LS/I    | 40A  | 1SDA068122R1              |       | 1SDA068142R1 |       |
|              | 160 Ekip LS/I    | 63A  | 1SDA068123R1              |       | 1SDA068144R1 |       |
|              | 160 Ekip LS/I    | 100A | 1SDA068124R1              |       | 1SDA068145R1 |       |
|              | 160 Ekip LS/I    | 160A | 1SDA068125R1              |       | 1SDA068146R1 |       |
|              | 250 Ekip LS/I    | 250A | 1SDA068126R1              |       | 1SDA068147R1 |       |
| T4N          | 320 PR221DS-LS   | 320A | 1SDA054117R1              |       | 1SDA054121R1 |       |
| XT4N<br>LSI  | 160 Ekip LSI     | 40A  | 1SDA068132R1              |       | 1SDA068153R1 |       |
|              | 160 Ekip LSI     | 63A  | 1SDA068133R1              |       | 1SDA068154R1 |       |
|              | 160 Ekip LSI     | 100A | 1SDA068134R1              |       | 1SDA068155R1 |       |
|              | 160 Ekip LSI     | 160A | 1SDA068135R1              |       | 1SDA068156R1 |       |
|              | 250 Ekip LSI     | 250A | 1SDA068136R1              |       | 1SDA068157R1 |       |
| T4N          | 320 PR221DS-LSI  | 320A | 1SDA054119R1              |       | 1SDA054123R1 |       |
| XT4S<br>LS/I | 160 Ekip LS/I    | 40A  | 1SDA068471R1              |       | 1SDA068491R1 |       |
|              | 160 Ekip LS/I    | 63A  | 1SDA068472R1              |       | 1SDA068492R1 |       |
|              | 160 Ekip LS/I    | 100A | 1SDA068473R1              |       | 1SDA068493R1 |       |
|              | 160 Ekip LS/I    | 160A | 1SDA068474R1              |       | 1SDA068494R1 |       |
|              | 160 Ekip LS/I    | 250A | 1SDA068475R1              |       | 1SDA068495R1 |       |
| T4S          | 320 PR221DS-LS   | 320A | 1SDA054125R1              |       | 1SDA054129R1 |       |
| XT4S<br>LSI  | 160 Ekip LSI     | 40A  | 1SDA068481R1              |       | 1SDA068501R1 |       |
|              | 160 Ekip LSI     | 63A  | 1SDA068482R1              |       | 1SDA068502R1 |       |
|              | 160 Ekip LSI     | 100A | 1SDA068483R1              |       | 1SDA068503R1 |       |
|              | 160 Ekip LSI     | 160A | 1SDA068484R1              |       | 1SDA068504R1 |       |
|              | 160 Ekip LSI     | 250A | 1SDA068485R1              |       | 1SDA068505R1 |       |
| T4S          | 320 PR221DS-LSI  | 320A | 1SDA054127R1              |       | 1SDA054131R1 |       |
| XT4H<br>LS/I | 160 Ekip LS/I    | 40A  | 1SDA068511R1              |       | 1SDA068531R1 |       |
|              | 160 Ekip LS/I    | 63A  | 1SDA068512R1              |       | 1SDA068532R1 |       |
|              | 160 Ekip LS/I    | 100A | 1SDA068513R1              |       | 1SDA068533R1 |       |
|              | 160 Ekip LS/I    | 160A | 1SDA068514R1              |       | 1SDA068534R1 |       |
|              | 250 Ekip LS/I    | 250A | 1SDA068515R1              |       | 1SDA068535R1 |       |
| T4H          | 320 PR221DS-LS/I | 320A | 1SDA054133R1              |       | 1SDA054137R1 |       |
| XT4H<br>LSI  | 160 Ekip LSI     | 40A  | 1SDA068521R1              |       | 1SDA068541R1 |       |
|              | 160 Ekip LSI     | 63A  | 1SDA068522R1              |       | 1SDA068542R1 |       |
|              | 160 Ekip LSI     | 100A | 1SDA068523R1              |       | 1SDA068543R1 |       |
|              | 160 Ekip LSI     | 160A | 1SDA068524R1              |       | 1SDA068544R1 |       |
|              | 250 Ekip LSI     | 250A | 1SDA068525R1              |       | 1SDA068545R1 |       |
| T4H          | 320 PR222DS-LSI  | 320A | 1SDA054135R1              |       | 1SDA054139R1 |       |

# Power distribution circuit breakers

## Tmax T5 - N, S, H thermomagnetic



### Ratings @ 400V

|     | Icu  | Ics  |
|-----|------|------|
| T5N | 36kA | 100% |
| T5S | 50kA | 100% |
| T5H | 70kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Thermomagnetic TMA

3

| Model      | Current [A] |       |     | Product Hierarchy 3000004 |       |              |       |
|------------|-------------|-------|-----|---------------------------|-------|--------------|-------|
|            | Ith/In      | I3    | %N  | 3 Pole                    | Price | 4 Pole       | Price |
| T5N<br>TMA | 400R320     | 3200A | 100 | 1SDA054436R1              |       | 1SDA054477R1 |       |
|            | 400R400     | 4000A |     | 1SDA054437R1              |       | 1SDA054478R1 |       |
|            | 630R500     | 5000A |     | 1SDA054456R1              |       | 1SDA054487R1 |       |
| T5S<br>TMA | 400R320     | 3200A | 100 | 1SDA054440R1              |       | 1SDA054479R1 |       |
|            | 400R400     | 4000A |     | 1SDA054441R1              |       | 1SDA054480R1 |       |
|            | 630R500     | 5000A |     | 1SDA054461R1              |       | 1SDA054489R1 |       |
| T5H<br>TMA | 400R320     | 3200A | 100 | 1SDA054444R1              |       | 1SDA054481R1 |       |
|            | 400R400     | 4000A |     | 1SDA054445R1              |       | 1SDA054482R1 |       |
|            | 630R500     | 5000A |     | 1SDA054465R1              |       | 1SDA054491R1 |       |

# Power distribution circuit breakers

## Tmax T5 - N, S, H electronic releases



### Ratings @ 400V

|     | Icu  | Ics  |
|-----|------|------|
| T5N | 50kA | 100% |
| T5S | 50kA | 100% |
| T5H | 70kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Electronic Release

| Model       | Type              | In   | Product Hierarchy 3000004 |  |              |       |
|-------------|-------------------|------|---------------------------|--|--------------|-------|
|             |                   |      | 3 Pole                    |  | 4 Pole       |       |
|             |                   |      | Price                     |  |              | Price |
| T5N<br>LS/I | 400 PR221DS-LS/I  | 320A | 1SDA054316R1              |  | 1SDA054324R1 |       |
|             | 400 PR221DS-LS/I  | 400A | 1SDA054317R1              |  | 1SDA054325R1 |       |
|             | 630 PR221DS-LS/I  | 630A | 1SDA054396R1              |  | 1SDA054400R1 |       |
| T5N<br>LSI  | 400 PR222DS/P-LSI | 320A | 1SDA054320R1              |  | 1SDA054328R1 |       |
|             | 400 PR222DS/P-LSI | 400A | 1SDA054321R1              |  | 1SDA054329R1 |       |
|             | 630 PR222DS/P-LSI | 630A | 1SDA054398R1              |  | 1SDA054402R1 |       |
| T5S<br>LS/I | 400 PR221DS-LS/I  | 320A | 1SDA054332R1              |  | 1SDA054340R1 |       |
|             | 400 PR221DS-LS/I  | 400A | 1SDA054333R1              |  | 1SDA054333R1 |       |
|             | 630 PR221DS-LS/I  | 630A | 1SDA054404R1              |  | 1SDA054408R1 |       |
| T5S<br>LSI  | 400 PR222DS/P-LSI | 320A | 1SDA054336R1              |  | 1SDA054344R1 |       |
|             | 400 PR222DS/P-LSI | 400A | 1SDA054337R1              |  | 1SDA054345R1 |       |
|             | 630 PR222DS/P-LSI | 630A | 1SDA054406R1              |  | 1SDA054410R1 |       |
| T5H<br>LS/I | 400 PR221DS-LS/I  | 320A | 1SDA054348R1              |  | 1SDA054356R1 |       |
|             | 400 PR221DS-LS/I  | 400A | 1SDA054349R1              |  | 1SDA054357R1 |       |
|             | 630 PR221DS-LS/I  | 630A | 1SDA054412R1              |  | 1SDA054416R1 |       |
| T5H<br>LSI  | 400 PR222DS/P-LSI | 320A | 1SDA054352R1              |  | 1SDA054360R1 |       |
|             | 400 PR222DS/P-LSI | 400A | 1SDA054353R1              |  | 1SDA054361R1 |       |
|             | 630 PR222DS/P-LSI | 630A | 1SDA054414R1              |  | 1SDA054418R1 |       |

# Power distribution circuit breakers

## Tmax T6 - N, S, H, L thermomagnetic



### Ratings @ 400V

|     | Icu  | Ics  |
|-----|------|------|
| T6N | 36kA | 100% |
| T6S | 50kA | 100% |
| T6H | 70kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Thermomagnetic TMA

3

| Model      | Current [A] |       |     | Product Hierarchy 3000004 |       |              |       |
|------------|-------------|-------|-----|---------------------------|-------|--------------|-------|
|            | Ith/In      | I3    | %N  | 3 Pole                    |       | 4 Pole       |       |
|            |             |       |     |                           | Price |              | Price |
| T6N<br>TMA | 630R630     | 6300A | 100 | 1SDA060202R1              |       | 1SDA060210R1 |       |
|            | 800R800     | 8000A |     | 1SDA060214R1              |       | 1SDA060222R1 |       |
| T6S<br>TMA | 630R630     | 6300A | 100 | 1SDA060204R1              |       | 1SDA060211R1 |       |
|            | 800R800     | 8000A |     | 1SDA060216R1              |       | 1SDA060223R1 |       |
| T6H<br>TMA | 630R630     | 6300A | 100 | 1SDA060206R1              |       | 1SDA060212R1 |       |
|            | 800R800     | 8000A |     | 1SDA060218R1              |       | 1SDA060224R1 |       |

# Power distribution circuit breakers

## Tmax T6 - N, S, H electronic release



### Ratings @ 400V

|     | Icu  | Ics  |
|-----|------|------|
| T6N | 36kA | 100% |
| T6S | 50kA | 100% |
| T6H | 70kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Electronic Release

| Model               | Type              | In   | Product Hierarchy 3000004 |       |              |       |
|---------------------|-------------------|------|---------------------------|-------|--------------|-------|
|                     |                   |      | 3 Pole                    | Price | 4 Pole       | Price |
| <b>T6N</b><br>LS/I  | 630 PR221DS-LS/I  | 630A | 1SDA060226R1              |       | 1SDA060231R1 |       |
|                     | 800 PR221DS-LS/I  | 800A | 1SDA060268R1              |       | 1SDA060273R1 |       |
| <b>T6N</b><br>P-LSI | 630 PR222DS/P-LSI | 630A | 1SDA060228R1              |       | 1SDA060233R1 |       |
|                     | 800 PR222DS/P-LSI | 800A | 1SDA060270R1              |       | 1SDA060275R1 |       |
| <b>T6S</b><br>LS/I  | 630 PR221DS-LS/I  | 630A | 1SDA060236R1              |       | 1SDA060243R1 |       |
|                     | 800 PR221DS-LS/I  | 800A | 1SDA060278R1              |       | 1SDA060285R1 |       |
| <b>T6S</b><br>P-LSI | 630 PR222DS/P-LSI | 630A | 1SDA060238R1              |       | 1SDA060243R1 |       |
|                     | 800 PR222DS/P-LSI | 800A | 1SDA060280R1              |       | 1SDA060285R1 |       |
| <b>T6H</b><br>LS/I  | 630 PR221DS-LS/I  | 630A | 1SDA060246R1              |       | 1SDA060251R1 |       |
|                     | 800 PR221DS-LS/I  | 800A | 1SDA060289R1              |       | 1SDA060294R1 |       |
| <b>T6H</b><br>P-LSI | 630 PR222DS/P-LSI | 630A | 1SDA060248R1              |       | 1SDA060253R1 |       |
|                     | 800 PR222DS/P-LSI | 800A | 1SDA060291R1              |       | 1SDA060296R1 |       |

3

# Power distribution circuit breakers

## Tmax T7 - S electronic release



### Ratings @ 400V

|     | Icu  | Ics  |
|-----|------|------|
| T7S | 50kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Electronic Release

3

| Model                      | Current [A]       | In    | Product Hierarchy 3000004 |       |              |       |
|----------------------------|-------------------|-------|---------------------------|-------|--------------|-------|
| <b>Toggle Operated</b>     |                   |       | 3 Pole                    | Price | 4 Pole       | Price |
| <b>T7S</b><br>P-LS/I       | 800 PR231/P-LS/I  | 800A  | 1SDA061963R1              |       | 1SDA061973R1 |       |
|                            | 1000 PR231/P-LS/I | 1000A | 1SDA062738R1              |       | 1SDA062746R1 |       |
|                            | 1250 PR231/P-LS/I | 1250A | 1SDA062866R1              |       | 1SDA062874R1 |       |
|                            | 1600 PR231/P-LS/I | 1600A | 1SDA062994R1              |       | 1SDA063002R1 |       |
| <b>T7S</b><br>P-LSI        | 800 PR232/P-LSI   | 800A  | 1SDA061964R1              |       | 1SDA061974R1 |       |
|                            | 1000 PR232/P-LSI  | 1000A | 1SDA062739R1              |       | 1SDA062747R1 |       |
|                            | 1250 PR232/P-LSI  | 1250A | 1SDA062867R1              |       | 1SDA062867R1 |       |
|                            | 1600 PR232/P-LSI  | 1600A | 1SDA062995R1              |       | 1SDA062995R1 |       |
| <b>T7S</b><br>P-LSIG       | 800 PR331/P-LSIG  | 800A  | 1SDA061965R1              |       | 1SDA061975R1 |       |
|                            | 1000 PR331/P-LSIG | 1000A | 1SDA062740R1              |       | 1SDA062748R1 |       |
|                            | 1250 PR331/P-LSIG | 1250A | 1SDA062868R1              |       | 1SDA062876R1 |       |
|                            | 1600 PR331/P-LSIG | 1600A | 1SDA062996R1              |       | 1SDA063004R1 |       |
| <b>T7S</b><br>P-LSIG       | 800 PR332/P-LSIG  | 800A  | 1SDA061968R1              |       | 1SDA061978R1 |       |
|                            | 1000 PR332/P-LSIG | 1000A | 1SDA062743R1              |       | 1SDA062751R1 |       |
|                            | 1250 PR332/P-LSIG | 1250A | 1SDA062871R1              |       | 1SDA062879R1 |       |
|                            | 1600 PR332/P-LSIG | 1600A | 1SDA062999R1              |       | 1SDA063007R1 |       |
| <b>Pushbutton Operated</b> |                   |       |                           |       |              |       |
| <b>T7S</b><br>P-LS/I       | 800 PR231/P-LS/I  | 800A  | 1SDA061981R1              |       | 1SDA061989R1 |       |
|                            | 1000 PR231/P-LS/I | 1000A | 1SDA062754R1              |       | 1SDA062762R1 |       |
|                            | 1250 PR231/P-LS/I | 1250A | 1SDA062882R1              |       | 1SDA062890R1 |       |
|                            | 1600 PR231/P-LS/I | 1600A | 1SDA063010R1              |       | 1SDA063018R1 |       |
| <b>T7S</b><br>P-LSI        | 800 PR232/P-LSI   | 800A  | 1SDA061982R1              |       | 1SDA061990R1 |       |
|                            | 1000 PR232/P-LSI  | 1000A | 1SDA062755R1              |       | 1SDA062763R1 |       |
|                            | 1250 PR232/P-LSI  | 1250A | 1SDA062883R1              |       | 1SDA062891R1 |       |
|                            | 1600 PR232/P-LSI  | 1600A | 1SDA063011R1              |       | 1SDA063019R1 |       |
| <b>T7S</b><br>P-LSIG       | 800 PR331/P-LSIG  | 800A  | 1SDA061983R1              |       | 1SDA061991R1 |       |
|                            | 1000 PR331/P-LSIG | 1000A | 1SDA062756R1              |       | 1SDA062764R1 |       |
|                            | 1250 PR331/P-LSIG | 1250A | 1SDA062884R1              |       | 1SDA062892R1 |       |
|                            | 1600 PR331/P-LSIG | 1600A | 1SDA063020R1              |       | 1SDA063019R1 |       |
| <b>T7S</b><br>P-LSIG       | 800 PR332/P-LSIG  | 800A  | 1SDA061986R1              |       | 1SDA061994R1 |       |
|                            | 1000 PR332/P-LSIG | 1000A | 1SDA062759R1              |       | 1SDA062767R1 |       |
|                            | 1250 PR332/P-LSIG | 1250A | 1SDA062887R1              |       | 1SDA062895R1 |       |
|                            | 1600 PR332/P-LSIG | 1600A | 1SDA063015R1              |       | 1SDA063023R1 |       |

# Power distribution circuit breakers

## Tmax T7 - H electronic release



### Ratings @ 400V

|     | Icu  | Ics  |
|-----|------|------|
| T7H | 70kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

### Electronic Release

| Model                      | Current [A]       | In    | Product Hierarchy 3000004 |  |       |              |  |       |
|----------------------------|-------------------|-------|---------------------------|--|-------|--------------|--|-------|
| <b>Toggle Operated</b>     |                   |       | 3 Pole                    |  | Price | 4 Pole       |  | Price |
| <b>T7H</b><br>P-LS/I       | 800 PR231/P-LS/I  | 800A  | 1SDA062642R1              |  |       | 1SDA062650R1 |  |       |
|                            | 1000 PR231/P-LS/I | 1000A | 1SDA062770R1              |  |       | 1SDA062778R1 |  |       |
|                            | 1250 PR231/P-LS/I | 1250A | 1SDA062898R1              |  |       | 1SDA062906R1 |  |       |
|                            | 1600 PR231/P-LS/I | 1600A | 1SDA063026R1              |  |       | 1SDA063034R1 |  |       |
| <b>T7H</b><br>P-LSI        | 800 PR232/P-LSI   | 800A  | 1SDA062643R1              |  |       | 1SDA062651R1 |  |       |
|                            | 1000 PR232/P-LSI  | 1000A | 1SDA062771R1              |  |       | 1SDA062779R1 |  |       |
|                            | 1250 PR232/P-LSI  | 1250A | 1SDA062899R1              |  |       | 1SDA062907R1 |  |       |
|                            | 1600 PR232/P-LSI  | 1600A | 1SDA063027R1              |  |       | 1SDA063035R1 |  |       |
| <b>T7H</b><br>P-LSIG       | 800 PR331/P-LSIG  | 800A  | 1SDA062644R1              |  |       | 1SDA062652R1 |  |       |
|                            | 1000 PR331/P-LSIG | 1000A | 1SDA062772R1              |  |       | 1SDA062780R1 |  |       |
|                            | 1250 PR331/P-LSIG | 1250A | 1SDA062900R1              |  |       | 1SDA062908R1 |  |       |
|                            | 1600 PR331/P-LSIG | 1600A | 1SDA063028R1              |  |       | 1SDA063036R1 |  |       |
|                            | 800 PR332/P-LSIG  | 800A  | 1SDA062647R1              |  |       | 1SDA062655R1 |  |       |
|                            | 1000 PR332/P-LSIG | 1000A | 1SDA062775R1              |  |       | 1SDA062873R1 |  |       |
|                            | 1250 PR332/P-LSIG | 1250A | 1SDA062903R1              |  |       | 1SDA062911R1 |  |       |
|                            | 1600 PR332/P-LSIG | 1600A | 1SDA063031R1              |  |       | 1SDA063039R1 |  |       |
| <b>Pushbutton Operated</b> |                   |       |                           |  |       |              |  |       |
| <b>T7H</b><br>P-LS/I       | 800 PR231/P-LS/I  | 800A  | 1SDA062658R1              |  |       | 1SDA062666R1 |  |       |
|                            | 1000 PR231/P-LS/I | 1000A | 1SDA062786R1              |  |       | 1SDA062794R1 |  |       |
|                            | 1250 PR231/P-LS/I | 1250A | 1SDA062914R1              |  |       | 1SDA062922R1 |  |       |
|                            | 1600 PR231/P-LS/I | 1600A | 1SDA063042R1              |  |       | 1SDA063050R1 |  |       |
| <b>T7H</b><br>P-LSI        | 800 PR232/P-LSI   | 800A  | 1SDA062659R1              |  |       | 1SDA062667R1 |  |       |
|                            | 1000 PR232/P-LSI  | 1000A | 1SDA062787R1              |  |       | 1SDA062795R1 |  |       |
|                            | 1250 PR232/P-LSI  | 1250A | 1SDA062915R1              |  |       | 1SDA062923R1 |  |       |
|                            | 1600 PR232/P-LSI  | 1600A | 1SDA063043R1              |  |       | 1SDA063051R1 |  |       |
| <b>T7H</b><br>P-LSIG       | 800 PR331/P-LSIG  | 800A  | 1SDA062660R1              |  |       | 1SDA062668R1 |  |       |
|                            | 1000 PR331/P-LSIG | 1000A | 1SDA062788R1              |  |       | 1SDA062796R1 |  |       |
|                            | 1250 PR331/P-LSIG | 1250A | 1SDA062916R1              |  |       | 1SDA062924R1 |  |       |
|                            | 1600 PR331/P-LSIG | 1600A | 1SDA063044R1              |  |       | 1SDA063052R1 |  |       |
|                            | 800 PR332/P-LSIG  | 800A  | 1SDA062663R1              |  |       | 1SDA062671R1 |  |       |
|                            | 1000 PR332/P-LSIG | 1000A | 1SDA062791R1              |  |       | 1SDA062799R1 |  |       |
|                            | 1250 PR332/P-LSIG | 1250A | 1SDA062919R1              |  |       | 1SDA062927R1 |  |       |
|                            | 1600 PR332/P-LSIG | 1600A | 1SDA063047R1              |  |       | 1SDA063055R1 |  |       |

# Power distribution circuit breakers

## Tmax switch disconnectors



Full range of product and technical information place this part number in a search engine and download  
**1SDC210015D0204**

### Fixed Pattern Circuit Breaker

Supplied as standard with front bar terminals for busbar - for other terminals see accessories section

3

### Non Automatic

### Product Hierarchy 3000004

| Icw   | Model        | Current [A] Iu | 3 Pole       |       | 4 Pole       |       |
|-------|--------------|----------------|--------------|-------|--------------|-------|
|       |              |                |              | Price |              | Price |
| 2kA   | XT1D 160 F F | 160            | 1SDA068208R1 |       | 1SDA068209R1 |       |
|       | XT3D 250 F F | 250            | 1SDA068210R1 |       | 1SDA068211R1 |       |
| 3.6kA | XT4D 250 F F | 250            | 1SDA068212R1 |       | 1SDA068213R1 |       |
|       |              |                |              |       |              |       |
| 6kA   | T5D 400 F F  | 400            | 1SDA054599R1 |       | 1SDA054600R1 |       |
|       | T5D 630 F F  | 630            | 1SDA054601R1 |       | 1SDA054602R1 |       |
| 15kA  | T6D 630 F F  | 630            | 1SDA060343R1 |       | 1SDA060344R1 |       |
|       | T6D 800 F F  | 1000           | 1SDA060345R1 |       | 1SDA060346R1 |       |
|       | T6D 1000 F F | 1250           | 1SDA060594R1 |       | 1SDA060595R1 |       |

### Toggle Operated

|      |              |      |              |  |              |  |
|------|--------------|------|--------------|--|--------------|--|
| 25kA | T7D 1000 F F | 1000 | 1SDA062032R1 |  | 1SDA062033R1 |  |
|      | T7D 1250 F F | 1250 | 1SDA062036R1 |  | 1SDA062037R1 |  |
|      | T7D 1600 F F | 1600 | 1SDA062040R1 |  | 1SDA062041R1 |  |

### Pushbutton Operated

|      |                |      |              |  |              |  |
|------|----------------|------|--------------|--|--------------|--|
| 25kA | T7D 1000 M F F | 1000 | 1SDA062034R1 |  | 1SDA062035R1 |  |
|      | T7D 1250 M F F | 1250 | 1SDA062038R1 |  | 1SDA062039R1 |  |
|      | T7D 1600 M F F | 1600 | 1SDA062042R1 |  | 1SDA062043R1 |  |



# Power distribution circuit breakers

## Accessories

3





Starting from the fixed version circuit-breaker, all the other versions used for various requirements are obtained by means of mounting conversion kits.

The following are available:

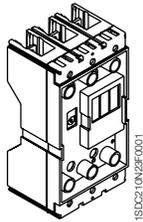
- Kit for converting a fixed circuit-breaker into the moving part of a plug-in
- Circuit-breaker fixed parts for plug-in circuit-breakers
- Conversion kit for the connection terminals

Various accessories are also available:

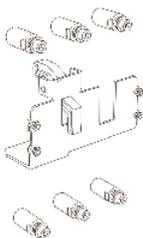
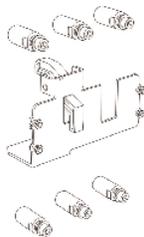
- Shunt opening releases
- Undervoltage releases
- Auxiliary contacts
- Position contacts
- Advanced contacts on rotary handle
- Front and rear connection terminals
- Bracket for rear fixing on DIN EN 50022 rail
- Front interlocking plate
- Solenoid operating mechanism
- Rotary handle operating mechanism - direct on circuit-breaker and transmitted on compartment door
- Three-pole and four-pole residual current releases

# Power distribution circuit breakers

## Tmax XT1 ... XT4 & T1 ... T7 accessories



1SDA02140X2E0003



3

### Plug-in (P) - Fixed Part

#### Product Hierarchy 3000006

|                                                         | Order Code    | Price | Order Code    | Price |
|---------------------------------------------------------|---------------|-------|---------------|-------|
| <b>F = Front terminals</b>                              | <b>3 pole</b> |       | <b>4 pole</b> |       |
| XT1 (max In=125A)                                       | 1SDA068183R1  |       | 1SDA068185R1  |       |
| XT2                                                     | 1SDA068187R1  |       | 1SDA051330R1  |       |
| XT3                                                     | 1SDA068192R1  |       | 1SDA051332R1  |       |
| XT4                                                     | 1SDA068196R1  |       | 1SDA054740R1  |       |
| T5 400                                                  | 1SDA054749R1  |       | 1SDA054752R1  |       |
| T5 630 circuit breaker in plug-in version In max = 570A | 1SDA054762R1  |       | 1SDA054765R1  |       |

| <b>HR = Rear flat horizontal terminals</b>              | <b>3 pole</b> |  | <b>4 pole</b> |  |
|---------------------------------------------------------|---------------|--|---------------|--|
| T4                                                      | 1SDA054739R1  |  | 1SDA054742R1  |  |
| T5                                                      | 1SDA054751R1  |  | 1SDA054754R1  |  |
| T5 630 circuit breaker in plug-in version In max = 570A | 1SDA054764R1  |  | 1SDA054767R1  |  |

| <b>VR = Rear flat vertical terminals</b>                | <b>3 pole</b> |  | <b>4 pole</b> |  |
|---------------------------------------------------------|---------------|--|---------------|--|
| T4                                                      | 1SDA054738R1  |  | 1SDA054741R1  |  |
| T5                                                      | 1SDA054750R1  |  | 1SDA054753R1  |  |
| T5 630 circuit breaker in plug-in version In max = 570A | 1SDA054763R1  |  | 1SDA054766R1  |  |

### Withdrawable (W) - Fixed Part

#### Product Hierarchy 3000006

|                                                         | Order Code    | Price | Order Code    | Price |
|---------------------------------------------------------|---------------|-------|---------------|-------|
| <b>F = Front terminals</b>                              | <b>3 pole</b> |       | <b>4 pole</b> |       |
| XT2                                                     | 1SDA068200R1  |       | 1SDA068202R1  |       |
| T4                                                      | 1SDA054743R1  |       | 1SDA054746R1  |       |
| T5 400                                                  | 1SDA054755R1  |       | 1SDA054758R1  |       |
| T5 630 circuit breaker in plug-in version In max = 570A | 1SDA054768R1  |       | 1SDA054771R1  |       |
| T6                                                      | 1SDA060384R1  |       | 1SDA060387R1  |       |
| T7 - X1                                                 | 1SDA062045R1  |       | 1SDA062049R1  |       |

| <b>HR = Rear flat horizontal terminals</b>              | <b>3 pole</b> |  | <b>4 pole</b> |  |
|---------------------------------------------------------|---------------|--|---------------|--|
| T4                                                      | 1SDA054745R1  |  | 1SDA054748R1  |  |
| T5 400                                                  | 1SDA054757R1  |  | 1SDA054761R1  |  |
| T5 630 circuit breaker in plug-in version In max = 570A | 1SDA054770R1  |  | 1SDA054774R1  |  |
| T6                                                      | 1SDA060385R1  |  | 1SDA060388R1  |  |

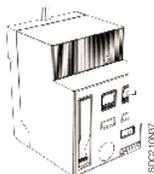
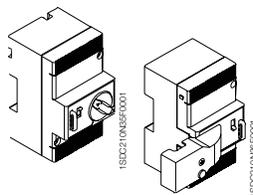
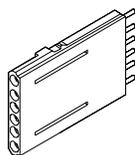
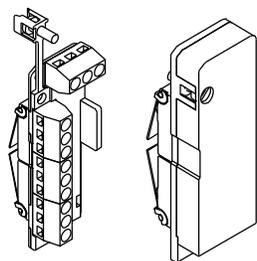
| <b>VR = Rear flat vertical terminals</b>                | <b>3 pole</b> |  | <b>4 pole</b> |  |
|---------------------------------------------------------|---------------|--|---------------|--|
| T4                                                      | 1SDA054744R1  |  | 1SDA054747R1  |  |
| T5 400                                                  | 1SDA054756R1  |  | 1SDA054759R1  |  |
| T5 630 circuit breaker in plug-in version In max = 570A | 1SDA054769R1  |  | 1SDA054772R1  |  |
| T6                                                      | 1SDA060386R1  |  | 1SDA060389R1  |  |

| <b>HR/V = Rear flat terminals</b> | <b>3 pole</b> |  | <b>4 pole</b> |  |
|-----------------------------------|---------------|--|---------------|--|
| T7 - X1                           | 1SDA062044R1  |  | 1SDA066276R1  |  |

**Note:** Fixed parts on T7 - T7M circuit breakers with \*\*\*\* terminals are supplied as standard with terminals mounted in horizontal. To order the terminals mounted vertically, use the extra code 1SDA063521R1

# Power distribution circuit breakers

## Tmax XT1 ... XT4 & T1 ... T7 accessories



### Product Hierarchy 300006

#### Conversion of Version

| Order Code | Price | Order Code | Price |
|------------|-------|------------|-------|
| 3 pole     |       | 4 pole     |       |

#### Conversion kit from fixed to moving part of plug-in part of plug-in

|                               |              |  |              |  |
|-------------------------------|--------------|--|--------------|--|
| Kit P MP XT1 (max In=125A)    | 1SDA066276R1 |  | 1SDA066277R1 |  |
| Kit P MP XT2                  | 1SDA066278R1 |  | 1SDA066279R1 |  |
| Kit P MP XT3                  | 1SDA066280R1 |  | 1SDA066281R1 |  |
| Kit P MP XT4                  | 1SDA066282R1 |  | 1SDA066283R1 |  |
| Kit MP T5 400 P               | 1SDA054843R1 |  | 1SDA054844R1 |  |
| Kit MP T5 630 P (max In=570A) | 1SDA054847R1 |  | 1SDA054848R1 |  |

#### Conversion kit from fixed to moving part of withdrawable

|                               |              |  |              |  |
|-------------------------------|--------------|--|--------------|--|
| Kit MP XT2 160 W              | 1SDA066284R1 |  | 1SDA066285R1 |  |
| Kit MP XT4 250 W              | 1SDA066286R1 |  | 1SDA066287R1 |  |
| Kit MP T5 400 W               | 1SDA054845R1 |  | 1SDA054846R1 |  |
| Kit MP T5 630 W (max In=570A) | 1SDA054849R1 |  | 1SDA054850R1 |  |
| Kit MP T6 630/800 W           | 1SDA060390R1 |  | 1SDA060391R1 |  |
| Kit MP T7-T7M-X1 W            | 1SDA062162R1 |  | 1SDA062163R1 |  |

#### Sliding Contacts T7-T7M

|                            |              |  |
|----------------------------|--------------|--|
| Left Sliding Contact MP    | 1SDA062164R1 |  |
| Central Sliding Contact MP | 1SDA062165R1 |  |
| Right Sliding Contact MP   | 1SDA062166R1 |  |
| Left Sliding Contact FP    | 1SDA062167R1 |  |
| Central Sliding Contact FP | 1SDA062168R1 |  |
| Right Sliding Contact FP   | 1SDA062169R1 |  |

**Note:** Always to be ordered in pairs (block for MP & block for FP) if the circuit breaker is automatic or fitted with electrical accessories withdrawable version. For more information, please contact us.

The sliding contact blocks are needed for T7 in the withdrawable version fitted with electrical accessories or with an electronic release. Their function is to make the electrical connection of the secondary circuits between the moving and fixed part. These blocks operate in pairs: one block must be mounted on the moving part and the other on the fixed part. The following table shows the possible combinations between sliding contact blocks and electrical accessories.

| Left hand lock                   | Central lock | Right hand lock       |
|----------------------------------|--------------|-----------------------|
| Spring charger motor             | PR331        | Auxiliary contacts    |
| "Closed springs charged" contact | PR332        | Shunt opening release |
| "Ready to close" contact         |              | Shunt closing release |
| Release trip signalling          |              | Under voltage release |

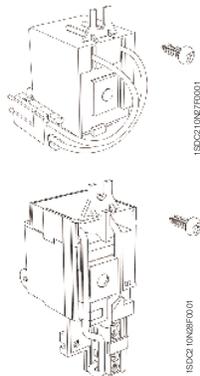
#### Terminal Covers for Fixed Part

|                                             |              |  |
|---------------------------------------------|--------------|--|
| TC-FP T4 4p Terminal Covers Fixed/P         | 1SDA054858R1 |  |
| TC-FP T5 400/630 4p Terminal Covers Fixed/P | 1SDA054861R1 |  |

# Power distribution circuit breakers

## Tmax XT1 ... XT4 & T1 ... T7 accessories

3



### Services releases

#### Shunt opening release - SOR

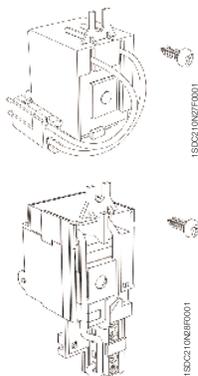
|                                          | Product Hierarchy 3000006 |       |
|------------------------------------------|---------------------------|-------|
|                                          | Order Code                | Price |
| SOR-C XT1..XT4 F/P 12 Vdc                | 1SDA066321R1              |       |
| SOR-C XT2-XT4 W 12 Vdc                   | 1SDA066328R1              |       |
| SOR-C XT1..XT4 F/P 24-30 Vac/dc          | 1SDA066322R1              |       |
| SOR-C XT2-XT4 W 24-30 Vac/dc             | 1SDA066329R1              |       |
| SOR-C XT1..XT4 F/P 48-60 Vac/dc          | 1SDA066323R1              |       |
| SOR-C XT2-XT4 W 48-60 Vac/dc             | 1SDA066330R1              |       |
| SOR-C XT1..XT4 F/P 110-127Vac-110-125Vdc | 1SDA066324R1              |       |
| SOR-C XT2-XT4 W 110-127Vac-110-125Vdc    | 1SDA066331R1              |       |
| SOR-C XT1..XT4 F/P 220-240Vac-220-250Vdc | 1SDA066325R1              |       |
| SOR-C XT2-XT4 W 220-240Vac-220-250Vdc    | 1SDA066332R1              |       |
| SOR-C XT1..XT4 F/P 380-440 Vac           | 1SDA066326R1              |       |
| SOR-C XT2-XT4 W 380-440 Vac              | 1SDA066333R1              |       |
| SOR-C XT1..XT4 F/P 480-525 Vac           | 1SDA066327R1              |       |
| SOR-C XT2-XT4 W 480-525 Vac              | 1SDA066334R1              |       |
| SOR-C T4-T5-T6 12 Vdc                    | 1SDA054869R1              |       |
| SOR-C T4-T5-T6 48...60 Vac/dc            | 1SDA054871R1              |       |
| SOR-C T4-T5-T6 110..127Vac - 110..1      | 1SDA054872R1              |       |
| SOR-C T4-T5-T6 220..240Vac - 220..2      | 1SDA054873R1              |       |
| SOR-C T4-T5-T6 380...440 Vac             | 1SDA054874R1              |       |
| SOR-CT4-T5-T6 480...500Vac               | 1SDA054875R1              |       |

#### Shunt opening/closing release - SOR/SCR

|                                       |              |  |
|---------------------------------------|--------------|--|
| SOR/SCR T7-T7M-X1 24Va.c./d.c.        | 1SDA062065R1 |  |
| SOR/SCR T7-T7M-X1 30Va.c./d.c.        | 1SDA062066R1 |  |
| SOR/SCR T7-T7M-X1 48Va.c./d.c.        | 1SDA062067R1 |  |
| SOR/SCR T7-T7M-X1 60Va.c./d.c.        | 1SDA062068R1 |  |
| SOR/SCR T7-T7M-X1 110...120Va.c./d.c. | 1SDA062069R1 |  |
| SOR/SCR T7-T7M-X1 240...250Va.c./d.c. | 1SDA062070R1 |  |
| SOR/SCR T7-T7M-X1 380...400Va.c.      | 1SDA062071R1 |  |
| SOR/SCR T7-T7M-X1 415...440Va.c.      | 1SDA062072R1 |  |

# Power distribution circuit breakers

## Tmax XT1 ... XT4 & T1 ... T7 accessories



### Services releases

#### Undervoltage release - UVR

|                                            | Product Hierarchy 3000006 |       |
|--------------------------------------------|---------------------------|-------|
|                                            | Order Code                | Price |
| UVR-C XT2-XT4 W 24-30 V ac/dc              | 1SDA066403R1              |       |
| UVR-C XT1...XT4 F/P 48 V ac/dc             | 1SDA069065R1              |       |
| UVR-C XT2-XT4 W 48 V ac/dc                 | 1SDA069066R1              |       |
| UVR-C XT1...XT4 F/P 60 V ac/dc             | 1SDA066397R1              |       |
| UVR-C XT2-XT4 W 60 V ac/dc                 | 1SDA066404R1              |       |
| UVR-C XT1...XT4 F/P 110-127V ac-110-125Vdc | 1SDA066398R1              |       |
| UVR-C XT2-XT4 W 110-127V ac-110-125Vdc     | 1SDA066405R1              |       |
| UVR-C XT1...XT4 F/P 220-240V ac-220-250Vdc | 1SDA066399R1              |       |
| UVR-C XT2-XT4 W 220-240V ac-220-250Vdc     | 1SDA066406R1              |       |
| UVR-C XT1...XT4 F/P 380-440 V ac           | 1SDA066400R1              |       |
| UVR-C XT2-XT4 W 380-440 V ac               | 1SDA066407R1              |       |
| UVR-C XT1...XT4 F/P 480-525 V ac           | 1SDA066401R1              |       |
| UVR-C XT2-XT4 W 480-525 V ac               | 1SDA066408R1              |       |
| UVR-C T4-T5-T6 24-30 V ac/dc               | 1SDA054887R1              |       |
| UVR-C T4-T5-T6 48 V ac/dc                  | 1SDA054888R1              |       |
| UVR-CT4-T5-T6 60V ac/dc                    | 1SDA054889R1              |       |
| UVR-C T4-T5-T6 110-127V ac-110-125Vdc      | 1SDA054890R1              |       |
| UVR-C T4-T5-T6 220-250 V ac/dc             | 1SDA054891R1              |       |
| UVR-C T4-T5-T6 380-440 V ac                | 1SDA054892R1              |       |
| UVR-C T4-T5-T6 480-500V ac                 | 1SDA054893R1              |       |
| UVR T7-T7M-X1 24Va.c./d.c.                 | 1SDA062087R1              |       |
| UVR T7-T7M-X130Va.c./d.c.                  | 1SDA062088R1              |       |
| UVR T7-T7M-X148Va.c./d.c.                  | 1SDA062089R1              |       |
| UVRT7-T7M-X160Va.c./d.c.                   | 1SDA062090R1              |       |
| UVR T7-T7M-X1 110...120Va.c./d.c.          | 1SDA062091R1              |       |
| UVR T7-T7M-X1 240...250Va.c./d.c.          | 1SDA062092R1              |       |
| UVR T7-T7M-X1 380...400Va.c.               | 1SDA062093R1              |       |
| UVRT7-T7M-X1415...440Va.c.                 | 1SDA062094R1              |       |

#### Time delayed UVR

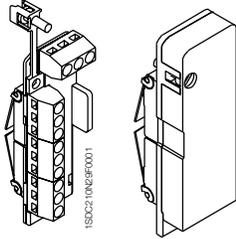
|                                 |              |  |
|---------------------------------|--------------|--|
| UVD T1...T6 24...30Va.c./d.c.   | 1SDA051357R1 |  |
| UVD T1...T6 48...60Va.c./d.c.   | 1SDA051358R1 |  |
| UVD T1...T6 110...125Va.c./d.c. | 1SDA051360R1 |  |
| UVD T1...T6 220...250Va.c./d.c. | 1SDA051361R1 |  |

#### Electronic Time Delay for UVR

|                        |              |  |
|------------------------|--------------|--|
| 24/30V E1/6-T7-X1-T8   | 1SDA038316R1 |  |
| 48V E1/6-T7-X1-T8      | 1SDA038317R1 |  |
| 60V E1/6-T7-X1-T8      | 1SDA038318R1 |  |
| 110-127V E1/6-T7-X1-T8 | 1SDA038319R1 |  |
| 220-250V E1/6-T7-X1-T8 | 1SDA038320R1 |  |

# Power distribution circuit breakers

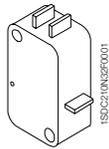
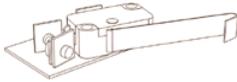
## Tmax XT1 ... XT4 & T1 ... T7 accessories



### Electrical Signals

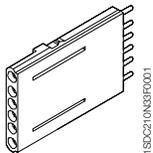
#### Product Hierarchy 3000006

| Auxiliary contact - AUX                                       | Order Code   | Price |
|---------------------------------------------------------------|--------------|-------|
| AUX-C 1Q+1SY 250 V XT1...XT4 F/P                              | 1SDA066431R1 |       |
| AUX-C 3Q+1SY 250 V XT2...XT4 F/P                              | 1SDA066434R1 |       |
| AUX-C 3Q+1SY 24 Vdc XT2...XT4 F/P                             | 1SDA066448R1 |       |
| <b>Auxiliary contact for ready to close</b>                   |              |       |
| AUX-C T4-T5-T6 1Q 1SY 250 Vac/dc                              | 1SDA054910R1 |       |
| AUX-C T4-T5-T6 3Q 1SY 250 Vac/dc                              | 1SDA054911R1 |       |
| AUX-C T4-T5-T6 1Q 1SY 400 Vac                                 | 1SDA054912R1 |       |
| AUX-C T4-T5-T6 2Q 400 Vac                                     | 1SDA054913R1 |       |
| AUX-C T4-T5-T6 3Q 1SY 24 Vdc                                  | 1SDA054915R1 |       |
| <b>Cabled contact for signalling trip coil release</b>        |              |       |
| AUX-SA T4-T5 1S51 not for PR221-222-223                       | 1SDA055050R1 |       |
| AUX-SA T6 1S51 for PR221-222-223                              | 1SDA060393R1 |       |
| <b>Cabled contact for signalling motor operation T4-T5-T6</b> |              |       |
| AUX-MOE-C T4-T5-T6 1Q x signal manual/automatic               | 1SDA054917R1 |       |
| <b>Auxiliary contact - AUX</b>                                |              |       |
| AUX T7 1Q + 1SY 400Va.c.                                      | 1SDA062104R1 |       |
| AUX T7 1Q + 1SY 24Vd.c.                                       | 1SDA062103R1 |       |
| AUX T7-T7M-X1 2Q 400Va.c.                                     | 1SDA062102R1 |       |
| AUX T7-T7M-X1 2Q 24Vd.c.                                      | 1SDA062101R1 |       |
| AUX-SA T7 1 S51 250Va.c.                                      | 1SDA062105R1 |       |
| AUX-SA T7M-X1 1 S51 250Va.c.                                  | 1SDA063553R1 |       |
| <b>Aux contact for ready to close T7M</b>                     |              |       |
| AUX-RTC T7M - X1 24Vd.c. ready to close                       | 1SDA062108R1 |       |
| AUX-RTC T7M - X1 250Va.c./d.c. ready to close                 | 1SDA062109R1 |       |
| <b>Aux contact for springs charged</b>                        |              |       |
| AUX-SC T7M - X1 24Vd.c. spring charged                        | 1SDA062106R1 |       |
| AUX-SC T7M - X1 250Vac/dc spring charged                      | 1SDA062107R1 |       |
| <b>Early aux contact</b>                                      |              |       |
| AUE T1-T2-T3 2 early contacts                                 | 1SDA051374R1 |       |
| AUE T4-T5 250Vac/dc 2 early contacts                          | 1SDA054925R1 |       |
| AUE T6 250Vac/dc 2 early contacts                             | 1SDA060394R1 |       |
| AUE T7 400Va.c. 3 early contacts                              | 1SDA062112R1 |       |
| <b>Aux position contact</b>                                   |              |       |
| AUP T2-T3 con inserted signalling                             | 1SDA051372R1 |       |
| AUP-I T4-T5-T6 con inserted signalling                        | 1SDA054918R1 |       |
| AUP-I T4-T5-T6 24 Vdc con inserted signalling                 | 1SDA054920R1 |       |
| AUP-R T4-T5-T6 24 Vdc con withdraw signalling                 | 1SDA054921R1 |       |
| AUP-R T4-T5-T6 con withdraw signalling                        | 1SDA054919R1 |       |
| AUP T7-T7M-X1 24Vd.c. (2INS+2TEST+2EXT)                       | 1SDA062110R1 |       |
| AUP T7-T7M-X1 250Va.c. (2INS+2TEST+2EXT)                      | 1SDA062111R1 |       |

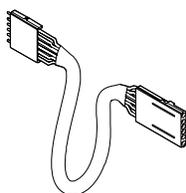


# Power distribution circuit breakers

## Tmax XT1 ... XT4 & T1 ... T7 accessories



1SDA210N88F001



1SDA210N88F001

### Electrical Signals

#### Adapters

|                                  | Product Hierarchy 3000006 |       |
|----------------------------------|---------------------------|-------|
|                                  | Order Code                | Price |
| ADP 5pin SOR/UVR RC T4-T5-T6 P/W | 1SDA055173R1              |       |
| ADP 6pin AUX T4-T5-T6 P/W        | 1SDA054922R1              |       |
| ADP 12pin AUX T4-T5-T6 P/W       | 1SDA054923R1              |       |
| ADP 10pin MOE AUE T4-T5-T6 P/W   | 1SDA054924R1              |       |

### Mechanical Signals

#### Test Extension

|                                                   |              |  |
|---------------------------------------------------|--------------|--|
| Trip Reset 110...130Vac/dc T7 pushbutton operated | 1SDA062118R1 |  |
| Trip Reset 200...240Vac/dc T7 pushbutton operated | 1SDA062119R1 |  |

#### Trip Reset

|                                          |              |  |
|------------------------------------------|--------------|--|
| Operation Counter T7 pushbutton operated | 1SDA062160R1 |  |
|------------------------------------------|--------------|--|

### Motor Operators

#### Stored energy motor operator MOE

|                              |              |  |
|------------------------------|--------------|--|
| MOE XT2-XT4 24 Vdc           | 1SDA066463R1 |  |
| MOE XT2-XT4 48...60 Vdc      | 1SDA066464R1 |  |
| MOE XT2-XT4 110...125 Vac/dc | 1SDA066465R1 |  |
| MOE XT2-XT4 220...250 Vac/dc | 1SDA066466R1 |  |
| MOE XT2-XT4 380 Vac          | 1SDA066467R1 |  |
| MOE XT2-XT4 480...525 Vac    | 1SDA066468R1 |  |

|                            |              |  |
|----------------------------|--------------|--|
| MOE T4-T5 24 Vdc           | 1SDA054894R1 |  |
| MOE T4-T5 48...60 Vdc      | 1SDA054895R1 |  |
| MOE T4-T5 110...125 Vac/dc | 1SDA054896R1 |  |
| MOE T4-T5 220...250 Vac/dc | 1SDA054897R1 |  |
| MOE T4-T5 380 Vac          | 1SDA054898R1 |  |

|                         |              |  |
|-------------------------|--------------|--|
| MOE T6 24 Vdc           | 1SDA060395R1 |  |
| MOE T6 48...60Vdc       | 1SDA060396R1 |  |
| MOE T6 110...125 Vac/dc | 1SDA060397R1 |  |
| MOE T6 220...250 Vac/dc | 1SDA060398R1 |  |
| MOE T6 380Vac           | 1SDA060399R1 |  |

#### Motor operator with direct action MOD

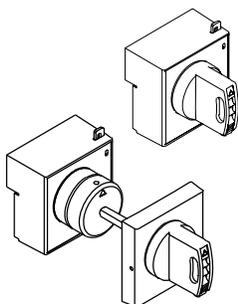
|                              |              |  |
|------------------------------|--------------|--|
| MOD XT1-XT3 24 Vdc           | 1SDA066457R1 |  |
| MOD XT1-XT3 48...60 Vdc      | 1SDA066458R1 |  |
| MOD XT1-XT3 110...125 Vac/dc | 1SDA066459R1 |  |
| MOD XT1-XT3 220...250 Vac/dc | 1SDA066460R1 |  |
| MOD XT1-XT3 380 Vac          | 1SDA066461R1 |  |
| MOD XT1-XT3 480...525 Vac    | 1SDA066462R1 |  |

#### Spring charging motor

|                                            |              |  |
|--------------------------------------------|--------------|--|
| Spring charging motor T7M-X1 24...30Vac/dc | 1SDA062113R1 |  |
| Spring charging motor T7M-X148...60Vac/dc  | 1SDA062114R1 |  |
| Spring charging motor T7M-X1 100...130Vac/ | 1SDA062115R1 |  |
| Spring charging motor T7M-X1 220...250 Vac | 1SDA062116R1 |  |
| Spring charging motor T7M-X1 380...415Vac  | 1SDA062117R1 |  |

# Power distribution circuit breakers

## Tmax XT1 ... XT4 & T1 ... T7 accessories



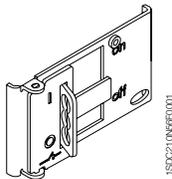
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| Rotary Handle Operating Mechanism |                                     | Product Hierarchy 3000006 |       |
|-----------------------------------|-------------------------------------|---------------------------|-------|
| Breaker                           | Direct - RHD                        | Order Code                | Price |
| XT1-XT3                           | RHD Standard for fixed and plug-in  | 1SDA066475R1              |       |
|                                   | RHD Emergency for fixed and plug-in | 1SDA066477R1              |       |
| XT2-XT4                           | RHD Standard with-drawable          | 1SDA066476R1              |       |
|                                   | RHD Emergency with-drawable         | 1SDA066478R1              |       |
| T4-T5                             | RHD Standard for fixed and plug-in  | 1SDA054926R1              |       |
|                                   | RHD Emergency for fixed and plug-in | 1SDA054927R1              |       |
|                                   | RHD Standard with-drawable          | 1SDA054928R1              |       |
| T6                                | RHD Emergency with-drawable         | 1SDA055234R1              |       |
|                                   | RHD Standard for fixed and plug-in  | 1SDA060405R1              |       |
|                                   | RHD Emergency for fixed and plug-in | 1SDA060406R1              |       |
| T7<br>Toggle operated             | RHD Standard with-drawable          | 1SDA060407R1              |       |
|                                   | RHD Emergency with-drawable         | 1SDA060408R1              |       |
|                                   | RHD Standard for fixed and plug-in  | 1SDA062120R1              |       |
|                                   | RHD Emergency for fixed and plug-in | 1SDA062121R1              |       |
| T7<br>Pushbutton operated         | RHD Standard with-drawable          | 1SDA062120R1              |       |
|                                   | RHD Emergency with-drawable         | 1SDA062121R1              |       |
|                                   | RHD Emergency with-drawable         | 1SDA062121R1              |       |

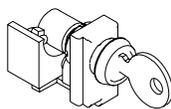
| Breaker                   | Door Mounted Extended - RHE         | Order Code   |  |
|---------------------------|-------------------------------------|--------------|--|
| XT1-XT3                   | RHE Standard for fixed and plug-in  | 1SDA066479R1 |  |
|                           | RHE Emergency for fixed and plug-in | 1SDA066481R1 |  |
| XT2-XT4                   | RHE Standard with-drawable          | 1SDA066480R1 |  |
|                           | RHE Emergency with-drawable         | 1SDA066482R1 |  |
| T4-T5                     | RHE Standard for fixed and plug-in  | 1SDA054929R1 |  |
|                           | RHE Emergency for fixed and plug-in | 1SDA054930R1 |  |
|                           | RHE Standard with-drawable          | 1SDA054933R1 |  |
|                           | RHE Emergency with-drawable         | 1SDA054934R1 |  |
| T6                        | RHE Standard for fixed and plug-in  | 1SDA060409R1 |  |
|                           | RHE Emergency for fixed and plug-in | 1SDA060410R1 |  |
|                           | RHE Standard with-drawable          | 1SDA060411R1 |  |
|                           | RHE Emergency with-drawable         | 1SDA060412R1 |  |
| T7<br>Pushbutton operated | RHE Standard for fixed and plug-in  | 1SDA062122R1 |  |
|                           | RHE Emergency for fixed and plug-in | 1SDA062123R1 |  |
|                           | RHE Standard with-drawable          | 1SDA062122R1 |  |
|                           | RHE Emergency with-drawable         | 1SDA062123R1 |  |

# Power distribution circuit breakers

## Tmax XT1 ... XT4 & T1 ... T7 accessories



1SDC2101656F001



### Operating mechanism and locks

| Padlock lever lock PPL                                | Breaker              | Product Hierarchy 3000006 |       |
|-------------------------------------------------------|----------------------|---------------------------|-------|
|                                                       |                      | Order Code                | Price |
| PLL - removable lock with padlocks in open position   | XT1-XT3              | 1SDA066588R1              |       |
| PLL - fixed lock with padlocks in open position       |                      | 1SDA066589R1              |       |
| PLL - fixed lock with padlocks in open/close position |                      | 1SDA066591R1              |       |
| PLL - fixed lock with padlocks in open position       | XT2-XT4              | 1SDA066590R1              |       |
| PLL - fixed lock with padlocks in open/close position |                      | 1SDA066592R1              |       |
| PLL - padlock pushbutton in open position             | T7 pushbutton opp.   | 1SDA062151R1              |       |
| PLL - padlock lever in open position                  | T7 pushbutton toggle | 1SDA062150R1              |       |

### Key locks KLC

|                                        |         |              |  |
|----------------------------------------|---------|--------------|--|
| KLC BL.Ronis locked in open position   | XT1     | 1SDA066593R1 |  |
| KLC BL.Ronis locked in open position   | XT2-XT4 | 1SDA066599R1 |  |
| KLC BL.Ronis locked in open position   | XT3     | 1SDA066605R1 |  |
| KLC-D key lock service operation       | T7      | 1SDA062134R1 |  |
| KLC key lock Ronis operator adapter    |         | 1SDA062139R1 |  |
| KLC key lock Profalux operator adapter |         | 1SDA062140R1 |  |

### Key locks front/rotary handle KLF

|                         |       |              |  |
|-------------------------|-------|--------------|--|
| KLF-D different keys    | T4-T5 | 1SDA054939R1 |  |
| KLF-S same keys         |       | 1SDA054940R1 |  |
| KLF-D different keys    | T6    | 1SDA060658R1 |  |
| KLF-S key lock EQ.20005 |       | 1SDA060659R1 |  |

### Key locks extended rotary handle shaft

|                      |         |          |  |
|----------------------|---------|----------|--|
| Castell lock adapter | XT1-XT3 | OETLZW16 |  |
|                      | XT4-T7  | OETLZW5  |  |

### Key locks motor operator MOL

|                                               |       |              |  |
|-----------------------------------------------|-------|--------------|--|
| MOL-D different keys                          | T4-T5 | 1SDA054904R1 |  |
|                                               | T6    | 1SDA060611R1 |  |
| MOL-S same key for different groups (N.20005) | T4-T5 | 1SDA054905R1 |  |
|                                               | T6    | 1SDA060612R1 |  |
| MOL-M manual operation same key               | T4-T5 | 1SDA054909R1 |  |
|                                               | T6    | 1SDA060616R1 |  |

### Key lock in open position on the circuit breaker pushbutton operated

|                                  |     |              |  |
|----------------------------------|-----|--------------|--|
| KLC-D key lock service operation | T7M | 1SDA062141R1 |  |
| KLC Ronis-Profalux               |     | 1SDA062146R1 |  |

### Key lock on handle

|                          |         |              |  |
|--------------------------|---------|--------------|--|
| RHL Ronis different keys | XT1-XT4 | 1SDA066617R1 |  |
| RHL Ronis Type A         |         | 1SDA066618R1 |  |

3

# Power distribution circuit breakers

## XT1 ... XT4 & T1 ... T7 accessories

3

### Operating mechanism and locks

Product Hierarchy 3000006

|                                                                             | Order Code   | Price |
|-----------------------------------------------------------------------------|--------------|-------|
| Key lock in racked-in/test isolated/rack-out position                       |              |       |
| Arrangement for Ronis key lock - can be equipped with two different keys T7 | 1SDA063567R1 |       |
| Arrangement for Profalux key lock T7                                        | 1SDA063570R1 |       |
| Arrangement for Castell key lock T7                                         | 1SDA063568R1 |       |
| Arrangement for Kirk key lock T7                                            | 1SDA063569R1 |       |

### Front lock device

|                 |              |  |
|-----------------|--------------|--|
| FLD XT2-XT4 F/P | 1SDA066635R1 |  |
| FLD XT2-XT4 W   | 1SDA066636R1 |  |
| FLD T4-T5 F/P   | 1SDA054944R1 |  |
| FLD T4-T5 W     | 1SDA054945R1 |  |
| FLD T6 F/P      | 1SDA060417R1 |  |
| FLD T6 W        | 1SDA060418R1 |  |

### Transparent Protection for Pushbutton

|                                                     |              |  |
|-----------------------------------------------------|--------------|--|
| Pushbuttons trans protection T7 pushbutton operated | 1SDA062132R1 |  |
| Pushbuttons trans protection independant            | 1SDA062133R1 |  |
| IP54 protection T7 pushbutton operated              | 1SDA062161R1 |  |

### Mechanical Interlock MIR

|                                                                                        |              |  |
|----------------------------------------------------------------------------------------|--------------|--|
| T4-T5 Horizontal Interlock Frame                                                       | 1SDA054946R1 |  |
| T4-T5 Vertical Interlock Frame                                                         | 1SDA054947R1 |  |
| T4-T5 Type A Interlock Plate T4 (F-P-W) + T4 (F-P-W)                                   | 1SDA054948R1 |  |
| T4-T5 Type B Interlock Plate T4 (F-P-W) + T5 400 (F-P-W)                               | 1SDA054949R1 |  |
| T4-T5 Type C Interlock Plate T6 (F-P-W) + T5 630 (P-W)                                 | 1SDA054950R1 |  |
| T4-T5 Type D Interlock Plate T5 400 (F-P-W) or T5 630 (F)+T5 400 (F-P-W) or T5 630 (F) | 1SDA054951R1 |  |
| T4-T5 Type E Interlock Plate T5 400 (F-P-W) or T5 630 (F)+T5 630 (F-W)                 | 1SDA054952R1 |  |
| T4-T5 Type F Interlock Plate T5 630 (P-W)+T5 630 (P-W)                                 | 1SDA054953R1 |  |
| T6 Mechanical Interlock - Horizontal                                                   | 1SDA060685R1 |  |
| T6 Mechanical Interlock - Vertical                                                     | 1SDA060686R1 |  |

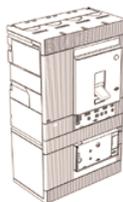
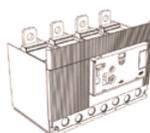
Note: To interlock two T4-T5 circuit breakers you have to order a frame unit interlock and plate (for type A or B or C or D or E or F) interlock

### Mechanical Interlock with cables

|                                                    |              |  |
|----------------------------------------------------|--------------|--|
| Kit cable mechanical Interlock HR/VR T7-T7M        | 1SDA062127R1 |  |
| Plate mechanical Interlock T7-T7M back plate fixed | 1SDA062129R1 |  |
| Plate mechanical Interlock T7M F floor fixed       | 1SDA062130R1 |  |
| Plate mechanical Interlock T7-T7M W                | 1SDA062131R1 |  |

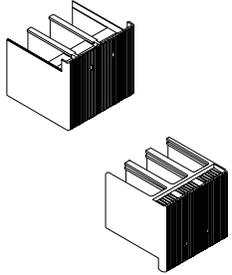
### Residual Current Devices

|                      |              |  |
|----------------------|--------------|--|
| RC Sel x XT1 3p F    | 1SDA067123R1 |  |
| RC Sel x XT1 4p F    | 1SDA067125R1 |  |
| RC Sel x XT2 4p F    | 1SDA067126R1 |  |
| RC Sel x XT3 3p F    | 1SDA067128R1 |  |
| RC Sel x XT3 4p F    | 1SDA067130R1 |  |
| RC Sel x XT4 4p F    | 1SDA067131R1 |  |
| RC 222/5 for T5 4p F | 1SDA054955R1 |  |



# Power distribution circuit breakers

## XT1 ... XT4 & T1 ... T7 accessories



### Shrouds and terminals

#### Product Hierarchy 3000006

|                                           | Order Code   | Price |
|-------------------------------------------|--------------|-------|
| <b>High shields</b>                       |              |       |
| XT1 3P High Terminal shields (Pair) - HTC | 1SDA066664R1 |       |
| XT1 4P High Terminal shields (Pair) - HTC | 1SDA066665R1 |       |
| XT2 3P High Terminal shields (Pair) - HTC | 1SDA066666R1 |       |
| XT2 4P High Terminal shields (Pair) - HTC | 1SDA066667R1 |       |
| XT3 3P High Terminal shields (Pair) - HTC | 1SDA066668R1 |       |
| XT3 4P High Terminal shields (Pair) - HTC | 1SDA066669R1 |       |
| XT4 3P High Terminal shields (Pair) - HTC | 1SDA066670R1 |       |
| XT4 4P High Terminal shields (Pair) - HTC | 1SDA066671R1 |       |
| T5 3P High Terminal Shields (Pair)        | 1SDA054960R1 |       |
| T5 4P High Terminal Shields (Pair)        | 1SDA054961R1 |       |
| T6 3P High Terminal Shields (Pair)        | 1SDA014040R1 |       |
| T6 4P High Terminal Shields (Pair)        | 1SDA014041R1 |       |
| T7/T7M 3P High Terminal Shields (Pair)    | 1SDA063091R1 |       |
| T7/T7M 4P High Terminal Shields (Pair)    | 1SDA063092R1 |       |
| <b>Low shields</b>                        |              |       |
| XT1 3P Low Terminal shields (Pair) - HTC  | 1SDA066655R1 |       |
| XT1 4P Low Terminal shields (Pair) - HTC  | 1SDA066656R1 |       |
| XT2 3P Low Terminal shields (Pair) - HTC  | 1SDA066657R1 |       |
| XT2 4P Low Terminal shields (Pair) - HTC  | 1SDA066659R1 |       |
| XT3 3P Low Terminal shields (Pair) - HTC  | 1SDA066660R1 |       |
| XT3 4P Low Terminal shields (Pair) - HTC  | 1SDA066661R1 |       |
| XT4 3P Low Terminal shields (Pair) - HTC  | 1SDA066662R1 |       |
| XT4 4P Low Terminal shields (Pair) - HTC  | 1SDA066663R1 |       |
| T5 3P Low Terminal Shields (Pair)         | 1SDA054968R1 |       |
| T5 4P Low Terminal Shields (Pair)         | 1SDA054969R1 |       |
| T6 3P Low Terminal Shields (Pair)         | 1SDA014038R1 |       |
| T6 4P Low Terminal Shields (Pair)         | 1SDA014039R1 |       |
| T7/T7M 3P Low Terminal Shields (Pair)     | 1SDA063093R1 |       |
| T7/T7M 4P Low Terminal Shields (Pair)     | 1SDA063094R1 |       |
| <b>Phase barriers</b>                     |              |       |
| PB100 T4-5-T7-X1 3p PART.DIV.PHA.LOW      | 1SDA054970R1 |       |
| PB100 T4-5-T7-X1 4p PART.DIV.PHA.LOW      | 1SDA054971R1 |       |
| PB200 T4-5-7-T7M-X1 3p PART.DIV.PHA.HIGH  | 1SDA054972R1 |       |
| PB200 T4-5-7-T7M-X1 4p PART.DIV.PHA.HIGH  | 1SDA054973R1 |       |
| <b>Extended front terminals</b>           |              |       |
| KIT EF XT1 3pcs                           | 1SDA066865R1 |       |
| KIT EF XT2 3pcs                           | 1SDA066869R1 |       |
| KIT EF XT3 3pcs                           | 1SDA066873R1 |       |
| KIT EF XT4 3pcs                           | 1SDA066877R1 |       |
| KIT EF T5 3pcs                            | 1SDA055036R1 |       |
| KIT EF T6 630 3pcs                        | 1SDA023379R1 |       |
| KIT EF T6 800 3pcs                        | 1SDA023383R1 |       |
| KIT EF T7-T7M-X1 3pcs                     | 1SDA063103R1 |       |
| KIT EF XT1 4pcs                           | 1SDA066866R1 |       |
| KIT EF XT2 4pcs                           | 1SDA066870R1 |       |
| KIT EF XT3 4pcs                           | 1SDA066874R1 |       |
| KIT EF XT4 4pcs                           | 1SDA066878R1 |       |
| KIT EF T5 4pcs                            | 1SDA055037R1 |       |
| KIT EF T6 630 4pcs                        | 1SDA023389R1 |       |
| KIT EF T6 800 4pcs                        | 1SDA023393R1 |       |
| KIT EF T7-T7M-X1 4pcs                     | 1SDA063104R1 |       |

# Power distribution circuit breakers

## XT1 ... XT4 & T1 ... T7 accessories

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### Shrouds and terminals

#### Product Hierarchy 3000006

| Terminals for CuAl cables                       | Order Code   | Price |
|-------------------------------------------------|--------------|-------|
| FC CuAl 1x35...95mm <sup>2</sup> XT1 3pcs       | 1SDA067155R1 |       |
| FC CuAl 1x2.5...95mm <sup>2</sup> XT2 3pcs      | 1SDA067163R1 |       |
| FC CuAl 2x35...95mm <sup>2</sup> XT2 3pcs       | 1SDA067175R1 |       |
| FC CuAl 1x70...185mm <sup>2</sup> XT2 3pcs      | 1SDA067167R1 |       |
| FC CuAl 2x35...150mm <sup>2</sup> XT3 3pcs      | 1SDA067187R1 |       |
| FC CuAl 1x90...185mm <sup>2</sup> XT3 3pcs      | 1SDA067179R1 |       |
| FC CuAl 1x150...240mm <sup>2</sup> XT3 3pcs+ADP | 1SDA067183R1 |       |
| FC CuAl 1x2.5...185mm <sup>2</sup> XT4 3pcs     | 1SDA067191R1 |       |
| FC CuAl 2x35...150mm <sup>2</sup> XT4 3pcs      | 1SDA067199R1 |       |
| FC CuAl 1x2.5...185mm <sup>2</sup> XT4 3pcs     | 1SDA067191R1 |       |
| FC CuAl 2x120mm <sup>2</sup> T5 400 3pcs        | 1SDA055028R1 |       |
| FC CuAl 1x240mm <sup>2</sup> T5 400 3pcs        | 1SDA055020R1 |       |
| FC CuAl 1x300mm <sup>2</sup> T5 400 3pcs        | 1SDA055024R1 |       |
| FC CuAl 2x240mm <sup>2</sup> T5 630 3pcs        | 1SDA055032R1 |       |
| FC CuAl 2x240mm <sup>2</sup> T6 630-S6 630 3pcs | 1SDA023380R1 |       |
| FC CuAl 3x185mm <sup>2</sup> T6 800-S6 800 3pcs | 1SDA023384R1 |       |
| FC CuAl 4x150mm <sup>2</sup> T6 1000 3 pcs      | 1SDA060687R1 |       |
| FC CuAl 4x240mm <sup>2</sup> T7-T7M 1250 3pcs   | 1SDA063112R1 |       |
| FC CuAl 1x35...95mm <sup>2</sup> XT1 4pcs       | 1SDA067156R1 |       |
| FC CuAl 1x2.5...95mm <sup>2</sup> XT2 4pcs      | 1SDA067164R1 |       |
| FC CuAl 2x35...95mm <sup>2</sup> XT2 4pcs       | 1SDA067176R1 |       |
| FC CuAl 1x70...185mm <sup>2</sup> XT2 4pcs      | 1SDA067168R1 |       |
| FC CuAl 2x35...150mm <sup>2</sup> XT3 4pcs      | 1SDA067188R1 |       |
| FC CuAl 1x90...185mm <sup>2</sup> XT3 4pcs      | 1SDA067180R1 |       |
| FC CuAl 1x150...240mm <sup>2</sup> XT3 4pcs+ADP | 1SDA067184R1 |       |
| FC CuAl 1x50mm <sup>2</sup> T4 4pcs             | 1SDA054985R1 |       |
| FC CuAl 2x35...150mm <sup>2</sup> XT4 4pcs      | 1SDA067200R1 |       |
| FC CuAl 1x2.5...185mm <sup>2</sup> XT4 4pcs     | 1SDA067192R1 |       |
| FC CuAl 2x120mm <sup>2</sup> T5 400 4pcs        | 1SDA055029R1 |       |
| FC CuAl 1x240mm <sup>2</sup> T5 400 4pcs        | 1SDA055021R1 |       |
| FC CuAl 1x300mm <sup>2</sup> T5 400 4pcs        | 1SDA055025R1 |       |
| FC CuAl 2x240mm <sup>2</sup> T5 630 4pcs        | 1SDA055033R1 |       |
| FC CuAl 2x240mm <sup>2</sup> T6 630-S6 630 4pcs | 1SDA023390R1 |       |
| FC CuAl 3x185mm <sup>2</sup> T6 800-S6 800 4pcs | 1SDA023394R1 |       |
| FC CuAl 4x150mm <sup>2</sup> T6 1000 4pcs       | 1SDA060688R1 |       |
| FC CuAl 4x240mm <sup>2</sup> T7-T7M 1250 4pcs   | 1SDA063113R1 |       |
| <b>Front terminals</b>                          |              |       |
| KIT F XT1 3pcs                                  | 1SDA066849R1 |       |
| KIT F XT2 3pcs                                  | 1SDA066853R1 |       |
| KIT F XT3 3pcs                                  | 1SDA066857R1 |       |
| KIT F XT4 3pcs                                  | 1SDA066861R1 |       |
| KIT F T5 3pcs                                   | 1SDA055012R1 |       |
| KIT F T6 630/800 - S6 630/800 3pcs              | 1SDA060421R1 |       |
| KIT F T7-T7M 3pcs                               | 1SDA063099R1 |       |
| KIT F XT1 4pcs                                  | 1SDA066850R1 |       |
| KIT F XT2 4pcs                                  | 1SDA066854R1 |       |
| KIT F XT3 4pcs                                  | 1SDA066858R1 |       |
| KIT F XT4 4pcs                                  | 1SDA066862R1 |       |
| KIT F T5 4pcs                                   | 1SDA055013R1 |       |
| KIT F T6 630/800 - S6 630/800 4pcs              | 1SDA060422R1 |       |
| KIT F T7-T7M 4pcs                               | 1SDA063100R1 |       |

# Power distribution circuit breakers

## XT1 ... XT4 & T1 ... T7 accessories

| Shrouds and terminals                  | Product Hierarchy 3000006 |       |
|----------------------------------------|---------------------------|-------|
|                                        | Order Code                | Price |
| <b>Extended spread front terminals</b> |                           |       |
| KIT ES XT2 3pcs                        | 1SDA066893R1              |       |
| KIT ES XT3 3pcs                        | 1SDA066897R1              |       |
| KIT ES XT4 3pcs                        | 1SDA066901R1              |       |
| KIT ES T5 3pcs                         | 1SDA055040R1              |       |
| KIT ES UP T6 - S6 3pcs                 | 1SDA050692R1              |       |
| KIT ES LO T6 - S6 3pcs                 | 1SDA050704R1              |       |
| KIT ES T7-T7M 3pcs UPP                 | 1SDA063107R1              |       |
| KIT ES T7-T7M 3pcs LOW                 | 1SDA063108R1              |       |
| <b>Extended spread front terminals</b> |                           |       |
| KIT ES XT2 4pcs                        | 1SDA066894R1              |       |
| KIT ES XT3 4pcs                        | 1SDA066898R1              |       |
| KIT ES XT4 4pcs                        | 1SDA066902R1              |       |
| KIT ES T5 4pcs                         | 1SDA055041R1              |       |
| KIT ES T6 - S6 4pcs                    | 1SDA050693R1              |       |
| KIT ES T7-T7M 4pcs                     | 1SDA063109R1              |       |
| <b>Terminals for Cu cables</b>         |                           |       |
| KIT FC Cu XT2 3pcs                     | 1SDA066909R1              |       |
| KIT FC Cu XT3 3pcs                     | 1SDA066913R1              |       |
| KIT FC Cu XT4 3pcs                     | 1SDA066917R1              |       |
| KIT FC Cu 1x240mm2 T5 400 3pcs         | 1SDA055016R1              |       |
| Kit FC Cu 2x240mm2 T5 630 3pcs         | 1SDA055364R1              |       |
| KIT RC 2x150mm2 T6 630 3pcs            | 1SDA023381R1              |       |
| KIT 1/2 3p F F>F RC T6 800             | 1SDA023385R1              |       |
| KIT FC Cu XT2 4pcs                     | 1SDA066910R1              |       |
| KIT FC Cu XT3 4pcs                     | 1SDA066914R1              |       |
| KIT FC Cu XT4 4pcs                     | 1SDA066918R1              |       |
| KIT FC Cu 1x240mm2 T5 400 4pcs         | 1SDA055017R1              |       |
| Kit FC Cu 2x240mm2 T5 630 4pcs         | 1SDA055365R1              |       |
| KIT RC 2x150mm2 T6 630 4pcs            | 1SDA023391R1              |       |
| KIT RC 3x240mm2 T6 800 4pcs            | 1SDA023395R1              |       |
| <b>Rear adjustable terminals</b>       |                           |       |
| KIT R XT2 3pcs                         | 1SDA066941R1              |       |
| KIT R XT3 3pcs                         | 1SDA066945R1              |       |
| KIT R XT4 3pcs                         | 1SDA066949R1              |       |
| KIT R T5 3pcs                          | 1SDA055044R1              |       |
| KIT R T6 3pcs                          | 1SDA060425R1              |       |
| KIT R T7-T7M 3pcs                      | 1SDA063116R1              |       |
| KIT R XT2 4pcs                         | 1SDA066942R1              |       |
| KIT R XT3 4pcs                         | 1SDA066946R1              |       |
| KIT R XT4 4pcs                         | 1SDA066950R1              |       |
| KIT R T5 4pcs                          | 1SDA055045R1              |       |
| KIT R T6 4pcs                          | 1SDA060426R1              |       |
| <b>Rear horizontal connectors</b>      |                           |       |
| KIT HR T7-T7M 3pcs                     | 1SDA063120R1              |       |
| KIT HR T7-T7M 4pcs                     | 1SDA063121R1              |       |
| <b>Rear vertical connectors</b>        |                           |       |
| KIT VR T7-T7M 3pcs                     | 1SDA063124R1              |       |
| KIT VR T7-T7M 4pcs                     | 1SDA063125R1              |       |

# Power distribution circuit breakers XT1 ... XT4 & T1 ... T7 accessories

## Product Hierarchy 3000006

### Front display unit

|                                          | Order Code   | Price |
|------------------------------------------|--------------|-------|
| FDU T4-T5 front display unit x PR222-223 | 1SDA055051R1 |       |
| FDU T6 front display unit x PR222-PR223  | 1SDA060429R1 |       |

### Automatic transfer switches

|                                          |              |  |
|------------------------------------------|--------------|--|
| ATS021 DISP.COMMUT.AUT.S/D MULTI TENS    | 1SDA065523R1 |  |
| ATS022 DISP.COMMUT.AUT.C/D CONT.AV.M/TEN | 1SDA065524R1 |  |

### Accessories for electronic trip units

|                                               |              |  |
|-----------------------------------------------|--------------|--|
| HMI030 switch display unit T4..T7             | 1SDA063143R1 |  |
| PR330/V measuring module PR332 T7             | 1SDA063144R1 |  |
| PR330/D-M communication module PR332-3 T7-T7M | 1SDA063145R1 |  |
| PR330/R driving unit PR332-3 T7-T7M           | 1SDA063146R1 |  |
| PR030/B battery unit E1/6-T7-T7M-X1           | 1SDA058258R1 |  |

### Test and Configurator Unit

|                 |              |  |
|-----------------|--------------|--|
| Ekip TT XT2-XT4 | 1SDA066988R1 |  |
| Ekip T&P        | 1SDA066989R1 |  |

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# Emax air circuit breakers

## X1N ACBs & X1B/MS disconnectors



### Ratings @ 400V

|        | Icu  | Ics  |
|--------|------|------|
| X1N    | 50kA | 100% |
| X1B/MS | 42kA | 100% |



Full range of product and technical information place this part number in a search engine and download  
**1SDC200009D0203**

| X1N<br>PR331/P |                |            | Product Hierarchy 2900003      |       |              |       |                |       |              |       |
|----------------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|                |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
| Model          | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|                |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| X1N800         | 800            | LSI        | 1SDA062282R1                   |       | 1SDA062291R1 |       | 1SDA062300R1   |       | 1SDA062309R1 |       |
|                |                | LSIG       | 1SDA062283R1                   |       | 1SDA062292R1 |       | 1SDA062301R1   |       | 1SDA062310R1 |       |
| X1N1000        | 1000           | LSI        | 1SDA062390R1                   |       | 1SDA062399R1 |       | 1SDA062408R1   |       | 1SDA062417R1 |       |
|                |                | LSIG       | 1SDA062391R1                   |       | 1SDA062400R1 |       | 1SDA062409R1   |       | 1SDA062418R1 |       |
| X1N1250        | 1250           | LSI        | 1SDA062498R1                   |       | 1SDA062507R1 |       | 1SDA062516R1   |       | 1SDA062525R1 |       |
|                |                | LSIG       | 1SDA062499R1                   |       | 1SDA062508R1 |       | 1SDA062517R1   |       | 1SDA062526R1 |       |
| X1N1600        | 1600           | LSI        | 1SDA062606R1                   |       | 1SDA062615R1 |       | 1SDA062624R1   |       | 1SDA062633R1 |       |
|                |                | LSIG       | 1SDA062607R1                   |       | 1SDA062616R1 |       | 1SDA062625R1   |       | 1SDA062634R1 |       |

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| X1N<br>PR332/P |                |            | Product Hierarchy 2900003      |       |              |       |                |       |              |       |
|----------------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|                |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
| Model          | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|                |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| X1N800         | 800            | LSI        | 1SDA062285R1                   |       | 1SDA062294R1 |       | 1SDA062303R1   |       | 1SDA062312R1 |       |
|                |                | LSIG       | 1SDA062286R1                   |       | 1SDA062295R1 |       | 1SDA062304R1   |       | 1SDA062313R1 |       |
| X1N1000        | 1000           | LSI        | 1SDA062393R1                   |       | 1SDA062402R1 |       | 1SDA062411R1   |       | 1SDA062420R1 |       |
|                |                | LSIG       | 1SDA062394R1                   |       | 1SDA062403R1 |       | 1SDA062412R1   |       | 1SDA062421R1 |       |
| X1N1250        | 1250           | LSI        | 1SDA062501R1                   |       | 1SDA062510R1 |       | 1SDA062519R1   |       | 1SDA062528R1 |       |
|                |                | LSIG       | 1SDA062502R1                   |       | 1SDA062511R1 |       | 1SDA062520R1   |       | 1SDA062529R1 |       |
| X1N1600        | 1600           | LSI        | 1SDA062609R1                   |       | 1SDA062618R1 |       | 1SDA062627R1   |       | 1SDA062636R1 |       |
|                |                | LSIG       | 1SDA062610R1                   |       | 1SDA062619R1 |       | 1SDA062628R1   |       | 1SDA062637R1 |       |

| X1B/MS<br>Icw 42kA |                | Product Hierarchy 2900003      |       |              |       |                |       |              |       |
|--------------------|----------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|                    |                | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
| Model              | Current (A) In | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|                    |                | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| X1B/MS10           | 1000           | 1SDA062052R1                   |       | 1SDA062053R1 |       | 1SDA062054R1   |       | 1SDA062055R1 |       |
| X1B/MS12           | 1250           | 1SDA062056R1                   |       | 1SDA062057R1 |       | 1SDA062058R1   |       | 1SDA062059R1 |       |
| X1B/MS16           | 1600           | 1SDA062060R1                   |       | 1SDA062061R1 |       | 1SDA062062R1   |       | 1SDA062063R1 |       |

# Emax air circuit breakers

## E1N



Ue 690V  
Ratings @ 415V

|          | Icu  | Ics  | Icw  |      |
|----------|------|------|------|------|
|          |      |      | 1s   | 3s   |
| E1N      | 50kA | 50kA | 50kA | 36kA |
| 4th pole |      | 100% |      |      |



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### E1N 50kA PR121/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E1N800  | 800            | LSI        | 1SDA055697R1                   |       | 1SDA055705R1 |       | 1SDA055713R1   |       | 1SDA055721R1 |       |
|         |                | LSIG       | 1SDA055698R1                   |       | 1SDA055706R1 |       | 1SDA055714R1   |       | 1SDA055722R1 |       |
| E1N1250 | 1250           | LSI        | 1SDA055729R1                   |       | 1SDA055737R1 |       | 1SDA055745R1   |       | 1SDA055753R1 |       |
|         |                | LSIG       | 1SDA055730R1                   |       | 1SDA055738R1 |       | 1SDA055746R1   |       | 1SDA055754R1 |       |
| E1N1600 | 1600           | LSI        | 1SDA055761R1                   |       | 1SDA055769R1 |       | 1SDA055777R1   |       | 1SDA055785R1 |       |
|         |                | LSIG       | 1SDA055762R1                   |       | 1SDA055770R1 |       | 1SDA055778R1   |       | 1SDA055786R1 |       |

### E1N 50kA PR122/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E1N800  | 800            | LSI        | 1SDA055700R1                   |       | 1SDA055708R1 |       | 1SDA055716R1   |       | 1SDA055724R1 |       |
|         |                | LSIG       | 1SDA055701R1                   |       | 1SDA055709R1 |       | 1SDA055717R1   |       | 1SDA055725R1 |       |
| E1N1250 | 1250           | LSI        | 1SDA055732R1                   |       | 1SDA055740R1 |       | 1SDA055748R1   |       | 1SDA055756R1 |       |
|         |                | LSIG       | 1SDA055733R1                   |       | 1SDA055741R1 |       | 1SDA055749R1   |       | 1SDA055757R1 |       |
| E1N1600 | 1600           | LSI        | 1SDA055764R1                   |       | 1SDA055772R1 |       | 1SDA055780R1   |       | 1SDA055788R1 |       |
|         |                | LSIG       | 1SDA055765R1                   |       | 1SDA055773R1 |       | 1SDA055781R1   |       | 1SDA055789R1 |       |

### E1N 50kA PR123/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E1N800  | 800            | LSI        | 1SDA055702R1                   |       | 1SDA055710R1 |       | 1SDA055718R1   |       | 1SDA055726R1 |       |
|         |                | LSIG       | 1SDA055703R1                   |       | 1SDA055711R1 |       | 1SDA055719R1   |       | 1SDA055727R1 |       |
| E1N1250 | 1250           | LSI        | 1SDA055734R1                   |       | 1SDA055742R1 |       | 1SDA055750R1   |       | 1SDA055758R1 |       |
|         |                | LSIG       | 1SDA055735R1                   |       | 1SDA055743R1 |       | 1SDA055751R1   |       | 1SDA055759R1 |       |
| E1N1600 | 1600           | LSI        | 1SDA055766R1                   |       | 1SDA055774R1 |       | 1SDA055782R1   |       | 1SDA055790R1 |       |
|         |                | LSIG       | 1SDA055767R1                   |       | 1SDA055775R1 |       | 1SDA055783R1   |       | 1SDA055791R1 |       |

# Emax air circuit breakers

## E2N



Ue 690V  
Ratings @ 415V

|               | Icu  | Ics  | Icw  |      |
|---------------|------|------|------|------|
|               |      |      | 1s   | 3s   |
| E2N           | 65kA | 65kA | 55kA | 42kA |
| 4th pole 100% |      |      |      |      |



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### E2N 65kA PR121/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E2N1250 | 1250           | LSI        | 1SDA055857R1                   |       | 1SDA055865R1 |       | 1SDA055873R1   |       | 1SDA055881R1 |       |
|         |                | LSIG       | 1SDA055858R1                   |       | 1SDA055866R1 |       | 1SDA055874R1   |       | 1SDA055882R1 |       |
| E2N1600 | 1600           | LSI        | 1SDA055889R1                   |       | 1SDA055897R1 |       | 1SDA055905R1   |       | 1SDA055913R1 |       |
|         |                | LSIG       | 1SDA055890R1                   |       | 1SDA055898R1 |       | 1SDA055906R1   |       | 1SDA055914R1 |       |
| E2N2000 | 2000           | LSI        | 1SDA055921R1                   |       | 1SDA055929R1 |       | 1SDA055937R1   |       | 1SDA055945R1 |       |
|         |                | LSIG       | 1SDA055922R1                   |       | 1SDA055930R1 |       | 1SDA055938R1   |       | 1SDA055946R1 |       |

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### E2N 65kA PR122/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E2N1250 | 1250           | LSI        | 1SDA055860R1                   |       | 1SDA055868R1 |       | 1SDA055876R1   |       | 1SDA055884R1 |       |
|         |                | LSIG       | 1SDA055861R1                   |       | 1SDA055869R1 |       | 1SDA055877R1   |       | 1SDA055885R1 |       |
| E2N1600 | 1600           | LSI        | 1SDA055892R1                   |       | 1SDA055900R1 |       | 1SDA055908R1   |       | 1SDA055916R1 |       |
|         |                | LSIG       | 1SDA055893R1                   |       | 1SDA055901R1 |       | 1SDA055909R1   |       | 1SDA055917R1 |       |
| E2N2000 | 2000           | LSI        | 1SDA055924R1                   |       | 1SDA055932R1 |       | 1SDA055940R1   |       | 1SDA055948R1 |       |
|         |                | LSIG       | 1SDA055925R1                   |       | 1SDA055933R1 |       | 1SDA055941R1   |       | 1SDA055949R1 |       |

### E2N 65kA PR123/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E2N1250 | 1250           | LSI        | 1SDA055862R1                   |       | 1SDA055870R1 |       | 1SDA055878R1   |       | 1SDA055886R1 |       |
|         |                | LSIG       | 1SDA055863R1                   |       | 1SDA055871R1 |       | 1SDA055879R1   |       | 1SDA055887R1 |       |
| E2N1600 | 1600           | LSI        | 1SDA055894R1                   |       | 1SDA055902R1 |       | 1SDA055910R1   |       | 1SDA055918R1 |       |
|         |                | LSIG       | 1SDA055895R1                   |       | 1SDA055903R1 |       | 1SDA055911R1   |       | 1SDA055919R1 |       |
| E2N2000 | 2000           | LSI        | 1SDA055926R1                   |       | 1SDA055934R1 |       | 1SDA055942R1   |       | 1SDA055950R1 |       |
|         |                | LSIG       | 1SDA055927R1                   |       | 1SDA055935R1 |       | 1SDA055943R1   |       | 1SDA055951R1 |       |

# Emax air circuit breakers

## E2S



Ue 690V  
Ratings @ 415V

|     | Icu  | Ics  | Icw  |      |
|-----|------|------|------|------|
|     |      |      | 1s   | 3s   |
| E2S | 85kA | 85kA | 65kA | 50kA |

4th pole 100%



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### E2S 85kA PR121/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E2S800  | 800            | LSI        | 1SDA058283R1                   |       | 1SDA058291R1 |       | 1SDA058299R1   |       | 1SDA058307R1 |       |
|         |                | LSIG       | 1SDA058284R1                   |       | 1SDA058292R1 |       | 1SDA058300R1   |       | 1SDA058308R1 |       |
| E2S1250 | 1250           | LSI        | 1SDA055953R1                   |       | 1SDA055961R1 |       | 1SDA055969R1   |       | 1SDA055881R1 |       |
|         |                | LSIG       | 1SDA055954R1                   |       | 1SDA055962R1 |       | 1SDA055970R1   |       | 1SDA055882R1 |       |
| E2S1600 | 1600           | LSI        | 1SDA055985R1                   |       | 1SDA055993R1 |       | 1SDA056001R1   |       | 1SDA056009R1 |       |
|         |                | LSIG       | 1SDA055986R1                   |       | 1SDA055994R1 |       | 1SDA056002R1   |       | 1SDA056010R1 |       |
| E2S2000 | 2000           | LSI        | 1SDA056017R1                   |       | 1SDA056025R1 |       | 1SDA056033R1   |       | 1SDA056041R1 |       |
|         |                | LSIG       | 1SDA056018R1                   |       | 1SDA056026R1 |       | 1SDA056034R1   |       | 1SDA056042R1 |       |

### E2S 85kA PR122/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E2S800  | 800            | LSI        | 1SDA058286R1                   |       | 1SDA058294R1 |       | 1SDA058302R1   |       | 1SDA058310R1 |       |
|         |                | LSIG       | 1SDA058287R1                   |       | 1SDA058295R1 |       | 1SDA058303R1   |       | 1SDA058311R1 |       |
| E2S1250 | 1250           | LSI        | 1SDA055956R1                   |       | 1SDA055964R1 |       | 1SDA055972R1   |       | 1SDA055980R1 |       |
|         |                | LSIG       | 1SDA055957R1                   |       | 1SDA055965R1 |       | 1SDA055973R1   |       | 1SDA055981R1 |       |
| E2S1600 | 1600           | LSI        | 1SDA055988R1                   |       | 1SDA055996R1 |       | 1SDA056004R1   |       | 1SDA056012R1 |       |
|         |                | LSIG       | 1SDA055989R1                   |       | 1SDA055997R1 |       | 1SDA056005R1   |       | 1SDA056013R1 |       |
| E2S2000 | 2000           | LSI        | 1SDA056020R1                   |       | 1SDA056028R1 |       | 1SDA056036R1   |       | 1SDA056044R1 |       |
|         |                | LSIG       | 1SDA056021R1                   |       | 1SDA056029R1 |       | 1SDA056037R1   |       | 1SDA056045R1 |       |

### E2S 85kA PR123/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E2S800  | 800            | LSI        | 1SDA058288R1                   |       | 1SDA058296R1 |       | 1SDA058304R1   |       | 1SDA058312R1 |       |
|         |                | LSIG       | 1SDA058289R1                   |       | 1SDA058297R1 |       | 1SDA058305R1   |       | 1SDA058313R1 |       |
| E2S1250 | 1250           | LSI        | 1SDA055958R1                   |       | 1SDA055966R1 |       | 1SDA055974R1   |       | 1SDA055982R1 |       |
|         |                | LSIG       | 1SDA055959R1                   |       | 1SDA055967R1 |       | 1SDA055975R1   |       | 1SDA055983R1 |       |
| E2S1600 | 1600           | LSI        | 1SDA055990R1                   |       | 1SDA055998R1 |       | 1SDA056006R1   |       | 1SDA056014R1 |       |
|         |                | LSIG       | 1SDA055991R1                   |       | 1SDA055999R1 |       | 1SDA056007R1   |       | 1SDA056015R1 |       |
| E2S2000 | 2000           | LSI        | 1SDA056022R1                   |       | 1SDA056030R1 |       | 1SDA056038R1   |       | 1SDA056046R1 |       |
|         |                | LSIG       | 1SDA056023R1                   |       | 1SDA056031R1 |       | 1SDA056039R1   |       | 1SDA056047R1 |       |

# Emax air circuit breakers

## E3S



Ue 690V  
Ratings @ 415V

|               | Icu  | Ics  | Icw  |      |
|---------------|------|------|------|------|
|               |      |      | 1s   | 3s   |
| E3S           | 75kA | 75kA | 75kA | 65kA |
| 4th pole 100% |      |      |      |      |



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### E3S 75kA PR121/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E3S1250 | 1250           | LSI        | 1SDA056177R1                   |       | 1SDA056185R1 |       | 1SDA056193R1   |       | 1SDA056201R1 |       |
|         |                | LSIG       | 1SDA056178R1                   |       | 1SDA056186R1 |       | 1SDA056194R1   |       | 1SDA056202R1 |       |
| E3S1600 | 1600           | LSI        | 1SDA056209R1                   |       | 1SDA056217R1 |       | 1SDA056225R1   |       | 1SDA056233R1 |       |
|         |                | LSIG       | 1SDA056210R1                   |       | 1SDA056218R1 |       | 1SDA056226R1   |       | 1SDA056234R1 |       |
| E3S2000 | 2000           | LSI        | 1SDA056241R1                   |       | 1SDA056249R1 |       | 1SDA056257R1   |       | 1SDA056265R1 |       |
|         |                | LSIG       | 1SDA056242R1                   |       | 1SDA056250R1 |       | 1SDA056258R1   |       | 1SDA056266R1 |       |
| E3S2500 | 2500           | LSI        | 1SDA056273R1                   |       | 1SDA056281R1 |       | 1SDA056289R1   |       | 1SDA056297R1 |       |
|         |                | LSIG       | 1SDA056274R1                   |       | 1SDA056282R1 |       | 1SDA056290R1   |       | 1SDA056298R1 |       |
| E3S3200 | 3200           | LSI        | 1SDA056305R1                   |       | 1SDA056313R1 |       | 1SDA056321R1   |       | 1SDA056329R1 |       |
|         |                | LSIG       | 1SDA056306R1                   |       | 1SDA056314R1 |       | 1SDA056322R1   |       | 1SDA056330R1 |       |

3

### E3S 75kA PR122/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E3S1250 | 1250           | LSI        | 1SDA056372R1                   |       | 1SDA056380R1 |       | 1SDA056196R1   |       | 1SDA056204R1 |       |
|         |                | LSIG       | 1SDA056373R1                   |       | 1SDA056381R1 |       | 1SDA056197R1   |       | 1SDA056205R1 |       |
| E3S1600 | 1600           | LSI        | 1SDA056212R1                   |       | 1SDA056220R1 |       | 1SDA056228R1   |       | 1SDA056236R1 |       |
|         |                | LSIG       | 1SDA056213R1                   |       | 1SDA056221R1 |       | 1SDA056229R1   |       | 1SDA056237R1 |       |
| E3S2000 | 2000           | LSI        | 1SDA056244R1                   |       | 1SDA056252R1 |       | 1SDA056260R1   |       | 1SDA056268R1 |       |
|         |                | LSIG       | 1SDA056245R1                   |       | 1SDA056253R1 |       | 1SDA056261R1   |       | 1SDA056269R1 |       |
| E3S2500 | 2500           | LSI        | 1SDA056276R1                   |       | 1SDA056284R1 |       | 1SDA056292R1   |       | 1SDA056300R1 |       |
|         |                | LSIG       | 1SDA056277R1                   |       | 1SDA056285R1 |       | 1SDA056293R1   |       | 1SDA056301R1 |       |
| E3S3200 | 3200           | LSI        | 1SDA056308R1                   |       | 1SDA056316R1 |       | 1SDA056324R1   |       | 1SDA056332R1 |       |
|         |                | LSIG       | 1SDA056309R1                   |       | 1SDA056317R1 |       | 1SDA056325R1   |       | 1SDA056333R1 |       |

### E3S 75kA PR123/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E3S1250 | 1250           | LSI        | 1SDA056182R1                   |       | 1SDA056190R1 |       | 1SDA056198R1   |       | 1SDA056206R1 |       |
|         |                | LSIG       | 1SDA056183R1                   |       | 1SDA056191R1 |       | 1SDA056199R1   |       | 1SDA056207R1 |       |
| E3S1600 | 1600           | LSI        | 1SDA056214R1                   |       | 1SDA056222R1 |       | 1SDA056230R1   |       | 1SDA056238R1 |       |
|         |                | LSIG       | 1SDA056215R1                   |       | 1SDA056223R1 |       | 1SDA056231R1   |       | 1SDA056239R1 |       |
| E3S2000 | 2000           | LSI        | 1SDA056246R1                   |       | 1SDA056254R1 |       | 1SDA056262R1   |       | 1SDA056270R1 |       |
|         |                | LSIG       | 1SDA056247R1                   |       | 1SDA056255R1 |       | 1SDA056263R1   |       | 1SDA056271R1 |       |
| E3S2500 | 2500           | LSI        | 1SDA056278R1                   |       | 1SDA056286R1 |       | 1SDA056294R1   |       | 1SDA056302R1 |       |
|         |                | LSIG       | 1SDA056279R1                   |       | 1SDA056287R1 |       | 1SDA056295R1   |       | 1SDA056303R1 |       |
| E3S3200 | 3200           | LSI        | 1SDA056310R1                   |       | 1SDA056318R1 |       | 1SDA056326R1   |       | 1SDA056334R1 |       |
|         |                | LSIG       | 1SDA056311R1                   |       | 1SDA056319R1 |       | 1SDA056327R1   |       | 1SDA056335R1 |       |

# Emax air circuit breakers

## E3H



Ue 690V  
Ratings @ 415V

|               | Icu   | Ics  | Icw  |      |
|---------------|-------|------|------|------|
|               |       |      | 1s   | 3s   |
| E3H           | 100kA | 85kA | 75kA | 65kA |
| 4th pole 100% |       |      |      |      |



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### E3H 100kA PR121/P

#### Product Hierarchy 2900003

| Model   | Current (A) In | Protection | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|         |                |            | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E3H800  | 800            | LSI        | 1SDA056337R1                   |       | 1SDA056345R1 |       | 1SDA056353R1   |       | 1SDA056361R1 |       |
|         |                | LSIG       | 1SDA056338R1                   |       | 1SDA056346R1 |       | 1SDA056354R1   |       | 1SDA056362R1 |       |
| E3H1250 | 1250           | LSI        | 1SDA056369R1                   |       | 1SDA056377R1 |       | 1SDA056385R1   |       | 1SDA056393R1 |       |
|         |                | LSIG       | 1SDA056370R1                   |       | 1SDA056378R1 |       | 1SDA056386R1   |       | 1SDA056394R1 |       |
| E3H1600 | 1600           | LSI        | 1SDA056401R1                   |       | 1SDA056409R1 |       | 1SDA056417R1   |       | 1SDA056425R1 |       |
|         |                | LSIG       | 1SDA056402R1                   |       | 1SDA056410R1 |       | 1SDA056418R1   |       | 1SDA056426R1 |       |
| E3H2000 | 2000           | LSI        | 1SDA056433R1                   |       | 1SDA056441R1 |       | 1SDA056449R1   |       | 1SDA056457R1 |       |
|         |                | LSIG       | 1SDA056434R1                   |       | 1SDA056442R1 |       | 1SDA056450R1   |       | 1SDA056458R1 |       |
| E3H2500 | 2500           | LSI        | 1SDA056465R1                   |       | 1SDA056473R1 |       | 1SDA056481R1   |       | 1SDA056489R1 |       |
|         |                | LSIG       | 1SDA056466R1                   |       | 1SDA056474R1 |       | 1SDA056482R1   |       | 1SDA056490R1 |       |
| E3H3200 | 3200           | LSI        | 1SDA056497R1                   |       | 1SDA056505R1 |       | 1SDA056513R1   |       | 1SDA056521R1 |       |
|         |                | LSIG       | 1SDA056498R1                   |       | 1SDA056506R1 |       | 1SDA056514R1   |       | 1SDA056522R1 |       |

### E3H 100kA PR122/P

#### Product Hierarchy 2900003

| Model   | Current (A) In | Protection | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|         |                |            | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E3H800  | 800            | LSI        | 1SDA056340R1                   |       | 1SDA056348R1 |       | 1SDA056356R1   |       | 1SDA056364R1 |       |
|         |                | LSIG       | 1SDA056341R1                   |       | 1SDA056349R1 |       | 1SDA056357R1   |       | 1SDA056365R1 |       |
| E3H1250 | 1250           | LSI        | 1SDA056373R1                   |       | 1SDA056180R1 |       | 1SDA056389R1   |       | 1SDA056396R1 |       |
|         |                | LSIG       | 1SDA056404R1                   |       | 1SDA056181R1 |       | 1SDA056420R1   |       | 1SDA056397R1 |       |
| E3H1600 | 1600           | LSI        | 1SDA056405R1                   |       | 1SDA056412R1 |       | 1SDA056421R1   |       | 1SDA056428R1 |       |
|         |                | LSIG       | 1SDA056436R1                   |       | 1SDA056413R1 |       | 1SDA056452R1   |       | 1SDA056429R1 |       |
| E3H2000 | 2000           | LSI        | 1SDA056437R1                   |       | 1SDA056444R1 |       | 1SDA056453R1   |       | 1SDA056460R1 |       |
|         |                | LSIG       | 1SDA056468R1                   |       | 1SDA056445R1 |       | 1SDA056484R1   |       | 1SDA056461R1 |       |
| E3H2500 | 2500           | LSI        | 1SDA056469R1                   |       | 1SDA056476R1 |       | 1SDA056485R1   |       | 1SDA056492R1 |       |
|         |                | LSIG       | 1SDA056500R1                   |       | 1SDA056477R1 |       | 1SDA056516R1   |       | 1SDA056493R1 |       |
| E3H3200 | 3200           | LSI        | 1SDA056501R1                   |       | 1SDA056508R1 |       | 1SDA056517R1   |       | 1SDA056524R1 |       |
|         |                | LSIG       | 1SDA056502R1                   |       | 1SDA056509R1 |       | 1SDA056517R1   |       | 1SDA056525R1 |       |

### E3H 100kA PR123/P

#### Product Hierarchy 2900003

| Model   | Current (A) In | Protection | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|         |                |            | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E3H800  | 800            | LSI        | 1SDA056342R1                   |       | 1SDA056350R1 |       | 1SDA056358R1   |       | 1SDA056366R1 |       |
|         |                | LSIG       | 1SDA056343R1                   |       | 1SDA056351R1 |       | 1SDA056359R1   |       | 1SDA056367R1 |       |
| E3H1250 | 1250           | LSI        | 1SDA056182R1                   |       | 1SDA056190R1 |       | 1SDA056390R1   |       | 1SDA056398R1 |       |
|         |                | LSIG       | 1SDA056183R1                   |       | 1SDA056191R1 |       | 1SDA056391R1   |       | 1SDA056399R1 |       |
| E3H1600 | 1600           | LSI        | 1SDA056406R1                   |       | 1SDA056414R1 |       | 1SDA056422R1   |       | 1SDA056430R1 |       |
|         |                | LSIG       | 1SDA056407R1                   |       | 1SDA056415R1 |       | 1SDA056423R1   |       | 1SDA056431R1 |       |
| E3H2000 | 2000           | LSI        | 1SDA056438R1                   |       | 1SDA056446R1 |       | 1SDA056454R1   |       | 1SDA056462R1 |       |
|         |                | LSIG       | 1SDA056439R1                   |       | 1SDA056447R1 |       | 1SDA056455R1   |       | 1SDA056463R1 |       |
| E3H2500 | 2500           | LSI        | 1SDA056470R1                   |       | 1SDA056478R1 |       | 1SDA056486R1   |       | 1SDA056494R1 |       |
|         |                | LSIG       | 1SDA056471R1                   |       | 1SDA056479R1 |       | 1SDA056487R1   |       | 1SDA056495R1 |       |
| E3H3200 | 3200           | LSI        | 1SDA056502R1                   |       | 1SDA056510R1 |       | 1SDA056518R1   |       | 1SDA056526R1 |       |
|         |                | LSIG       | 1SDA056503R1                   |       | 1SDA056511R1 |       | 1SDA056519R1   |       | 1SDA056527R1 |       |

# Emax air circuit breakers

## E4H



Ue 690V  
Ratings @ 415V

|          | Icu   | Ics   | Icw   |      |
|----------|-------|-------|-------|------|
|          |       |       | 1s    | 3s   |
| E4H      | 100kA | 100kA | 100kA | 75kA |
| 4th pole |       | 50%   |       |      |



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### E4H 100kA PR121/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E4H3200 | 3200           | LSI        | 1SDA056817R1                   |       | 1SDA056825R1 |       | 1SDA056833R1   |       | 1SDA056841R1 |       |
|         |                | LSIG       | 1SDA056818R1                   |       | 1SDA056826R1 |       | 1SDA056834R1   |       | 1SDA056842R1 |       |
| E4H4000 | 4000           | LSI        | 1SDA056849R1                   |       | 1SDA056857R1 |       | 1SDA056865R1   |       | 1SDA056873R1 |       |
|         |                | LSIG       | 1SDA056850R1                   |       | 1SDA056858R1 |       | 1SDA056866R1   |       | 1SDA056874R1 |       |

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### E4H 100kA PR122/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E4H3200 | 3200           | LSI        | 1SDA056820R1                   |       | 1SDA056828R1 |       | 1SDA056836R1   |       | 1SDA056844R1 |       |
|         |                | LSIG       | 1SDA056821R1                   |       | 1SDA056829R1 |       | 1SDA056837R1   |       | 1SDA056845R1 |       |
| E4H4000 | 4000           | LSI        | 1SDA056852R1                   |       | 1SDA056860R1 |       | 1SDA056868R1   |       | 1SDA056876R1 |       |
|         |                | LSIG       | 1SDA056853R1                   |       | 1SDA056861R1 |       | 1SDA056869R1   |       | 1SDA056877R1 |       |

### E4H 100kA PR123/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E4H3200 | 3200           | LSI        | 1SDA056822R1                   |       | 1SDA056830R1 |       | 1SDA056838R1   |       | 1SDA056849R1 |       |
|         |                | LSIG       | 1SDA056823R1                   |       | 1SDA056831R1 |       | 1SDA056839R1   |       | 1SDA056847R1 |       |
| E4H4000 | 4000           | LSI        | 1SDA056854R1                   |       | 1SDA056862R1 |       | 1SDA056870R1   |       | 1SDA056878R1 |       |
|         |                | LSIG       | 1SDA056855R1                   |       | 1SDA056863R1 |       | 1SDA056871R1   |       | 1SDA056879R1 |       |

# Emax air circuit breakers

## E6H



Ue 690V  
Ratings @ 415V

|     | Icu   | Ics   | Icw   |      |
|-----|-------|-------|-------|------|
|     |       |       | 1s    | 3s   |
| E6H | 100kA | 100kA | 100kA | 85kA |

4th pole 50%



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### E6H 100kA PR121/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E6H4000 | 4000           | LSI        | 1SDA056945R1                   |       | 1SDA056953R1 |       | 1SDA056961R1   |       | 1SDA056969R1 |       |
|         |                | LSIG       | 1SDA056946R1                   |       | 1SDA056954R1 |       | 1SDA056962R1   |       | 1SDA056970R1 |       |
| E6H5000 | 5000           | LSI        | 1SDA056977R1                   |       | 1SDA056985R1 |       | 1SDA056993R1   |       | 1SDA057001R1 |       |
|         |                | LSIG       | 1SDA056978R1                   |       | 1SDA056986R1 |       | 1SDA056994R1   |       | 1SDA057002R1 |       |
| E6H6300 | 6300           | LSI        | 1SDA057009R1                   |       | 1SDA057017R1 |       | 1SDA057025R1   |       | 1SDA057033R1 |       |
|         |                | LSIG       | 1SDA057010R1                   |       | 1SDA057018R1 |       | 1SDA057026R1   |       | 1SDA057034R1 |       |

### E6H 100kA PR122/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E6H4000 | 4000           | LSI        | 1SDA056948R1                   |       | 1SDA056956R1 |       | 1SDA056964R1   |       | 1SDA056972R1 |       |
|         |                | LSIG       | 1SDA056949R1                   |       | 1SDA056957R1 |       | 1SDA056965R1   |       | 1SDA056973R1 |       |
| E6H5000 | 5000           | LSI        | 1SDA056980R1                   |       | 1SDA056988R1 |       | 1SDA056996R1   |       | 1SDA057004R1 |       |
|         |                | LSIG       | 1SDA056981R1                   |       | 1SDA056989R1 |       | 1SDA056997R1   |       | 1SDA057005R1 |       |
| E6H6300 | 6300           | LSI        | 1SDA057012R1                   |       | 1SDA057020R1 |       | 1SDA057028R1   |       | 1SDA057036R1 |       |
|         |                | LSIG       | 1SDA057013R1                   |       | 1SDA057021R1 |       | 1SDA057029R1   |       | 1SDA057037R1 |       |

### E6H 100kA PR123/P

#### Product Hierarchy 2900003

|         |                |            | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|---------|----------------|------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
| Model   | Current (A) In | Protection | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|         |                |            | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E6H4000 | 4000           | LSI        | 1SDA056950R1                   |       | 1SDA056958R1 |       | 1SDA056966R1   |       | 1SDA056974R1 |       |
|         |                | LSIG       | 1SDA056951R1                   |       | 1SDA056959R1 |       | 1SDA056967R1   |       | 1SDA056975R1 |       |
| E6H5000 | 5000           | LSI        | 1SDA056982R1                   |       | 1SDA056990R1 |       | 1SDA056998R1   |       | 1SDA057006R1 |       |
|         |                | LSIG       | 1SDA056983R1                   |       | 1SDA056991R1 |       | 1SDA056999R1   |       | 1SDA057007R1 |       |
| E6H6300 | 6300           | LSI        | 1SDA057014R1                   |       | 1SDA057022R1 |       | 1SDA057030R1   |       | 1SDA057038R1 |       |
|         |                | LSIG       | 1SDA057015R1                   |       | 1SDA057023R1 |       | 1SDA057031R1   |       | 1SDA057039R1 |       |

# Emax air circuit breakers

## E4S/f 4th pole 100%



**Ue 690V**  
**Ratings @ 415V**

|       | Icu  | Ics  | Icw  |      |
|-------|------|------|------|------|
|       |      |      | 1s   | 3s   |
| E4S/f | 80kA | 80kA | 75kA | 75kA |

4th pole 100%



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| E4S/f 80kA<br>PR121/P |                |            | Product Hierarchy 2900003      |       |                |       |
|-----------------------|----------------|------------|--------------------------------|-------|----------------|-------|
|                       |                |            | Fixed breaker front connection |       | Moving Portion |       |
|                       |                |            | 4 pole                         |       | 4 pole         |       |
| Model                 | Current (A) In | Protection | Order Code                     | Price | Order Code     | Price |
| E4S/f4000             | 4000           | LSI        | 1SDA055537R1                   |       | 1SDA055545R1   |       |
|                       |                | LSIG       | 1SDA055538R1                   |       | 1SDA055546R1   |       |

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| E4S/f 80kA<br>PR122/P |                |            | Product Hierarchy 2900003      |       |                |       |
|-----------------------|----------------|------------|--------------------------------|-------|----------------|-------|
|                       |                |            | Fixed breaker front connection |       | Moving Portion |       |
|                       |                |            | 4 pole                         |       | 4 pole         |       |
| Model                 | Current (A) In | Protection | Order Code                     | Price | Order Code     | Price |
| E4S/f4000             | 4000           | LSI        | 1SDA055540R1                   |       | 1SDA055548R1   |       |
|                       |                | LSIG       | 1SDA055541R1                   |       | 1SDA055549R1   |       |

| E4S/f 80kA<br>PR123/P |                |            | Product Hierarchy 2900003      |       |                |       |
|-----------------------|----------------|------------|--------------------------------|-------|----------------|-------|
|                       |                |            | Fixed breaker front connection |       | Moving Portion |       |
|                       |                |            | 4 pole                         |       | 4 pole         |       |
| Model                 | Current (A) In | Protection | Order Code                     | Price | Order Code     | Price |
| E4S/f4000             | 4000           | LSI        | 1SDA055542R1                   |       | 1SDA055550R1   |       |
|                       |                | LSIG       | 1SDA055543R1                   |       | 1SDA055551R1   |       |

# Emax air circuit breakers

## E6H/f 4th pole 100%



Ue 690V  
Ratings @ 415V

|               | Icu   | Ics   | Icw   |      |
|---------------|-------|-------|-------|------|
|               |       |       | 1s    | 3s   |
| E6H/f         | 100kA | 100kA | 100kA | 85kA |
| 4th pole 100% |       |       |       |      |



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### E6H/f 100kA PR121/P

#### Product Hierarchy 2900003

|           |                |            | Fixed breaker front connection |       | Moving Portion |       |
|-----------|----------------|------------|--------------------------------|-------|----------------|-------|
|           |                |            | 4 pole                         |       | 4 pole         |       |
| Model     | Current (A) In | Protection | Order Code                     | Price | Order Code     | Price |
| E6H/f4000 | 4000           | LSI        | 1SDA055553R1                   |       | 1SDA055561R1   |       |
|           |                | LSIG       | 1SDA055554R1                   |       | 1SDA055562R1   |       |
| E6H/f5000 | 5000           | LSI        | 1SDA055569R1                   |       | 1SDA055577R1   |       |
|           |                | LSIG       | 1SDA055570R1                   |       | 1SDA055578R1   |       |
| E6H/f6300 | 6300           | LSI        | 1SDA055585R1                   |       | 1SDA055593R1   |       |
|           |                | LSIG       | 1SDA055586R1                   |       | 1SDA055594R1   |       |

### E6H/f 100kA PR122/P

#### Product Hierarchy 2900003

|           |                |            | Fixed breaker front connection |       | Moving Portion |       |
|-----------|----------------|------------|--------------------------------|-------|----------------|-------|
|           |                |            | 4 pole                         |       | 4 pole         |       |
| Model     | Current (A) In | Protection | Order Code                     | Price | Order Code     | Price |
| E6H/f4000 | 4000           | LSI        | 1SDA055556R1                   |       | 1SDA055564R1   |       |
|           |                | LSIG       | 1SDA055557R1                   |       | 1SDA055565R1   |       |
| E6H/f5000 | 5000           | LSI        | 1SDA055572R1                   |       | 1SDA055580R1   |       |
|           |                | LSIG       | 1SDA055573R1                   |       | 1SDA055581R1   |       |
| E6H/f6300 | 6300           | LSI        | 1SDA055588R1                   |       | 1SDA055596R1   |       |
|           |                | LSIG       | 1SDA055589R1                   |       | 1SDA055597R1   |       |

### E6H/f 100kA PR123/P

#### Product Hierarchy 2900003

|           |                |            | Fixed breaker front connection |       | Moving Portion |       |
|-----------|----------------|------------|--------------------------------|-------|----------------|-------|
|           |                |            | 4 pole                         |       | 4 pole         |       |
| Model     | Current (A) In | Protection | Order Code                     | Price | Order Code     | Price |
| E6H/f4000 | 4000           | LSI        | 1SDA055558R1                   |       | 1SDA055566R1   |       |
|           |                | LSIG       | 1SDA055559R1                   |       | 1SDA055567R1   |       |
| E6H/f5000 | 5000           | LSI        | 1SDA055574R1                   |       | 1SDA055582R1   |       |
|           |                | LSIG       | 1SDA055575R1                   |       | 1SDA055583R1   |       |
| E6H/f6300 | 6300           | LSI        | 1SDA055590R1                   |       | 1SDA055598R1   |       |
|           |                | LSIG       | 1SDA055591R1                   |       | 1SDA055599R1   |       |

# Emax air circuit breakers E1-E3 switch disconnectors



Ue 690V  
Ratings @ 415V

|          | Icm   | Icw  |      |
|----------|-------|------|------|
|          |       | 1s   | 3s   |
| E1N/MS   | 105kA | 50kA | 36kA |
| E2N/MS   | 121kA | 55kA | 42kA |
| E2S/MS   | 143kA | 65kA | 50kA |
| E3S/MS   | 165kA | 65kA | 50kA |
| 4th pole | 100%  |      |      |



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| E1N/MS<br>105kA |                | Product Hierarchy 2900003      |       |              |       |                |       |              |       |
|-----------------|----------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|                 |                | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
| Model           | Current (A) In | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
|                 |                | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E1N/MS800       | 800            | 1SDA058933R1                   |       | 1SDA058934R1 |       | 1SDA058941R1   |       | 1SDA058942R1 |       |
| E1N/MS1250      | 1250           | 1SDA058937R1                   |       | 1SDA058938R1 |       | 1SDA058945R1   |       | 1SDA058946R1 |       |
| E1N/MS1600      | 1600           | 1SDA058861R1                   |       | 1SDA058862R1 |       | 1SDA058863R1   |       | 1SDA058864R1 |       |

| E2N/MS<br>121kA |                | Product Hierarchy 2900003      |  |              |  |                |  |              |  |
|-----------------|----------------|--------------------------------|--|--------------|--|----------------|--|--------------|--|
|                 |                | Fixed breaker front connection |  |              |  | Moving Portion |  |              |  |
| Model           | Current (A) In | 3 pole                         |  | 4 pole       |  | 3 pole         |  | 4 pole       |  |
|                 |                | Order Code                     |  | Order Code   |  | Order Code     |  | Order Code   |  |
| E2N/MS1250      | 1250           | 1SDA058947R1                   |  | 1SDA058948R1 |  | 1SDA058957R1   |  | 1SDA058958R1 |  |
| E2N/MS1600      | 1600           | 1SDA058951R1                   |  | 1SDA058952R1 |  | 1SDA058961R1   |  | 1SDA058962R1 |  |
| E2N/MS1600      | 2000           | 1SDA058955R1                   |  | 1SDA058956R1 |  | 1SDA058965R1   |  | 1SDA058966R1 |  |

| E2S/MS<br>143kA |                | Product Hierarchy 2900003      |  |              |  |                |  |              |  |
|-----------------|----------------|--------------------------------|--|--------------|--|----------------|--|--------------|--|
|                 |                | Fixed breaker front connection |  |              |  | Moving Portion |  |              |  |
| Model           | Current (A) In | 3 pole                         |  | 4 pole       |  | 3 pole         |  | 4 pole       |  |
|                 |                | Order Code                     |  | Order Code   |  | Order Code     |  | Order Code   |  |
| E2S/MS1250      | 1250           | 1SDA058865R1                   |  | 1SDA058866R1 |  | 1SDA058867R1   |  | 1SDA058868R1 |  |
| E2S/MS1600      | 1600           | 1SDA058869R1                   |  | 1SDA058870R1 |  | 1SDA058871R1   |  | 1SDA058872R1 |  |
| E2S/MS2000      | 2000           | 1SDA058873R1                   |  | 1SDA058874R1 |  | 1SDA058875R1   |  | 1SDA058876R1 |  |

| E3N/MS<br>143kA |                | Product Hierarchy 2900003      |  |              |  |                |  |              |  |
|-----------------|----------------|--------------------------------|--|--------------|--|----------------|--|--------------|--|
|                 |                | Fixed breaker front connection |  |              |  | Moving Portion |  |              |  |
| Model           | Current (A) In | 3 pole                         |  | 4 pole       |  | 3 pole         |  | 4 pole       |  |
|                 |                | Order Code                     |  | Order Code   |  | Order Code     |  | Order Code   |  |
| E3N/MS2500      | 2500           | 1SDA058973R1                   |  | 1SDA058974R1 |  | 1SDA058987R1   |  | 1SDA058988R1 |  |
| E3N/MS3200      | 3200           | 1SDA058977R1                   |  | 1SDA058978R1 |  | 1SDA058991R1   |  | 1SDA058992R1 |  |

| E3S/MS<br>165kA |                | Product Hierarchy 2900003      |  |              |  |                |  |              |  |
|-----------------|----------------|--------------------------------|--|--------------|--|----------------|--|--------------|--|
|                 |                | Fixed breaker front connection |  |              |  | Moving Portion |  |              |  |
| Model           | Current (A) In | 3 pole                         |  | 4 pole       |  | 3 pole         |  | 4 pole       |  |
|                 |                | Order Code                     |  | Order Code   |  | Order Code     |  | Order Code   |  |
| E3S/MS1250      | 1250           | 1SDA058967R1                   |  | 1SDA058968R1 |  | 1SDA058981R1   |  | 1SDA058982R1 |  |
| E3S/MS1600      | 1600           | 1SDA058969R1                   |  | 1SDA058970R1 |  | 1SDA058983R1   |  | 1SDA058984R1 |  |
| E3S/MS2000      | 2000           | 1SDA058971R1                   |  | 1SDA058972R1 |  | 1SDA058985R1   |  | 1SDA058986R1 |  |
| E3S/MS2500      | 2500           | 1SDA058975R1                   |  | 1SDA058976R1 |  | 1SDA058989R1   |  | 1SDA058990R1 |  |
| E3S/MS3200      | 3200           | 1SDA058979R1                   |  | 1SDA058980R1 |  | 1SDA058993R1   |  | 1SDA058994R1 |  |

# Emax air circuit breakers E4-6 switch disconnectors



**Ue 690V**  
**Ratings @ 415V**

|              | Icm   | Icw   |      |
|--------------|-------|-------|------|
|              |       | 1s    | 3s   |
| E4S/MS       | 165kA | 75kA  | 75kA |
| E4H/MS       | 220kA | 100kA | 75kA |
| <hr/>        |       |       |      |
| E6H/MS       | 220kA | 100kA | 85kA |
| <hr/>        |       |       |      |
| 4th pole 50% |       |       |      |



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**3**

## E4S/MS 165kA

### Product Hierarchy 2900003

|            |                | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|------------|----------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|            |                | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
| Model      | Current (A) In | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E4S/MS4000 | 4000           | 1SDA058997R1                   |       | 1SDA058998R1 |       | 1SDA059003R1   |       | 1SDA059004R1 |       |

## E4H/MS 220kA

### Product Hierarchy 2900003

|            |                | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|------------|----------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|            |                | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
| Model      | Current (A) In | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E4H/MS1250 | 3200           | 1SDA058995R1                   |       | 1SDA058996R1 |       | 1SDA059001R1   |       | 1SDA059002R1 |       |
| E4H/MS1600 | 4000           | 1SDA058999R1                   |       | 1SDA059000R1 |       | 1SDA059005R1   |       | 1SDA059006R1 |       |

## E6H/MS 220kA

### Product Hierarchy 2900003

|            |                | Fixed breaker front connection |       |              |       | Moving Portion |       |              |       |
|------------|----------------|--------------------------------|-------|--------------|-------|----------------|-------|--------------|-------|
|            |                | 3 pole                         |       | 4 pole       |       | 3 pole         |       | 4 pole       |       |
| Model      | Current (A) In | Order Code                     | Price | Order Code   | Price | Order Code     | Price | Order Code   | Price |
| E6H/MS4000 | 4000           | 1SDA058905R1                   |       | 1SDA058906R1 |       | 1SDA058907R1   |       | 1SDA058908R1 |       |
| E6H/MS5000 | 5000           | 1SDA059007R1                   |       | 1SDA059008R1 |       | 1SDA059011R1   |       | 1SDA059012R1 |       |
| E6H/MS6300 | 6300           | 1SDA059009R1                   |       | 1SDA059010R1 |       | 1SDA059013R1   |       | 1SDA059014R1 |       |

# Emax air circuit breakers

## E4f-6f switch disconnectors 4th pole 100%



Ue 690V  
Ratings @ 415V

|                | Icm   |       | Icw  |    |
|----------------|-------|-------|------|----|
|                |       |       | 1s   | 3s |
| E4S/f/MS 165kA | 165kA | 75kA  | 75kA |    |
| E4H/f/MS 220kA | 220kA | 100kA | 75kA |    |
| <hr/>          |       |       |      |    |
| E6H/f/MS 220kA | 220kA | 100kA | 85kA |    |
| <hr/>          |       |       |      |    |
| 4th pole 100%  |       |       |      |    |



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| E4S/f/MS<br>165kA |                | Product Hierarchy 2900003      |       |                |       |
|-------------------|----------------|--------------------------------|-------|----------------|-------|
|                   |                | Fixed breaker front connection |       | Moving Portion |       |
|                   |                | 4 pole                         |       | 4 pole         |       |
| Model             | Current (A) In | Order Code                     | Price | Order Code     | Price |
| E4S/f/MS4000      | 4000           | 1SDA059015R1                   |       | 1SDA059016R1   |       |

| E4H/f/MS<br>220kA |                | Product Hierarchy 2900003      |       |                |       |
|-------------------|----------------|--------------------------------|-------|----------------|-------|
|                   |                | Fixed breaker front connection |       | Moving Portion |       |
|                   |                | 4 pole                         |       | 4 pole         |       |
| Model             | Current (A) In | Order Code                     | Price | Order Code     | Price |
| E4H/f/MS3200      | 3200           | 1SDA058901R1                   |       | 1SDA058902R1   |       |
| E4H/f/MS4000      | 4000           | 1SDA058903R1                   |       | 1SDA058904R1   |       |

| E6H/f/MS<br>220kA |                | Product Hierarchy 2900003      |       |                |       |
|-------------------|----------------|--------------------------------|-------|----------------|-------|
|                   |                | Fixed breaker front connection |       | Moving Portion |       |
|                   |                | 4 pole                         |       | 4 pole         |       |
| Model             | Current (A) In | Order Code                     | Price | Order Code     | Price |
| E6H/f/MS4000      | 4000           | 1SDA058909R1                   |       | 1SDA058910R1   |       |
| E6H/f/MS5000      | 5000           | 1SDA059017R1                   |       | 1SDA059019R1   |       |
| E6H/f/MS6300      | 6300           | 1SDA059018R1                   |       | 1SDA059020R1   |       |

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# Emax air circuit breakers

## FP fixed parts X1, E1 - E3

3

| X1 withdrawable (W) - FP | Product Hierarchy 2900003 |       |              |       |
|--------------------------|---------------------------|-------|--------------|-------|
|                          | 3 pole                    |       | 4 pole       |       |
|                          | Order Code                | Price | Order Code   | Price |
| EF-EE                    | 1SDA062045R1              |       | 1SDA062049R1 |       |
| HR-VR                    | 1SDA062048R1              |       | 1SDA062048R1 |       |

| E1 withdrawable (W) - FP | Product Hierarchy 2900003 |  |              |  |
|--------------------------|---------------------------|--|--------------|--|
|                          | 3 pole                    |  | 4 pole       |  |
|                          | Order Code                |  | Order Code   |  |
| HR                       | 1SDA059666R1              |  | 1SDA059762R1 |  |
| VR                       | 1SDA059672R1              |  | 1SDA059770R1 |  |
| F                        | 1SDA059678R1              |  | 1SDA059778R1 |  |
| FL                       | 1SDA059684R1              |  | 1SDA059786R1 |  |
| HR-VR                    | 1SDA059690R1              |  | 1SDA059794R1 |  |
| VR-HR                    | 1SDA059708R1              |  | 1SDA059818R1 |  |

| E2 withdrawable (W) - FP | Product Hierarchy 2900003 |  |              |  |
|--------------------------|---------------------------|--|--------------|--|
|                          | 3 pole                    |  | 4 pole       |  |
|                          | Order Code                |  | Order Code   |  |
| HR                       | 1SDA059667R1              |  | 1SDA059763R1 |  |
| VR                       | 1SDA059673R1              |  | 1SDA059771R1 |  |
| F                        | 1SDA059679R1              |  | 1SDA059779R1 |  |
| FL                       | 1SDA059685R1              |  | 1SDA059787R1 |  |
| HR-VR                    | 1SDA059691R1              |  | 1SDA059795R1 |  |
| VR-HR                    | 1SDA059709R1              |  | 1SDA059819R1 |  |

| E2S withdrawable (W) - FP | Product Hierarchy 2900003 |  |              |  |
|---------------------------|---------------------------|--|--------------|--|
|                           | 3 pole                    |  | 4 pole       |  |
|                           | Order Code                |  | Order Code   |  |
| HR                        | 1SDA059668R1              |  | 1SDA059764R1 |  |
| VR                        | 1SDA059674R1              |  | 1SDA059772R1 |  |
| F                         | 1SDA059680R1              |  | 1SDA059780R1 |  |
| FL                        | 1SDA059686R1              |  | 1SDA059788R1 |  |
| HR-VR                     | 1SDA059692R1              |  | 1SDA059796R1 |  |
| VR-HR                     | 1SDA059710R1              |  | 1SDA059820R1 |  |

| E3 withdrawable (W) - FP | Product Hierarchy 2900003 |  |              |  |
|--------------------------|---------------------------|--|--------------|--|
|                          | 3 pole                    |  | 4 pole       |  |
|                          | Order Code                |  | Order Code   |  |
| HR                       | 1SDA059669R1              |  | 1SDA059765R1 |  |
| VR                       | 1SDA059675R1              |  | 1SDA059773R1 |  |
| F                        | 1SDA059681R1              |  | 1SDA059781R1 |  |
| FL                       | 1SDA059687R1              |  | 1SDA059789R1 |  |
| HR-VR                    | 1SDA059693R1              |  | 1SDA059797R1 |  |
| VR-HR                    | 1SDA059711R1              |  | 1SDA059821R1 |  |



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# Emax air circuit breakers

## FP fixed parts E4 - E6 E4/f - E6/f

| E4 withdrawable (W) - FP | Product Hierarchy 2900003 |       |              |       |
|--------------------------|---------------------------|-------|--------------|-------|
|                          | 3 pole                    |       | 4 pole       |       |
|                          | Order Code                | Price | Order Code   | Price |
| HR                       | 1SDA059670R1              |       | 1SDA059766R1 |       |
| VR                       | 1SDA059676R1              |       | 1SDA059774R1 |       |
| F                        | 1SDA059682R1              |       | 1SDA059782R1 |       |
| FL                       | 1SDA059688R1              |       | 1SDA059790R1 |       |
| HR-VR                    | 1SDA059694R1              |       | 1SDA059798R1 |       |
| VR-HR                    | 1SDA059712R1              |       | 1SDA059822R1 |       |

| E6 withdrawable (W) - FP | Product Hierarchy 2900003 |       |              |       |
|--------------------------|---------------------------|-------|--------------|-------|
|                          | 3 pole                    |       | 4 pole       |       |
|                          | Order Code                | Price | Order Code   | Price |
| HR                       | 1SDA059671R1              |       | 1SDA059768R1 |       |
| VR                       | 1SDA059677R1              |       | 1SDA059776R1 |       |
| F                        | 1SDA059683R1              |       | 1SDA059784R1 |       |
| FL                       | 1SDA059689R1              |       | 1SDA059792R1 |       |
| HR-VR                    | 1SDA059695R1              |       | 1SDA059800R1 |       |
| VR-HR                    | 1SDA059713R1              |       | 1SDA059824R1 |       |

| E4/f withdrawable (W) - FP | Product Hierarchy 2900003 |       |
|----------------------------|---------------------------|-------|
|                            | 4 pole                    |       |
|                            | Order Code                | Price |
| HR                         | 1SDA059767R1              |       |
| VR                         | 1SDA059775R1              |       |
| F                          | 1SDA059783R1              |       |
| FL                         | 1SDA059791R1              |       |
| HR-VR                      | 1SDA059799R1              |       |
| VR-HR                      | 1SDA059823R1              |       |

| E6/f withdrawable (W) - FP | Product Hierarchy 2900003 |       |
|----------------------------|---------------------------|-------|
|                            | 4 pole                    |       |
|                            | Order Code                | Price |
| HR                         | 1SDA059769R1              |       |
| VR                         | 1SDA059777R1              |       |
| F                          | 1SDA059785R1              |       |
| FL                         | 1SDA059793R1              |       |
| HR-VR                      | 1SDA059801R1              |       |
| VR-HR                      | 1SDA059825R1              |       |

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# Emax air circuit breakers

## Accessories

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| Accessories                                          | Product Hierarchy 2900003 |                        |
|------------------------------------------------------|---------------------------|------------------------|
|                                                      | Order Code                | Price                  |
| <b>Terminal for fixed parts</b>                      |                           |                        |
| Kit EF FP T7-T7M-X1 3pcs                             | 1SDA062171R1              |                        |
| Kit HR/VR FP T7-T7M-X1 3pcs                          | 1SDA063089R1              |                        |
| Kit MP T7-T7M-X1 W 4p                                | 1SDA062163R1              |                        |
| Kit EF FP T7-T7M-X1 4pcs                             | 1SDA062172R1              |                        |
| Kit HR/VR FP T7-T7M-X1 4pcs                          | 1SDA063090R1              |                        |
| Kit EF T7-T7M-X1 3pcs                                | 1SDA063103R1              |                        |
| Kit FC CuAl 4x240mm <sup>2</sup> T7-T7M-X1 1250 3pcs | 1SDA063112R1              |                        |
| Kit F T7-T7M-X1 3pcs                                 | 1SDA063099R1              |                        |
| Kit ES T7-T7M-X1 3pcs UPP                            | 1SDA063107R1              |                        |
| Kit ES T7-T7M-X1 3pcs LOW                            | 1SDA063108R1              |                        |
| Kit R T7-T7M-X1 3pcs                                 | 1SDA063116R1              |                        |
| Kit HR T7-T7M-X1 3pcs                                | 1SDA063120R1              |                        |
| Kit VR T7-T7M-X1 3pcs                                | 1SDA063124R1              |                        |
| Kit EF T7-T7M-X1 4pcs                                | 1SDA063104R1              |                        |
| Kit FC CuAl 4x240mm <sup>2</sup> T7-T7M-X1 1250 4pcs | 1SDA063113R1              |                        |
| Kit ES T7-T7M-X1 4pcs                                | 1SDA063091R1              |                        |
| Kit R T7-T7M-X1 4pcs                                 | 1SDA063117R1              |                        |
| Kit HR T7-T7M-X1 4pcs                                | 1SDA063121R1              |                        |
| Kit VR T7-T7M-X1 4pcs                                | 1SDA063125R1              |                        |
| <b>High terminal covers</b>                          |                           |                        |
| HTC T7-T7M-X1 F 3p 2pcs                              | 1SDA063091R1              |                        |
| HTC T7-T7M-X1 F 4p 2pcs                              | 1SDA063092R1              |                        |
| <b>Low terminal covers</b>                           |                           |                        |
| LTC T7-T7M-X1 F 3p 2pcs                              | 1SDA063093R1              |                        |
| LTC T7-T7M-X1 F 4p 2pcs                              | 1SDA063094R1              |                        |
| <b>Sliding Contact Blocks</b>                        |                           |                        |
| Left sliding contact MP C.BR.T7-T7M-X1               | 1SDA062164R1              |                        |
| Central sliding contact MP C.BR.T7-T7M-X1            | 1SDA062165R1              |                        |
| Right sliding contact MP C.BR.T7-T7M-X1              | 1SDA062166R1              |                        |
| Left sliding contact FP C.BR.T7M-X1                  | 1SDA062167R1              |                        |
| Central sliding contact FP C.BR.T7-T7M-X1            | 1SDA062168R1              |                        |
| Right sliding contact FP C.BR.T7M-X1                 | 1SDA062169R1              |                        |
| <b>Left hand lock</b>                                | <b>Central lock</b>       | <b>Right hand lock</b> |
| Spring charger motor                                 | PR331                     | Auxiliary contacts     |
| "Closed springs charged" contact                     | PR332                     | Shunt opening release  |
| "Ready to close" contact                             |                           | Shunt closing release  |
| Release trip signalling                              |                           | Under voltage release  |

# Emax air circuit breakers

## Accessories



1SDC200191 F0001

### Electrical Accessories

| Shunt opening/closing release SOR/SCR |             | Product Hierarchy 2900003 |       |
|---------------------------------------|-------------|---------------------------|-------|
| Breaker type                          | Description | Order Code                | Price |
| E1 - E6                               | 24V DC      | 1SDA038286R1              |       |
|                                       | 30V         | 1SDA038287R1              |       |
|                                       | 48V         | 1SDA038288R1              |       |
|                                       | 60V         | 1SDA038289R1              |       |
|                                       | 110/120V    | 1SDA038290R1              |       |
|                                       | 120/127V    | 1SDA038291R1              |       |
|                                       | 220/240V    | 1SDA038292R1              |       |
|                                       | 240/250V    | 1SDA038293R1              |       |
|                                       | 380/400V    | 1SDA038294R1              |       |
|                                       | 440/480V AC | 1SDA038295R1              |       |

### Undervoltage Releases UVR

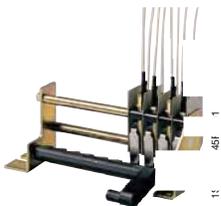
|         |                                   |              |  |
|---------|-----------------------------------|--------------|--|
| X1      | UVR T7-T7M-X1 24Va.c./d.c.        | 1SDA062087R1 |  |
|         | UVR T7-T7M-X1 30Va.c./d.c.        | 1SDA062088R1 |  |
|         | UVR T7-T7M-X1 48Va.c./d.c.        | 1SDA062089R1 |  |
|         | UVR T7-T7M-X1 60Va.c./d.c.        | 1SDA062090R1 |  |
|         | UVR T7-T7M-X1 110...120Va.c./d.c. | 1SDA062091R1 |  |
|         | UVR T7-T7M-X1 240...250Va.c./d.c. | 1SDA062092R1 |  |
|         | UVR T7-T7M-X1 380...400Va.c.      | 1SDA062093R1 |  |
|         | UVR T7-T7M-X1 415...440Va.c.      | 1SDA062094R1 |  |
| E1 - E6 | 24V DC                            | 1SDA038306R1 |  |
|         | 30V                               | 1SDA038307R1 |  |
|         | 48V                               | 1SDA038308R1 |  |
|         | 60V                               | 1SDA038309R1 |  |
|         | 110/120V                          | 1SDA038310R1 |  |
|         | 120/127V                          | 1SDA038311R1 |  |
|         | 220/240V                          | 1SDA038312R1 |  |
|         | 240/250V                          | 1SDA038313R1 |  |
|         | 380/400V                          | 1SDA038314R1 |  |
|         | 440/480V AC                       | 1SDA038315R1 |  |



X

### Time delayed under voltage release

|               |          |              |  |
|---------------|----------|--------------|--|
| E1/6-T7-X1-T8 | 24/30V   | 1SDA038316R1 |  |
|               | 48V      | 1SDA038317R1 |  |
|               | 60V      | 1SDA038318R1 |  |
|               | 110/127V | 1SDA038319R1 |  |
|               | 220/250V | 1SDA038320R1 |  |
| E1 - E6       | 24V DC   | 1SDA038316R1 |  |
|               | 48V      | 1SDA038317R1 |  |
|               | 60V      | 1SDA038318R1 |  |
|               | 110/120V | 1SDA038319R1 |  |
|               | 220/250V | 1SDA038320R1 |  |



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### Motor operator

|         |                 |              |  |
|---------|-----------------|--------------|--|
| X1      | 24...30Vac/dc   | 1SDA062113R1 |  |
|         | 48...60Vac/dc   | 1SDA062114R1 |  |
|         | 100...130Vac/dc | 1SDA062115R1 |  |
|         | 220...250Vac/dc | 1SDA062116R1 |  |
|         | 380...415Vac    | 1SDA062117R1 |  |
| E1 - E6 | 24/30V DC       | 1SDA038321R1 |  |
|         | 48/60V          | 1SDA038322R1 |  |
|         | 100/130V        | 1SDA038323R1 |  |
|         | 220/250V        | 1SDA038324R1 |  |



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# Emax air circuit breakers

## Accessories

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### Electrical Accessories cont.

| Auxiliary contacts |                                 | Product Hierarchy 2900003 |       |
|--------------------|---------------------------------|---------------------------|-------|
| Breaker type       | Description                     | Order Code                | Price |
| E1-E6              | 10 open/closed contacts         | 1SDA038327R1              |       |
| Automatic C/B      | 10 open/closed contacts 5NO+5NC | 1SDA058266R1              |       |
| E1-E6 Non-auto     | 4 open/closed contacts          | 1SDA038326R1              |       |

### Current sensor for neural conductor

|         |              |              |  |
|---------|--------------|--------------|--|
| E1 - E2 | Iu N = 2000A | 1SDA058191R1 |  |
| E3      | Iu N = 3200A | 1SDA058218R1 |  |
| E4/f    | Iu N = 3200A | 1SDA058216R1 |  |
| E6/f    | Iu N = 6300A | 1SDA058220R1 |  |

### Toroidal coil for main power supply earthing conductor

|         |  |              |  |
|---------|--|--------------|--|
| E1 - E6 |  | 1SDA059145R1 |  |
|---------|--|--------------|--|

### PR120/K signalling modules

|         |                                               |              |  |
|---------|-----------------------------------------------|--------------|--|
| E1 - E6 | 4 output with independant terminals           | 1SDA058255R1 |  |
|         | 4 output with + 1 input with common terminals | 1SDA058256R1 |  |

### PR120/V measuring modules

|         |  |              |  |
|---------|--|--------------|--|
| E1 - E6 |  | 1SDA058252R1 |  |
|---------|--|--------------|--|

### Automatic transfer modules

|         |                                         |              |  |
|---------|-----------------------------------------|--------------|--|
| E1 - E6 | ATS021 DISP.COMMUT.AUT.S/D MULTI TENS   | 1SDA065523R1 |  |
|         | ATS022 DISP.COMMUT.AUT.C/D CONT.AVM/TEN | 1SDA065524R1 |  |

### Communication modules

|         |                                |              |  |
|---------|--------------------------------|--------------|--|
| E1 - E6 | PR120/D-M communication module | 1SDA058254R1 |  |
|         | PR120/D-BT bluetooth           | 1SDA058257R1 |  |
|         | BT030-USB bluetooth            | 1SDA058259R1 |  |

### Modules for PR33\_ electronic trip units

|                       |                                       |              |  |
|-----------------------|---------------------------------------|--------------|--|
| T4..T7-T8<br>X1-E1/6N | HMI030 display unit                   | 1SDA063143R1 |  |
| T7                    | PR330/V MEASURING MOD.INT.SOC.x PR332 | 1SDA063144R1 |  |
| T7-T7M-X1-T8          | PR330/D-M COMM.MOD.xPR332-3           | 1SDA063145R1 |  |
| T7-T7M-X1             | PR330/R DRIVING UNIT x PR332-3        | 1SDA063146R1 |  |
| E1/6-T4.T8-X1         | BT030-USB WIRE.EXT.MOD.BLU.           | 1SDA058259R1 |  |
| T7-T7M-X1             | SOCKET INT.TENS.PR332 x EXT.CO        | 1SDA063573R1 |  |

### Test configurator unit

|         |          |              |  |
|---------|----------|--------------|--|
| XT2-XT4 | Ekip TT  | 1SDA066988R1 |  |
|         | Ekip T&P | 1SDA066989R1 |  |

### Electrical trip indicator

|         |   |              |  |
|---------|---|--------------|--|
| E1 - E6 | - | 1SDA058260R1 |  |
|---------|---|--------------|--|

### Electrical trip reset

|         |                |              |  |
|---------|----------------|--------------|--|
| T7M-X1  | 110..130Vac/dc | 1SDA062118R1 |  |
|         | 200..240Vac/dc | 1SDA062119R1 |  |
| E1 - E6 | 220/250V       | 1SDA058261R1 |  |
|         | 100/130V       | 1SDA058262R1 |  |
|         | 24/30V         | 1SDA058263R1 |  |

### Position signalling contacts

|         |             |              |  |
|---------|-------------|--------------|--|
| E1 - E6 | 5 contacts  | 1SDA038361R1 |  |
| E1 - E2 | 10 contacts | 1SDA038360R1 |  |
| E3      |             | 1SDA043468R1 |  |
| E4 - E6 |             | 1SDA043470R1 |  |



Full range of product and technical information place this part number in a search engine and download  
1SDC200009D0203

# Emax air circuit breakers

## Accessories

### Electrical Accessories cont.

| Auxiliary contacts (open/close) |             | Product Hierarchy 2900003 |       |
|---------------------------------|-------------|---------------------------|-------|
| Breaker type                    | Description | Order Code                | Price |
| X1                              | 2Q 400Va.c. | 1SDA062102R1              |       |
|                                 | 2Q 24Vd.c.  | 1SDA062101R1              |       |

### Auxiliary contacts signalling spring charged

|    |                     |              |  |
|----|---------------------|--------------|--|
| X1 | SC 24Vd.c.          | 1SDA062106R1 |  |
|    | SC T7M-X1 250Vac/dc | 1SDA062107R1 |  |

### Auxiliary position contacts

|    |                                |              |  |
|----|--------------------------------|--------------|--|
| X1 | AUP 24Vd.c. (2INS+2TEST+2EXT)  | 1SDA062110R1 |  |
|    | AUP 250Va.c. (2INS+2TEST+2EXT) | 1SDA062111R1 |  |

### Mechanical Accessories

#### Mechanical operation counter

|         |  |              |  |
|---------|--|--------------|--|
| X1      |  | 1SDA062160R1 |  |
| E1 - E6 |  | 1SDA038345R1 |  |



#### Transparent pushbutton covers

|    |                                          |              |  |
|----|------------------------------------------|--------------|--|
| X1 | PUSHBUTTONS TRANS. PROTECTION T7M-X1     | 1SDA062132R1 |  |
|    | PUSHBUTTONS TRANS. PROTECTION IND.T7M-X1 | 1SDA062133R1 |  |
| X1 | IP54 Protection                          | 1SDA062161R1 |  |

#### Lock in open position

|         |                                        |              |  |
|---------|----------------------------------------|--------------|--|
| E1 - E6 | for 1 circuit breaker (different keys) | 1SDA058271R1 |  |
|         | for groups circuit breakers (same key) | 1SDA058270R1 |  |
|         | Padlock 4mm                            | 1SDA038351R1 |  |
|         | Padlock 6mm                            | 1SDA064504R1 |  |

#### Padlock lever

|    |     |              |  |
|----|-----|--------------|--|
| X1 | PLL | 1SDA062152R1 |  |
|----|-----|--------------|--|

#### Key lock in open position on the circuit breaker - KLC

|    |                                 |              |  |
|----|---------------------------------|--------------|--|
| X1 | KLC Key lock service operation. | 1SDA063562R1 |  |
|    | KLC-S Key lock EQ.N.20005       | 1SDA063563R1 |  |
|    | KLC Key lock Castell            | 1SDA062147R1 |  |
|    | KLC Key lock Kirk               | 1SDA062148R1 |  |
|    | KLC Key lock Ronis              | 1SDA062149R1 |  |

#### Circuit breaker lock in test and racked positions

|         |                                                     |              |  |
|---------|-----------------------------------------------------|--------------|--|
| X1      | KLF-D-FP Key lock SEV.CON/ISOL                      | 1SDA062153R1 |  |
|         | KLF-S-FP Key lock 20005 CON/IS                      | 1SDA062154R1 |  |
| E1 - E6 | for 1 circuit breaker (different keys)              | 1SDA058277R1 |  |
|         | for groups circuit breakers (same key)              | 1SDA058278R1 |  |
|         | padlock for shutters                                | 1SDA038363R1 |  |
|         | Castell lock ref PDS 01388 adapter                  | 1SDA058275R1 |  |
|         | Protective cover for opening and closing pushbutton | 1SDA038343R1 |  |



Full range of product and technical information place this part number in a search engine and download

1SDC200009D0203

# Emax air circuit breakers

## Accessories

### Mechanical Accessories cont.

| Accessory for lock only in racked-out position         |                                                          | Product Hierarchy 2900003 |       |
|--------------------------------------------------------|----------------------------------------------------------|---------------------------|-------|
| Breaker type                                           | Description                                              | Order Code                | Price |
| T7-T7M-X1                                              |                                                          | 1SDA062158R1              |       |
| <b>Interlocks</b>                                      |                                                          |                           |       |
| T7-T7M-X1                                              | Kit cable mech interlock HR/VR                           | 1SDA062127R1              |       |
|                                                        | Plate mech interlock, wall fixed                         | 1SDA062129R1              |       |
|                                                        | Plate mech interlock, floor fixed                        | 1SDA062130R1              |       |
|                                                        | Plate mech interlock with FP                             | 1SDA062131R1              |       |
| E1 - E2                                                | *3 pole & 4 pole                                         | 1SDA038366R1              |       |
| E3                                                     |                                                          | 1SDA038367R1              |       |
| E4                                                     | *3 pole                                                  | 1SDA038368R1              |       |
|                                                        | *4 pole                                                  | 1SDA043466R1              |       |
| E6                                                     | *3 pole                                                  | 1SDA043466R1              |       |
|                                                        | *4 pole                                                  | 1SDA038369R1              |       |
| E1 - E6                                                | **Horizontal 2 cables -A-                                | 1SDA038329R1              |       |
|                                                        | **Horizontal 3 cables -B-                                | 1SDA038330R1              |       |
|                                                        | **Horizontal 3 cables -C-                                | 1SDA038331R1              |       |
|                                                        | **Horizontal 3 cables -D-                                | 1SDA038332R1              |       |
|                                                        | **Vertical 2 cables -A-                                  | 1SDA038333R1              |       |
|                                                        | **Vertical 3 cables -B-                                  | 1SDA038334R1              |       |
|                                                        | **Vertical 3 cables -C-                                  | 1SDA038335R1              |       |
|                                                        | **Vertical 3 cables -D-                                  | 1SDA038336R1              |       |
|                                                        | **Plate for interlocking fixed circuit breakers          | 1SDA038358R1              |       |
|                                                        | *Accessory for interlock withdrawable fixed portion -ABC | 1SDA038364R1              |       |
| *Accessory for interlock withdrawable fixed portion -C | 1SDA038365R1                                             |                           |       |

- \* To be ordered with each fixed circuit breaker or moving part of withdrawable circuit breaker
- \*\* To be ordered only once for each combination of interlocked circuit breakers

# Switchgear



## Switch disconnectors

|                                 |      |
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| OT16...3150 disconnectors ..... | 4/6  |
| OT16...3150 accessories .....   | 4/10 |



**New**  
OTM 40

## Changeover & transfer switches

|                                                  |      |
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## Switch fuses

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## Slimline switch fuses

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## Cam switches

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|                                                                                                                                                                                                                          |                                                                                                                                                                                                                           |                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>OT switch disconnectors</p>                                                                                                                                                                                           | <p>Switch fuses</p>                                                                                                                                                                                                       | <p>Changeover switches</p>                                                                                                                                                                                                 |
|  <p>Full range of product and technical information place this part number in a search engine and download</p> <p>1SEC301001C0201</p> |  <p>Full range of product and technical information place this part number in a search engine and download</p> <p>1SCC311013C0201</p> |  <p>Full range of product and technical information place this part number in a search engine and download</p> <p>1SCC303003C0201</p> |
| <p>XR SlimLine switch fuses</p>                                                                                                                                                                                          | <p>Cam switches</p>                                                                                                                                                                                                       |                                                                                                                                                                                                                            |
|  <p>Full range of product and technical information place this part number in a search engine and download</p> <p>1SEC311001C0201</p> |  <p>Full range of product and technical information place this part number in a search engine and download</p> <p>1SCC302003C0201</p> |                                                                                                                                                                                                                            |

# OT switch disconnectors 16 ... 3150 A 690V

## Manual operation



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|     |       |       |        |        |         |        |
|-----|-------|-------|--------|--------|---------|--------|
| IEC | OT16F | OT63F | OT100F | OT160E | OT160EV | OT315E |
|     | OT25F | OT80F | OT125F |        | OT200E  | OT400E |
|     | OT40F |       |        |        | OT250E  |        |
| UL  | OT16F | OT63F | OT30F  | OT160E |         | OT200U |
|     | OT25F | OT80F | OT60F  |        |         |        |
|     | OT40F |       | OT100F |        |         |        |

|                         |          |       |               |     |             |     |         |
|-------------------------|----------|-------|---------------|-----|-------------|-----|---------|
| Switch size             | 16 25 40 | 63 80 | 30 60 100 125 | 160 | 160 200 250 | 200 | 315 400 |
| IEC $I_{pn}$ [A]        | 25 32 40 | 63 80 | 115 125       | 200 | 200 200 250 |     | 315 400 |
| $I_n$ /AC22A ? 415V [A] | 16 25 40 | 63 80 | 100 125       | 160 | 200 200 250 |     | 315 400 |
| $I_n$ /AC23A ? 415V [A] | 16 20 23 | 45 75 | 80 90         | 135 | 200 200 250 |     | 315 400 |
| UL Ampere rating [A]    | 20 30 40 | 60 80 | 30 60 100     | 100 |             | 200 |         |

## Motor operation



|     |  |         |         |
|-----|--|---------|---------|
| IEC |  | OTM160E | OTM315E |
|     |  | OTM200E | OTM400E |
|     |  | OTM250E |         |

|                 |             |         |
|-----------------|-------------|---------|
| Switch size [A] | 160 200 250 | 315 400 |
|-----------------|-------------|---------|

**Accessories**

Optional handles

Extended shafts

Legend plates

Auxiliary contacts

Fourth poles

N & PE terminals

Terminal shrouds

Connecting accessories

Conversion kits

Locking accessories

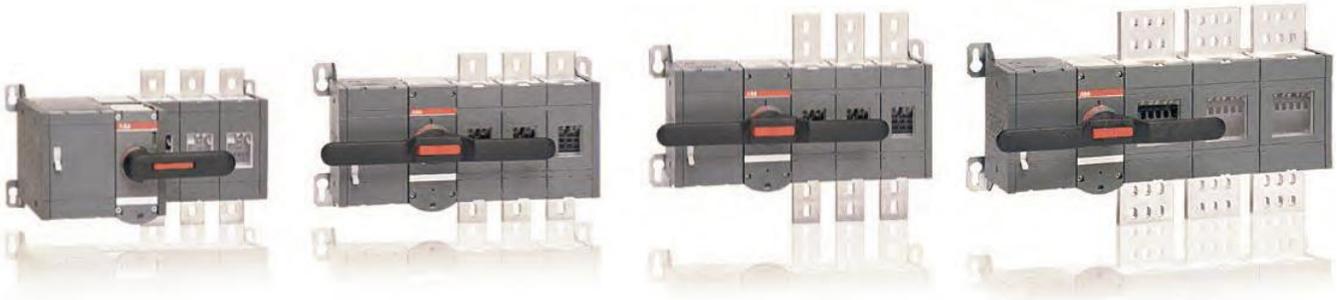
Motor operators



|        |        |         |         |             |
|--------|--------|---------|---------|-------------|
|        | OT630E | OT1000E | OT2000E | OETL3150K   |
|        | OT800E | OT1250E | OT2500E |             |
|        |        | OT1600E |         |             |
| OT400U | OT600U | OT800U  |         | OETL-NF1600 |
|        |        | OT1200U |         | OETL-NF2000 |

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|     |             |                         |           |                |
|-----|-------------|-------------------------|-----------|----------------|
| 400 | 600 630 800 | 800 1000 1200 1250 1600 | 2000 2500 | 1600 2000 3150 |
|     | 630 800     | 1000 1250 1600          | 2000 2500 | 3150           |
|     | 630 800     | 1000 1250 1600          | 2000 2500 |                |
|     | 630 800     | 1000 1250 1600          |           |                |
| 400 | 600         | 800 1200                |           | 1600 2000      |



|  |         |          |          |          |
|--|---------|----------|----------|----------|
|  | OTM630E | OTM1000E | OTM1600E | OTM2000E |
|  | OTM800E | OTM1250E |          | OTM2500E |

|         |           |      |           |
|---------|-----------|------|-----------|
| 630 800 | 1000 1250 | 1600 | 2000 2500 |
|---------|-----------|------|-----------|

# Enhanced range of switch-disconnectors From 16 to 3150 A, 690 V

4

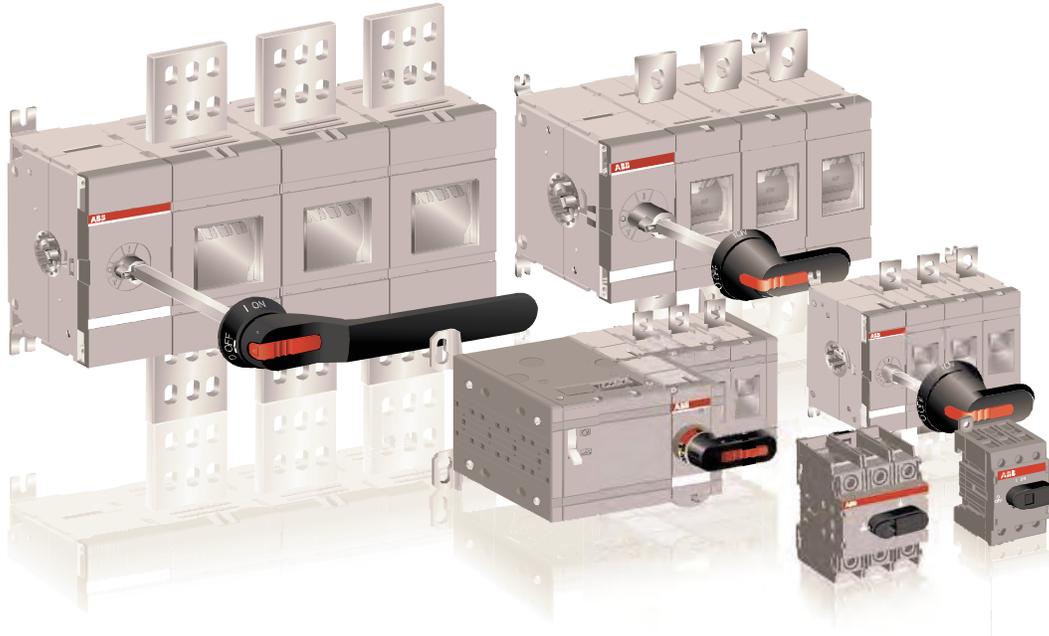


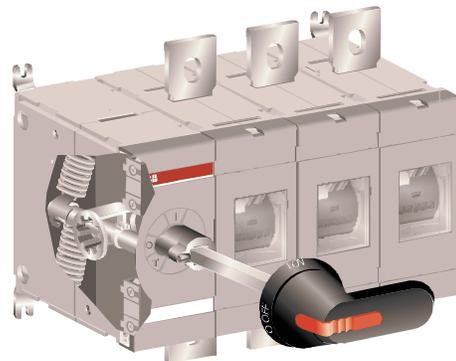
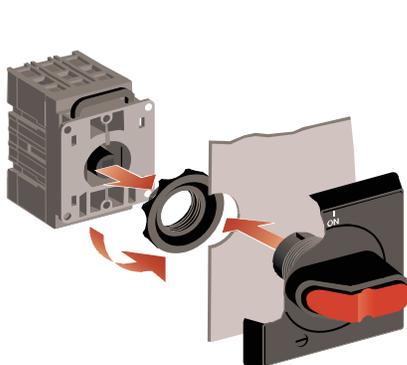
ABB switch-disconnectors are suitable for diverse applications, in motor control centers, in switchboards and as main switches in various equipment and machines. From single to 8-poles front operated switches with pistol handle or direct mounted handle. For installation in enclosures, side operated switches, switches with wide phase distance and combination switches for change-over, bypass, reversing etc.

- Mountable on DIN rails or base plates and on the door, both by snap-on and screw fitting
- Snap-on mounting of accessories
- Motorized switch-disconnectors OTM are suitable for remote control

## The most compact disconnect (isolation) solution

Optimally designed, the OT switch-disconnector offers an advanced and compact solution, providing you with added value.

- The new double-sided spring construction in combination with fewer components made an innovative and compact design of the operation mechanism possible.
- The uniquely short current path enabled a small-sized contact construction.



ABB's switch-disconnector range meets disconnect and isolation requirements more effectively than ever, maximizing the benefits and optimizing your use of assets.

**High performance despite the small size**

The powerful construction, with its quick-make and quick-break operation features and two contact points instead of one, adds value to and enhances the performance of the switch-disconnectors.

- The OT range offers you improved power ratings. Full  $I_{th}$  ratings can be used both in open air and in enclosures, without having to derate or enlarge the box.
- User-friendly and flexible, the OT switch-disconnector provides you with full AC-23A current ratings for all the voltages, even up to 690 V.

The OT switch-disconnector is easy to use and easy to install according to your choice: horizontally or vertically - even in the ceiling! The adjustable mounting feet allow both top and side mounting of the switch.

ABB's switch-disconnector range meets disconnect and isolation requirements more effectively than ever, maximizing the benefits and optimizing your use of assets.



# Switch disconnectors

## OT16 ...160 base mounted



OT16...32E3



OT 45...63E3



OT 100...125E3

4

### Front operated switch-disconnectors, base and DIN-rail mounting

#### OT 16...160

Including protected terminal clamps, IP20. Handle and shaft have to be ordered separately.

| No of Poles | $I_{th}$ (open) [A] | Cable Cross Section mm <sup>2</sup> | Operational Currents AC22A/AC23A 400V | Shaft Diameter mm | Product Hierarchy 2200003 |       |
|-------------|---------------------|-------------------------------------|---------------------------------------|-------------------|---------------------------|-------|
|             |                     |                                     |                                       |                   | Order Code                | Price |
| 3           | 25                  | 0.75...10                           | 16/16                                 | 6                 | OT16F3                    |       |
| 4           |                     |                                     |                                       |                   | OT16F4N2                  |       |
| 3           | 32                  |                                     | 25/20                                 |                   | OT25F3                    |       |
| 4           |                     |                                     |                                       |                   | OT25F4N2                  |       |
| 3           | 40                  |                                     | 40/23                                 |                   | OT40F3                    |       |
| 4           |                     |                                     |                                       |                   | OT40F4N2                  |       |
| 3           | 80                  | 1.5...35                            | 80/75                                 |                   | OT63F3                    |       |
| 4           |                     |                                     |                                       |                   | OT63F4N2                  |       |
| 3           | 100                 |                                     | 80/75                                 |                   | OT80F3                    |       |
| 4           |                     |                                     |                                       |                   | OT80F4N2                  |       |
| 3           | 115                 |                                     | 100/80                                |                   | OT100F3                   |       |
| 4           |                     |                                     |                                       |                   | OT100F4N2                 |       |
| 3           | 125                 | 10...70                             | 125/90                                | OT125F3           |                           |       |
| 4           |                     |                                     |                                       | OT125F4N2         |                           |       |
| 3           | 160                 |                                     | 200/135                               | OT160E3           |                           |       |
| 4           |                     |                                     |                                       | OT160E4           |                           |       |

### Front operated, 6- and 8- pole switch-disconnectors

Including protected terminal clamps, IP20

| Suitable Shaft Diameter mm | $I_{th}$ (open) [A] | Cable Cross Section [mm <sup>2</sup> ] | Operational Currents AC22A/AC23A 400V | Product Hierarchy 2200003 |       |
|----------------------------|---------------------|----------------------------------------|---------------------------------------|---------------------------|-------|
|                            |                     |                                        |                                       | Order Code                | Price |
| 6-pole                     |                     |                                        |                                       |                           |       |
| 6                          | 25                  | 0.75...10                              | 16/16                                 | OT16F6                    |       |
| 6                          | 32                  |                                        | 25/20                                 | OT25F6                    |       |
| 6                          | 40                  |                                        | 40/23                                 | OT40F6                    |       |
| 6                          | 63                  | 1.5...35                               | 63/45                                 | OT63F6                    |       |
| 6                          | 80                  |                                        | 80/75                                 | OT80F6                    |       |
| 6                          | 115                 | 10...70                                | 100/80                                | OT100F6                   |       |
| 6                          | 125                 |                                        | 125/90                                | OT125F6                   |       |
| 8-pole                     |                     |                                        |                                       |                           |       |
| 8                          | 25                  | 0.75...10                              | 16/16                                 | OT16F8                    |       |
| 8                          | 32                  |                                        | 25/20                                 | OT25F8                    |       |
| 8                          | 40                  |                                        | 40/23                                 | OT40F8                    |       |
| 8                          | 63                  | 1.5...35                               | 63/45                                 | OT63F8                    |       |
| 8                          | 80                  |                                        | 80/75                                 | OT80F8                    |       |
| 8                          | 115                 | 10...70                                | 100/80                                | OT100F8                   |       |
| 8                          | 125                 |                                        | 125/90                                | OT125F8                   |       |



OT125E3



OT 160E3



OT 16 - 40F6



Full range of product and technical information place this part number in a search engine and download  
1SCC301001C0201

# Switch disconnectors

## OT200 ... 800 base mounted



OT160EV03P



OT200E04P



OT315E03P



OT315E04P



OT630E04P

### Front operated switch-disconnectors, with pistol handle

#### OT 200...800E

Including a black ON-OFF plastic handle and shaft as standard. The handle is IP65 protected, padlockable in the OFF-position and with door interlock in the ON-position. The shaft is adjustable for a range of installation depths.

| No of Poles | I <sub>n</sub> (open) [A] | Operational Currents<br>AC22A/AC23A 400V | Product Hierarchy 2200003 |       |
|-------------|---------------------------|------------------------------------------|---------------------------|-------|
|             |                           |                                          | Order Code                | Price |
| 3           | 200                       | 200/160                                  | OT160EV03P                |       |
| 4           |                           |                                          | OT160EV04P                |       |
| 3           |                           |                                          | OT160EV12P                |       |
| 4           |                           |                                          | OT160EV22P                |       |
| 3           | 200                       | 200/200                                  | OT200E03P                 |       |
| 4           |                           |                                          | OT200E04P                 |       |
| 3           |                           |                                          | OT200E12P                 |       |
| 4           |                           |                                          | OT200E22P                 |       |
| 3           | 250                       | 250/250                                  | OT250E03P                 |       |
| 4           |                           |                                          | OT250E04P                 |       |
| 3           |                           |                                          | OT250E12P                 |       |
| 4           |                           |                                          | OT250E22P                 |       |
| 3           | 315                       | 315/315                                  | OT315E03P                 |       |
| 4           |                           |                                          | OT315E04P                 |       |
| 3           |                           |                                          | OT315E12P                 |       |
| 4           |                           |                                          | OT315E22P                 |       |
| 3           | 400                       | 400/400                                  | OT400E03P                 |       |
| 4           |                           |                                          | OT400E04P                 |       |
| 3           |                           |                                          | OT400E12P                 |       |
| 4           |                           |                                          | OT400E22P                 |       |
| 3           | 630                       | 630/630                                  | OT630E03P                 |       |
| 3+N         |                           |                                          | OT630E03N3P               |       |
| 4           |                           |                                          | OT630E04P                 |       |
| 3           |                           |                                          | OT630E12P                 |       |
| 4           | OT630E22P                 |                                          |                           |       |
| 3           | 800                       | 800/800                                  | OT800E03P                 |       |
| 3+N         |                           |                                          | OT800E03N3P               |       |
| 4           |                           |                                          | OT800E04P                 |       |
| 3           |                           |                                          | OT800E12P                 |       |
| 4           | OT800E22P                 |                                          |                           |       |

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#### Shafts & handles included as standard

| Suitable for switches | Included shaft | Included handle | Included terminal bolts |
|-----------------------|----------------|-----------------|-------------------------|
| OT160EV...250_P       | OX P6X210      | OHB65J6         | M 8x25                  |
| OT315...400_P         | OX P12X185     | OHB95J12        | M 10x30                 |
| OT630...800_P         | OX P12X185     | OHB125J12       | M 12x40                 |



Full range of product and technical information place this part number in a search engine and download  
1SCC301001C0201

# Switch disconnectors

## OT1000 ...1600 & OETL 2500 ... 3150 base mounted

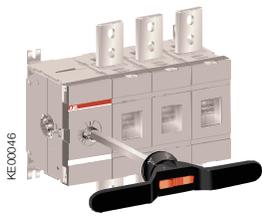
### Front operated switch-disconnectors

#### OT 1000...1600 & OETL 2500...3150

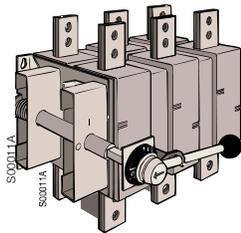
Including standard terminal bolt kit, a black ON-OFF plastic handle OHB200J12P and shaft OXP12x280 as standard. The handle is IP65 protected, padlockable in the OFF-position and with door interlock in the ON-position. The shaft is adjustable for a range of installation depths.



OT1000 - 1250\_03P



OT1600\_03P



OETL2500 - 3150K3

4

| No of Poles | $I_{th}$ (open) [A] | AC22A/AC23A 400V | Product Hierarchy 2200003 |           |
|-------------|---------------------|------------------|---------------------------|-----------|
|             |                     |                  | Order Code                | Price     |
| 3           | 1000                | 1000/1000        | OT1000E03P                |           |
| 3+N         |                     |                  | OT1000E03N3P              |           |
| 4           |                     |                  | OT1000E04P                |           |
| 3           |                     |                  | OT1000E12P                |           |
| 4           |                     |                  | OT1000E22P                |           |
| 3           |                     |                  | 1250                      | 1250/1250 |
| 3+N         | OT1250E03N3P        |                  |                           |           |
| 4           | OT1250E04P          |                  |                           |           |
| 3           | OT1250E12P          |                  |                           |           |
| 4           | OT1250E22P          |                  |                           |           |
| 3           | 1600                | 1600/1250        |                           |           |
| 3+N         |                     |                  | OT1600E03N3P              |           |
| 4           |                     |                  | OT1600E04P                |           |
| 3           |                     |                  | OT1600E12P                |           |
| 4           |                     |                  | OT1600E22P                |           |
| 3           |                     |                  | 2000                      | 2000/-    |
| 3+N         | OT2000E03N3P        |                  |                           |           |
| 4           | OT2000E04P          |                  |                           |           |
| 3           | OT2000E12P          |                  |                           |           |
| 4           | OT2000E22P          |                  |                           |           |
| 3           | 2500                | 2500/-           |                           |           |
| 3+N         |                     |                  | OT2500E03N3P              |           |
| 4           |                     |                  | OT2500E04P                |           |
| 3           |                     |                  | OT2500E12P                |           |
| 4           |                     |                  | OT2500E22P                |           |
| 3           |                     |                  | 3150                      | 1600/-    |
| 3           | OETL3150K185        |                  |                           |           |
| 4           | OETL3150K4          |                  |                           |           |
| 3           | OETL3150K3-4        |                  |                           |           |
| 3           | OETL3150KV12        |                  |                           |           |
| 4           | OETL3150KV22        |                  |                           |           |

Including an IP54 metallic handle with I-O indication. Padlockable in the O-position

### Shafts & handles included as standard

| Suitable for switches | Included shaft | Included handle | Included terminal bolts |
|-----------------------|----------------|-----------------|-------------------------|
| OT1000...1250_P       | OXP12X280      | OHB274J12P      | M12X50                  |
| OT1600_P              | OXP12X280      | OHB274J12P      | M12X60                  |
| OT2000...2500_P       | OXP12X280      | OHB274J12P      | M12X60                  |
| OETL3150              | OXP12X325      | YASDA7          | M12X60                  |



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# Switch disconnectors accessories

## Operating handles



OHB 1



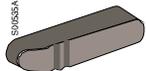
OHR 2



OHR 3



OHB 9



YAST 1

### Optional handles for front operated, base & DIN-rail mounted switches

Handle knobs, mounting directly to the switch, no shaft needed

| Colour | Handle Length mm | Suitable for switch | Product Hierarchy 2200003 |       |
|--------|------------------|---------------------|---------------------------|-------|
|        |                  |                     | Order Code                | Price |
| Black  | 31               | OT16...80F3/F4      | OHBS1                     |       |
| Red    |                  |                     | OHR1                      |       |
| Black  | 37               | OT16...40F3/F4      | OHBS12                    |       |
| Red    |                  |                     | OHR12                     |       |
| Black  | 40               | OT63...125F3/F4     | OHBS2                     |       |
|        |                  | OT16...40F6/F8      |                           |       |
| Red    |                  | OT63...40F6/F8      |                           |       |
|        |                  | OT16...40F6/F8      | OHR2                      |       |
| Black  | 39               | OT63...125F3/F4     | OHBS3                     |       |
|        |                  | OT16...40F6/F8      |                           |       |
| Red    |                  | OT63...40F6/F8      | OHR3                      |       |
|        |                  | OT16...40F6/F8      | OHR3                      |       |
| Black  | 72               | OT63...125F6/F8     | OHBS9                     |       |
|        |                  |                     | OHR9                      |       |
| Red    |                  |                     | OHR9                      |       |
|        |                  |                     | OHR9/1                    |       |
| Black  |                  | OT160E              | YAST1                     |       |



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# Switch disconnectors accessories

## Operating handles



OH\_1\_



OH\_3\_



OH\_2\_

4

### Optional handles for base & DIN-rail mounted switches

For shaft diameter 6mm, door drilling 22.5mm. The type and the ordering numbers are one piece

|                                                                                                                                       |                     | Product Hierarchy 2200003 |       |
|---------------------------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------|-------|
| Colour                                                                                                                                | Suitable for switch | Order Code                | Price |
| IP54 handles, NEMA 1                                                                                                                  |                     |                           |       |
| Black                                                                                                                                 | OT16...80F          | OHBS1AH                   |       |
| Yellow/Red                                                                                                                            |                     | OHYS1AH                   |       |
| Silver                                                                                                                                |                     | OHSS1AH                   |       |
| Grey                                                                                                                                  |                     | OHGS1AH                   |       |
| IP54 handles door interlock in ON position                                                                                            |                     |                           |       |
| Black                                                                                                                                 | OT16...80F          | OHBS1AH1                  |       |
| Yellow/Red                                                                                                                            |                     | OHYS1AH1                  |       |
| Silver                                                                                                                                |                     | OHSS1AH1                  |       |
| Grey                                                                                                                                  |                     | OHGS1AH1                  |       |
| IP54 handles padlockable with one padlock with bail diameter 5...6.3mm, NEMA 1                                                        |                     |                           |       |
| Black                                                                                                                                 | OT16...125F         | OHBS3AH                   |       |
| Yellow/Red                                                                                                                            |                     | OHYS3AH                   |       |
| Silver                                                                                                                                |                     | OHSS3AH                   |       |
| Grey                                                                                                                                  |                     | OHGS3AH                   |       |
| IP65 handles padlockable with max. 3 padlocks with bail diameter 5...8mm, door interlocked in ON position, defeatable, NEMA 1, 3R, 12 |                     |                           |       |
| Black                                                                                                                                 | OT16...125F         | OHBS2AJ                   |       |
| Yellow/Red                                                                                                                            |                     | OHYS2AJ                   |       |
| Grey                                                                                                                                  |                     | OHGS2AJ                   |       |
| IP65 handles padlockable with max. 3 padlocks with bail diameter 5...8mm, door interlocked in ON position, NEMA 1, 3R, 12             |                     |                           |       |
| Black                                                                                                                                 | OT16...125F         | OHBS2AJ1                  |       |
| Yellow/Red                                                                                                                            |                     | OHYS2AJ1                  |       |
| Silver                                                                                                                                |                     | OHSS2AJ1                  |       |
| Grey                                                                                                                                  |                     | OHGS2AJ1                  |       |
| IP65 handles with metal hasp padlockable with max. 3 padlocks door interlocked in ON position, defeatable NEMA 1, 3R, 12              |                     |                           |       |
| Black                                                                                                                                 | OT16...125F         | OHBS2AJEH1                |       |

### Round padlockable handles

Padlockable in O-position, max. 3 padlocks with 8mm hasp diameter.

|                                                                                              |                     | Product Hierarchy 2200003 |       |
|----------------------------------------------------------------------------------------------|---------------------|---------------------------|-------|
| Colour                                                                                       | Suitable for switch | Order Code                | Price |
| One hole mounting handle, IP65, NEMA 4X outdoor, size 66x66                                  |                     |                           |       |
| Black                                                                                        | OT16...125F         | OZ331SPB                  |       |
| Yellow/Red                                                                                   |                     | OZ331SPRY                 |       |
| IP67, IP69K, NEMA 4X outdoor, size 66x66                                                     |                     |                           |       |
| Black                                                                                        | OT16...80F          | OZ331P67B                 |       |
| Yellow/Red                                                                                   |                     | OZ331SPRY                 |       |
| Handles with door coupling in ON-position, not defeatable, IP65, NEMA 4X outdoor, size 66x66 |                     |                           |       |
| Black                                                                                        | OT16...125F         | OZ371PB                   |       |
| Yellow/Red                                                                                   |                     | OZ371PRY                  |       |



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# Switch disconnectors accessories

## Operating handles

### Optional handles, base & DIN-rail mounted switches

#### Pistol type handles

OH\_handles: IP65, NEMA 1, 3R, 12, padlockable with three padlocks in OFF-position, door interlock in ON-position. Screw fixing from the back side of the handle. No screws on the front ensures double insulation. The type and the ordering numbers are for one piece.



OHY\_



OHB\_



OHB\_



OTV\_



OHB\_



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|                                                                                        |                    |                       | Product Hierarchy 2200003 |       |
|----------------------------------------------------------------------------------------|--------------------|-----------------------|---------------------------|-------|
| Colour                                                                                 | Handle Length [mm] | Suitable for switches | Order Code                | Price |
| For shaft diameter 5mm, indication in type OHB & OHY: I-O, ON-OFF, in types OHG: I-O   |                    |                       |                           |       |
| Black                                                                                  | 45                 | OT16...125F           | OHB45J6                   |       |
| Yellow-Red                                                                             |                    |                       | OHY45J6                   |       |
| Grey                                                                                   |                    |                       | OHG45J6                   |       |
| For shaft diameter 6mm, indication in types OHB & OHY: I-O, ON-OFF, in types OHG: I-O  |                    |                       |                           |       |
| Black                                                                                  | 65                 | OT160...250           | OHB65J6                   |       |
| Yellow-Red                                                                             |                    |                       | OHY65J6                   |       |
| Grey                                                                                   |                    |                       | OHG65J6                   |       |
| Black                                                                                  | 80                 | OT160...250           | OHB80J6                   |       |
| Yellow-Red                                                                             |                    |                       | OHY80J6                   |       |
| Grey                                                                                   |                    |                       | OHG80J6                   |       |
| For shaft diameter 6mm, indication: Test-OFF-ON/Test-O-I                               |                    |                       |                           |       |
| Black                                                                                  | 65                 | OT200...250           | OHB65J6T                  |       |
| Yellow-Red                                                                             |                    |                       | OHY65J6T                  |       |
| For shaft diameter 12mm, indication in types OHB & OHY: I-O, ON-OFF, in types OHG: I-O |                    |                       |                           |       |
| Black                                                                                  | 95                 | OT315...400           | OHB95J12                  |       |
| Yellow-Red                                                                             |                    |                       | OHY95J12                  |       |
| Grey                                                                                   |                    |                       | OHG95J12                  |       |
| Black                                                                                  | 125                | OT630...800           | OHB125J12                 |       |
| Yellow-Red                                                                             |                    |                       | OHY125J12                 |       |
| Grey                                                                                   |                    |                       | OHG125J12                 |       |
| Black                                                                                  | 145                | OT630...800           | OHB145J12                 |       |
| Yellow-Red                                                                             |                    |                       | OHY145J12                 |       |
| Grey                                                                                   |                    |                       | OHG145J12                 |       |
| Black                                                                                  | 274                | OT1000...2500         | OHB274J12                 |       |
| Yellow-Red                                                                             |                    |                       | OHY274J12                 |       |
| Black                                                                                  | 330                | OT1000...2500         | OHB330J12                 |       |
| Yellow-Red                                                                             |                    |                       | OHY330J12                 |       |
| Black                                                                                  | 2x150              | OT1000...2500         | OHB150J12P                |       |
| Yellow-Red                                                                             |                    |                       | OHY150J12P                |       |
| Black                                                                                  | 2x200              | OT1000...2500         | OHB200J12P                |       |
| Yellow-Red                                                                             |                    |                       | OHY200J12P                |       |
| Black                                                                                  | 2x75               | OETL3150              | OHB275J12                 |       |
| Yellow-Red                                                                             |                    |                       | OHY275J12                 |       |
| Grey                                                                                   |                    |                       | OHG275J12                 |       |
| For shaft diameter 12mm, indication: Test-OFF-ON/Test-O-I                              |                    |                       |                           |       |
| Black                                                                                  | 95                 | OT315...400           | OHB95J12T                 |       |
| Yellow-Red                                                                             |                    |                       | OHY95J12T                 |       |
| Black                                                                                  | 125                | OT630...800           | OHB125J12T                |       |
| Yellow-Red                                                                             |                    |                       | OHY125J12T                |       |
| Black                                                                                  | 145                | OT630...800           | OHB145J12T                |       |
| Yellow-Red                                                                             |                    |                       | OHY145J12T                |       |
| Black                                                                                  | 175                | OT630...800           | OHB175J12T                |       |
| Yellow-Red                                                                             |                    |                       | OHY175J12T                |       |
| Black                                                                                  | 274                | OT1000...2500         | OHB274J12T                |       |
| Yellow-Red                                                                             |                    |                       | OHY330J12T                |       |
| Black                                                                                  | 2x200              | OT1000...2500         | OHB200J12PT               |       |
| Yellow-Red                                                                             |                    |                       | OHY200J12PT               |       |

• Door interlocking in ON-position means that the door can not be opened, when the handle is in the ON-position. This can be defeated in IP65 types to allow authorised personnel access for inspection

• NEMA 4, 4x pistol handles available on request  
• Handles padlockable in all positions available on request

# Switch disconnectors accessories

## Operating handles

### Pistol type handles

| Colour                                      | Handle Length [mm] | Suitable for switches | Product Hierarchy 2200003 |       |
|---------------------------------------------|--------------------|-----------------------|---------------------------|-------|
|                                             |                    |                       | Order Code                | Price |
| For shaft diameter 12mm, indication: I-O-II |                    |                       |                           |       |
| Black                                       | 275                | OETL3150              | OHB275J12E011             |       |
| Yellow-Red                                  |                    |                       | OHY275J12E011             |       |
| Black                                       |                    |                       | OHG275J12E011             |       |

### Handles for direct mounting

Indication Test-OFF-ON/Test-O-I. Padlockable with three padlocks in OFF-position. Includes shaft & mechanism cover

| Colour     | Handle Length [mm] | Suitable for switches | Order Code | Price |
|------------|--------------------|-----------------------|------------|-------|
| Black      | 65                 | OT160EV...250_K       | OTV250EK   |       |
| Yellow-Red |                    |                       | OTVY250EK  |       |
| Black      | 95                 | OT315...400_K         | OTV400EK   |       |
| Yellow-Red |                    |                       | OTVY400EK  |       |
| Black      | 125                | OT630...800_K         | OTV800EK   |       |
| Yellow-Red |                    |                       | OTVY800EK  |       |
| Black      | 274                | OT1000...2500_K       | OTV1000EK  |       |
| Yellow-Red |                    |                       | OTV1000EPK |       |
|            | 2x200              |                       |            |       |

### Selector type handles

Indication I-O and ON-OFF. No separate shaft needed. The type and the ordering numbers are for one piece.

| Colour                                                                  | Suitable for switches | Order Code | Price |
|-------------------------------------------------------------------------|-----------------------|------------|-------|
| Snap-on mounting, door drilling 22.5mmø. No padlocking, IP54 NEMA 1     |                       |            |       |
| Black                                                                   | OT16...40FT           | OHBS1PH    |       |
| Yellow-Red                                                              |                       | OHYS1PH    |       |
| Silver                                                                  |                       | OHSS1PH    |       |
| Grey                                                                    |                       | OHGS1PH    |       |
| Padlockable with one padlock, IP54 NEMA 1                               |                       |            |       |
| Black                                                                   | OT16...40FT           | OHBS3PH    |       |
| Yellow-Red                                                              |                       | OHYS3PH    |       |
| Silver                                                                  |                       | OHSS3PH    |       |
| Grey                                                                    |                       | OHGS3PH    |       |
| Padlockable with 3 padlocks, IP65 NEMA, 1, 3R, 12                       |                       |            |       |
| Black                                                                   | OT16...40FT           | OHBS2PJ    |       |
| Yellow-Red                                                              |                       | OHYS2PJ    |       |
| Silver                                                                  |                       | OHSS2PJ    |       |
| Grey                                                                    |                       | OHGS2PJ    |       |
| Screw mounting, hole distance 36mm, No padlocking, IP54 NEMA 1          |                       |            |       |
| Black                                                                   | OT16...80FT           | OHBS1RH    |       |
| Yellow-Red                                                              |                       | OHYS1RH    |       |
| Silver                                                                  |                       | OHSS1RH    |       |
| Grey                                                                    |                       | OHGS1RH    |       |
| Padlockable with one padlock, IP54 NEMA 1                               |                       |            |       |
| Black                                                                   | OT16...80FT           | OHBS3RH    |       |
| Yellow-Red                                                              |                       | OHYS3RH    |       |
| Silver                                                                  |                       | OHSS3RH    |       |
| Grey                                                                    |                       | OHGS3RH    |       |
| Padlockable with 3 padlocks, IP65 hole distance 36/48mm NEMA, 1, 3R, 12 |                       |            |       |
| Black                                                                   | OT16...125FT          | OHBS2RJ    |       |
| Yellow-Red                                                              |                       | OHYS2RJ    |       |
| Silver                                                                  |                       | OHSS2RJ    |       |
| Grey                                                                    |                       | OHGS2RJ    |       |

4



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# Switch disconnectors accessories

## Extended shafts

### Extended shafts 6mm

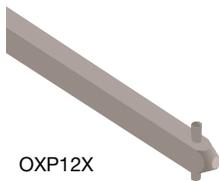


OX6X\_

| Shaft length                                                 | H [mm]                 | Suitable for switches | Product Hierarchy 2200003 |       |
|--------------------------------------------------------------|------------------------|-----------------------|---------------------------|-------|
|                                                              |                        |                       | Order Code                | Price |
| <b>Selector type handles for shaft diameter 6mm</b>          |                        |                       |                           |       |
| 85                                                           | see dimension drawings | OT16...125F           | OXS6X85                   |       |
| 105                                                          |                        |                       | OXS6X105                  |       |
| 120                                                          |                        |                       | OXS6X120                  |       |
| 130                                                          |                        |                       | OX6X130                   |       |
| 160                                                          |                        |                       | OXS6X160                  |       |
| 180                                                          |                        |                       | OXS6X180                  |       |
| 250                                                          |                        |                       | OXS6X250                  |       |
| 330                                                          |                        |                       | OXS6X330                  |       |
| <b>Round padlockable type handles for shaft diameter 6mm</b> |                        |                       |                           |       |
| 60                                                           | see dimension drawings | OT16...125F           | OXS6X60                   |       |
| 85                                                           |                        |                       | OXS6X85                   |       |
| 105                                                          |                        |                       | OXS6X105                  |       |
| 115                                                          |                        |                       | OXS6X115                  |       |
| 130                                                          |                        |                       | OXS6X130                  |       |
| 155                                                          |                        |                       | OXS6X155                  |       |
| 200                                                          |                        |                       | OXS6X200                  |       |
| 300                                                          |                        |                       | OXS6X300                  |       |
| <b>Pistol type handles shaft diameter 6mm</b>                |                        |                       |                           |       |
| 150                                                          | see dimension drawings | OT16...125F           | OX6X150                   |       |
| 170                                                          |                        |                       | OX6X170                   |       |
| 265                                                          |                        |                       | OX6X265                   |       |
| 400                                                          |                        |                       | OX6X400                   |       |
| <b>Shaft diameter 6mm</b>                                    |                        |                       |                           |       |
| 130                                                          | 105...135              | OT160E                | OX6X130                   |       |
| 150                                                          | 125...155              |                       | OX6X150                   |       |
| 210                                                          | 185...215              |                       | OX6X210                   |       |
| 130                                                          | 109...174              | OT160EV ... 250       | OX6X130                   |       |
| 150                                                          | 129...194              |                       | OX6X150                   |       |
| 161                                                          | 140...205              |                       | OX6X161                   |       |
| 210                                                          | 189...254              |                       | OX6X210                   |       |
| 290                                                          | 269...334              |                       | OX6X290                   |       |

4

### Extended shafts 12mm



OX12X

| Shaft diameter 12mm |           | Order Code    |             |          |
|---------------------|-----------|---------------|-------------|----------|
| 166                 | 146...226 | OT315 ...400  | OX12X166    |          |
| 185                 | 165...245 |               | OX12X185    |          |
| 250                 | 230...310 |               | OX12X250    |          |
| 280                 | 260...340 |               | OX12X280    |          |
| 325                 | 305...385 |               | OX12X325    |          |
| 395                 | 445...525 |               | OX12X395    |          |
| 495                 | 439...519 |               | OX12X465    |          |
| 535                 | 515...595 |               | OX12X535    |          |
| 250                 | 230...345 |               | OT630...800 | OX12X250 |
| 280                 | 260...375 |               |             | OX12X280 |
| 325                 | 305...420 | OX12X325      |             |          |
| 395                 | 375...490 | OX12X395      |             |          |
| 465                 | 445...560 | OX12X465      |             |          |
| 535                 | 515...630 | OX12X535      |             |          |
| 250                 | 221...350 | OT1000...2500 | OX12X250    |          |
| 185                 | 251...380 |               | OX12X280    |          |
| 250                 | 296...425 |               | OX12X325    |          |
| 280                 | 366...495 |               | OX12X395    |          |
| 325                 | 436...565 |               | OX12X465    |          |
| 395                 | 506...635 |               | OX12X535    |          |
| 325                 | 340...535 | OTEL3150      | OX12X325    |          |
| 395                 | 410...605 |               | OX12X395    |          |
| 465                 | 480...675 |               | OX12X465    |          |
| 535                 | 550...745 |               | OX12X535    |          |



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# Switch disconnectors accessories

## Extended shafts

### Extended shafts

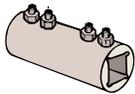
Twisted shafts for pistol type handles, the shaft position is rotated 45 degrees.



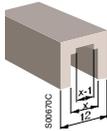
OXP6X150-45



OHZX10



OETLZX 95,  
OESAZX 167



OETL ZK 19  
(x = 6 mm)

4

| Shaft length                                 | H [mm]                 | Suitable for switches | Product Hierarchy 2200003 |       |
|----------------------------------------------|------------------------|-----------------------|---------------------------|-------|
|                                              |                        |                       | Order Code                | Price |
| <b>Pistol type handle shaft diameter 6mm</b> |                        |                       |                           |       |
| 150                                          | see dimension drawings | OT16...125F           | OSP6X150-45               |       |
| 170                                          |                        |                       | OSP6X170-45               |       |
| 265                                          |                        |                       | OSP6X265-45               |       |
| 400                                          |                        |                       | OSP6X400-45               |       |
| <b>Shaft diameter 6mm</b>                    |                        |                       |                           |       |
| 130                                          | 109...174              | OT160EV...250         | OSP6X130-45               |       |
| 150                                          | 129...194              |                       | OSP6X150-45               |       |
| 210                                          | 189...254              |                       | OSP6X210-45               |       |
| 290                                          | 269...334              |                       | OSP6X290-45               |       |
| <b>Shaft diameter 12mm</b>                   |                        |                       |                           |       |
| 250                                          | 230...310              | OT315...400           | OSP12X250-45              |       |
| 280                                          | 260...340              |                       | OSP12X280-45              |       |
| 325                                          | 305...385              |                       | OSP12X325-45              |       |
| 395                                          | 445...525              |                       | OSP12X395-45              |       |
| 465                                          | 439...519              |                       | OSP12X465-45              |       |
| 535                                          | 515...595              |                       | OSP12X535-45              |       |
| <b>Shaft diameter 12mm</b>                   |                        |                       |                           |       |
| 250                                          | 226...355              | OT1000...2500         | OSP12X250-45              |       |
| 280                                          | 256...385              |                       | OSP12X280-45              |       |
| 325                                          | 301...430              |                       | OSP12X325-45              |       |
| 395                                          | 371...500              |                       | OSP12X395-45              |       |
| 465                                          | 441...570              |                       | OSP12X465-45              |       |
| 535                                          | 511...640              |                       | OSP12X535-45              |       |
| <b>Shaft diameter 12mm</b>                   |                        |                       |                           |       |
| 325                                          | 340...535              | OETL3150              | OSP12X325-45              |       |
| 395                                          | 410...605              |                       | OSP12X395-45              |       |
| 465                                          | 480...675              |                       | OSP12X465-45              |       |
| 535                                          | 550...745              |                       | OSP12X535-45              |       |

### Shaft alignment ring

Improves the handle operation if a handle and a shaft have been poorly aligned.

| Type                                      | Colour | Order Code | Price |
|-------------------------------------------|--------|------------|-------|
| For pistol type handle OH_45...275J5...12 | Black  | OHZX10     |       |
| For selector type handles OH_1...3        |        | OHZX11     |       |
| For round padlockable handle OZG71P       |        | OZG71      |       |

### Shaft extension socket

For extending the shaft of combination attachment

| Shaft Diameter [mm] | Order Code | Price |
|---------------------|------------|-------|
| 6                   | OESAZX167  |       |
| 12                  | OETLZX95   |       |

### Adapter for extension socket

The adapter can be placed inside the extension socket OETLZX95

| Shaft Diameter [mm] | Order Code | Price |
|---------------------|------------|-------|
| 6                   | OETLZK19   |       |



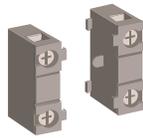
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# Switch disconnectors accessories

## Auxiliary contacts

### Auxiliary contact blocks, IP20

Contact numbering according to EN50013



OA1G01



OA1G10



Auxiliary contacts - mounted on both sides of the switch



OBEA\_



OZXK\_

#### Product Hierarchy 2200001

| Suitable for switches | Function | Order Code | Price |
|-----------------------|----------|------------|-------|
|-----------------------|----------|------------|-------|

#### Aux Contacts for snap-on mounting to the side of the switch OT 16...125F\_ , ET\_

$I_{th} = 16A$ , cable cross section max.  $2 \times 2.5 \text{ mm}^2$ . Early-break type OA1G10  
Mountable on left side, max. 2 pcs

| OT 16...125F_ , ET_ | 1NC | OA1G01                 |  |
|---------------------|-----|------------------------|--|
|                     | 1NC | OA1G01AU <sup>1)</sup> |  |

#### Aux Contacts for mounting on the right side, max. 2 pcs OT 16...125F\_ , ET

| OT 16...125F_ , ET_ | 1NO | OA1G10                 |  |
|---------------------|-----|------------------------|--|
|                     | 1NO | OA1G10AU <sup>1)</sup> |  |

#### Aux Contacts for mounting on both sides OT 16...125F

OT 16...32: max. 2NO+2NC, OT45...125: max. 4NO+4NC<sup>3)</sup>

| OT 16...125F_ | 1NO+1NC | OA2G11 <sup>2)</sup> |  |
|---------------|---------|----------------------|--|
|---------------|---------|----------------------|--|

#### Aux Contacts for mounting with adapter to the side of the switch OT16\_ , ET\_

$I_{th} = 16A$ , cable cross section max.  $2 \times 2.5 \text{ mm}^2$ . Mounting with the adapter OAZX1, max. 2 blocks/side.

| OT160E_ , ET_ | 1NO+1NC | OA2G11 |  |
|---------------|---------|--------|--|
|---------------|---------|--------|--|

#### Aux Contacts for mounting with adapter on top of the switch OT160E

$I_{th} = 10A$ . Cable cross section  $0.5 \text{ mm}^2 \dots 2 \times 2.5 \text{ mm}^2$ . Insulation voltage  $U_i 690V$ . Mounting with the adapter OEZNP1, max. 6 aux. blocks. Early break type.

| OT160E_ | 1NO | OBEA10                 |  |
|---------|-----|------------------------|--|
|         |     | OBEA10AU <sup>1)</sup> |  |
|         | 1NC | OBEA01                 |  |
|         |     | OBEA01AU <sup>1)</sup> |  |

#### Aux Contacts for mounting on the left side of the switch OT160EV...2500

Max. 8 auxiliary contact blocks with the OEA28 module

| OT160EV...2500 | 1NO | OA1G10                 |  |
|----------------|-----|------------------------|--|
|                |     | OA1G10AU               |  |
|                | 1NC | OA3G01                 |  |
|                |     | OA3G01AU <sup>1)</sup> |  |

#### Aux Contacts for mounting on the mechanism cover OETL3150

$I_{th} = 10A$ . Cable cross section  $0.5 \text{ mm}^2 \dots 2 \times 2.5 \text{ mm}^2$ . Insulation voltage  $U_i 690V$ . Early break type.

| OETL3150 | 1NO+1NC | OZXK1               |  |
|----------|---------|---------------------|--|
|          | 2NO+2NC | OZXK2               |  |
|          | 4NO+4NC | OZXK3 <sup>5)</sup> |  |
|          | 2NO     | OZXK4               |  |
|          | 4NO     | OZXK5               |  |
|          | 8NO     | OZXK6 <sup>6)</sup> |  |

<sup>1)</sup> Types \_AU are gold plated for extremely difficult circumstances and low voltages.

<sup>2)</sup> Not mountable on the same side as the fourth pole.

<sup>3)</sup> Contact numbering:

(83) (43) (53) 13            21 (61) (31) (71)  
(84) (44) (54) 14            22 (62) (32) (72)

<sup>4)</sup> Auxiliary contacts OA1G\_ are available in larger packing as well. A bulk package includes 50 switches. Type number: add a suffix: /B, e.g. OA1G01/B.

<sup>5)</sup> 8 NO + 8 NC auxiliary contacts = 2 x OZXK 3

<sup>6)</sup> 16 NO auxiliary contacts = 2 x OZXK 6

Early break type auxiliary contacts means that in the switches, the NO aux.contacts break before the main contacts open.



# Switch disconnectors accessories

## Auxiliary contacts

### Mounting Accessories for Auxiliary contacts

|                                                                                                        |  | Product Hierarchy 2200001 |       |
|--------------------------------------------------------------------------------------------------------|--|---------------------------|-------|
|                                                                                                        |  | Order Code                | Price |
| <b>Adapter for OA2G11 with OT160E</b><br>Max. two blocks/side. Mountable on either side of the switch. |  | OAZX1                     |       |
| <b>Adapter for OBEA_ with OT160E</b><br>Mountable on top of switch                                     |  | OEZNP1                    |       |
| <b>Numbering stickers for aux contact blocks OBEA</b><br>Required if several blocks are used.          |  |                           |       |
| OBEA10 1NO                                                                                             |  | OBEAZX10                  |       |
| OBEA01 1NC                                                                                             |  | OBEAZX01                  |       |
| <b>Module for aux contacts for OT160EV...2500</b><br>Screw mounting on left side of switch             |  | OEA28                     |       |

4

| For OA1G_, OA2G_, OA3G_ |                |        |                      |     |                      |    | For OBEA_ and OZKK_   |   |                       |      |
|-------------------------|----------------|--------|----------------------|-----|----------------------|----|-----------------------|---|-----------------------|------|
| Ue/[V]                  | AC15<br>Ie/[A] | Ue/[V] | DC12<br>Ie/[A] P/[W] |     | DC13<br>Ie/[A] P/[W] |    | AC12<br>Ue/[V] Ie/[A] |   | DC12<br>Ue/[V] Ie/[A] |      |
| 230                     | 6              | 24     | 10                   | 240 | 2                    | 50 | 120                   | 8 | 125                   | 1.1  |
| 400                     | 4              | 72     | 4                    | 290 | 0.8                  | 60 | 240                   | 6 | 250                   | 0.55 |
| 415                     | 4              | 125    | 2                    | 250 | 0.55                 | 70 | 400                   | 4 | 440                   | 0.31 |
| 690                     | 2              | 250    | 0.55                 | 140 | 0.27                 | 70 | 415                   | 4 | 500                   | 0.27 |
|                         |                | 440    | 0.1                  | 44  |                      |    | 480                   | 3 | 600                   | 0.2  |
|                         |                |        |                      |     |                      |    | 500                   | 3 |                       |      |
|                         |                |        |                      |     |                      |    | 690                   | 2 |                       |      |



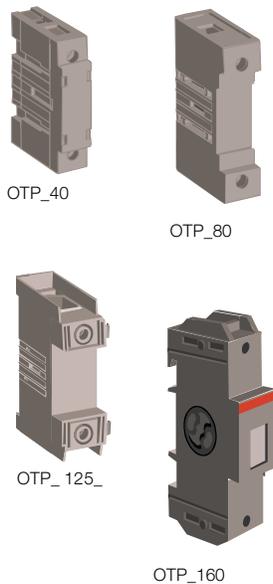
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# Switch disconnectors accessories

## 4th Poles, neutral & earth terminals

### Fourth poles

Mountable on the side of the switch.



| Suitable for switches                               | Function | Product Hierarchy 2200001 |       |
|-----------------------------------------------------|----------|---------------------------|-------|
|                                                     |          | Order Code                | Price |
| <b>Simultaneous function with the main contacts</b> |          |                           |       |
| OT16...40F3                                         |          | OTPS40FPN1                |       |
| OT63...80F3                                         |          | OTPS40FPN2                |       |
| OT100...125F3                                       |          | OTPS80FP                  |       |
| OT16...40FT3                                        |          | OTPS125FP                 |       |
| OT63...80FT3                                        |          | OTPS40FDN1                |       |
| OT100...125FT3                                      |          | OTPS40FDN2                |       |
| OT160E3, ET3                                        |          | OTPS80FD                  |       |
| OT160EV...250                                       |          | OTPS125FD                 |       |
| OT315...400                                         |          | OTZNA1-160E4              |       |
| OT630...800                                         |          | OTPS160EP                 |       |
| OT1000...1250                                       |          | OTZ250E                   |       |
| OT1600                                              |          | OTZ400E                   |       |
| OT2000...2500                                       |          | OTZ800E                   |       |
|                                                     |          | OTZ1250E                  |       |
|                                                     | OTZ1600E |                           |       |
|                                                     | OTZ2500E |                           |       |
| <b>Late-break and early-make</b>                    |          |                           |       |
| OT16...40F3                                         |          | OTPL40FP                  |       |
| OT63...80F3                                         |          | OTPL80FP                  |       |
| OT100...125F3                                       |          | OTPL125FP                 |       |
| OT16...40F3                                         |          | OTPL40FD                  |       |
| OT63...80F3                                         |          | OTPL80FD                  |       |
| OT100...125F3                                       |          | OTPL125FD                 |       |

### Neutral & earth terminals

Mountable on the side of the switch.



| Suitable for switches     | Function  | Product Hierarchy 2200001 |       |
|---------------------------|-----------|---------------------------|-------|
|                           |           | Order Code                | Price |
| <b>Fixed neutral</b>      |           |                           |       |
| OT16...40F3               |           | OTPN40FP                  |       |
| OT63...80F3               |           | OTPN80FP                  |       |
| OT100...125F3             |           | OTPN125FP                 |       |
| OT106E3, ET3              |           | OTPN160EP                 |       |
| OT16...40FT3              |           | OTPN40FD                  |       |
| OT63...80FT3              |           | OTPN80FD                  |       |
| OT 100...125ET3           |           | OTPN125FD                 |       |
| <b>Detachable neutral</b> |           |                           |       |
| OT16...40F3               |           | OTPD40FP                  |       |
| OT63...80F3               |           | OTPD80FP                  |       |
| OT100...125FT3            |           | OTPD125FP                 |       |
| OT63...80FT3              | OTPD80FD  |                           |       |
| <b>Protective earth</b>   |           |                           |       |
| OT16...40F3               |           | OTPE40FP                  |       |
| OT63...80F3               |           | OTPE80FP                  |       |
| OT100...125F3             |           | OTPE125FP                 |       |
| OT 160E3, ET3             |           | OTPE160EP                 |       |
| OT16...40F3               |           | OTPE40FD                  |       |
| OT63...80F3               | OTPE80FD  |                           |       |
| OT100...125FT3            | OTPE125FD |                           |       |



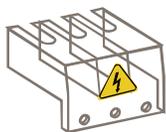
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# Switch disconnectors accessories

## Neutral links & terminal shrouds

### Neutral links

|                                                    |              | Product Hierarchy 2200001 |       |
|----------------------------------------------------|--------------|---------------------------|-------|
| Suitable for switches                              | $I_{th}$ [A] | Order Code                | Price |
| Detachable, mountable separately to the base plate |              |                           |       |
| OT 160EV...250 / OTM 160...250                     | 250          | OXN250                    |       |
| OT/OTM 315...400                                   | 400          | OXN400                    |       |
| OT/OTM 630...800                                   | 800          | OXN800T                   |       |
| OT/OTM 1000...1250                                 | 1250         | OXN1250T                  |       |
| Mountable separately to the base plate             |              |                           |       |
|                                                    | 200          | OESAZX162                 |       |
|                                                    | 315          | OESAZX164                 |       |
|                                                    | 400          | OESAZX165                 |       |
|                                                    | 1000         | OESAZX160                 |       |



OTS\_T3



OTS125T3L



OTS\_T1



OTS160T1



OTS\_L



OTS\_S\_

### Terminal shrouds

Snap-on mounting, transparent

| Suitable for switches                             | Order Code | Price |
|---------------------------------------------------|------------|-------|
| For 3-pole switches                               |            |       |
| OT 16...40F3, -FT3                                | OTS40T3    |       |
| OT63...80F3, -FT3                                 | OTS63T3    |       |
| OT 100...125F3, FT3                               | OTS125T3   |       |
| OT125FL                                           | OTS125T3L  |       |
| OT160E3                                           | OTS160T3   |       |
| OT100...125F3 with terminal clamps OZXL1 or OZXT1 | OTS125T3P  |       |
| For 4-pole switches                               |            |       |
| OT160E4                                           | OTS160T4   |       |

For 1 to 4-pole switches, shroud for single pole and for fourth pole

| Suitable for switches                               | Order Code | Price |
|-----------------------------------------------------|------------|-------|
| OTP_40F_                                            | OTS40T1    |       |
| OTP_80F_                                            | OTS63T1    |       |
| OTP_125F                                            | OTS125T1P  |       |
| OT160E_                                             | OTS160T1   |       |
| OT100...125E3 with terminal clamps OZXL1/1 or OZXT1 | OTS125T1P  |       |

Snap-on mounting, grey plastic

| Suitable for switches      | Description | Order Code      | Price | Order Code      | Price |
|----------------------------|-------------|-----------------|-------|-----------------|-------|
|                            |             | 3-pole switches |       | 4-pole switches |       |
| OT160EV...250/OTM160...250 | Long Type   | OTS250G1L/3     | 20.87 | OTS250G1L/4     |       |
|                            | Short Type  | OTS250G1S/3     | 18.96 | OTS250G1S/4     |       |
| OT/OTM315...400            | Long Type   | OTS400G1L/3     | 29.15 | OTS400G1L/4     |       |
|                            | Short Type  | OTS400G1S/3     | 23.32 | OTS400G1S/4     |       |
| OT/OTM630...800            | Long Type   | OTS800G1L/3     | 52.19 | OTS800G1L/4     |       |
|                            | Short Type  | OTS800G1S/3     | 46.84 | OTS800G1S/4     |       |
| OT/OTM1000...1600          | Long Type   | OTS1600G1L/3    | 35.17 | OTS1600G1L/4    |       |
|                            | Short Type  | OTS1600G1S/3    | 27.03 | OTS1600G1S/4    |       |
| OT/OTM2000...2500          | Long Type   | OTS2500G1L/3    | 48.94 | OTS2500G1L/4    |       |
|                            | Short Type  | OTS2500G1S/3    | 35.95 | OTS2500G1S/4    |       |



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# Switch disconnectors accessories

## Conversion kits

### Conversion kits for front operated switch combinations

#### 6 & 8-pole switch mechanism

Parallel attachment for connecting two 3- or 4-pole switches. The switches work simultaneously. Mounting directly on the top of two switch-disconnectors, snap-on mounting. The switch size is printed on stickers for different switch sizes. The fourth pole or auxiliary contacts can be mounted on the outer side of the combination.



OWP6D80



OTZW8



OESAZW2



OESAZW1



OTZW25  
OETLZW11, OETLZW12



OTZW26

OETLZW13

#### Product Hierarchy 2200001

| Suitable for switches | Shaft distance [mm] | Product Hierarchy 2200001 |       |
|-----------------------|---------------------|---------------------------|-------|
|                       |                     | Order Code                | Price |
| OT16 - 40             |                     | OWP6D40                   |       |
| OT63...80             |                     | OWP6D80                   |       |
| OT100...125           |                     | OWP6D125                  |       |

Attachment levers provided with holes, enabling different shaft distances. The combination switches can be mounted either horizontally or vertically. Two 3 or 4-pole switches needed.

| Suitable for switches | Shaft distance [mm] | Order Code | Price |
|-----------------------|---------------------|------------|-------|
| OT16...40             | 45+(0 - 12)x15      | OTZW8      |       |
| OT45...80             | 60+(0 - 11)x15      |            |       |
| OT100...125           | 75+(0 - 10)x15      | OESAZW2    |       |
| OT160E                | 45+(0 - 11)x15      |            |       |
| OT160EV...250         | 45+(0 - 13)x15      | OETLZW9    |       |
| OT315...800           | 60+(0 - 19)x20      |            |       |

#### Change-over switch mechanism

Two switches connected with a mechanism operating into I-O-II positions. Two 3 or 4-pole switches needed.

| Suitable for switches | Shaft distance [mm] | Order Code | Price |
|-----------------------|---------------------|------------|-------|
| OT16...125            | 90+(0 - 10)x15      | OESAZW1    |       |
| OT160EV...250         | 210+(0 - 18)x20     | OTZW25     |       |
| OT315...400           | 210+(0 - 11)x20     | OETLZW11   |       |
| OT630...800           | 210+(0 - 20)x20     | OETLZW12   |       |

#### By-pass switch mechanism

A combination of two switches in parallel with a third switch for change-over operation to by-pass, for example, a breaker for maintenance. The by-pass attachment can be used together with another combination attachment. Three 3 or 4-pole switches needed.

| Suitable for switches | Shaft distance [mm]              | Order Code | Price |
|-----------------------|----------------------------------|------------|-------|
| OT16 - 125            | Between 1 and 2: 90+(0...6)x15   | OTZW17     |       |
|                       | Between 1 and 3: 90+(0...10)x15  |            |       |
| OT160EV - 250         | Between 1 and 2: 210+(0...9)x20  | OTZW26     |       |
|                       | Between 1 and 3: 250+(0...9)x20  |            |       |
| OT315 - 800           | Between 1 and 2: 210+(0...18)x20 | OETLZW13   |       |
|                       | Between 1 and 3: 250+(0...18)x20 |            |       |



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# Switch disconnectors accessories

## Mechanical interlocks



OTZW24, 10



OETLZW 14, 3, 15

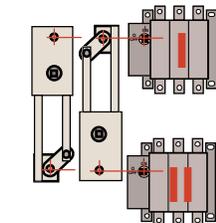
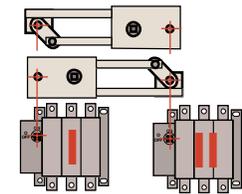
### Mechanical interlock mechanism

Prevents one switch from closing to ON-position, if the other is not in OFF-position. When mounted upside down, prevents one switch from opening to OFF-position, if the other is not in ON-position. (UPS-usage, make-before-break)

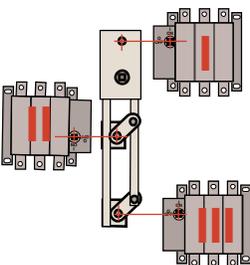
|                            |                     | Product Hierarchy 2200001 |       |
|----------------------------|---------------------|---------------------------|-------|
| Suitable for switches      | Shaft distance [mm] | Order Code                | Price |
| Two 3-pole switches needed |                     |                           |       |
| OT16...125                 | 100                 | OTZW24                    |       |
| OT160...250                | 190                 | OTZW10                    |       |
| OT315...400                | 250                 | OETLZW14                  |       |
| OT315...800                | 300                 | OETLZW3                   |       |
| OT 315...2500 and 3150     | 500                 | OETLZW15                  |       |

### The shafts and handles for conversion kits

| Conversion kit type   | To be ordered separately |             | Included in conversion kit delivery |                       | The standard handle or shaft of one of the combined switches can be used |        |
|-----------------------|--------------------------|-------------|-------------------------------------|-----------------------|--------------------------------------------------------------------------|--------|
|                       | Shaft                    | Handle      | Shaft                               | Handle                | Shaft                                                                    | Handle |
| 6 and 8-pole switches |                          |             |                                     |                       |                                                                          |        |
| OWP5D1                | x<br>(shaft dia 5 mm)    | OHB1A_      | -                                   | -                     | -                                                                        | -      |
| OWP5D2                | x<br>(shaft dia 5 mm)    | OHB1A_      | -                                   | -                     | -                                                                        | -      |
| OWP5D3                | x<br>(shaft dia 5 mm)    | OHB1A_      | -                                   | -                     | -                                                                        | -      |
| OWP5D4                | x<br>(shaft dia 5 mm)    | OHB1A_      | -                                   | -                     | -                                                                        | -      |
| OWP6D1                | x<br>(shaft dia 6 mm)    | OHB45J6     | -                                   | -                     | -                                                                        | -      |
| OWP6D2                | x<br>(shaft dia 6 mm)    | OHB45J6     | -                                   | -                     | -                                                                        | -      |
| OTZW8                 | x<br>(shaft dia 5 mm)    | OHB65J5     | -                                   | -                     | -                                                                        | -      |
| OESAZW2               | -                        | -           | x (2 pcs)                           | OHB145J12             | -                                                                        | -      |
| OETLZW9 for OT        | -                        | -           | -                                   | -                     | x                                                                        | x      |
| OETLZW9 for OETL      | -                        | YASDA7 or 8 | -                                   | -                     | x                                                                        | -      |
| Change-over switches  |                          |             |                                     |                       |                                                                          |        |
| OTZW6                 | -                        | -           | x (2 pcs)                           | OHB80J6E011           | -                                                                        | -      |
| OTZW25                | -                        | -           | x (2 pcs)                           | OHB95J12E011          | -                                                                        | -      |
| OETLZW11              | -                        | -           | x (2 pcs)                           | OHB145J12E011         | -                                                                        | -      |
| OETLZW12              | -                        | -           | x (2 pcs)                           | YASDA21<br>(metallic) | -                                                                        | -      |
| By-pass switches      |                          |             |                                     |                       |                                                                          |        |
| OTZW17                | -                        | -           | x (3 pcs)                           | OHB80J6E011           | -                                                                        | -      |
| OTZW26                | -                        | -           | x (3 pcs)                           | OHB95J12E011          | -                                                                        | -      |
| OETLZW13              | -                        | -           | x (3 pcs)                           | YASDA 6               | -                                                                        | -      |
| Mechanical interlock  |                          |             |                                     |                       |                                                                          |        |
| OTZW24                | -                        | -           | -                                   | -                     | x                                                                        | x      |
| OTZW10                | -                        | -           | -                                   | -                     | x                                                                        | x      |
| OETLZW14              | -                        | -           | -                                   | -                     | x                                                                        | x      |
| OETLZW3               | -                        | -           | -                                   | -                     | x                                                                        | x      |
| OETLZW15              | -                        | -           | -                                   | -                     | x                                                                        | x      |



Change-over switches

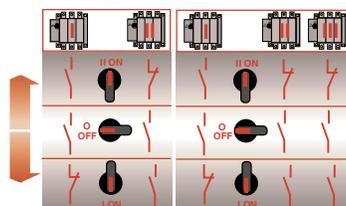


Change-over and by-pass switches

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Change-over switches

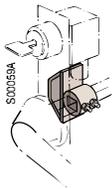
By-pass switches



Mechanical interlock

# Switch disconnectors accessories

## Locking & mounting accessories



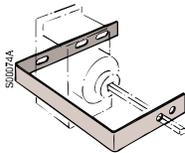
OETLZW 16



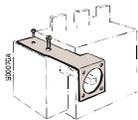
SA 1



OHZX4



OETLZX 58



OHZX 1, 3

### Locking accessories

#### Cam attachment for Castell, Lowe & Fletcher and Ronis interlock

Cam attachment for adopting the switches to the interlock system. The interlock is not included

| Suitable for switches                                          | Product Hierarchy 2200001 |       |
|----------------------------------------------------------------|---------------------------|-------|
|                                                                | Order Code                | Price |
| OT16...250                                                     | OETLZW16                  |       |
| OT315...2500, OETL3150                                         | OETLZW5                   |       |
| <b>Padlocking adapter</b> For a padlock with a max. 3.5mm ball |                           |       |
| OT45...125E, OT160                                             | SA1                       |       |

### Door interlock bracket

When this bracket is provided, the door interlock in handles can't be defeated.

| For pistol type handles | Order Code | Price |
|-------------------------|------------|-------|
| OH_45...275             | OHZX4      |       |

### Mounting accessories

#### Shaft support for long shafts

| Suitable for switches | Order Code | Price |
|-----------------------|------------|-------|
| OT16...125            | OETLZX58   |       |

#### Handle support bracket for direct mounting on the switch mechanism

|          |          |  |
|----------|----------|--|
| OETL3150 | OETLZX71 |  |
|----------|----------|--|

#### 90° angle kit, a front operated switch can be converted to side operated switch

|          |           |  |
|----------|-----------|--|
| OETL3150 | OETLZX108 |  |
|----------|-----------|--|



Full range of product and technical information place this part number in a search engine and download

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# OT change-over and transfer switches 16 ... 2500 A 690V

## Manual operation



|                             | OT16F |    |    | OT63F |    | OT100F |     |
|-----------------------------|-------|----|----|-------|----|--------|-----|
|                             | OT25F |    |    | OT80F |    | OT125F |     |
|                             | OT40F |    |    |       |    |        |     |
| $I_n$ / A                   | 25    | 32 | 40 | 63    | 80 | 115    | 125 |
| $I_n$ / AC-22A, $\leq 415V$ | 16    | 25 | 40 | 63    | 80 | 100    | 125 |
| $I_n$ / AC-23A, $\leq 415V$ | 16    | 20 | 23 | 45    | 75 | 80     | 90  |

4

|                             |  |  |  |  |  |  |  |
|-----------------------------|--|--|--|--|--|--|--|
| $I_n$ / A                   |  |  |  |  |  |  |  |
| $I_n$ / AC-22A, $\leq 415V$ |  |  |  |  |  |  |  |
| $I_n$ / AC-23A, $\leq 415V$ |  |  |  |  |  |  |  |
| $I_n$ / AC-21B, $\leq 415V$ |  |  |  |  |  |  |  |

## Motor operation



|                             | OTM160E_C |     |     | OTM160E_WC |     |     | OTM315E_C |     |
|-----------------------------|-----------|-----|-----|------------|-----|-----|-----------|-----|
|                             | OTM200E_C |     |     | OTM200E_WC |     |     | OTM400E_C |     |
|                             | OTM250E_C |     |     | OTM250E_WC |     |     |           |     |
| $I_n$ / A                   | 160       | 200 | 250 | 160        | 200 | 250 | 315       | 400 |
| $I_n$ / AC-22A, $\leq 415V$ | 160       | 200 | 250 | 160        | 200 | 250 | 315       | 400 |
| $I_n$ / AC-23A, $\leq 415V$ | 160       | 200 | 250 | 160        | 200 | 250 | 315       | 400 |
| $I_n$ / AC-21B, $\leq 415V$ |           |     |     |            |     |     |           |     |

## Automatic operation



|                             | OTM160E_C_D |     |     | OTM160E_WC_D |     |     |
|-----------------------------|-------------|-----|-----|--------------|-----|-----|
|                             | OTM200E_C_D |     |     | OTM200E_WC_D |     |     |
|                             | OTM250E_C_D |     |     | OTM250E_WC_D |     |     |
| $I_n$ / A                   | 160         | 200 | 250 | 160          | 200 | 250 |
| $I_n$ / AC-22A, $\leq 415V$ | 160         | 200 | 250 | 160          | 200 | 250 |
| $I_n$ / AC-23A, $\leq 415V$ | 160         | 200 | 250 | 160          | 200 | 250 |

**Accessories**

Optional handles

Terminal shrouds

Extended shafts

Connecting accessories

Auxiliary contacts

Locking accessories



OT160E  
OT200E  
OT250E

OT160E\_W  
OT200E\_W  
OT250E\_W

OT315E  
OT400E

OT630E  
OT800E

160 200 250  
160 200 250  
160 200 250

160 200 250  
160 200 250  
160 200 250

315 400  
315 400  
315 400

630 800  
630 800  
630 800



OT1000E  
OT1250E

OT1600E

OT2000E  
OT2500E

1000 1250  
1000 1250  
1000 1250

1600  
1600  
1250

2000 2500  
2000 2500



OTM630E\_C  
OTM800E\_C

OTM1000E\_C  
OTM1250E\_C

OTM1600E\_C

OTM2000E\_C  
OTM2500E\_C

630 800  
630 800  
630 800

1000 1250  
1000 1250  
1000 1250

1600  
1600  
1250

2000 2500  
2000 2500



OTM315E\_C\_D  
OTM400E\_C\_D

OTM630E\_C\_D  
OTM800E\_C\_D

OTM1000E\_C\_D  
OTM1250E\_C\_D

OTM1600E\_C\_D

315 400  
315 400  
315 400

630 800  
630 800  
630 800

1000 1250  
1000 1250  
1000 1250

1600  
1600  
1250

# Growing importance of a secure power supply

As industrial processes and IT applications diversify, a secure power supply is becoming an increasingly important asset in the drive to cut production and maintenance costs. In emergency situations, the system logic of power distribution can become complex with mechanical devices looking after making, breaking, conducting and isolating power. Loads may sometimes need to be transferred from one supply to another — this will be the case when energy use is restricted or when the supply source is overloaded.

## High performance level

In change-over applications where the loaded switch may need to be operated remotely, adequate durability has been ensured by testing against the IEC 60947-6-1 standard in the specification of endurance requirements.

## Utilization categories:

- AC-31 for non-inductive or slightly inductive load
- AC-33 for motor loads or mixed loads including motors

The motorized change-over switches have snap-on control wire connections. Auxiliary contacts can be snapped-on to the sides of the switches and the power terminals can be connected in parallel with bridging bars.

4

ABB change-over switches are rated according to IEC 60947-6-1 standard

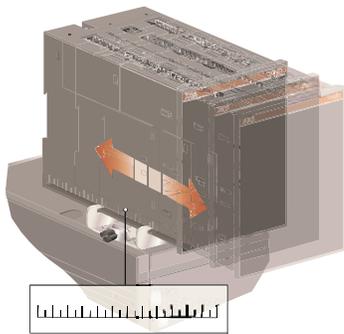
## Easy installation for local or remote control

ABB change-over switches are very easy to install: the manually operated switch is operated via a handle fixed directly on the switch or on the panel door. The 16 to 125 Ampere sizes can be snapped-on to a DIN rail and the front fits in the 45 mm consumer unit cut-out.



The automatic transfer switches feature the automatic control unit which can be adjusted according to the mounting depth of the panel. Voltage sensing kit is installed at the factory thus reducing the expensive and time consuming installation work.

- ▶ Quick and easy installation  
– savings in time and expenses



#### Safe and reliable

ABB automatic transfer switches ensure service continuity with a number of built-in, integrated safety features. The change-over mechanism, for example, offers three stable positions which ensure isolation of the two asynchronous power supplies. This eliminates any risk of short-circuit between them, even in the presence of transient voltages. The automatic transfer switches are equipped with handle for manual operation in case of emergency.

- ▶ Inbuilt safety



#### Compact design

The design of ABB change-over switches is advanced and compact, allowing installation in confined spaces at considerable savings. Compact double layer construction.

- ▶ Minimizing the need for space

# Change-over switches

## Manual OT16...315

### Change-over switches, 3 & 4 pole, I-O-II -indication

Includes terminal clamps IP20. Handle and shaft has to be ordered separately.



OT 45...63 E3C



OT 125 E3C

4

| Rated current / Rate Power |                 |                         | Number of Poles | Product Hierarchy 2200003 |  |
|----------------------------|-----------------|-------------------------|-----------------|---------------------------|--|
| AC-21A...AC-22A            | AC-23A          | Order Code              |                 | Price                     |  |
| Up to 415V<br>I[A]         | 400V<br>S/[kVA] | 400-415V<br>I[A], P[kW] |                 |                           |  |
| 16                         | 11              | 16/7.5                  | 3               | OT16F3C                   |  |
|                            |                 |                         | 4               | OT16F4C                   |  |
| 25                         | 17              | 20/9                    | 3               | OT25F3C                   |  |
|                            |                 |                         | 4               | OT25F4C                   |  |
| 40                         | 27              | 23/11                   | 3               | OT40F3C                   |  |
|                            |                 |                         | 4               | OT40F4C                   |  |
| 63                         | 43              | 45/22                   | 3               | OT63F3C                   |  |
|                            |                 |                         | 4               | OT63F4C                   |  |
| 80                         | 55              | 75/37                   | 3               | OT80F3C                   |  |
|                            |                 |                         | 4               | OT80F4C                   |  |
| 100                        | 70              | 80/37                   | 3               | OT100F3C                  |  |
|                            |                 |                         | 4               | OT100F4C                  |  |
| 125                        | 86              | 90/45                   | 3               | OT125F3C                  |  |
|                            |                 |                         | 4               | OT125F4C                  |  |



OT160...250E03CP



OT315...400E03CP



OT630...800E03CP



OT160...250E03WCP

### Manual Change-over switches, 3 & 4 pole, I-O-II -indication

Including a black plastic IP65 I-O-II pistol type handle, padlockable in the O-position, door interlock in the I- & II-positions and when padlocked.

|     |     |         |   | Order Code  | Price |
|-----|-----|---------|---|-------------|-------|
| 160 | 110 | 160/90  | 3 | OT160E03CP  |       |
|     |     |         |   | OT160E12CP  |       |
|     |     |         |   | OT160E03WCP |       |
|     |     |         | 4 | OT160E04CP  |       |
|     |     |         |   | OT160E13CP  |       |
|     |     |         |   | OT160E04WCP |       |
| 200 | 135 | 200/110 | 3 | OT200E03CP  |       |
|     |     |         |   | OT200E12CP  |       |
|     |     |         |   | OT200E03WCP |       |
|     |     |         | 4 | OT200E04CP  |       |
|     |     |         |   | OT200E13CP  |       |
|     |     |         |   | OT200E04WCP |       |
| 250 | 170 | 250/140 | 3 | OT250E03CP  |       |
|     |     |         |   | OT250E12CP  |       |
|     |     |         |   | OT250E03WCP |       |
|     |     |         | 4 | OT250E04CP  |       |
|     |     |         |   | OT250E13CP  |       |
|     |     |         |   | OT250E04WCP |       |
| 315 | 215 | 315/160 | 3 | OT315E03CP  |       |
|     |     |         |   | OT315E12CP  |       |
|     |     |         |   | OT315E04CP  |       |
|     |     |         | 4 | OT315E13CP  |       |
|     |     |         |   | OT315E04CP  |       |
|     |     |         |   | OT315E13CP  |       |



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# Change-over switches

## Manual OT400...2500

### Manual Change-over switches, 3 & 4 pole, I-O-II - indication

Including a black plastic IP65 I-O-II pistol type handle, padlockable in the O-position, door interlock in the I- & II-positions and when padlocked.



OT160...250E03CP



OT315...400E03CP



OT630...800E03CP



OT1250E03CP



OT2500E03CP

|      |      |          |   | Product Hierarchy 2200003 |       |
|------|------|----------|---|---------------------------|-------|
|      |      |          |   | Order Code                | Price |
| 400  | 275  | 400/220  | 3 | OT400E03CP                |       |
|      |      |          |   | OT400E12CP                |       |
|      |      |          | 4 | OT400E04CP                |       |
|      |      |          |   | OT400E13CP                |       |
| 630  | 435  | 630/355  | 3 | OT630E03CP                |       |
|      |      |          |   | OT630E12CP                |       |
|      |      |          | 4 | OT630E04CP                |       |
|      |      |          |   | OT630E13CP                |       |
| 800  | 550  | 800/450  | 3 | OT800E03CP                |       |
|      |      |          |   | OT800E12CP                |       |
|      |      |          | 4 | OT800E13CP                |       |
|      |      |          |   | OT800E04CP                |       |
| 1000 | 680  | 1000/560 | 3 | OT1000E03CP               |       |
|      |      |          |   | OT1000E12CP               |       |
|      |      |          | 4 | OT1000E04CP               |       |
|      |      |          |   | OT1000E13CP               |       |
|      |      |          |   | OT1000E22CP               |       |
|      |      |          |   |                           |       |
| 1250 | 850  | 1250/710 | 3 | OT1250E03CP               |       |
|      |      |          |   | OT1250E12CP               |       |
|      |      |          | 4 | OT1250E04CP               |       |
|      |      |          |   | OT1250E22CP               |       |
|      |      |          |   | OT1250E13CP               |       |
|      |      |          |   |                           |       |
| 1600 | 1000 | 1250/710 | 3 | OT1600E03CP               |       |
|      |      |          |   | OT1600E12CP               |       |
|      |      |          | 4 | OT1600E04CP               |       |
|      |      |          |   | OT1600E13CP               |       |
|      |      |          |   | OT1600E22CP               |       |
|      |      |          |   |                           |       |
| 2000 | 1350 | -        | 3 | OT2000E03CP               |       |
|      |      |          |   | OT2000E12CP               |       |
|      |      |          | 4 | OT2000E04CP               |       |
|      |      |          |   | OT2000E13CP               |       |
|      |      |          |   | OT2000E22CP               |       |
|      |      |          |   |                           |       |
| 2500 | 1700 | -        | 3 | OT2500E03CP               |       |
|      |      |          |   | OT2500E12CP               |       |
|      |      |          | 4 | OT2500E04CP               |       |
|      |      |          |   | OT2500E13CP               |       |
|      |      |          |   | OT2500E22CP               |       |
|      |      |          |   |                           |       |



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# Change-over switches

## Manual fast transition OT160...800

### Manual Change-over switches, 3 & 4 pole, I-O-II -indication

Including a black plastic IP65 I-O-II pistol type handle, shaft and bolt set for the cable connection. Handle not padlockable and no door interlocking. Operating angle 90° to achieve fast switching. Minimum OFF-time between transfer from I-II or II-I is 20ms.

4



OT250E03CFP



OT315E13CFP



OT630-800E03CFP



OT630-800E04CFP

|     |     |         |   | Product Hierarchy 2200003 |       |
|-----|-----|---------|---|---------------------------|-------|
|     |     |         |   | Order Code                | Price |
| 160 | 110 | 160/90  | 3 | OT160E03CFP               |       |
|     |     |         |   | OT160E12CFP               |       |
|     |     |         |   | OT160E03WCFP              |       |
|     |     |         | 4 | OT160E04CFP               |       |
|     |     |         |   | OT160E13CFP               |       |
|     |     |         |   | OT160E04WCFP              |       |
| 200 | 135 | 200/110 | 3 | OT200E03CFP               |       |
|     |     |         |   | OT200E12CFP               |       |
|     |     |         |   | OT200E03WCFP              |       |
|     |     |         | 4 | OT200E04CFP               |       |
|     |     |         |   | OT200E13CFP               |       |
|     |     |         |   | OT200E04WCFP              |       |
| 250 | 170 | 250/140 | 3 | OT250E03CFP               |       |
|     |     |         |   | OT250E12CFP               |       |
|     |     |         |   | OT250E03WCFP              |       |
|     |     |         | 4 | OT250E04CFP               |       |
|     |     |         |   | OT250E13CFP               |       |
|     |     |         |   | OT250E04WCFP              |       |
| 315 | 215 | 315/160 | 3 | OT315E03CFP               |       |
|     |     |         |   | OT315E12CFP               |       |
|     |     |         |   | OT315E04CFP               |       |
|     |     |         | 4 | OT315E13CFP               |       |
|     |     |         |   | OT400E03CFP               |       |
|     |     |         |   | OT400E12CFP               |       |
| 400 | 275 | 400/220 | 3 | OT400E03CFP               |       |
|     |     |         |   | OT400E12CFP               |       |
|     |     |         |   | OT400E04CFP               |       |
|     |     |         | 4 | OT400E13CFP               |       |
|     |     |         |   | OT630E03CFP               |       |
|     |     |         |   | OT630E12CFP               |       |
| 630 | 435 | 630/355 | 3 | OT630E03CFP               |       |
|     |     |         |   | OT630E12CFP               |       |
|     |     |         |   | OT630E04CFP               |       |
|     |     |         | 4 | OT630E13CFP               |       |
|     |     |         |   | OT800E03CFP               |       |
|     |     |         |   | OT800E12CFP               |       |
| 800 | 550 | 800/450 | 3 | OT800E03CFP               |       |
|     |     |         |   | OT800E12CFP               |       |
|     |     |         |   | OT800E04CFP               |       |
|     |     |         | 4 | OT800E13CFP               |       |
|     |     |         |   |                           |       |
|     |     |         |   |                           |       |

### Shafts, handle and bolt kits included as standard

| Suitable for switches | Shaft    | Handle         | Bolt kit |
|-----------------------|----------|----------------|----------|
| OT160...250_C         | XP6x161  | OHB65J6E011    | M8x25    |
| OT315...400_C         | XP12x166 | OHB95J12E011   | M10x30   |
| OT630...800_C         | XP12x185 | OHB125J12E011  | M12x40   |
| OT1000...2500_C       |          | OHB200J12PE011 | M12x60   |
| OT160...250_CF        | XP6x161  | OHB65J6E69     | M8x25    |
| OT315...400_CF        | XP12x166 | OHB95J12E69    | M10x30   |
| OT630...800_CF        | XP12x185 | OHB145J12E69   | M12x40   |

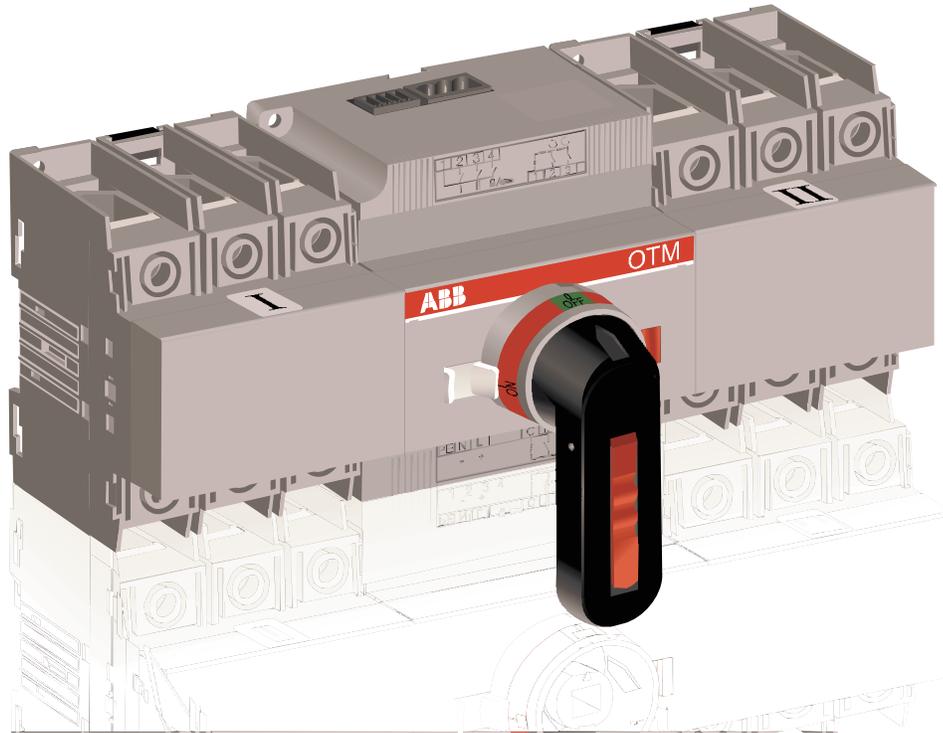


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# OTM40...125\_C

## Improves your performance



4

### Assembly made easy

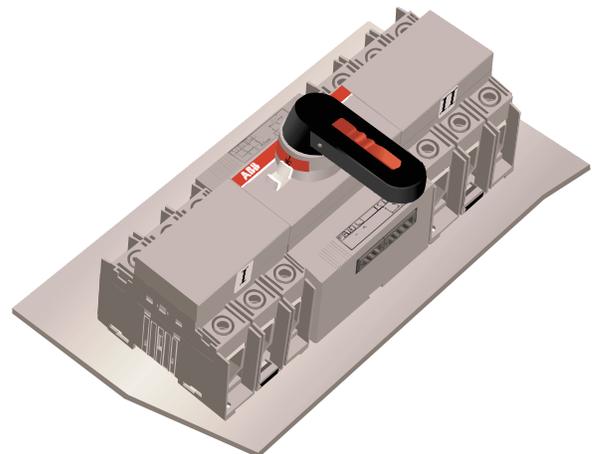
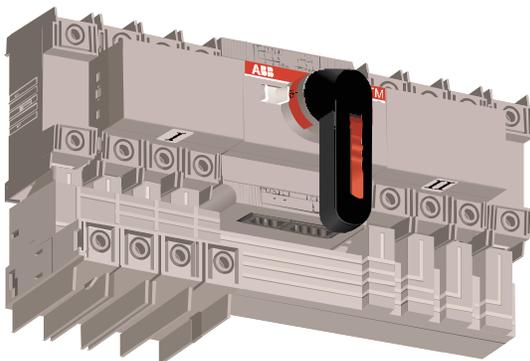
- Bridging bars for quick wiring
- Tunnel terminals ensure a tight and good connection every time
- Snap on accessories are easy to install
- Mounting in any direction

- ▶ Fast and reliable installation every time

### Most compact solution

- The very small footprint area of OTM allows it to be installed in confined spaces

- ▶ Reduced size means savings in costs



Effortless assembly, safety features, optimized performance and small size enable OTM40...125\_C motorized change-over switches to improve the performance of your application!

ABB offers a wide range of components for change-over applications. Meaning that all components can be sourced from one supplier.

4

#### Performance that meets your needs

- Tested according to IEC 60947-3 and IEC 60947-6-1
- Full ratings according to utilization categories AC22A/32B which are the typical categories in GenSet applications
- A wide supply voltage range provides enhanced logistics and effortless design work
- 3- and 4-pole switches as standard

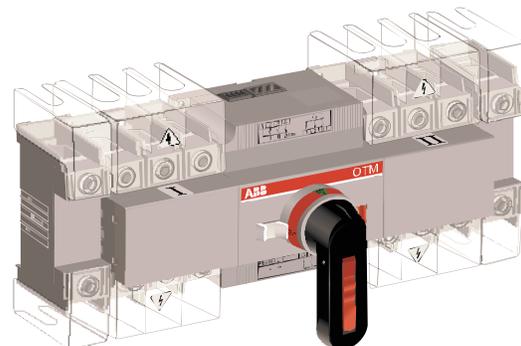
- ▶ Designed for your application



#### Safe to use

- OTM is not only a transfer device, it is also an isolator providing safe maintenance work
- Reliable position indication is always guaranteed
- Finger-safe construction prevents contact with live parts
- Mechanical and electrical locking options - safety is always considered

- ▶ Safe and reliable operation and maintenance



# Change-over switches

## Motorised OTM40...125\_C



Change-over switches, motor operation, I-O-II operation, open transition  
OTM40...125\_C

Including handle for manual operation, a handle storage clip and male connectors for control circuits. Cable cross section for OTM40 is 2.5...25mm<sup>2</sup> or 2 x 2.5...16mm<sup>2</sup> and for OTM63...125 is 10...70mm<sup>2</sup>

OTM40...125F3C\_



OTM40...125F4C\_



Motor voltage U<sub>e</sub> 110-240 V AC/DC

| No of Poles | Rated Current AC21A .. AC22A 415V [A] | Rated Power 400V [kVA] | Rated Current AC31B / AC33B 415V [A] | Part Number     | Product Hierarchy 2200003 |       |
|-------------|---------------------------------------|------------------------|--------------------------------------|-----------------|---------------------------|-------|
|             |                                       |                        |                                      |                 | Order Code                | Price |
| 3           | 40                                    | 27                     | 40/40                                | OTM40F3CMA230V  | OTM40F3CMA230V            |       |
| 4           |                                       |                        |                                      | OTM40F4CMA230V  | OTM40F4CMA230V            |       |
| 3           | 63                                    | 43                     | 63/63                                | OTM63F3CMA230V  | OTM63F3CMA230V            |       |
| 4           |                                       |                        |                                      | OTM63F4CMA230V  | OTM63F4CMA230V            |       |
| 3           | 80                                    | 55                     | 80/80                                | OTM80F3CMA230V  | OTM80F3CMA230V            |       |
| 4           |                                       |                        |                                      | OTM80F4CMA230V  | OTM80F4CMA230V            |       |
| 3           | 100                                   | 70                     | 100/80                               | OTM100F3CMA230V | OTM100F3CMA230V           |       |
| 4           |                                       |                        |                                      | OTM100F4CMA230V | OTM100F4CMA230V           |       |
| 3           | 125                                   | 86                     | 125/80                               | OTM125F3CMA230V | OTM125F3CMA230V           |       |
| 4           |                                       |                        |                                      | OTM125F4CMA230V | OTM125F4CMA230V           |       |



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# Change-over switches

## Motorised OTM160...200

### Motorised Change-over switches, 3 & 4 pole, I-O-II -indication

Including a handle for manual operation, bolt kit with nut and washers for all terminals and male connectors for control circuits. Types OTM160-2500E\_ include a clamp for the handle and spare fuses. Types OTM160-250E\_W are equipped with extended phase distance.



OTM160...250E3\_



OTM160...250E4\_



OTM160...250E3W\_

4

| Rated Current                             | Rated Power     | Rated Current                    | Number of Poles | Motor voltage Ue | Product Hierarchy 2200003 |       |  |     |                |                 |  |  |  |  |   |                |                |  |
|-------------------------------------------|-----------------|----------------------------------|-----------------|------------------|---------------------------|-------|--|-----|----------------|-----------------|--|--|--|--|---|----------------|----------------|--|
|                                           |                 |                                  |                 |                  | Order Code                | Price |  |     |                |                 |  |  |  |  |   |                |                |  |
| AC-21A...<br>AC-22A<br>Up to 415V<br>I[A] | 400V<br>S/[kVA] | AC-31B<br>AC-33B<br>415V<br>I[A] | 160             | 110              | 160/160                   |       |  |     |                |                 |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  | 3   | 220-240v AC    | OTM160E3CM230C  |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 110-125v AC/DC | OTM160E3CM110C  |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 48v DC         | OTM160E3CM48D   |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 24v DC         | OTM160E3CM24D   |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 220-240v AC    | OTM160E3WCM230C |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 110-125v AC/DC | OTM160E3WCM110C |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  | 4   | 48v DC         | OTM160E3WCM48D  |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 24v DC         | OTM160E3WCM24D  |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 220-240v AC    | OTM160E4CM230C  |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 110-125v AC/DC | OTM160E4CM110C  |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 48v DC         | OTM160E4CM48D   |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     | 24v DC         | OTM160E4CM24D   |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  | 200 | 135            | 200/200         |  |  |  |  |   |                |                |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     |                |                 |  |  |  |  | 3 | 220-240v AC    | OTM200E3CM230C |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   | 110-125v AC/DC | OTM200E3CM110C |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   | 48v DC         | OTM200E3CM48D  |  |
|                                           |                 |                                  |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   | 24v DC         | OTM200E3CM24D  |  |
| 220-240v AC                               | OTM200E3WCM230C |                                  |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   |                |                |  |
| 110-125v AC/DC                            | OTM200E3WCM110C |                                  |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   |                |                |  |
| 4                                         | 48v DC          | OTM200E3WCM48D                   |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   |                |                |  |
|                                           | 24v DC          | OTM200E3WCM24D                   |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   |                |                |  |
|                                           | 220-240v AC     | OTM200E4CM230C                   |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   |                |                |  |
|                                           | 110-125v AC/DC  | OTM200E4CM110C                   |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   |                |                |  |
|                                           | 48v DC          | OTM200E4CM48D                    |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   |                |                |  |
|                                           | 24v DC          | OTM200E4CM24D                    |                 |                  |                           |       |  |     |                |                 |  |  |  |  |   |                |                |  |



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# Change-over switches

## Motorised OTM250...630

### Motorised Change-over switches, 3 & 4 pole, I-O-II -indication

Including a handle for manual operation, bolt kit with nut and washers for all terminals and male connectors for control circuits. Types OTM160-2500E\_ include a clamp for the handle and spare fuses. Types OTM160-250E\_W are equipped with extended phase distance.



OTM250E4CM230C



OTM315...400E3\_



OTM315...400E4\_

| Rated Current<br>AC-21A...<br>AC-22A<br>Up to 415V<br>I/[A] | Rated Power<br>400V<br>S/[kVA] | Rated Current<br>AC-31B<br>AC-33B<br>415V<br>I/[A] | Number of Poles | Motor voltage Ue | Product Hierarchy 2200003 |       |
|-------------------------------------------------------------|--------------------------------|----------------------------------------------------|-----------------|------------------|---------------------------|-------|
|                                                             |                                |                                                    |                 |                  | Order Code                | Price |
| 250                                                         | 170                            | 250/250                                            | 3               | 220-240v AC      | OTM250E3CM230C            |       |
|                                                             |                                |                                                    |                 | 110-125v AC/DC   | OTM250E3CM110C            |       |
|                                                             |                                |                                                    |                 | 48v DC           | OTM250E3CM48D             |       |
|                                                             |                                |                                                    |                 | 24v DC           | OTM250E3CM24D             |       |
|                                                             |                                |                                                    |                 | 220-240v AC      | OTM250E3WCM230C           |       |
|                                                             |                                |                                                    |                 | 110-125v AC/DC   | OTM250E3WCM110C           |       |
|                                                             |                                |                                                    | 4               | 48v DC           | OTM250E3WCM48D            |       |
|                                                             |                                |                                                    |                 | 24v DC           | OTM250E3WCM24D            |       |
|                                                             |                                |                                                    |                 | 220-240v AC      | OTM250E4CM230C            |       |
|                                                             |                                |                                                    |                 | 110-125v AC/DC   | OTM250E4CM110C            |       |
|                                                             |                                |                                                    |                 | 48v DC           | OTM250E4CM48D             |       |
|                                                             |                                |                                                    |                 | 24v DC           | OTM250E4CM24D             |       |
| 315                                                         | 215                            | 315/315                                            | 3               | 220-240v AC      | OTM315E3CM230C            |       |
|                                                             |                                |                                                    |                 | 110-125v AC/DC   | OTM315E3CM110C            |       |
|                                                             |                                |                                                    |                 | 48v DC           | OTM315E3CM48D             |       |
|                                                             |                                |                                                    |                 | 24v DC           | OTM315E3CM24D             |       |
|                                                             |                                |                                                    | 4               | 220-240v AC      | OTM315E4CM230C            |       |
|                                                             |                                |                                                    |                 | 110-125v AC/DC   | OTM315E4CM110C            |       |
|                                                             |                                |                                                    |                 | 48v DC           | OTM315E4CM48D             |       |
|                                                             |                                |                                                    |                 | 24v DC           | OTM315E4CM24D             |       |
| 400                                                         | 275                            | 400/400                                            | 3               | 220-240v AC      | OTM400E3CM230C            |       |
|                                                             |                                |                                                    |                 | 110-125v AC/DC   | OTM400E3CM110C            |       |
|                                                             |                                |                                                    |                 | 48v DC           | OTM400E3CM48D             |       |
|                                                             |                                |                                                    |                 | 24v DC           | OTM400E3CM24D             |       |
|                                                             |                                |                                                    | 4               | 220-240v AC      | OTM400E4CM230C            |       |
|                                                             |                                |                                                    |                 | 110-125v AC/DC   | OTM400E4CM110C            |       |
|                                                             |                                |                                                    |                 | 48v DC           | OTM400E4CM48D             |       |
|                                                             |                                |                                                    |                 | 24v DC           | OTM400E4CM24D             |       |
| 400                                                         | 275                            | 400/400                                            | 3               | 220-240v AC      | OTM630E3CM230C            |       |
|                                                             |                                |                                                    |                 | 110-125v AC/DC   | OTM630E3CM110C            |       |
|                                                             |                                |                                                    |                 | 48v DC           | OTM630E3CM48D             |       |
|                                                             |                                |                                                    |                 | 24v DC           | OTM630E3CM24D             |       |
|                                                             |                                |                                                    | 4               | 220-240v AC      | OTM630E4CM230C            |       |
|                                                             |                                |                                                    |                 | 110-125v AC/DC   | OTM630E4CM110C            |       |
|                                                             |                                |                                                    |                 | 48v DC           | OTM630E4CM48D             |       |
|                                                             |                                |                                                    |                 | 24v DC           | OTM630E4CM24D             |       |



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# Change-over switches

## Motorised OTM800...1600

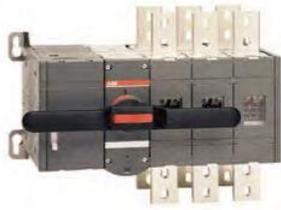
### Motorised Change-over switches, 3 & 4 pole, I-O-II -indication

Including a handle for manual operation, bolt kit with nut and washers for all terminals and male connectors for control circuits. Types OTM160-2500E\_ include a clamp for the handle and spare fuses. Types OTM160-250E\_W are equipped with extended phase distance.

4



OTM1250E3CM230C



OTM1600E3CM230C

| Rated Current                             | Rated Power<br>S/[kVA] | Rated Current<br>I[A]            | Number of Poles | Motor voltage Ue | Product Hierarchy 2200003 |       |
|-------------------------------------------|------------------------|----------------------------------|-----------------|------------------|---------------------------|-------|
|                                           |                        |                                  |                 |                  | Order Code                | Price |
| AC-21A...<br>AC-22A<br>Up to 415V<br>I[A] | 400V                   | AC-31B<br>AC-33B<br>415V<br>I[A] | 3               | 220-240v AC      | OTM800E3CM230C            |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM800E3CM110C            |       |
|                                           |                        |                                  |                 | 48v DC           | OTM800E3CM48D             |       |
|                                           |                        |                                  |                 | 24v DC           | OTM800E3CM24D             |       |
|                                           |                        |                                  | 4               | 220-240v AC      | OTM800E4CM230C            |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM800E4CM110C            |       |
|                                           |                        |                                  |                 | 48v DC           | OTM800E4CM48D             |       |
|                                           |                        |                                  |                 | 24v DC           | OTM800E4CM24D             |       |
| 800                                       | 550                    | 720/650                          | 3               | 220-240v AC      | OTM1000E3CM230C           |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM1000E3CM110C           |       |
|                                           |                        |                                  |                 | 48v DC           | OTM1000E3CM48D            |       |
|                                           |                        |                                  |                 | 24v DC           | OTM1000E3CM24D            |       |
|                                           |                        |                                  | 4               | 220-240v AC      | OTM1000E4CM230C           |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM1000E4CM110C           |       |
|                                           |                        |                                  |                 | 48v DC           | OTM1000E4CM48D            |       |
|                                           |                        |                                  |                 | 24v DC           | OTM1000E4CM24D            |       |
| 1000                                      | 680                    | 1000/1000                        | 3               | 220-240v AC      | OTM1250E3CM230C           |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM1250E3CM110C           |       |
|                                           |                        |                                  |                 | 48v DC           | OTM1250E3CM48D            |       |
|                                           |                        |                                  |                 | 24v DC           | OTM1250E3CM24D            |       |
|                                           |                        |                                  | 4               | 220-240v AC      | OTM1250E4CM230C           |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM1250E4CM110C           |       |
|                                           |                        |                                  |                 | 48v DC           | OTM1250E4CM48D            |       |
|                                           |                        |                                  |                 | 24v DC           | OTM1250E4CM24D            |       |
| 1250                                      | 850                    | 1250/1000                        | 3               | 220-240v AC      | OTM1600E3CM230C           |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM1600E3CM110C           |       |
|                                           |                        |                                  |                 | 48v DC           | OTM1600E3CM48D            |       |
|                                           |                        |                                  |                 | 24v DC           | OTM1600E3CM24D            |       |
|                                           |                        |                                  | 4               | 220-240v AC      | OTM1600E4CM230C           |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM1600E4CM110C           |       |
|                                           |                        |                                  |                 | 48v DC           | OTM1600E4CM48D            |       |
|                                           |                        |                                  |                 | 24v DC           | OTM1600E4CM24D            |       |
| 1600                                      | 100                    | -                                | 3               | 220-240v AC      | OTM1600E3CM230C           |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM1600E3CM110C           |       |
|                                           |                        |                                  |                 | 48v DC           | OTM1600E3CM48D            |       |
|                                           |                        |                                  |                 | 24v DC           | OTM1600E3CM24D            |       |
|                                           |                        |                                  | 4               | 220-240v AC      | OTM1600E4CM230C           |       |
|                                           |                        |                                  |                 | 110-125v AC/DC   | OTM1600E4CM110C           |       |
|                                           |                        |                                  |                 | 48v DC           | OTM1600E4CM48D            |       |
|                                           |                        |                                  |                 | 24v DC           | OTM1600E4CM24D            |       |



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# Change-over switches

## Motorised OTM2000...2500

### Motorised Change-over switches, 3 & 4 pole, I-O-II -indication

Including a handle for manual operation, bolt kit with nut and washers for all terminals and male connectors for control circuits. Types OTM160-2500E\_ include a clamp for the handle and spare fuses. Types OTM160-250E\_W are equipped with extended phase distance.



OTM2500E3CM230C

| Rated Current                              | Rated Power     | Rated Current                     | Number of Poles | Motor voltage Ue | Product Hierarchy 2200003 |       |
|--------------------------------------------|-----------------|-----------------------------------|-----------------|------------------|---------------------------|-------|
|                                            |                 |                                   |                 |                  | Order Code                | Price |
| AC-21A...<br>AC-22A<br>Up to 415V<br>I/[A] | 400V<br>S/[kVA] | AC-31B<br>AC-33B<br>415V<br>I/[A] | 3               | 220-240v AC      | OTM2000E3CM230C           |       |
|                                            |                 |                                   |                 | 110-125v AC/DC   | OTM2000E3CM110C           |       |
|                                            |                 |                                   |                 | 48v DC           | OTM2000E3CM48D            |       |
|                                            |                 |                                   |                 | 24v DC           | OTM2000E3CM24D            |       |
|                                            |                 |                                   | 4               | 220-240v AC      | OTM2000E4CM230C           |       |
|                                            |                 |                                   |                 | 110-125v AC/DC   | OTM2000E4CM110C           |       |
|                                            |                 |                                   |                 | 48v DC           | OTM2000E4CM48D            |       |
|                                            |                 |                                   |                 | 24v DC           | OTM2000E4CM24D            |       |
| 2000                                       | 1350            | -                                 | 3               | 220-240v AC      | OTM2500E3CM230C           |       |
|                                            |                 |                                   |                 | 110-125v AC/DC   | OTM2500E3CM110C           |       |
|                                            |                 |                                   |                 | 48v DC           | OTM2500E3CM48D            |       |
|                                            |                 |                                   |                 | 24v DC           | OTM2500E3CM24D            |       |
|                                            |                 |                                   | 4               | 220-240v AC      | OTM2500E4CM230C           |       |
|                                            |                 |                                   |                 | 110-125v AC/DC   | OTM2500E4CM110C           |       |
|                                            |                 |                                   |                 | 48v DC           | OTM2500E4CM48D            |       |
|                                            |                 |                                   |                 | 24v DC           | OTM2500E4CM24D            |       |
| 2500                                       | 1700            | -                                 | 3               | 220-240v AC      | OTM2500E3CM230C           |       |
|                                            |                 |                                   |                 | 110-125v AC/DC   | OTM2500E3CM110C           |       |
|                                            |                 |                                   |                 | 48v DC           | OTM2500E3CM48D            |       |
|                                            |                 |                                   |                 | 24v DC           | OTM2500E3CM24D            |       |
|                                            |                 |                                   | 4               | 220-240v AC      | OTM2500E4CM230C           |       |
|                                            |                 |                                   |                 | 110-125v AC/DC   | OTM2500E4CM110C           |       |
|                                            |                 |                                   |                 | 48v DC           | OTM2500E4CM48D            |       |
|                                            |                 |                                   |                 | 24v DC           | OTM2500E4CM24D            |       |

4

### Shafts, handle and bolt kits included as standard

| Suitable for switches | Handle      | Bolt kit |
|-----------------------|-------------|----------|
| OTM160...250          | OTV250ECMK  | M8x25    |
| OTM315...400          | OTV400ECMK  | M10x30   |
| OTM630...800          | OTV800ECMK  | M12x40   |
| OTM1000...2500        | OTV1000ECMK | M12x60   |



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# Change-over switches

## Automatic transfer switches OTM160...1600

### Automatic transfer switches, I-O-II operation, open transition OTM\_C3D\_ types, voltage sensing on the top

Including a handle for manual operation, PCB connectors, bolt kit with nut and washers for all terminals.  
Types OTM160...1600\_C\_D, including a voltage sensing kit on the bottom of the switch, available on request, please add the letter "B" to the type code. Types OTM160-1600E include a clamp for the handle and spare fuses.  
Types OTM160...250\_WC\_D\_ are equipped with extended phase distance.

Automatic operation, OTM\_C3D\_ types, voltage sensing on the top. Including dual power source for the motor operator.  
Motor operator voltage  $U_e = 220-240\text{v AC}$



OTM400E4C3D230C



OTM800E4C3D230C



OTM1600E4WC3D230C



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| Rated Current<br>AC-21A...<br>AC-22A<br>Up to 415V<br>I[A] | Rated Power<br>S/[kVA] | Rated Current<br>AC-31B<br>AC-33B<br>415V<br>I[A] | Number of Poles | Product Hierarchy 2200003 |       |
|------------------------------------------------------------|------------------------|---------------------------------------------------|-----------------|---------------------------|-------|
|                                                            |                        |                                                   |                 | Order Code                | Price |
| 160                                                        | 110                    | 160/160                                           | 4               | OTM160E4C3D230C           |       |
|                                                            |                        |                                                   |                 | OTM160E4WC3D230C          |       |
|                                                            |                        |                                                   |                 | OTM200E4C3D230C           |       |
|                                                            |                        |                                                   |                 | OTM200E4WC3D230C          |       |
|                                                            |                        |                                                   |                 | OTM250E4C3D230C           |       |
|                                                            |                        |                                                   |                 | OTM250E4WC3D230C          |       |
|                                                            |                        |                                                   |                 | OTM315E4C3D230C           |       |
|                                                            |                        |                                                   |                 | OTM400E4C3D230C           |       |
|                                                            |                        |                                                   |                 | OTM630E4C3D230C           |       |
|                                                            |                        |                                                   |                 | OTM800E4C3D230C           |       |
|                                                            |                        |                                                   |                 | OTM1000E4WC3D230C         |       |
|                                                            |                        |                                                   |                 | OTM1250E4WC3D230C         |       |
| 1600                                                       | 1000                   | 1600/1000                                         |                 | OTM1600E4WC3D230C         |       |

Automatic operation, OTM\_C3D\_ types, voltage sensing on the top. Motor operator voltage  $U_e = 220-240\text{v AC}$

| Rated Current<br>AC-21A...<br>AC-22A<br>Up to 415V<br>I[A] | Rated Power<br>S/[kVA] | Rated Current<br>AC-31B<br>AC-33B<br>415V<br>I[A] | Number of Poles | Product Hierarchy 2200003 |       |
|------------------------------------------------------------|------------------------|---------------------------------------------------|-----------------|---------------------------|-------|
|                                                            |                        |                                                   |                 | Order Code                | Price |
| 160                                                        | 110                    | 160/160                                           | 3               | OTM160E3C8D230C           |       |
|                                                            |                        |                                                   | 4               | OTM160E4C8D230C           |       |
| 200                                                        | 135                    | 200/200                                           | 3               | OTM200E3C8D230C           |       |
|                                                            |                        |                                                   | 4               | OTM200E4C8D230C           |       |
| 250                                                        | 170                    | 250/250                                           | 3               | OTM250E3C8D230C           |       |
|                                                            |                        |                                                   | 4               | OTM250E4C8D230C           |       |
| 315                                                        | 215                    | 315/315                                           | 3               | OTM315E3C8D230C           |       |
|                                                            |                        |                                                   | 4               | OTM315E4C8D230C           |       |
| 400                                                        | 275                    | 400/400                                           | 3               | OTM400E3C8D230C           |       |
|                                                            |                        |                                                   | 4               | OTM400E4C8D230C           |       |
| 630                                                        | 435                    | 650/650                                           | 3               | OTM630E3C8D230C           |       |
|                                                            |                        |                                                   | 4               | OTM630E4C8D230C           |       |
| 800                                                        | 550                    | 720/650                                           | 3               | OTM800E3C8D230C           |       |
|                                                            |                        |                                                   | 4               | OTM800E4C8D230C           |       |
| 1000                                                       | 680                    | 1000/1000                                         | 3               | OTM1000E3C8D230C          |       |
|                                                            |                        |                                                   | 4               | OTM1000E4C8D230C          |       |
| 1200                                                       | 850                    | 1250/1000                                         | 3               | OTM1200E3C8D230C          |       |
|                                                            |                        |                                                   | 4               | OTM1200E4C8D230C          |       |
| 1600                                                       | 1000                   | 1600/1000                                         | 3               | OTM1600E3C8D230C          |       |
|                                                            |                        |                                                   | 4               | OTM1600E4C8D230C          |       |

# Change-over switches

## Manual change-over switches OTM160...315

### Manual change-over switches, I - I+II - II -operation, closed transition

Including dual power source for the motor operator.  
Motor operator voltage  $U_e = 220-240\text{V AC}$

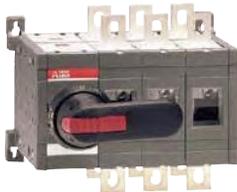
Including a handle for manual operation, PCB connectors, bolt kit with nut and washers for all terminals.  
Types OTM160...1600\_C\_D. including a voltage sensing kit on the bottom of the switch, available on request, please add the letter "B" to the type code. Types OTM160-1600E include a clamp for the handle and spare fuses.  
Types OTM160...250\_WC\_D\_ are equipped with extended phase distance.



OTM160E03CLP



OTM250E03CLP



OTM315E03CLP

| Rated Current<br>AC-21A...<br>AC-22A<br>Up to 415V<br>I[A] | Rated Power<br>400V<br>S/[kVA] | Rated Current<br>AC-31B<br>AC-33B<br>415V<br>I[A] | Number of Poles | Product Hierarchy 2200003 |       |
|------------------------------------------------------------|--------------------------------|---------------------------------------------------|-----------------|---------------------------|-------|
|                                                            |                                |                                                   |                 | Order Code                | Price |
| 160                                                        | 110                            | 160/160                                           | 3               | OTM160E03CLP              |       |
|                                                            |                                |                                                   |                 | OTM160E12CLP              |       |
|                                                            |                                |                                                   |                 | OTM160E03WCLP             |       |
|                                                            |                                |                                                   | 4               | OTM160E04CLP              |       |
|                                                            |                                |                                                   |                 | OTM160E13CLP              |       |
|                                                            |                                |                                                   |                 | OTM160E04WCLP             |       |
| 200                                                        | 135                            | 200/200                                           | 3               | OTM200E03CLP              |       |
|                                                            |                                |                                                   |                 | OTM200E12CLP              |       |
|                                                            |                                |                                                   | 4               | OTM200E03WCLP             |       |
|                                                            |                                |                                                   |                 | OTM200E04CLP              |       |
|                                                            |                                |                                                   |                 | OTM200E13CLP              |       |
|                                                            |                                |                                                   |                 | OTM200E04WCLP             |       |
| 250                                                        | 170                            | 250/250                                           | 3               | OTM250E03CLP              |       |
|                                                            |                                |                                                   |                 | OTM250E12CLP              |       |
|                                                            |                                |                                                   |                 | OTM250E03WCLP             |       |
|                                                            |                                |                                                   | 4               | OTM250E04CLP              |       |
|                                                            |                                |                                                   |                 | OTM250E13CLP              |       |
|                                                            |                                |                                                   |                 | OTM250E04WCLP             |       |
| 315                                                        | 215                            | 315/315                                           | 3               | OTM315E03CLP              |       |
|                                                            |                                |                                                   |                 | OTM315E12CLP              |       |
|                                                            |                                |                                                   | 4               | OTM315E04CLP              |       |
|                                                            |                                |                                                   |                 | OTM315E13CLP              |       |
|                                                            |                                |                                                   |                 |                           |       |
|                                                            |                                |                                                   |                 |                           |       |

4



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# Change-over switches

## Manual change-over switches OT400...1600

### Manual change-over switches, I - I+II - II -operation, closed transition

Including dual power source for the motor operator.  
Motor operator voltage  $U_e = 220-240\text{V AC}$

Including a handle for manual operation, PCB connectors, bolt kit with nut and washers for all terminals.  
Types OTM160...1600\_C\_D, including a voltage sensing kit on the bottom of the switch, available on request, please add the letter "B" to the type code. Types OTM160-1600E include a clamp for the handle and spare fuses.  
Types OTM160...250\_WC\_D\_ are equipped with extended phase distance.

4



OTM630E13CLP



OTM1250E03CLP

| Rated Current                             | Rated Power     | Rated Current                    | Number of Poles | Product Hierarchy 2200003 |       |
|-------------------------------------------|-----------------|----------------------------------|-----------------|---------------------------|-------|
|                                           |                 |                                  |                 | Order Code                | Price |
| AC-21A...<br>AC-22A<br>Up to 415V<br>I[A] | 400V<br>S/[kVA] | AC-31B<br>AC-33B<br>415V<br>I[A] |                 |                           |       |
|                                           |                 |                                  |                 |                           |       |
| 400                                       | 275             | 400/400                          | 3               | OTM400E03CLP              |       |
|                                           |                 |                                  |                 | OTM400E12CLP              |       |
|                                           |                 |                                  | 4               | OTM400E04CLP              |       |
|                                           |                 |                                  |                 | OTM400E13CLP              |       |
| 630                                       | 435             | 650/650                          | 3               | OTM630E03CLP              |       |
|                                           |                 |                                  |                 | OTM630E12CLP              |       |
|                                           |                 |                                  | 4               | OTM630E04CLP              |       |
|                                           |                 |                                  |                 | OTM630E13CLP              |       |
| 800                                       | 550             | 720/650                          | 3               | OTM800E03CLP              |       |
|                                           |                 |                                  |                 | OTM800E12CLP              |       |
|                                           |                 |                                  | 4               | OTM800E04CLP              |       |
|                                           |                 |                                  |                 | OTM800E13CLP              |       |
| 1000                                      | 680             | 1000/1000                        | 3               | OTM1000E03CLP             |       |
|                                           |                 |                                  |                 | OTM1000E12CLP             |       |
|                                           |                 |                                  | 4               | OTM1000E04CLP             |       |
|                                           |                 |                                  |                 | OTM1000E13CLP             |       |
| 1250                                      | 850             | 1250/1000                        | 3               | OTM1250E03CLP             |       |
|                                           |                 |                                  |                 | OTM1250E12CLP             |       |
|                                           |                 |                                  | 4               | OTM1250E04CLP             |       |
|                                           |                 |                                  |                 | OTM1250E13CLP             |       |
| 1600                                      | 1000            | 1600/1000                        | 3               | OTM1600E03CLP             |       |
|                                           |                 |                                  |                 | OTM1600E12CLP             |       |
|                                           |                 |                                  | 4               | OTM1600E04CLP             |       |
|                                           |                 |                                  |                 | OTM1600E13CLP             |       |

### Shafts, handle and bolt kits included as standard

| Suitable for switches | Handle      | Bolt kit |
|-----------------------|-------------|----------|
| OTM160...250          | OTV250ECMK  | M8x25    |
| OTM315...400          | OTV400ECMK  | M10x30   |
| OTM630...800          | OTV800ECMK  | M12x40   |
| OTM1000...2500        | OTV1000ECMK | M12x60   |



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# Change-over switches

## Operating handles

### Handles

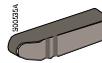
Handle knobs, mounting directly to the switch, no shaft needed



OHRS 2



OHRS 3



OHBS 9



OHBS2\_

| Colour | Non Padlockable | Padlockable in O-position | Suitable for switch | Product Hierarchy 2200003 |       |
|--------|-----------------|---------------------------|---------------------|---------------------------|-------|
|        |                 |                           |                     | Order Code                | Price |
| Black  | -               | X                         | OT16...80F_C        | OHBS2                     |       |
| Red    |                 |                           |                     | OHR2                      |       |
| Black  | X               | -                         |                     | OHBS3                     |       |
| Red    |                 |                           |                     | OHR3                      |       |
| Black  | -               | X                         |                     | OHBS1                     |       |
| Red    |                 |                           |                     | OHR1                      |       |
| Black  | X               | -                         | OHBS9               |                           |       |
| Red    |                 |                           | OHR9                |                           |       |
| Black  | -               | X                         | OHBS11              |                           |       |
| Red    |                 |                           | OHR11               |                           |       |
| Black  |                 | X                         | OTM40...125F_C      | OHB65D6CM                 |       |

### External handles

Selector handle IP65, Nema type 1, 3R, 12 indication I-O-II. Padlockable in O-position with maximum of three padlocks with ball diameter 5...8mm (two lower holes) and 5...6.3mm (the upper hole). Door interlocked in I- and II-position and when padlocked in the O-position.

| Colour     | Shaft diameter | Suitable for switch | Product Hierarchy 2200003 |       |
|------------|----------------|---------------------|---------------------------|-------|
|            |                |                     | Order Code                | Price |
| Black      | 6              | OT16...125F         | OHBS2AJE011               |       |
| Yellow/Red |                |                     | OHYS2AJE011               |       |



OHY\_



OHB\_



OHB\_

Pistol type handle IP65, Nema type 1, 3R, 12 indication I-O-II. Padlockable with maximum of three padlocks with ball diameter 5...10mm. Door interlocked in I- and II-position and when padlocked.

#### Padlockable in all positions

|            |    |                |                  |               |
|------------|----|----------------|------------------|---------------|
| Black      | 6  | OT16...125F_C  | OHB45J6E311      |               |
| Yellow/Red |    |                | OHY45J6E311      |               |
| Black      | 6  | OT160...250E_C | OHB65J6E311      |               |
|            |    |                | OT315...400E_C   | OHB95J12E311  |
|            | 12 | OT630...800E_C | OHB125J12E311    |               |
|            |    |                | OT1000...2500E_C | OHB200J12E311 |

#### Padlockable in O-position

|            |    |                  |               |  |
|------------|----|------------------|---------------|--|
| Black      | 6  | OT16...125F_C    | OHB45J6E011   |  |
| Yellow/Red |    |                  | OHY45J6E011   |  |
| Black      | 6  | OT160...250E_C   | OHB65J6E011   |  |
| Yellow/Red |    |                  | OHY65J6E011   |  |
| Black      | 12 | OT315...400E_C   | OHB95J12E011  |  |
| Yellow/Red |    |                  | OHY95J12E011  |  |
| Black      | 12 | OT630...800E_C   | OHB125J12E011 |  |
| Yellow/Red |    |                  | OHY125J12E011 |  |
| Black      | 12 | OT1000...2500E_C | OHB200J12E011 |  |
| Yellow/Red |    |                  | OHY200J12E011 |  |

Metallic handles IP65, Nema type 1, 3R, 4, 4X, 12 indication I-O-II. Padlockable with maximum of three padlocks in OFF-position, door interlocked in I- and II-position.

| Colour | Shaft diameter | Handle length (mm) | Order Code | Price |
|--------|----------------|--------------------|------------|-------|
| Metal  | 12             | 220                | YASDA21    |       |
|        |                | 320                | YASDA6     |       |



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# Change-over switches

## Operating handles



OHB\_

### Pistol handles

Plastic IP65, operating angle 90°, handle not padlockable or door interlocked.

| Colour                          | Suitable for switch | Product Hierarchy 2200003 |       |
|---------------------------------|---------------------|---------------------------|-------|
|                                 |                     | Order Code                | Price |
| <b>Indication I - O - II</b>    |                     |                           |       |
| Black                           | OT160...250_CF      | OHB65J6E69                |       |
|                                 | OT315...400_CF      | OHB65J12E69               |       |
|                                 | OT630...800_CF      | OHB145J12E69              |       |
| <b>Indication I - I+II - II</b> |                     |                           |       |
| Black                           | OT160...250_CL      | OHB65J6E65                |       |
|                                 | OT315...400_CL      | OHB65J12E65               |       |
|                                 | OT630...800_CL      | OHB145J12E65              |       |
|                                 | OT1000...2500_CL    | OHB200J12E65              |       |

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OTV\_

### Handles, direct mounting

Plastic handle with 3 padlocks in O-position. Includes a shaft and a mechanism cover. Types -ECMK include also microswitches. Shaft included.

| Colour                                                                                              | Suitable for switch | Order Code  | Price |
|-----------------------------------------------------------------------------------------------------|---------------------|-------------|-------|
| <b>Indication I - O - II</b>                                                                        |                     |             |       |
| Black                                                                                               |                     | OTV250ECK   |       |
|                                                                                                     |                     | OTV400ECK   |       |
|                                                                                                     |                     | OTV800ECK   |       |
|                                                                                                     |                     | OTV1000ECK  |       |
| Black                                                                                               |                     | OTV250ECMK  |       |
|                                                                                                     |                     | OTV400ECMK  |       |
|                                                                                                     |                     | OTV800ECMK  |       |
|                                                                                                     |                     | OTV1000ECMK |       |
| Plastic handle operating angle 90°, handle not padlockable. Includes a shaft and a mechanism cover. |                     |             |       |
| <b>Indication I - O - II</b>                                                                        |                     |             |       |
| Black                                                                                               | OT160...250_CF      | OTV250ECFK  |       |
|                                                                                                     | OT315...400_CF      | OTV400ECFK  |       |
|                                                                                                     | OT630...800_CF      | OTV800ECFK  |       |
| Plastic handle operating angle 90°, handle not padlockable. Includes a shaft and a mechanism cover. |                     |             |       |
| <b>Indication I - I+II - II</b>                                                                     |                     |             |       |
| Black                                                                                               | OT160...250_CL      | OTV250ECLK  |       |
|                                                                                                     | OT315...400_CL      | OTV400ECLK  |       |
|                                                                                                     | OT630...800_CL      | OTV800ECLK  |       |
|                                                                                                     | OT1000...2500CL     | OTV1000ECLK |       |

### Accessories

| Description                        | Suitable for switch | Part No | Order Code      | Price |
|------------------------------------|---------------------|---------|-----------------|-------|
| Handle storage clip                | OTM40...125F        | OTVS0   | 1SCA117524R1001 |       |
| Handle and spare fuse storage clip | OTM160...250E_      | -       | OTVS1           |       |
|                                    | OTM315...2500E_     | -       | OTVS2           |       |

### Connection kits

| Suitable for switch | Cable cross section [mm²] | Part No | Order Code | Price |
|---------------------|---------------------------|---------|------------|-------|
| OTM40...125F3C_     | 10 ... 70                 | OMZC03  | OMZC03     |       |
| OTM40...125F4C_     |                           | OMZC04  | OMZC04     |       |



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# Change-over switches

## Extended shafts



OXP12X

### Shafts for selector type handles 6mm

| Shaft length | H [mm]    | Suitable for switches | Product Hierarchy 2200003 |       |
|--------------|-----------|-----------------------|---------------------------|-------|
|              |           |                       | Order Code                | Price |
| 85           | 103...114 | OT16...40             | OXS6x85                   |       |
| 105          | 123...134 |                       | OXS6x105                  |       |
| 120          | 138...149 |                       | OXS6x120                  |       |
| 130          | 148...159 |                       | OXS6x130                  |       |
| 85           | 121...131 | OT63...80             | OXS6x85                   |       |
| 105          | 141...151 |                       | OXS6x105                  |       |
| 120          | 156...166 |                       | OXS6x120                  |       |
| 130          | 166...176 |                       | OXS6x130                  |       |
| 85           | 120...130 | OT100...125           | OXS6x85                   |       |
| 105          | 140...150 |                       | OXS6x105                  |       |
| 120          | 155...165 |                       | OXS6x120                  |       |
| 130          | 165...175 |                       | OXS6x130                  |       |

### Shafts for pistol type handles 6mm

|     |           |                |          |  |
|-----|-----------|----------------|----------|--|
| 150 | 164...175 | OT16...40      | OXP6x150 |  |
| 170 | 184...195 |                | OXP6x170 |  |
| 265 | 279...290 |                | OXP6x265 |  |
| 400 | 414...425 |                | OXP6x400 |  |
| 150 | 183...194 | OT63...80      | OXP6x150 |  |
| 170 | 203...214 |                | OXP6x170 |  |
| 265 | 298...309 |                | OXP6x265 |  |
| 400 | 433...444 |                | OXP6x400 |  |
| 150 | 192...206 | OT100...125    | OXP6x150 |  |
| 170 | 212...226 |                | OXP6x170 |  |
| 265 | 307...321 |                | OXP6x265 |  |
| 400 | 442...456 |                | OXP6x400 |  |
| 90  | 166...214 | OT160...250E_C | OXP6x90  |  |
| 130 | 209...254 |                | OXP6x130 |  |
| 161 | 240...285 |                | OXP6x161 |  |
| 210 | 289...334 |                | OXP6x210 |  |
| 290 | 369...414 |                | OXP6x290 |  |
| 360 | 439...484 |                | OXP6x360 |  |

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### Shafts for pistol type handles 12mm

|     |           |                  |           |  |
|-----|-----------|------------------|-----------|--|
| 107 | 209...266 | OT160...250E_C   | OXP12x107 |  |
| 148 | 243...307 |                  | OXP12x148 |  |
| 166 | 261...325 |                  | OXP12x166 |  |
| 185 | 280...344 |                  | OXP12x185 |  |
| 250 | 345...409 |                  | OXP12x250 |  |
| 280 | 375...439 |                  | OXP12x280 |  |
| 325 | 420...484 |                  | OXP12x325 |  |
| 395 | 490...554 |                  | OXP12x395 |  |
| 465 | 560...624 | OXP12x465        |           |  |
| 148 | 287...355 | OT630...800E_C   | OXP12x148 |  |
| 185 | 324...422 |                  | OXP12x185 |  |
| 250 | 389...487 |                  | OXP12x250 |  |
| 325 | 464...562 |                  | OXP12x325 |  |
| 395 | 534...632 |                  | OXP12x395 |  |
| 465 | 604...702 | OXP12x465        |           |  |
| 166 | 339...425 | OT1000...2500E_C | OXP12x166 |  |
| 250 | 423...509 |                  | OXP12x250 |  |
| 325 | 498...584 |                  | OXP12x325 |  |
| 395 | 568...654 |                  | OXP12x395 |  |
| 465 | 638...724 |                  | OXP12x465 |  |



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# Change-over switches

## Auxiliary contacts, 4th poles, terminal shrouds

### Auxiliary contact blocks, IP20

Contact numbering according to EN50013



OA1G\_  
OA3G01



OA2G11

| Suitable for switches | Installation side | Function | Product Hierarchy 2200001 |       |
|-----------------------|-------------------|----------|---------------------------|-------|
|                       |                   |          | Order Code                | Price |

Aux Contacts for snap-on mounting to the side of the switch IP20.

$I_m = 16A$ , cable cross section max.  $2 \times 2.5 \text{ mm}^2$ .

| Suitable for switches | Installation side | Function | Product Hierarchy 2200001 |       |
|-----------------------|-------------------|----------|---------------------------|-------|
|                       |                   |          | Order Code                | Price |
| OT16...125F_C         | Right             | 1NO      | OA1G10                    |       |
|                       | Right             | 1NC      | OA18G01                   |       |
| OT63...125F3C         | Left              | 1NO      | OA7G10                    |       |
|                       | Left              | 1NC      | OA1G01                    |       |
| OT63...125F3C         | Either            | 1NO/1NC  | OA2G11                    |       |

Aux Contacts mounting on the side of the switch maximum 8 blocks IP20.

| Suitable for switches | Installation side | Function | Product Hierarchy 2200001 |       |
|-----------------------|-------------------|----------|---------------------------|-------|
|                       |                   |          | Order Code                | Price |
| OT160...2500E_C_      | Right             | 1NO      | OA1G10                    |       |
|                       |                   | 1NC      | OA2G11                    |       |

### Fourth poles

Mountable on the side of the switch.



OTP\_63\_

| Suitable for switches                        | Rated current/ up to 415v I[A] |        | Product Hierarchy 2200001 |       |
|----------------------------------------------|--------------------------------|--------|---------------------------|-------|
|                                              | AC-21A/AC-22A                  | AC-23A | Order Code                | Price |
| Simultaneous function with the main contacts |                                |        |                           |       |
| OT16...40                                    | 40                             | 23     | OTPS40FPN1                |       |
| OT63...80                                    | 80                             | 75     | OTPS40FPN2                |       |
| OT63...80                                    | 80                             | 75     | OTPS80FP                  |       |
| OT100...125                                  | 125                            | 90     | OTPS125FP                 |       |

### Terminal shrouds

Snap-on mounting, transparent



OTS\_L\_



OTS\_S\_

| Suitable for switches | Order Code | Price |
|-----------------------|------------|-------|
| For 3-pole switches   |            |       |
| OT 16...40            | OTS40T3    |       |
| OT63...80             | OTS63T3    |       |
| OT 100...125          | OTS125T3   |       |
| For 4th pole          |            |       |
| OTPS40FPN1            | OTS40T1    |       |
| OTPS40FPN2            |            |       |
| OTPS80FP              | OTS63T1    |       |
| OTPS125FP             | OTS125T1   |       |



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# Change-over switches

## Connection kits

### Parallel connection kits

| Suitable for switches | Max cable size [mm <sup>2</sup> ] | Product Hierarchy 2200001 |       |
|-----------------------|-----------------------------------|---------------------------|-------|
|                       |                                   | Order Code                | Price |
| OT16...40F3C          | 6 (fine stranded), 10 (stranded)  | OZXA33                    |       |
| OT16...40F4C          |                                   | OZXA32                    |       |
| OT63...80F3C          | 25                                | OZXA38                    |       |
| OT63...80F4C          |                                   | OZXA39                    |       |
| OT100...125F3C        | 50                                | OZXA40                    |       |
| OT100...125F4C        |                                   | OZXA41                    |       |

### Bridging Bars

| Suitable for switches | Number of poles | Order Code | Price |
|-----------------------|-----------------|------------|-------|
| OT_160...250E_C       | 3               | OTZC13     |       |
|                       | 4               | OTZC14     |       |
| OT_315...400E_C       | 3               | OTZC23     |       |
|                       | 4               | OTZC24     |       |
| OT_600...800E_C       | 3               | OTZC33     |       |
|                       | 4               | OTZC34     |       |
| OT_1000...1250E_C     | 3               | OTZC43     |       |
|                       | 4               | OTZC44     |       |
| OT_1600E_C            | 3               | OTZC53     |       |
|                       | 4               | OTZC54     |       |
| OT_2000...2500E_C     | 3               | OTZC63     |       |
|                       | 4               | OTZC64     |       |

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### Reversing Bars

| Suitable for switches | Order Code | Price |
|-----------------------|------------|-------|
| OT_160...250E_C       | OTZR1      |       |
| OT_315...400E_C       | OTZR2      |       |
| OT_600...800E_C       | OTZR3      |       |



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# OS switch fuses

## 16...1250 A 690V

### Manual operation



|        |          |        |        |         |
|--------|----------|--------|--------|---------|
| DIN    | OS16FD   | OS40FD | OS32GD | OS125GD |
|        | OS35FD   |        | OS63GD | OS160GD |
| BS     | OS20FB   |        | OS32GB | OS100GB |
|        | OS32FB   |        | OS63GB | OS125GB |
|        |          |        |        | OS160GB |
| NFC    | OS25FF   |        | OS50GF | OS125GF |
|        | OS32FF   |        |        |         |
| UL/CSA | OS30FACC |        | OS60GJ | OS100GJ |
|        | OS30FAJ  |        |        |         |

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|                 | OS Mini |    |    |    |    |      |    | OS |    |    |    |     |     |       |
|-----------------|---------|----|----|----|----|------|----|----|----|----|----|-----|-----|-------|
| Switch size [A] | 16      | 20 | 25 | 30 | 32 | 35   | 40 | 32 | 50 | 60 | 63 | 100 | 125 | 160   |
| AC23/400 V [kW] | 7.5     | 11 |    | 15 | 15 | 18,5 |    | 15 | 22 | 30 |    |     | 55  | 75    |
| AC23/415 V [kW] | 7.5     |    |    | 15 |    |      |    | 15 |    | 30 |    |     | 55  | 55 75 |
| 480 V [HP]      |         |    |    | 15 |    |      |    |    |    | 30 |    |     | 60  |       |
| 600 V [HP]      |         |    |    | 20 |    |      |    |    |    | 50 |    |     | 75  |       |

### Motor operation



|     |         |          |
|-----|---------|----------|
| DIN | OSM32GD | OSM125GD |
|     | OSM63GD | OSM160GD |
| BS  | OSM32GB | OSM100GB |
|     | OSM63GB | OSM125GB |
|     |         | OSM160GB |
| NFC | OSM50GF | OSM125GF |

|                 | OSM |    |    |     |     |     |
|-----------------|-----|----|----|-----|-----|-----|
| Switch size [A] | 32  | 50 | 63 | 100 | 125 | 160 |
|                 |     |    |    |     |     |     |

Accessories

Optional handles

Extended shafts

Auxiliary contacts

Fourth poles

N & PE terminals

Solid links

Terminal shrouds

Connecting accessories

Conversion kits

Blown fuse indicators

Locking accessories



OS200D

OS400D

OS630D

OS1250D

OS250D

OS800D

OS200B

OS315B

OS630B

OS1250B

OS250B

OS400B

OS800B

OS200J

OS400J

OS600J

OS1200L

OS800L

200 250

315 400

600 630 800

1200 1250

110 140

220

355 450

560

110 145

180 230

355 450

560

150

250

400 500

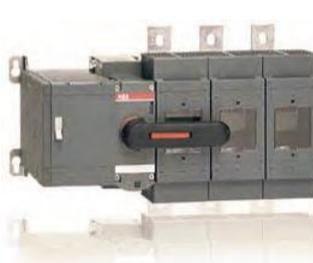
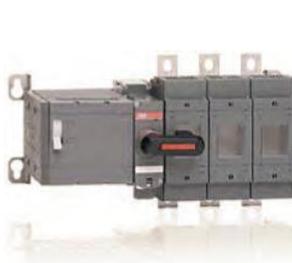
-

200

350

500 600

-



OSM200D

OSM400D

OSM630D

OSM1250D

OSM250D

OSM800D

OSM200B

OSM315B

OSM630B

OSM1250B

OSM250B

OSM400B

OSM800B

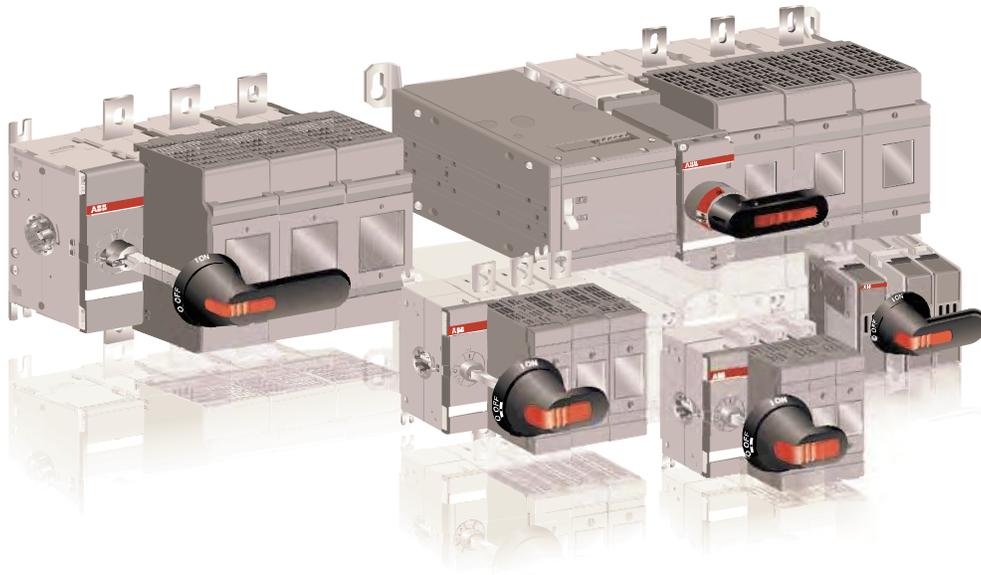
200 250

315 400

630 800

1250

# Features of OS switch fuses 16 ... 1250 A 690V

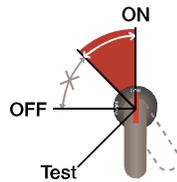
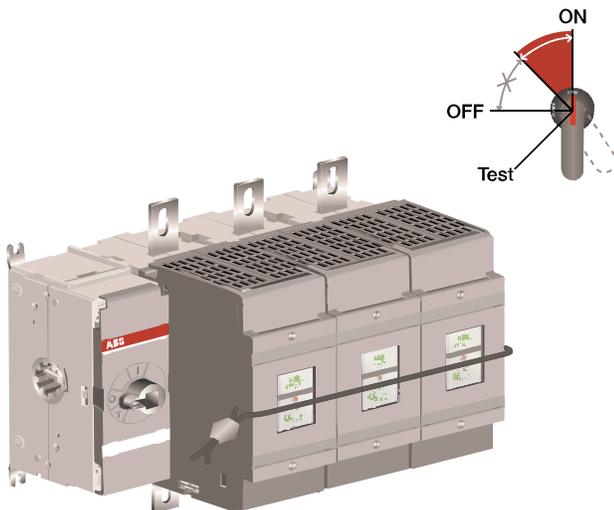


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## Features within the range of ABB switch fuses include single pole to four pole versions.

The switch fuse mechanism located in any position, increasing the ease of installation and adaptability to different types of cubicle designs (OS32G...1250).

A wide selection of accessories improve the usability of the switch fuses; 6 and 8- pole, changeover, by-pass and mechanically interlocked switch combinations can be built up by means of conversion kits.



The switch fuses are available for all types of fuse links, DIN, BS, NFC, UL, CSA. Switch fuses are also suitable for remote control by the motorized OSM versions.

## Designed for safety

The switch fuse ensures safe operation, protecting both people and equipment.

Designed and based on substantial experience of electrical safety, the switch fuse eliminates the risk of electrical accidents:

- The fuse covers cannot be opened while the switch fuse is in the ON-position and can be sealed in the closed position.
- The double insulated external operating handle eliminates the risk of touching live parts outside the box.
- The handle indicates the position of the contacts with complete reliability in all situations.
- The frame is made of robust plastic with excellent mechanical and thermal properties.
- Voltage output pins (as standard)
- Pole markings as standard

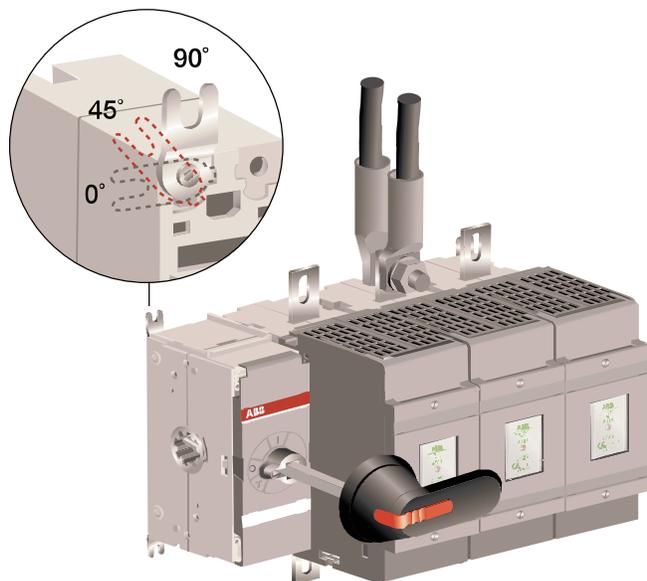
● You take no risks with OS16...1250 switch fuses

Switch fuses for extreme conditions - Numerous applications require switch fuses that can withstand extreme conditions. High voltages and high short circuit currents create a demand for superior performance without neglecting safety.

**Easy, flexible installation**

The OS 32...1250 switch fuse is easy to use and a snap to install according to your choice: the adjustable mounting feet allow both top and side mounting of the switch fuse.

The OS switch fuse offers you flexible cabling options. The high terminal positioning with space to the back plate simplifies the mounting of cables. It's also ideal for double cabling, which in turn saves on space.



**Superior performance**

- High CTI in supporting parts, resulting high  $U_i$  ratings
- The contact constructions are optimal, regardless of fuse type, DIN, BS, NFC or UL-type
- Meets the requirements for installation close to the main transformer up to 100 kA in heavy industry and in ships

- High performance level and smart design makes OS switch fuses suitable for all applications in low voltage networks.

**Compact construction**

- Intelligent construction in combination with a small number of components results in a very compact mechanism design
- Very small footprint area

- Space savings mean cost reduction!

# Switch fuses

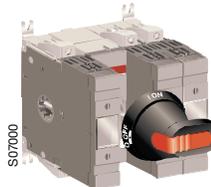
## OS20...160 BS -type

### Front operated switch fuses

Including terminal bolt kit (OS100...160), a black ON-OFF plastic handle and shaft as standard. The handle is IP65 protected, padlockable in the OFF-position and with door interlock in the ON-position. The shaft is adjustable for a range of installation depths.



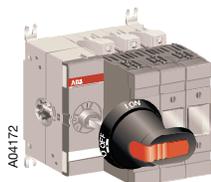
(OS Mini)  
OS20...32FB12A1  
OS32FB12A2  
OS32FB12F1



OS32G...63GB12P



OS100G...160GB12P



OS32G...63GB03P



OS100G...160GB03P



Full range of product and technical information place this part number in a search engine and download  
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| Rated current<br>AC-20...23<br>≤ 690V<br>[A] | Rated Power<br>AC-23<br>400/500/690V<br>[kW] | Fuse Size | No. of poles | Product Hierarchy 2100002 |       |
|----------------------------------------------|----------------------------------------------|-----------|--------------|---------------------------|-------|
|                                              |                                              |           |              | Order Code                | Price |

#### Mechanism between the poles - protected tunnel terminals, IP20

|    |            |        |   |              |  |
|----|------------|--------|---|--------------|--|
| 20 | 7.5/11/15  | A1     | 3 | OS20FB12A1-2 |  |
|    |            |        | 4 | OS20FB22A1N1 |  |
| 32 | 15/18/25   | A1     | 3 | OS32FB12A1   |  |
|    |            |        | 4 | OS32FB22A1N1 |  |
|    | 15/18.5/22 | A2     | 3 | OS32FB12A2   |  |
|    |            |        | 4 | OS32FB12A2N1 |  |
| 32 | 15/18.5/22 | A2, A3 | 2 | OS32GB11P    |  |
|    |            |        | 3 | OS32GB12P    |  |
|    |            |        | 4 | OS32GB22N1P  |  |
| 63 | 30/37/55   | A2, A3 | 2 | OS63GB11P    |  |
|    |            |        | 3 | OS63GB12P    |  |
|    |            |        | 4 | OS63GB22N1P  |  |

#### Terminal bolt kit

|     |           |                          |   |              |  |
|-----|-----------|--------------------------|---|--------------|--|
| 100 | 55/55/90  | A2, A3, A4 <sup>1)</sup> | 2 | OS100GB11P   |  |
|     |           |                          | 3 | OS100GB12P   |  |
|     |           |                          | 4 | OS100GB22N1P |  |
| 125 | 55/75/110 | A2, A3, A4 <sup>1)</sup> | 2 | OS125GB11P   |  |
|     |           |                          | 3 | OS125GB12P   |  |
|     |           |                          | 4 | OS125GB22N1P |  |
| 160 | 75/90/132 | A2, A3, A4 <sup>1)</sup> | 2 | OS160GB11P   |  |
|     |           |                          | 3 | OS160GB12P   |  |
|     |           |                          | 4 | OS160GB22N1P |  |

#### Mechanism at the end of the switch, protected tunnel terminals, IP20

|    |            |        |   |             |  |
|----|------------|--------|---|-------------|--|
| 32 | 15/18.5/22 | A2, A3 | 2 | OS32GB02P   |  |
|    |            |        | 3 | OS32GB03P   |  |
|    |            |        | 4 | OS32GB04N1P |  |
| 63 | 30/37/55   | A2, A3 | 2 | OS63GB02P   |  |
|    |            |        | 3 | OS63GB03P   |  |
|    |            |        | 4 | OS63GB04N1P |  |

#### Terminal Bolt Kit

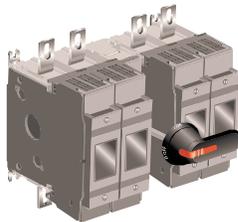
|     |           |                          |   |              |  |
|-----|-----------|--------------------------|---|--------------|--|
| 100 | 55/55/90  | A2, A3, A4 <sup>1)</sup> | 2 | OS100GB02P   |  |
|     |           |                          | 3 | OS100GB03P   |  |
|     |           |                          | 4 | OS100GB04N1P |  |
| 125 | 55/75/110 | A2, A3, A4 <sup>1)</sup> | 2 | OS125GB02P   |  |
|     |           |                          | 3 | OS125GB03P   |  |
|     |           |                          | 4 | OS125GB04N1P |  |
| 160 | 75/90/132 | A2, A3, A4 <sup>1)</sup> | 2 | OS160GB02P   |  |
|     |           |                          | 3 | OS160GB03P   |  |
|     |           |                          | 4 | OS160GB04N1P |  |

# Switch fuses

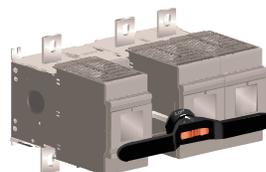
## OS200...1250 BS -type

### Front operated switch fuses - Mechanism between the poles

Including terminal bolt kit, a black ON-OFF plastic handle and shaft as standard. The handle is IP65 protected, padlockable in the OFF-position and with door interlock in the ON-position. The shaft is adjustable for a range of installation depths.



OS250B22N2P



OS1250B12P

| Rated current<br>AC-20...23<br>≤ 690V<br>[A] | Rated Power<br>AC-23<br>400/500/690V<br>[kW] | Fuse Size | No. of poles | Product Hierarchy 2100002 |       |
|----------------------------------------------|----------------------------------------------|-----------|--------------|---------------------------|-------|
|                                              |                                              |           |              | Order Code                | Price |
| 200                                          | 110/132/200                                  |           |              | OS200B12P                 |       |
|                                              |                                              |           |              | OS200B22N2P               |       |
| 250                                          | 140/170/250                                  | B1-B3     | 3            | OS250B12P                 |       |
|                                              |                                              |           | 4            | OS250B22N2P               |       |
| 315                                          | 160/220/220                                  | B1-B4     | 3            | OS315B12P                 |       |
|                                              |                                              |           | 4            | OS315B22N2P               |       |
| 400                                          | 220/280/400                                  | B1-B4     | 3            | OS400B12P                 |       |
|                                              |                                              |           | 4            | OS400B22N2P               |       |
| 630                                          | 355/450/630                                  | C1-C2     | 3            | OS630B12P                 |       |
|                                              |                                              |           | 4            | OS630B22N2P               |       |
| 800                                          | 450/560/710                                  | C1-C2     | 3            | OS800B12P                 |       |
|                                              |                                              |           | 4            | OS800B22N2P               |       |
| 1250 <sup>1)</sup> 1000 <sup>2)</sup>        | 560/710/1000                                 | D1        | 3            | OS1250B12P                |       |
|                                              |                                              |           | 4            | OS1250B22N2P              |       |

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### Shafts, handles & bolt kits included as standard

| Suitable for switches | Included shaft | Included handle | Included terminal bolts |
|-----------------------|----------------|-----------------|-------------------------|
| OS20...32FB (OS Mini) | OXp6X150       | OHB65J6         | -                       |
| OS32...63G_P          | OXp6X161       | OHB45J6         | -                       |
| OS100...160G_P        | OXp6X161       | OHB65J6         | M8x25                   |
| OS200_P               | OXp6X210       | OHB65J6         | M8x25                   |
| OS250_P               | OXp6X210       | OHB65J6         | M10x30                  |
| OS315...400_P         | OXp12X250      | OHB95J12        | M10x30                  |
| OS630...800_P         | OXp12X280      | OHB145J12       | M12x40                  |
| OS1250_P              | OXp12X395      | OHB200J12       | M12x50                  |

#### OS20...160

N1 = Non-fused switched neutral on left side  
N2 = Non-fused switched neutral on the right side

<sup>1)</sup> AC-20...22  
<sup>2)</sup> AC-23  
<sup>3)</sup> Include a detachable neutral link integrated into the mechanism

#### OS200...125 0

N1 = Non-fused switched neutral on left side  
N2 = Non-fused switched neutral on the right side

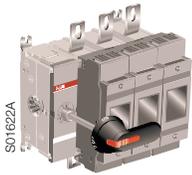
<sup>1)</sup> AC-20...22  
<sup>2)</sup> AC-23  
<sup>3)</sup> Include a detachable neutral link integrated into the mechanism



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# Switch fuses

## OS200...1250 BS -type



OS200B03P



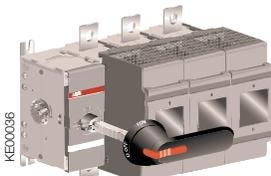
OS200B04P



OS250B03P



OS400B03P



OS800B03P



OS1250B03P

### Front operated switch fuses - Mechanism at the end of the switch

Including terminal bolt kit, a black ON-OFF plastic handle and shaft as standard. The handle is IP65 protected, padlockable in the OFF-position and with door interlock in the ON-position. The shaft is adjustable for a range of installation depths.

| Rated current<br>AC-20...23<br>≤ 690V<br>[A] | Rated Power<br>AC-23<br>400/500/690V<br>[kW] | Fuse Size | No. of poles      | Product Hierarchy 2100002 |       |
|----------------------------------------------|----------------------------------------------|-----------|-------------------|---------------------------|-------|
|                                              |                                              |           |                   | Order Code                | Price |
| 200                                          | 110/132/200                                  | B1-B2     | 2                 | OS200B02P                 |       |
|                                              |                                              |           | 3                 | OS200B03P                 |       |
|                                              |                                              |           | 3+N <sup>3)</sup> | OS200B03N3P               |       |
|                                              |                                              |           | 4                 | OS200B04N2P               |       |
| 250                                          | 140/170/250                                  | B1-B3     | 2                 | OS250B02P                 |       |
|                                              |                                              |           | 3                 | OS250B03P                 |       |
|                                              |                                              |           | 3+N <sup>3)</sup> | OS250B03N3P               |       |
|                                              |                                              |           | 4                 | OS250B04N2P               |       |
| 315                                          | 160/220/220                                  | B1-B4     | 2                 | OS315B02P                 |       |
|                                              |                                              |           | 3                 | OS315B03P                 |       |
|                                              |                                              |           | 3+N <sup>3)</sup> | OS315B03N3P               |       |
|                                              |                                              |           | 4                 | OS315B04N2P               |       |
| 400                                          | 220/280/400                                  | B1-B4     | 2                 | OS400B02P                 |       |
|                                              |                                              |           | 3                 | OS400B03P                 |       |
|                                              |                                              |           | 3+N <sup>3)</sup> | OS400B03N3P               |       |
|                                              |                                              |           | 4                 | OS400B04N2P               |       |
| 630                                          | 355/450/630                                  | C1-C2     | 2                 | OS630B02P                 |       |
|                                              |                                              |           | 3                 | OS630B03P                 |       |
|                                              |                                              |           | 3+N <sup>3)</sup> | OS630B03N3P               |       |
|                                              |                                              |           | 4                 | OS630B04N2P               |       |
| 800                                          | 450/560/710                                  | C1-C3     | 2                 | OS800B02P                 |       |
|                                              |                                              |           | 3                 | OS800B03P                 |       |
|                                              |                                              |           | 3+N <sup>3)</sup> | OS800B03N3P               |       |
|                                              |                                              |           | 4                 | OS800B04N2P               |       |
| 1250 <sup>1)</sup> 1000 <sup>2)</sup>        | 560/710/1000                                 | D1        | 2                 | OS1250B02P                |       |
|                                              |                                              |           | 3                 | OS1250B03P                |       |
|                                              |                                              |           | 3+N <sup>3)</sup> | OS1250B03N3P              |       |
|                                              |                                              |           | 4                 | OS1250B04N2P              |       |

4



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N2 = Non-fused switched neutral on the right side  
 N3 = Include a detachable neutral link integrated into the mechanism

<sup>1)</sup> Max. fuse diameter 32 mm

<sup>2)</sup> AC-23

<sup>3)</sup> Include a detachable neutral link integrated into the mechanism

# Switch fuses

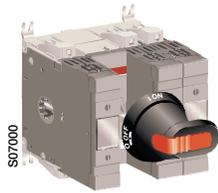
## OS40 ...160 DIN -type

### Front operated switch fuses

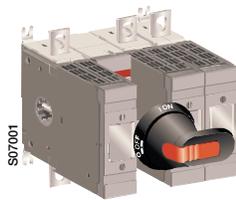
Including terminal bolt kit in OS125G...160G, a black ON-OFF plastic handle and shaft as standard. The handle is IP65 protected, padlockable in the OFF-position and with door interlock in the ON-position. The shaft is adjustable for a range of installation depths.



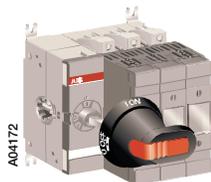
OS40FD12000 (OS Mini)



OS32G...63GD12P



OS125G...160GD12P



OS32G...63GD03P



OS125G...160GD03P

| Rated current<br>AC-20...23<br>≤ 690V<br>[A] | Rated Power<br>AC-23<br>400/500/690V<br>[kW] | Fuse Size | No. of poles | Product Hierarchy 2100002 |       |
|----------------------------------------------|----------------------------------------------|-----------|--------------|---------------------------|-------|
|                                              |                                              |           |              | Order Code                | Price |

### Mechanism between the poles

Protected tunnel terminals, IP20

|    |            |     |   |               |  |
|----|------------|-----|---|---------------|--|
| 40 | 18.5/22/30 | 000 | 3 | OS40FD12000   |  |
|    |            |     | 4 | OS40FD22000N1 |  |
| 32 | 15/18.5/22 | 000 | 3 | OS32GD12P     |  |
|    |            |     | 4 | OS32GD22N2P   |  |
|    |            |     | 4 | OS32GD22FP    |  |
| 63 | 30/37/55   | 000 | 3 | OS63GD12P     |  |
|    |            |     | 4 | OS63GD22N2P   |  |
|    |            |     | 4 | OS63GD22FP    |  |

### Terminal bolt kit

|     |           |         |   |              |  |
|-----|-----------|---------|---|--------------|--|
| 125 | 55/75/110 | 000, 00 | 3 | OS125GD12P   |  |
|     |           |         | 4 | OS125GD22N2P |  |
|     |           |         | 4 | OS125GD22FP  |  |
| 160 | 75/90/132 | 000, 00 | 3 | OS160GD12P   |  |
|     |           |         | 4 | OS160GD22N2P |  |
|     |           |         | 4 | OS160GD22FP  |  |

### Mechanism at the end of the switch,

Protected tunnel terminals, IP20

|    |            |     |   |             |  |
|----|------------|-----|---|-------------|--|
| 32 | 15/18.5/22 | 000 | 3 | OS32GD03P   |  |
|    |            |     | 4 | OS32GD04N2P |  |
|    |            |     | 4 | OS32GD04FP  |  |
| 63 | 30/37/55   | 000 | 3 | OS63GD03P   |  |
|    |            |     | 4 | OS63GD04N2P |  |
|    |            |     | 4 | OS63GD04FP  |  |

### Terminal Bolt Kit

|     |           |         |   |              |  |
|-----|-----------|---------|---|--------------|--|
| 125 | 55/75/110 | 000, 00 | 3 | OS125GD03P   |  |
|     |           |         | 4 | OS125GD04N2P |  |
|     |           |         | 4 | OS125GD04FP  |  |
| 160 | 75/90/132 | 000, 00 | 3 | OS160GD03P   |  |
|     |           |         | 4 | OS160GD04N2P |  |
|     |           |         | 4 | OS160GD04FP  |  |

### Shafts, handles included as standard

| Suitable for switches | Included shaft | Included handle | Included terminal bolts |
|-----------------------|----------------|-----------------|-------------------------|
| OS40                  | OXp6X150       | OHB65J6         | -                       |
| OS32_...63G_          | OXp6X161       | OHB45J6         | -                       |
| OS125_...160G_        | OXp6X161       | OHB65J6         | M8x25                   |



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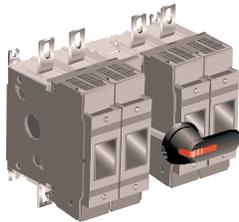
F = Fused switched neutral  
N1 = Non-fused switched neutral on the left side  
N2 = Non-fused switched neutral on the right side

# Switch fuses

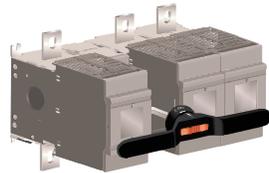
## OS200 ...1250 DIN -type

### Front operated switch fuses - Mechanism between the poles

Including terminal bolt kit, a black ON-OFF plastic handle and shaft as standard. The handle is IP65 protected, padlockable in the OFF-position and with door interlock in the ON-position. The shaft is adjustable for a range of installation depths. OS1250DA: a fuse replacement tool is integrated in the fuse cover.



OS250D22N2P



OS1250D12P

4

| Rated current<br>AC-20...23<br>≤ 690V<br>[A] | Rated Power<br>AC-23<br>400/500/690V<br>[kW] | Fuse Size | No. of poles | Product Hierarchy 2100002 |       |
|----------------------------------------------|----------------------------------------------|-----------|--------------|---------------------------|-------|
|                                              |                                              |           |              | Order Code                | Price |
| <b>Protected tunnel terminals, IP20</b>      |                                              |           |              |                           |       |
| 200                                          | 110/132/200                                  | 00        | 3            | OS200DZ12P                |       |
| 200                                          | 110/132/200                                  | 0         | 2            | OS200D11P                 |       |
|                                              |                                              |           | 3            | OS200D12P                 |       |
|                                              |                                              |           | 4            | OS200D22N2P               |       |
| 250                                          | 145/170/250                                  | 0-1       | 2            | OS250D11P                 |       |
|                                              |                                              |           | 3            | OS250D12P                 |       |
|                                              |                                              |           | 4            | OS250D22N2P               |       |
| 400                                          | 230/280/400                                  | 0-2       | 2            | OS400D11P                 |       |
|                                              |                                              |           | 3            | OS400D12P                 |       |
|                                              |                                              |           | 4            | OS400D22N2P               |       |
| 630                                          | 355/450/630                                  | 3         | 2            | OS630D11P                 |       |
|                                              |                                              |           | 3            | OS630D12P                 |       |
|                                              |                                              |           | 4            | OS630D22N2P               |       |
| 800                                          | 450/560/710                                  | 3         | 2            | OS800D11P                 |       |
|                                              |                                              |           | 3            | OS800D12P                 |       |
|                                              |                                              |           | 4            | OS800D22N2P               |       |
| 1250 <sup>1)</sup> 1000 <sup>2)</sup>        | 560/710/1000                                 | 4         | 3            | OS1250D11P                |       |
|                                              |                                              |           | 4            | OS1250D12P                |       |
|                                              |                                              | 4a        | 3            | OS1250DA11P               |       |
|                                              |                                              |           | 4            | OS1250DA12P               |       |

### Shafts, handles included as standard

| Suitable for switches | Included shaft | Included handle | Included terminal bolts |
|-----------------------|----------------|-----------------|-------------------------|
| OS200_P               | EXP6X210       | OHB65J6         | M8x25                   |
| OS250_P               | EXP6X210       | OHB45J6         | M10x30                  |
| OS400_P               | EXP12X250      | OHB95J12        | M10x30                  |
| OS630...800_P         | EXP12X280      | OHB145J12       | M12x40                  |
| OS1250_P              | EXP12X395      | OHB200J12       | M12x50                  |



Full range of product and technical information place this part number in a search engine and download

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F = Fused switched neutral  
N2 = Non-fused switched neutral on the right side  
N3 = Include a detachable neutral link integrated into the mechanism

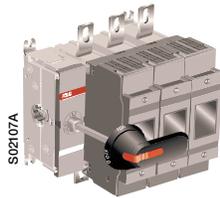
<sup>1)</sup> AC-20...22  
<sup>2)</sup> AC-23  
<sup>3)</sup> Max. fuse diameter 32 mm

# Switch fuses

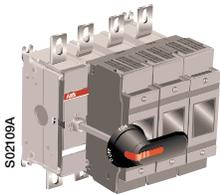
## OS200 ...1250 DIN -type

### Front operated switch fuses - Mechanism at the end of the switch

Including terminal bolt kit, a black ON-OFF plastic handle and shaft as standard. The handle is IP65 protected, padlockable in the OFF-position and with door interlock in the ON-position. The shaft is adjustable for a range of installation depths. OS1250DA: a fuse replacement tool is integrated in the fuse cover.



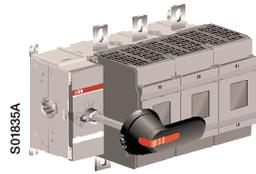
OS200D03P



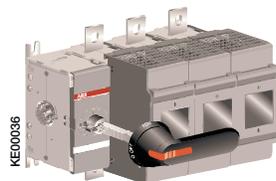
OS250D03N3P



OS250D04P



OS400D03P



OS630D03P



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| Rated current<br>AC-20...23<br>≤ 690V<br>[A] | Rated Power<br>AC-23<br>400/500/690V<br>[kW] | Fuse Size | No. of poles | Product Hierarchy 2100002 |       |
|----------------------------------------------|----------------------------------------------|-----------|--------------|---------------------------|-------|
|                                              |                                              |           |              | Order Code                | Price |
| Protected tunnel terminals, IP20             |                                              |           |              |                           |       |
| 200                                          | 110/132/200                                  | 00        | 3            | OS200DZ03P                |       |
|                                              |                                              |           | 4            | OS200DZ04N2P              |       |
| 200                                          | 110/132/200                                  | 0         | 2            | OS200D02P                 |       |
|                                              |                                              |           | 3            | OS200D03P                 |       |
|                                              |                                              |           | 3+N          | OS200D03N3P               |       |
|                                              |                                              |           | 4            | OS200D04N2P               |       |
|                                              |                                              |           | 4            | OS200D04FP                |       |
| 250                                          | 145/170/250                                  | 0-1       | 2            | OS250D02P                 |       |
|                                              |                                              |           | 3            | OS250D03P                 |       |
|                                              |                                              |           | 3+N          | OS250D03N3P               |       |
|                                              |                                              |           | 4            | OS250D04N2P               |       |
|                                              |                                              |           | 4            | OS250D04FP                |       |
| 400                                          | 230/280/400                                  | 0-2       | 2            | OS400D02P                 |       |
|                                              |                                              |           | 3            | OS400D03P                 |       |
|                                              |                                              |           | 3+N          | OS400D03N3P               |       |
|                                              |                                              |           | 4            | OS400D04N2P               |       |
|                                              |                                              |           | 4            | OS400D04FP                |       |
| 630                                          | 355/450/630                                  | 3         | 2            | OS630D02P                 |       |
|                                              |                                              |           | 3            | OS630D03P                 |       |
|                                              |                                              |           | 3+N          | OS630D03N3P               |       |
|                                              |                                              |           | 4            | OS630D04N2P               |       |
|                                              |                                              |           | 4            | OS630D04FP                |       |
| 800                                          | 450/560/710                                  | 3         | 2            | OS800D02P                 |       |
|                                              |                                              |           | 3            | OS800D03P                 |       |
|                                              |                                              |           | 3+N          | OS800D03N3P               |       |
|                                              |                                              |           | 4            | OS800D04N2P               |       |
|                                              |                                              |           | 4            | OS800D04FP                |       |
| 1250 <sup>1)</sup> 1000 <sup>2)</sup>        | 560/710/1000                                 | 4         | 2            | OS1250D02P                |       |
|                                              |                                              |           | 3            | OS1250D03P                |       |
|                                              |                                              |           | 3+N          | OS1250D03N3P              |       |
|                                              |                                              |           | 4            | OS1250D04N2P              |       |
| 1250 <sup>1)</sup> 1000 <sup>2)</sup>        | 560/710/1000                                 | 4a        | 4            | OS1250D04FP               |       |
|                                              |                                              |           | 2            | OS1250DA02P               |       |
|                                              |                                              |           | 3            | OS1250DA03P               |       |
|                                              |                                              |           | 3+N          | OS1250DA03N3P             |       |
|                                              |                                              |           | 4            | OS1250DA04N2P             |       |
| 4                                            | OS1250DA04FP                                 |           |              |                           |       |

4

F = Fused switched neutral  
 N2 = Non-fused switched neutral on the right side  
 N3 = Include a detachable neutral link integrated into the mechanism

<sup>1)</sup> AC-20...22

<sup>2)</sup> AC-23

<sup>3)</sup> Max. fuse diameter 32 mm

# Switch fuses accessories

## Operating handles

### For front operated switch fuses

OH\_handles: IP65, NEMA 1, 3R, 12, padlockable with three padlocks in OFF-position, door interlock in ON-position. Screw fixing from the back side of the handle. No screws on the front ensures double insulation. Excluding metallic handles.



OHY\_



OHB\_



OHB\_



OTV\_



OHB\_

4

| Product Hierarchy 2200003                                                                                                               |                    |                       |                 |          |  |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------|-----------------|----------|--|
| Colour                                                                                                                                  | Handle Length [mm] | Suitable for switches | Order Code      | Price    |  |
| <b>For shaft diameter 6mm</b>                                                                                                           |                    |                       |                 |          |  |
| Black and red-yellow: I-O/ON-OFF, grey: I/O                                                                                             |                    |                       |                 |          |  |
| Black                                                                                                                                   | 45                 | OS Mini ... 250       | OHB65J6         |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY45J6         |          |  |
| Grey                                                                                                                                    |                    |                       | OHG45J6         |          |  |
| Black                                                                                                                                   | 65                 |                       | OHB65J6         |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY65J6         |          |  |
| Grey                                                                                                                                    |                    |                       | OHG65J6         |          |  |
| Black                                                                                                                                   | 80                 |                       | OHB80J6         |          |  |
| Plastic handles, black and red/yellow: Test/I-O/ON-OFF, grey: Test/I-O                                                                  |                    |                       |                 |          |  |
| Black                                                                                                                                   | 45                 |                       | OS Mini ... 250 | OHB45J6T |  |
| Yellow-Red                                                                                                                              | 65                 | OHB65J6T              |                 |          |  |
| Grey                                                                                                                                    |                    | OHY65J6T              |                 |          |  |
| Black                                                                                                                                   | 80                 | OHG65J6T              |                 |          |  |
|                                                                                                                                         |                    | OHB80J6T              |                 |          |  |
| Stainless steel handles: I-O/ON-OFF, padlockable with 3 padlocks in the OFF position, door interlock in the ON position, IP66 (NEMA 4X) |                    |                       |                 |          |  |
| Metallic                                                                                                                                | 65                 | OS Mini ... 250       | OHM65L6         |          |  |
| <b>For shaft diameter 12mm</b>                                                                                                          |                    |                       |                 |          |  |
| Plastic handles, black and red/yellow: I-O/ON-OFF, grey: I-O                                                                            |                    |                       |                 |          |  |
| Black                                                                                                                                   | 95                 | OT315...400           | OHB95J12        |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY95J12        |          |  |
| Grey                                                                                                                                    |                    |                       | OHG95J12        |          |  |
| Indication: Test-OFF-ON/Test-O-I, padlockable with 3 padlocks in the OFF position, door interlock in the ON position, IP66 (NEMA 4X)    |                    |                       |                 |          |  |
| Black                                                                                                                                   | 95                 | OT315...400           | OHB95J12T       |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY95J12T       |          |  |
| Plastic handles, black and red/yellow: I-O/ON-OFF, grey: I-O                                                                            |                    |                       |                 |          |  |
| Black                                                                                                                                   | 125                | OT630...800           | OHB125J12       |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY125J12       |          |  |
| Grey                                                                                                                                    |                    |                       | OHG125J12       |          |  |
| Black                                                                                                                                   | 145                |                       | OHB145J12       |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY145J12       |          |  |
| Grey                                                                                                                                    |                    |                       | OHG145J12       |          |  |
| Black                                                                                                                                   | 175                |                       | OHB175J12       |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY175J12       |          |  |
| Grey                                                                                                                                    |                    |                       | OHG175J12       |          |  |
| Indication: Test-OFF-ON/Test-O-I                                                                                                        |                    |                       |                 |          |  |
| Black                                                                                                                                   | 125                | OT630...800           | OHB125J12T      |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY125J12T      |          |  |
| Black                                                                                                                                   | 145                |                       | OHB145J12T      |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY145J12T      |          |  |
| Black                                                                                                                                   | 175                |                       | OHB175J12P      |          |  |
| Plastic handles, black and red/yellow: I-O/ON-OFF                                                                                       |                    |                       |                 |          |  |
| Black                                                                                                                                   | 2x150              | OT1200...1250         | OHB150J12P      |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY150J12P      |          |  |
| Black                                                                                                                                   | 2x200              |                       | OHB200J12P      |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY200J12P      |          |  |
| Indication: Test-OFF-ON/Test-O-I                                                                                                        |                    |                       |                 |          |  |
| Black                                                                                                                                   | 2x200              | OT1200...1250         | OHB200J12PT     |          |  |
| Yellow-Red                                                                                                                              |                    |                       | OHY200J12PT     |          |  |



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# Switch fuses accessories

## Operating handles

| Product Hierarchy 2200003                                                                                                               |                    |                       |            |         |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----------------------|------------|---------|
| Colour                                                                                                                                  | Handle Length [mm] | Suitable for switches | Order Code | Price   |
| <b>For shaft diameter 12mm</b>                                                                                                          |                    |                       |            |         |
| Stainless steel handles: I-O/ON-OFF, padlockable with 3 padlocks in the OFF position, door interlock in the ON position, IP66 (NEMA 4X) |                    |                       |            |         |
| Metallic                                                                                                                                | 125                | OT1200...1250         | OHM125J12  |         |
|                                                                                                                                         | 175                |                       | OHM175J12  |         |
|                                                                                                                                         | 275                |                       | OHM275J12  |         |
| Metallic handles: padlockable with 3 padlocks in the OFF position, door interlock in the ON position.                                   |                    |                       |            |         |
| Black 1-O                                                                                                                               | 220                | OT1200...1250         | YASDA7     |         |
| Black ON-OFF                                                                                                                            |                    |                       | YASDA8     |         |
| Black I-O                                                                                                                               |                    |                       | 320        | YASDA35 |

Door interlocking in ON-position means that the door cannot be opened, when the handle is in the ON-position. This can be defeated in IP65 types to allow authorised personnel access for inspection

### Direct mounted handles

Plastic handles, panel board handle, can be padlocked in the OFF-position. Includes a special shaft. The handle can also be used with a standard shaft as padlocking device.

#### For front operated OS Mini

Indication I-O/ON-OFF/TEST. Handle padlockable with 2 padlocks in the OFF- and Test-positions when the door is open. Max. bail dia 8 mm.

| Colour | Order Code | Price |
|--------|------------|-------|
| Black  | OHBS5      |       |

#### For side operated OS Mini

Padlockable with three padlocks in the OFF- position when the door is open. Max. bail dia 6 mm.

| Colour | Order Code | Price |
|--------|------------|-------|
| Black  | OHB4       |       |

#### For front operated OS 32G...1250

Test OFF-ON/Test O-I indication  
Padlockable with three padlocks in the OFF-position, optionally also in the ON-position.  
Includes shaft and mechanism cover.

| Suitable for switches | Colour     | Order Code | Price |
|-----------------------|------------|------------|-------|
| OS32G...160G,         | Black      | OSV200BK   |       |
| OS200B/J_K            | Yellow-red | OSVY200BK  |       |
| OS200D...250D/B_K     | Black      | OSV250DK   |       |
|                       | Yellow-red | OSVY250DK  |       |
| OS400D_K              | Black      | OSV400DK   |       |
|                       | Yellow-red | OSVY400DK  |       |
| OS315...400B/J_K      | Black      | OSV400BK   |       |
|                       | Yellow-red | OSVY400BK  |       |
| OS600...800_K         | Black      | OSV800DK   |       |
| OS1200...OS1250_K     | Black      | OSV1250DK  |       |

#### Fuse replacement handles

| DIN fuse sizes | Description | Order Code | Price |
|----------------|-------------|------------|-------|
| 000,00,1,2,3   | Compact     | OFAE 504   |       |
|                | 690 V       | OFAE 505   |       |

#### Extension ring for pistol type handles

| Colour | Suitable for handles | Order Code | Price |
|--------|----------------------|------------|-------|
| Black  | OHB_                 | OHZX14     |       |



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# Switch fuses accessories

## Extended shafts

### Extended shafts

Product Hierarchy 2200003

| Shaft (mm)                                                      | Front operated<br>H / mm  | Side operated<br>H / mm | Order Code                | Price |
|-----------------------------------------------------------------|---------------------------|-------------------------|---------------------------|-------|
| <b>For OS 16...35 (Mini) <sup>2)</sup>, shaft diameter 6 mm</b> |                           |                         |                           |       |
| 150                                                             | 135...210                 | 154...166               | OSP6X150 <sup>5)</sup>    |       |
| 170                                                             | 155...230                 | 174...186               | OSP6X170                  |       |
| 265                                                             | 250...325                 | 269...281               | OSP6X265                  |       |
| 400                                                             | 385...460                 | 404...416               | OSP6X400                  |       |
| 150                                                             | 135...210                 | 154...166               | OSP6X150-45 <sup>1)</sup> |       |
| 170                                                             | 155...230                 | 174...186               | OSP6X170-45 <sup>1)</sup> |       |
| 265                                                             | 380...460                 | 269...281               | OSP6X265-45 <sup>1)</sup> |       |
| 400                                                             | 380...460                 | 404...416               | OSP6X400-45 <sup>1)</sup> |       |
| <b>For OS 40 (Mini) <sup>2)</sup>, shaft diameter 6 mm</b>      |                           |                         |                           |       |
| 150                                                             | 135...210                 | 235...243               | OSP6X150 <sup>5)</sup>    |       |
| 170                                                             | 155...230                 | 255...363               | OSP6X170                  |       |
| 265                                                             | 250...325                 | 352...360               | OSP6X265                  |       |
| 400                                                             | 385...460                 | 487...495               | OSP6X400                  |       |
| 150                                                             | 135...210                 | 235...243               | OSP6X150-45 <sup>1)</sup> |       |
| 170                                                             | 155...230                 | 255...363               | OSP6X170-45 <sup>1)</sup> |       |
| 265                                                             | 250...325                 | 352...360               | OSP6X265-45 <sup>1)</sup> |       |
| 400                                                             | 385...460                 | 487...495               | OSP6X400-45 <sup>1)</sup> |       |
| <b>For OS 32G...63G <sup>4)</sup>, shaft diameter 6 mm</b>      |                           |                         |                           |       |
| 63                                                              |                           | 161...167               | OSP6X63                   |       |
| 90                                                              |                           | 223 ... 229             | OSP6X90                   |       |
| 130                                                             | 137 ... 174 <sup>7)</sup> | 263 ... 263             | OSP6X130                  |       |
| 161                                                             | 138 ... 205               |                         | OSP6X161 <sup>3)</sup>    |       |
| 210                                                             | 187 ... 254               |                         | OSP6X210                  |       |
| 290                                                             | 267 ... 334               |                         | OSP6X290                  |       |
| 360                                                             | 337 ... 404               |                         | OSP6X360                  |       |
| 430                                                             | 407 ... 474               |                         | OSP6X430                  |       |
| 210                                                             | 187 ... 254               |                         | OSP6X210-45 <sup>1)</sup> |       |
| 290                                                             | 267 ... 334               |                         | OSP6X290-45 <sup>1)</sup> |       |
| 360                                                             | 337 ... 404               |                         | OSP6X360-45 <sup>1)</sup> |       |
| <b>For OS 200...250 DIN-type, shaft diameter 6 mm</b>           |                           |                         |                           |       |
| 161                                                             | 160 ... 205               |                         | OSP6X161                  |       |
| 210                                                             | 189 ... 254               |                         | OSP6X210 <sup>3)</sup>    |       |
| 290                                                             | 269 ... 334               |                         | OSP6X290                  |       |
| <b>For OS 200...250 BS-type, shaft diameter 6 mm</b>            |                           |                         |                           |       |
| 161                                                             | 140 ... 205               |                         | OSP6X161                  |       |
| 210                                                             | 189 ... 254               |                         | OSP6X161                  |       |
| 290                                                             | 269 ... 334               |                         | OSP6X290                  |       |



OSP6X\_



OSP\_X\_-45

4



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<sup>1)</sup> The shaft position is rotated 45 degrees

<sup>2)</sup> Side operated, 4-pole: add 36 mm

<sup>3)</sup> Included as standard in P-types

<sup>4)</sup> Side operated 3-pole OS60GJ: add 33mm, 4-pole types: OS32...63GD/GB: add 23.5 mm, OS60GJ: add 68mm

<sup>5)</sup> Included as standard in front operated types

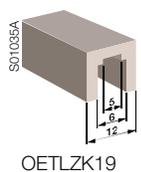
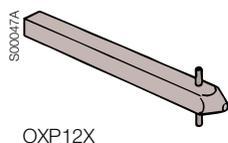
<sup>6)</sup> OS32...63GB/GF: 115...174

<sup>7)</sup> OS100GJ: 113...174, OS100GB...160GB: 121...174

<sup>8)</sup> Side operated 4-pole types: add 35mm

# Switch fuses accessories

## Extended shafts



### Extended shafts

Product Hierarchy 2200003

| Shaft (mm)                                                                                                         | Front operated<br>H / mm | Order Code                 | Price |
|--------------------------------------------------------------------------------------------------------------------|--------------------------|----------------------------|-------|
| <b>For OS 315...400, shaft diameter 12 mm</b>                                                                      |                          |                            |       |
| 250                                                                                                                | 230...325                | EXP12X250 <sup>2)</sup>    |       |
| 280                                                                                                                | 260...355                | EXP12X280                  |       |
| 325                                                                                                                | 305...400                | EXP12X325                  |       |
| 395                                                                                                                | 375...470                | EXP12X395                  |       |
| 465                                                                                                                | 445...540                | EXP12X465                  |       |
| 535                                                                                                                | 515...610                | EXP12X535                  |       |
| <b>For OS 630...800, shaft diameter 12 mm</b>                                                                      |                          |                            |       |
| 280                                                                                                                | 258...382                | EXP12X280 <sup>2)</sup>    |       |
| 325                                                                                                                | 303...427                | EXP12X325                  |       |
| 395                                                                                                                | 373...497                | EXP12X395                  |       |
| 465                                                                                                                | 443...567                | EXP12X465                  |       |
| 535                                                                                                                | 513...637                | EXP12X535                  |       |
| 280                                                                                                                | 258...382                | EXP12X280-45 <sup>1)</sup> |       |
| 325                                                                                                                | 303...427                | EXP12X325-45 <sup>1)</sup> |       |
| <b>For OS 1200...1250, shaft diameter 12 mm</b>                                                                    |                          |                            |       |
| 395                                                                                                                | 371...500                | EXP12X395                  |       |
| 465                                                                                                                | 441...570                | EXP12X465                  |       |
| 535                                                                                                                | 511...640                | EXP12X535                  |       |
| <b>Shaft extension socket - for extending the shaft of combination attachment.</b>                                 |                          |                            |       |
| 12 diameter                                                                                                        |                          | OETLZX95                   |       |
| <b>Adapters for extension socket - adapters to place inside of OETLZX 95 to connect shafts of different sizes.</b> |                          |                            |       |
| 6/6, 6/12                                                                                                          |                          | OETLZK19                   |       |

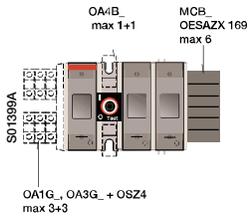


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# Switch fuses accessories

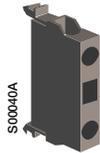
## Auxiliary contacts



OS Mini



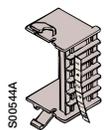
OA\_G



MCB\_



OSZ4



OESAZX169

4

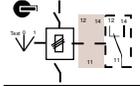
### Auxiliary contacts

#### OS Mini

##### Auxiliary contacts for OS Mini

Mounting to the switch mechanism, auxiliary/test contacts. Max. two change over contacts.

##### Change-over contacts



|                                                                                                                                                                                                                                        | Handle position | Main contacts |        | Aux. / Test contacts N.O. |        | Order Code | Price |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|--------|---------------------------|--------|------------|-------|
|                                                                                                                                                                                                                                        |                 | open          | closed | open                      | closed |            |       |
| Single pole contacts > 3mm contact gap                                                                                                                                                                                                 | 0               | open          | closed | open                      | closed | OA4B1C     |       |
| 1NO                                                                                                                                                                                                                                    |                 |               |        | NO                        | NC     | OA4B10     |       |
| 1NC                                                                                                                                                                                                                                    |                 |               |        | NC                        | NO     | OA4B01     |       |
| Mounting on the side of the switch with aux. frame OESAZX169                                                                                                                                                                           |                 |               |        |                           |        |            |       |
| 1NO                                                                                                                                                                                                                                    |                 |               |        | NO                        | NC     | MCB-10     |       |
| 1NC                                                                                                                                                                                                                                    |                 |               |        | NC                        | NO     | MCB-01     |       |
| Snap-on mounting on the switch, by using a frame OSZ4. IP20.<br>NO contacts are provided with a positive opening feature. Units/type = 1 piece. Types _AU have gold plated contacts for harsh environments and low operating voltages. |                 |               |        |                           |        |            |       |
| 1NO                                                                                                                                                                                                                                    |                 |               |        | NO                        | NC     | OA1G10     |       |
| 1NC                                                                                                                                                                                                                                    |                 |               |        | NC                        | NO     | OA3G01     |       |
| 1NO                                                                                                                                                                                                                                    |                 |               |        | NO                        | NC     | OA1G10AU   |       |
| 1NC                                                                                                                                                                                                                                    |                 |               |        | NC                        | NO     | OA3G01AU   |       |

#### Mounting frames for auxiliary contacts of OS Mini

| Description                                                                                                          | Order Code | Price |
|----------------------------------------------------------------------------------------------------------------------|------------|-------|
| Frame for auxiliary contacts OA1G10 & OA3F01 & for fuse monitor. Max. 6 auxiliary contacts can be fitted.            |            |       |
| Mounting on the left side of the switch                                                                              | OSZ4       |       |
| Frame for MCB_ auxiliary contacts. Not suitable for side operated switches. Max. 6 auxiliary contacts can be fitted. |            |       |
| Mounting on the right side of the switch                                                                             | OESAZX169  |       |



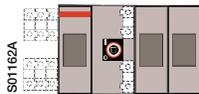
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# Switch fuses accessories

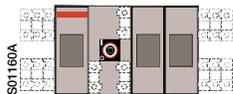
## Auxiliary contacts

### Auxiliary contacts for OS32G ... 1250

The "test" contacts operate in ON- and OFF-positions as well as when the handle is turned to TEST position = 45 degrees over the OFF-position. The "test indication" contacts operate only when the handle is turned to TEST-position. See the function table below. The OA1G10 (N.O.) or OA3G01 (N.C.) auxiliary contact blocks can be used as standard auxiliary contacts, "test" or "test indication" contacts. The desired functions are achieved when an auxiliary contact block is installed in a specific place shown in the mounting instruction. In order to activate the "test" and "test indication" features a handle with test function is required.



OS 30...60



OS 100...200

| Handle position | Main contacts | Aux./Test contacts N.O. | Test indication contacts N.O. |
|-----------------|---------------|-------------------------|-------------------------------|
| Test            | open          | closed                  | closed                        |
| 0               | open          | open                    | open                          |
| I               | closed        | closed                  | open                          |

Maximum number of contact blocks, "Aux./test" contacts and "test indication" contacts, see the table below. Standard versions include all except for N3-types which are equipped with integrated neutral through the mechanism.

#### Maximum number of auxiliary contacts under the mechanism cover

| Pole version                     | Standard | N3 | Standard | N3 | Standard        | N3              |
|----------------------------------|----------|----|----------|----|-----------------|-----------------|
| Maximum number of contact blocks | 4        | 0  | 8        | 4  | 12              | 8               |
| Aux./Test contacts               | 4        | 0  | 4        | 2  | 8 <sup>1)</sup> | 6 <sup>2)</sup> |
| Test indication contacts         | 2        | 0  | 4        | 2  | 4               | 2               |

### Auxiliary contacts for OS32G ... 1250

Mounting on the left side of the switch: Max. 8 auxiliary contact blocks with the OEA28 module.

Mounting under the mechanism cover: - OS200...250: Max 4 test contacts or 2 test contacts + 2 test indication contacts.

- OS315...400: Max 4 test contacts and 4 test indication contacts. The test contacts can be used as standard auxiliary contacts as well. Auxiliary contacts for 3 + N types only with the OEA28 module.



OEA28

OA\_G\_

| Description                                                                 | Product Hierarchy 2100004 |       |
|-----------------------------------------------------------------------------|---------------------------|-------|
|                                                                             | Order Code                | Price |
| Module for auxiliary contacts screw mounting to the left side of the switch | OEA28                     |       |
| 1 NO contact block                                                          | OA1G10                    |       |
| 1 NC contact block                                                          | OA3G01                    |       |



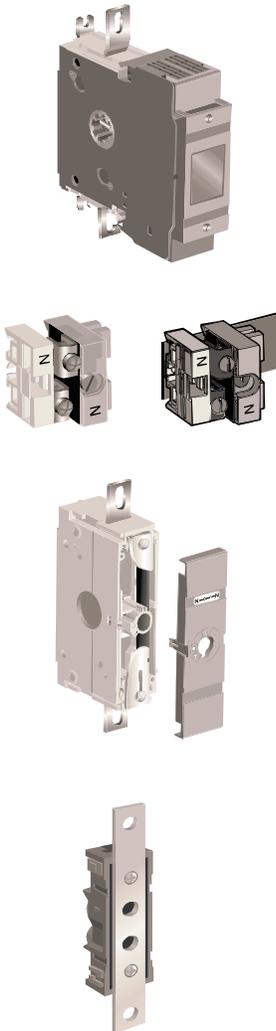
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# Switch fuses accessories

## 4th poles

4



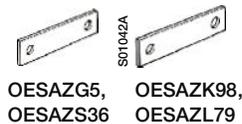
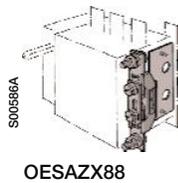
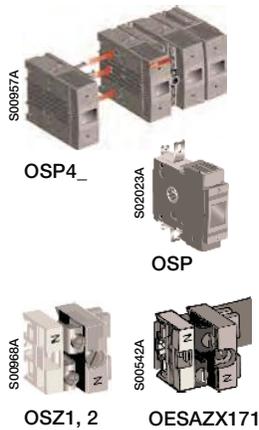
| 4th poles                                             |               | Product Hierarchy 2200003 |       |
|-------------------------------------------------------|---------------|---------------------------|-------|
| Suitable for switches                                 | Mounting side | Order Code                | Price |
| <b>Fusible 4 poles</b>                                |               |                           |       |
| OS100GB ... 160GB                                     | Left/right    | OSP160GB                  |       |
| OS125GD ... 160GD                                     |               | OSP160GD                  |       |
| OS200B                                                |               | OSP200B                   |       |
| OS200D                                                |               | OSP200D                   |       |
| OS250B                                                |               | OSP250B                   |       |
| OS250D                                                |               | OSP250D                   |       |
| OS315B ... 400B                                       |               | OSP400B                   |       |
| OS400D                                                |               | OSP400D                   |       |
| OS630 ... 800D                                        |               | OSP800B                   |       |
| OS630 ... 800B                                        |               | OSP800D                   |       |
| OS1250D                                               |               | OSP1250D                  |       |
| OS1250DA                                              |               | OSP1250DA                 |       |
| OS1250B                                               |               | OSP1250DB                 |       |
| <b>Switched 4 poles</b>                               |               |                           |       |
| OS100G ... 160G                                       | Left/right    | OSP160GN                  |       |
| OS200_                                                |               | OSP200N                   |       |
| OS250_                                                |               | OSP250N                   |       |
| OS400_                                                |               | OSP400N                   |       |
| OS630 ... 800                                         |               | OSP800N                   |       |
| OS1200 ... 1250                                       |               | OSP1250N                  |       |
| <b>For OS 200...250 DIN-type, shaft diameter 6 mm</b> |               |                           |       |
| 161                                                   | 160 ... 205   |                           |       |
| 210                                                   | 189 ... 254   |                           |       |
| 290                                                   | 269 ... 334   |                           |       |
| <b>For OS 200...250 BS-type, shaft diameter 6 mm</b>  |               |                           |       |
| 161                                                   | 140 ... 205   |                           |       |
| 210                                                   | 189 ... 254   |                           |       |
| 290                                                   | 269 ... 334   |                           |       |



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# Switch fuses accessories

## Neutral links



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### Neutral links

|                                                                                                                                                                   |            |                     | Product Hierarchy 2100004 |       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------------------|---------------------------|-------|
| Max. wire                                                                                                                                                         | H/W/D [mm] | Mounting holes      | Order Code                | Price |
| <b>For OS Mini</b><br>Detachable, mounting on the side of the switch, on the mounting plate or DIN-rail.                                                          |            |                     |                           |       |
| 16mm <sup>2</sup> Cu                                                                                                                                              | 39/41/40   | ø 4.2, distance 32  | OESAZX171                 |       |
| <b>For OS/OSM 32G ... 160G</b><br>Detachable, mounting onto the base plate or DIN-rail.                                                                           |            |                     |                           |       |
| 16mm <sup>2</sup> Cu                                                                                                                                              | 39/41/40   | ø 4.2, distance 32  | OSZ1                      |       |
| 35mm <sup>2</sup> Cu                                                                                                                                              | 39/44/45   | ø 4.2, distance 365 | OSZ2                      |       |
| <b>For OS/OSM 100G ... 1250</b><br>Mounting with screws (included) onto either side of the switch (OXN250 to OS200...250) or on the base plate (OXN250 to OS1250) |            |                     |                           |       |
| OS/OSM32G ... 250                                                                                                                                                 |            |                     | OXN250                    |       |
| OS/OSM315G ... 400                                                                                                                                                |            |                     | OXN400                    |       |
| OS/OSM630G ... 800                                                                                                                                                |            |                     | OXN800S                   |       |
| OS/OSM1250                                                                                                                                                        |            |                     | OXN1250S                  |       |

| I <sub>n</sub> [A]                           | Terminal size (WxD) [mm]; bolt size | Order Code | Price |
|----------------------------------------------|-------------------------------------|------------|-------|
| <b>Mounting separately to the base plate</b> |                                     |            |       |
| 250                                          | 12x3 M6                             | OESAZX162  |       |
| 315                                          | 20x3 M81                            | OESAZX165  |       |
| 400                                          | 25x4 M10                            | OESAZX162  |       |
| 1000                                         | 40x5 M12                            | OESAZX160  |       |

### Solid links

|                      |            | Product Hierarchy 2100004 |  |
|----------------------|------------|---------------------------|--|
| Suitable for         | Order Code | Price                     |  |
| OS20FB...OS32FB_A1   | OESAZG98   |                           |  |
| OS32GD...OS160GD     | OFAW000    |                           |  |
| OS32FB...A2...OS63GB | OESAZG5    |                           |  |
| OS100GB...OS160GB    | OESAZS36   |                           |  |
| OS100GJ              | OESAZS175  |                           |  |
|                      |            |                           |  |
| OS200...250B,J       | OEZL1      |                           |  |
| OS315...400B,J       | OESAZK98   |                           |  |
| OS630B...800B        | OESAZL79   |                           |  |
| OS600J, 800...1200L  | OEZNL8     |                           |  |
| OS1250B              | OEZNL810   |                           |  |
|                      |            |                           |  |
| OS250D               | OFAW1      |                           |  |
| OS400D               | OFAW2      |                           |  |
| OS630/800D           | OFAW3      |                           |  |

# Switch fuses accessories

## Terminal shrouds



OSS160G3\_



OSS160T1\_



OSS\_L



OSS\_S

4

### Terminal shrouds

| Suitable Switch                | Pieces | Handle Type | Product Hierarchy 2100004 |       |
|--------------------------------|--------|-------------|---------------------------|-------|
|                                |        |             | Order Code                | Price |
| OS 100G ... 160G               | 3      | Long type   | OSS160GG1L/3              |       |
|                                |        | Short type  | OSS160GG1S/3              |       |
|                                | 4      | Long type   | OSS160GG1L/4              |       |
|                                |        | Short type  | OSS160GG1S/4              |       |
| OS/OSM 200                     | 3      | Long type   | OSS200G1L/3               |       |
|                                |        | Short type  | OSS200G1S/3               |       |
|                                | 4      | Long type   | OSS200G1L/4               |       |
|                                |        | Short type  | OSS200G1S/4               |       |
| OS/OSM 250                     | 3      | Long type   | OSS250G1L/3               |       |
|                                |        | Short type  | OSS250G1S/3               |       |
|                                | 4      | Long type   | OSS250G1L/4               |       |
|                                |        | Short type  | OSS250G1S/4               |       |
| OS/OSM 315...400               | 3      | Long type   | OSS400G1L/3               |       |
|                                |        | Short type  | OSS400G1S/3               |       |
|                                | 4      | Long type   | OSS400G1L/4               |       |
|                                |        | Short type  | OSS400G1S/4               |       |
| OS/OSM 630...800               | 3      | Long type   | OSS800G1L/3               |       |
|                                |        | Short type  | OSS800G1S/3               |       |
|                                | 4      | Long type   | OSS800G1L/4               |       |
|                                |        | Short type  | OSS800G1S/4               |       |
| OS 1200...1250/<br>OSM 1250_N3 | 3      | Long type   | OSS1250G1L/3              |       |
|                                |        | Short type  | OSS1250G1S/3              |       |
|                                | 4      | Long type   | OSS1250G1L/4              |       |
|                                |        | Short type  | OSS1250G1S/4              |       |

### Terminal shrouds suitable for mechanisms with detachable integrated neutral (N3 versions)

|                                   |            |            |           |  |
|-----------------------------------|------------|------------|-----------|--|
| OS/OSM 100G...250_N3              | 1          | Long type  | OTS250G1L |  |
|                                   |            | Short type | OTS250G1S |  |
| OS/OSM 315...400_N3               |            | Long type  | OSS250G1L |  |
|                                   |            | Short type | OSS250G1S |  |
| OS/OSM 630...800_N3               |            | Long type  | OTS800G1L |  |
|                                   |            | Short type | OTS800G1S |  |
| OS 1200...1250_N3/<br>OSM 1250_N3 | Long type  | OTS1600G1L |           |  |
|                                   | Short type | OTS1600G1S |           |  |

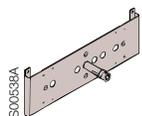


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# Switch fuses accessories

## Conversion kits



OW\_6DS\_



OESAZW2

OETLZW9



OTZW25,  
OETLZW11

OETLZW12

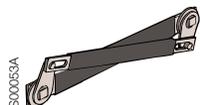


OTZW26

OETLZW13



OTZW10



OETLZW3, 14, 15



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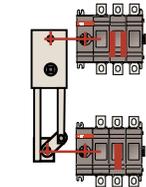
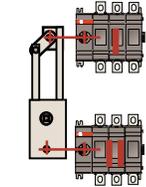
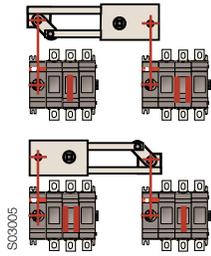
### For front operated combination switches

Product Hierarchy 2100004

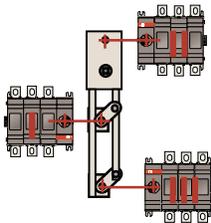
| Suitable for switches                                                                                                                                                                                                         | Remarks                            | Shaft distance [mm]                                                        | Order Code | Price |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------|------------|-------|
| <b>6 and 8-pole switch mechanism</b>                                                                                                                                                                                          |                                    |                                                                            |            |       |
| Parallel attachment for connecting 3- and 4-pole switches. The switches work simultaneously.                                                                                                                                  |                                    |                                                                            |            |       |
| <b>6-pole switches</b>                                                                                                                                                                                                        |                                    |                                                                            |            |       |
| OS Mini                                                                                                                                                                                                                       | Two 3-pole switches needed         |                                                                            | OWP6DS1    |       |
| <b>6-pole switches</b>                                                                                                                                                                                                        |                                    |                                                                            |            |       |
| OS Mini                                                                                                                                                                                                                       | Two 4-pole switches needed         |                                                                            | OWP6DS2    |       |
| The attachment levers are provided with holes, enabling different shaft distances. The combination switches can be mounted either horizontally or vertically.                                                                 |                                    |                                                                            |            |       |
| OS32G-250                                                                                                                                                                                                                     | Two 3- or 4-pole switches needed   | 45+(0-13)x15                                                               | OESAZW2    |       |
| OS315-400                                                                                                                                                                                                                     |                                    | 60+(0-19)x20                                                               | OETLZW9    |       |
| <b>Change-over switch mechanism</b>                                                                                                                                                                                           |                                    |                                                                            |            |       |
| Two switches connected with a mechanism operating into I-O-II positions.                                                                                                                                                      |                                    |                                                                            |            |       |
| OS Mini                                                                                                                                                                                                                       | Two 3-pole switches needed         |                                                                            | OWC6DSH1   |       |
|                                                                                                                                                                                                                               | Two 4-pole switches needed         |                                                                            | OWC6DSH2   |       |
| OS32G-250                                                                                                                                                                                                                     | Two 3- or 4-pole switches needed   | 210+(0 - 18)x20                                                            | OTZW25     |       |
| OS315-400                                                                                                                                                                                                                     |                                    | 210+(0 - 11)x20                                                            | OETLZW11   |       |
|                                                                                                                                                                                                                               |                                    | 210+(0 - 20)x20                                                            | OETLZW12   |       |
| <b>By-pass switch mechanism</b>                                                                                                                                                                                               |                                    |                                                                            |            |       |
| A combination of two switches in parallel with a third switch for change-over operation to pass- by, for example, a breaker for maintenance. The by-pass attachment can be used together with another combination attachment. |                                    |                                                                            |            |       |
| OS32G - 250                                                                                                                                                                                                                   | Three 3- or 4-pole switches needed | Between 1 and 2:<br>210+(0 - 9)x20<br>Between 1 and 3:<br>250+(0 - 9)x20   | OTZW26     |       |
| OS315-400                                                                                                                                                                                                                     |                                    | Between 1 and 2:<br>210+(0 - 18)x20<br>Between 1 and 3:<br>250+(0 - 18)x20 | OETLZW13   |       |
| <b>Mechanical interlock mechanism</b>                                                                                                                                                                                         |                                    |                                                                            |            |       |
| Prevents one switch from closing to ON -position, if the other is not in OFF - position.                                                                                                                                      |                                    |                                                                            |            |       |
| OTZW/OETLZW-types: When mounted upside down, prevents one switch from opening to OFF-position, if the other is not in the ON-position. (UPS-usage, make-before-break)                                                         |                                    |                                                                            |            |       |
| OS Mini                                                                                                                                                                                                                       | Two 3-pole switches needed         |                                                                            | OWM6DS1    |       |
|                                                                                                                                                                                                                               | Two 4-pole switches needed         |                                                                            | OWM6DS2    |       |
| OS32G-250                                                                                                                                                                                                                     | Two 3- or 4-pole switches needed   | 190                                                                        | OTZW10     |       |
| OS315-800                                                                                                                                                                                                                     |                                    | 250                                                                        | OETLZW14   |       |
| OS315-800                                                                                                                                                                                                                     |                                    | 300                                                                        | OETLZW3    |       |
| OS315-1250                                                                                                                                                                                                                    |                                    | 500                                                                        | OETLZW15   |       |

# Switch fuses accessories

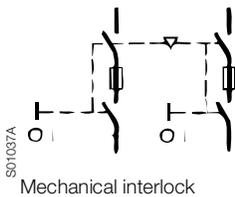
## Conversion kits & locks



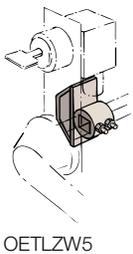
Change-over switches



By-pass switches



Mechanical interlock



OETLZW5

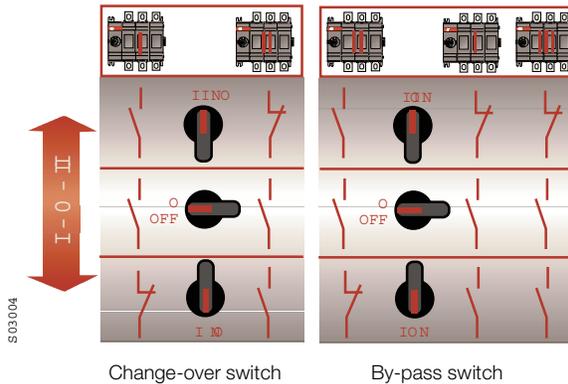


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### The shafts and handles for conversion kits

| Conversion kit type          | To be ordered separately     |        | Included in the conversion kit delivery |               | The standard handle or shaft of one of the combined switches can be used |        |
|------------------------------|------------------------------|--------|-----------------------------------------|---------------|--------------------------------------------------------------------------|--------|
|                              | Shaft                        | Handle | Shaft                                   | Handle        | Shaft                                                                    | Handle |
| <b>6 and 8-pole switches</b> |                              |        |                                         |               |                                                                          |        |
| OWP6DS1                      | x                            | -      | -                                       | -             | -                                                                        | x      |
| OWP6DS2                      | x                            | -      | -                                       | -             | -                                                                        | x      |
| OESAZW2                      | -                            | -      | x (2 pcs)                               | OHB145J12     | -                                                                        | -      |
| OETLZW9                      | -                            | -      | -                                       | -             | x                                                                        | x      |
| <b>Change-over switches</b>  |                              |        |                                         |               |                                                                          |        |
| OWC6DSH1                     | x (length min. 170mm)        | -      | -                                       | OHB65J6E011   | -                                                                        | -      |
| OWC6DSH2                     | x (length min. 170mm)        | -      | -                                       | OHB65J6E011   | -                                                                        | -      |
| OTZW25                       | -                            | -      | x (2 pcs)                               | OHB95J12E011  | -                                                                        | -      |
| OETLZW11                     | -                            | -      | x (2 pcs)                               | OHB145J12E011 | -                                                                        | -      |
| OETLZW12                     | -                            | -      | x (2 pcs)                               | YASDA21       | -                                                                        | -      |
| <b>By-pass switches</b>      |                              |        |                                         |               |                                                                          |        |
| OTZW26                       | -                            | -      | x (3 pcs)                               | OHB95J12E011  | -                                                                        | -      |
| OETLZW13                     | -                            | -      | x (3 pcs)                               | YASDA 6       | -                                                                        | -      |
| <b>Mechanical interlock</b>  |                              |        |                                         |               |                                                                          |        |
| OWM6DS1                      | x (2 pcs, length min. 170mm) |        | x (2 pcs)                               | -             | -                                                                        | -      |
| OWM6DS2                      | x (2 pcs, length min. 170mm) |        | x (2 pcs)                               | -             | -                                                                        | -      |
| OTZW10                       | -                            | -      | -                                       | -             | x                                                                        | x      |
| OETLZW14                     | -                            | -      | -                                       | -             | x                                                                        | x      |
| OETLZW3                      | -                            | -      | -                                       | -             | x                                                                        | x      |
| OETLZW15                     | -                            | -      | -                                       | -             | x                                                                        | x      |

### The functional diagram



Change-over switch

By-pass switch

### Cam attachment

Suitable for switches

OS16 ... 250

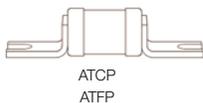
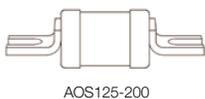
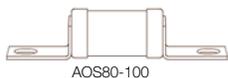
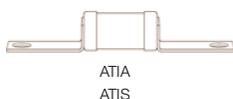
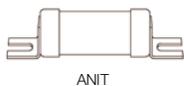
OS 315 ... 1250

### Product Hierarchy 2300001

| Order Code | Price |
|------------|-------|
| OELTZW16   |       |
| OELTZW5    |       |

# Switch fuses

## BS 88 fuses



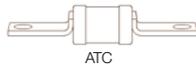
| Fuse Size        | Product Hierarchy 2000002 |       |
|------------------|---------------------------|-------|
|                  | Order Code                | Price |
| 2A A1 fuselink   | ANIT2                     |       |
| 4A A1 fuselink   | ANIT4                     |       |
| 6A A1 fuselink   | ANIT6                     |       |
| 10A A1 fuselink  | ANIT10                    |       |
| 16A A1 fuselink  | ANIT16                    |       |
| 20A A1 fuselink  | ANIT20                    |       |
| 25A fuselink     | ANIT25                    |       |
| 32A fuselink     | ANIT32                    |       |
|                  |                           |       |
| 2A A2 fuselink   | ATIA2                     |       |
| 4A A2 fuselink   | ATIA4                     |       |
| 6A A2 fuselink   | ATIA6                     |       |
| 10A A2 fuselink  | ATIA10                    |       |
| 16A A2 fuselink  | ATIA16                    |       |
| 20A A2 fuselink  | ATIA20                    |       |
| 25A A2 fuselink  | ATIA25                    |       |
| 32A A2 fuselink  | ATIA32                    |       |
| 35A A3 fuselink  | ATIS35                    |       |
| 40A A3 fuselink  | ATIS40                    |       |
| 50A A3 fuselink  | ATIS50                    |       |
| 63A A3 fuselink  | ATIS63                    |       |
|                  |                           |       |
| 80A fuselink     | AOS80                     |       |
| 100A fuselink    | AOS100                    |       |
| 125A fuselink    | AOS125                    |       |
| 160A fuselink    | AOS160                    |       |
| 200A fuselink    | AOS200                    |       |
|                  |                           |       |
| 80A A4 fuselink  | ATCP80                    |       |
| 100A A4 fuselink | ATCP100                   |       |
| 125A fuselink    | ATFP125                   |       |
| 160A fuselink    | ATFP160                   |       |
| 200A fuselink    | ATFP200                   |       |



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# Switch fuses

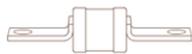
## BS 88 fuses



ATC

| Fuse Size                        | Product Hierarchy 2000002 |       |
|----------------------------------|---------------------------|-------|
|                                  | Order Code                | Price |
| 80A B1 fuselink                  | ATC80                     |       |
| 100A B1 fuselink                 | ATC100                    |       |
| 125A B2 fuselink                 | ATF125                    |       |
| 160A B2 fuselink                 | ATF160                    |       |
| 200A B2 fuselink                 | ATF200                    |       |
| 250A B3 fuselink                 | ATKF250                   |       |
| 315A B3 fuselink                 | ATKF315                   |       |
| 355A B4 fuselink                 | ATMF355                   |       |
| 400A B4 fuselink                 | ATMF400                   |       |
| 450A Fuselink Fixing Centre: 111 | ATMF450                   |       |
| 500A Fuselink Fixing Centre: 111 | ATMF500                   |       |
| 560A Fuselink Fixing Centre: 111 | ATMF560                   |       |
| 630A Fuselink Fixing Centre: 111 | ATMF630                   |       |

4



ATF  
ATKF  
ATMF  
ATKM

|                  |         |  |
|------------------|---------|--|
| 250A fuselink    | ATKM250 |  |
| 315A fuselink    | ATKM315 |  |
| 355A C1 fuselink | ATM355  |  |
| 400A C1 fuselink | ATM400  |  |
| 450A C2 fuselink | ATTM450 |  |
| 500A C2 fuselink | ATTM500 |  |
| 630A C2 fuselink | ATTM630 |  |
| 800A C3 fuselink | ATLM800 |  |

|                 |       |  |
|-----------------|-------|--|
| 2A F1 fuselink  | ANS2  |  |
| 4A F1 fuselink  | ANS4  |  |
| 6A F1 fuselink  | ANS6  |  |
| 10A F1 fuselink | ANS10 |  |
| 16A F1 fuselink | ANS16 |  |
| 20A F1 fuselink | ANS20 |  |
| 25A F1 fuselink | ANS25 |  |
| 20A F2 fuselink | AES20 |  |
| 25A F2 fuselink | AES25 |  |
| 32A F2 fuselink | AES32 |  |
| 40A F2 fuselink | AES40 |  |
| 50A F2 fuselink | AES50 |  |
| 63A F2 fuselink | AES63 |  |



Full range of product and technical information place this part number in a search engine and download

1SCC301001C0201

# Slimline XR

## Slimline switch fuses and accessories



### XR Switch Fuse 3-pole - 185mm busbar distance BS - British Standard

| Description         | Product Hierarchy 2300001 |       |
|---------------------|---------------------------|-------|
|                     | Order Code                | Price |
| XR Slimline 63A 3P  | 1SEP102244R3300           |       |
| XR Slimline 100A 3P | 1SEP102245R3300           |       |
| XR Slimline 160A 3P | 1SEP102246R3300           |       |
| XR Slimline 250A 3P | 1SEP102247R3300           |       |
| XR Slimline 400A 3P | 1SEP102248R3300           |       |
| XR Slimline 630A 3P | 1SEP102249R3300           |       |



| Accessories                    |                 |       |
|--------------------------------|-----------------|-------|
| Description                    | Order Code      | Price |
| XR 50mm Ventilated Blind Cover | 1SEP408528R0001 |       |
| XR 00 Auxillary Switch 1NO     | 1SEP408504R0001 |       |
| XR 00 Auxillary Switch 1NC     | 1SEP408505R0001 |       |
| XR 1 Auxillary Switch 1NO      | 1SEP408506R0001 |       |
| XR 1 Auxillary Switch 1NC      | 1SEP408507R0001 |       |
| XR 2/3 Auxillary Switch 1NO    | 1SEP408508R0001 |       |
| XR 2/3 Auxillary Switch 1NC    | 1SEP408509R0001 |       |
| XR Single Auxillary Switch 1NO | 1SEP407742R0013 |       |
| XR 63A - 160A 3P Shroud Size 0 | 1SEP408496R0001 |       |
| XR 250A 3P Shroud Size 1       | 1SEP408497R0001 |       |
| XR 400A/630A Shroud Size 2/3   | 1SEP408498R0001 |       |

4

### XR-E Switch fuse 4-pole - 185mm busbar distance BS - British Standard



| Type designation           | Product Hierarchy 2300001 |       |
|----------------------------|---------------------------|-------|
|                            | Order Code                | Price |
| 160A BS 185mm 4 Pole AC23B | 1SEP102246R3400           |       |
| 250A BS 185mm 4 Pole AC23B | 1SEP102247R3400           |       |
| 400A BS 185mm 4 Pole AC23B | 1SEP102248R3400           |       |
| 630A BS 185mm 4 Pole AC23B | 1SEP102249R3400           |       |

| Accessories                            |                 |       |
|----------------------------------------|-----------------|-------|
| Description                            | Order Code      | Price |
| 63A - 160A Terminal Extension 3 pieces | 1SEP408523R0001 |       |
| 250A Terminal Extension 3 pieces       | 1SEP408525R0001 |       |
| 4Pole Cable Shroud Size SR00-3         | 1SEP407775R0001 |       |
| SRM Busbar Support                     | NHP 343139P0001 |       |



Full range of product and technical information place this part number in a search engine and download  
**1SEC301001C0201**

# Cam switches

## Front mounted



4

Screw mounting also available.

All switches available without an escutcheon & with a round front ring only, call sales for details or visit cam web design platform <https://a.saleconfigurator.com>.

| Description                              | Product Hierarchy 4000003 |       |
|------------------------------------------|---------------------------|-------|
|                                          | Order Code                | Price |
| 10A 1P 0-1 Mini Cam Switch               | OMA1PB                    |       |
| 10A 2P 0-1 Mini Cam Switch               | OMA2PB                    |       |
| 10A 3P 0-1 Mini Cam Switch               | OMA3PB                    |       |
| 25A 2P 0-1 Mini Cam Switch               | ONA2PB                    |       |
| 25A 3P 0-1 Mini Cam Switch               | ONA3PB                    |       |
| 25A 1P On-Off switch, round front ring   | ONA1XB                    |       |
| 25A 2P On-Off switch, round front ring   | ONA2XB                    |       |
| 25A 3P On-Off switch, round front ring   | ONA3XB                    |       |
| 10A 1P 0-1 Mini Key Op Cam Switch        | OMA1KB                    |       |
| 10A 3P 0-1 Mini Key Op Cam Switch        | OMA3KB                    |       |
| 25A 3P Key Op C/O Cam switch, 1-0-2      | ONU3KB                    |       |
| 25A 1P C/O Cam sw/ rnd frnt rng, 1-2     | ONWS1XB                   |       |
| 25A 2P C/O Cam sw/ rnd frnt rng, 1-2     | ONWS2XB                   |       |
| 25A 3P C/O Cam sw/ rnd frnt rng, 1-2     | ONWS3XB                   |       |
| 10A 1P 1-0-2 Mini Changeover Cam switch  | OMU1PB                    |       |
| 10A 2P 1-0-2 Mini Changeover Cam switch  | OMU2PB                    |       |
| 10A 3P 1-0-2 Mini Changeover Cam switch  | OMU3PB                    |       |
| 25A 1P 1-0-2 Mini Changeover Cam switch  | ONU1PB                    |       |
| 25A 2P 1-0-2 Mini Changeover Cam switch  | ONU2PB                    |       |
| 25A 3P 1-0-2 Mini Changeover Cam switch  | ONU3PB                    |       |
| 10A 1P 1-2 Mini Changeover Cam switch    | OMWS1PB                   |       |
| 10A 3P 1-2 Mini Changeover Cam switch    | OMWS3PB                   |       |
| 10A 2P 1-2 Mini Changeover Cam switch    | ONWS2PB                   |       |
| 10A 3P 1-2 Mini Changeover Cam switch    | ONWS3PB                   |       |
| 25A 1P Key Op C/O Cam switch, 1-0-2      | ONU1KB                    |       |
| 10A 1P, 2 Step, Multistep Switch 0-1-2   | OMSO21PB                  |       |
| 10A 1P, 3 Step, Multistep Switch 0-1-2-3 | OMSO31PB                  |       |
| 10A 2P, 3 Step, Multistep Switch 0-1-2-3 | OMSO32PB                  |       |
| 25A 1P, 2 Step, Multistep Switch 0-1-2   | ONSO21PB                  |       |
| 25A 2P, 2 Step, Multistep Switch 0-1-2   | ONSO22PB                  |       |
| 25A 3P, 2 Step, Multistep Switch 0-1-2   | ONSO23PB                  |       |
| 25A 2P, 3 Step, Multistep Switch 0-1-2-3 | ONSO32PB                  |       |
| 25A 3P, 3 Step, Multistep Switch 0-1-2-3 | ONSO33PB                  |       |
| 25A 1P 4 Step Multistep Switch 1-2-3     | ONSO41PB                  |       |
| 25A 2P 4 Step Multistep Switch 1-2-3     | ONSO42PB                  |       |
| 25A 2P IP65 Enc 0-1 Cam Switch           | ONA2EPB                   |       |
| 25A 3P IP65 Enc 0-1 Cam Switch           | ONA3EPB                   |       |



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1SCC302003C0201

# Enclosures



## Enclosures

Overview ..... 5/2

## Sheet steel

Sheet steel IP65 ..... 5/4

## Insulated

Adaptable boxes ..... 5/6

Modular units ..... 5/8

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Gemini weather proof enclosures ..... 5/11



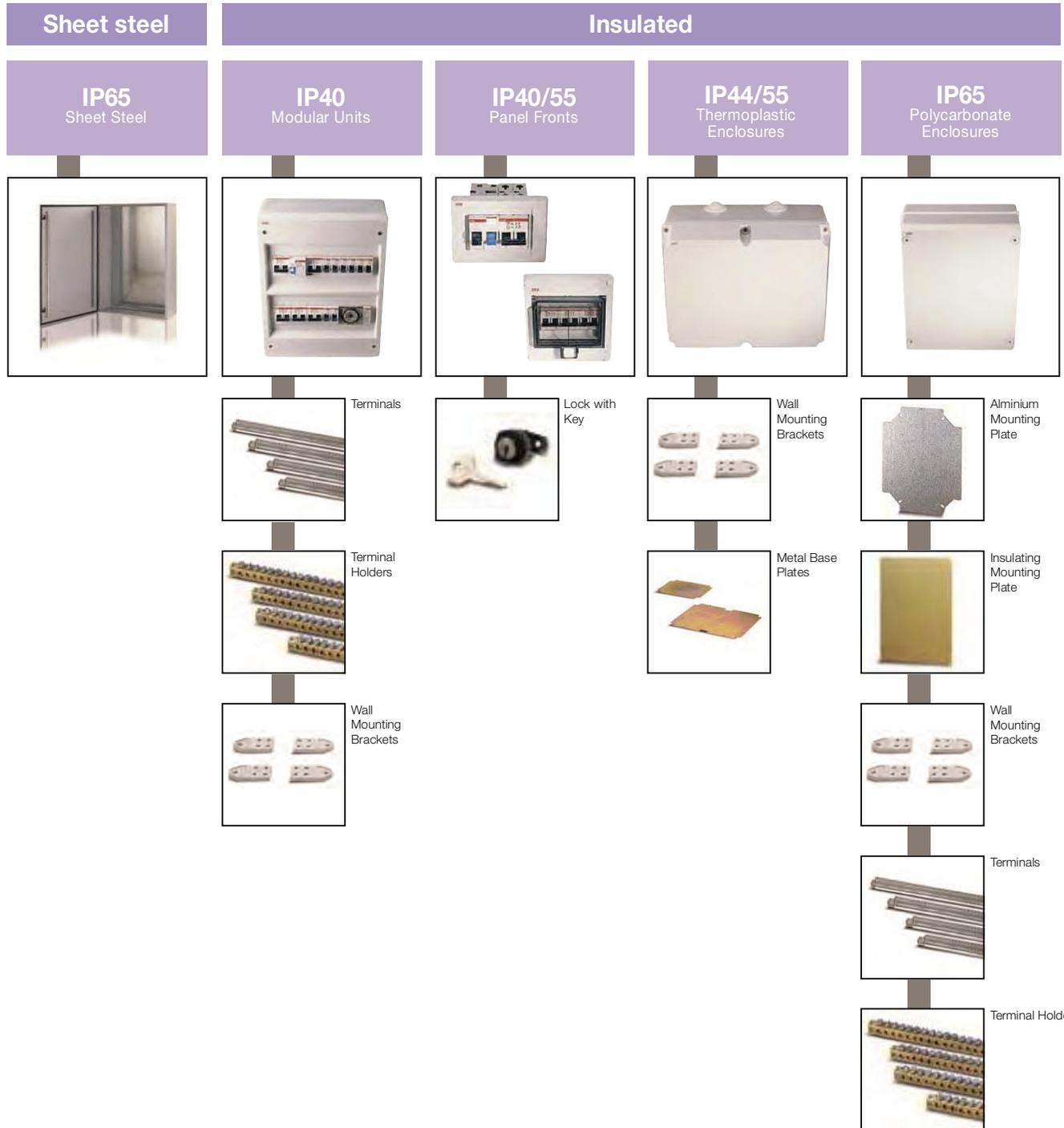
## Slotted trunking

Slotted trunking ..... 5/16



# Enclosures - IP40 - IP66

## Overview



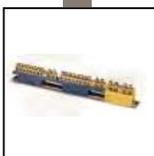
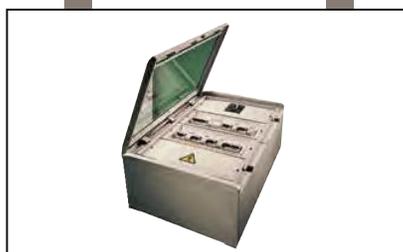
5

## Insulated

**IP55**  
Modular Unit

**IP55**  
Modular Unit  
Multiple Door

**IP66**  
Gemini Range



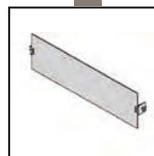
Neutral Terminals



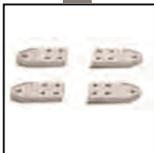
Terminals



Mounting Plates



Plain Rear Plates



Wall Mounting Brackets



Terminal Holders



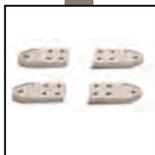
Full Height Inner Door



MCB Kits



Lock with Key



Wall Mounting Brackets



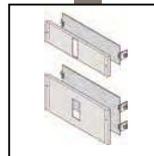
Enclosure Uprights



Plain Inner Door



Screw Lead Sealing Accessory



T-Max Mounting Kit



Lock with Key

# Enclosures

## IP65 sheet steel enclosure (For external use please consult us)

Colour: RAL7035 (orange Peel)



### Solid Door Enclosures IP65 - Nema 4, 12 & 13 Top & Bottom Gland Plates including Mounting Plate

| Description H x W x D | Product Hierarchy 3200003 |       |
|-----------------------|---------------------------|-------|
|                       | Order Code                | Price |
| 300 x 200 x 150       | SRN3215K                  | 41.81 |
| 300 x 300 x 150       | SRN3315K                  |       |
| 300 x 400 x 150       | SRN3415K                  |       |
| 400 x 300 x 150       | SRN4315K                  |       |
| 400 x 300 x 200       | SRN4320K                  |       |
| 400 x 200 x 200       | SRN4420K                  |       |
| 400 x 600 x 200       | SRN4620K                  |       |
| 500 x 300 x 200       | SRN5320K                  |       |
| 500 x 400 x 200       | SRN5420K                  |       |
| 500 x 400 x 250       | SRN5425K                  |       |
| 600 x 400 x 200       | SRN6420K                  |       |
| 600 x 400 x 250       | SRN6425K                  |       |
| 600 x 500 x 200       | SRN6520K                  |       |
| 600 x 640 x 300       | SRN6630K                  |       |
| 800 x 600 x 250       | SRN6625K                  |       |
| 600 x 600 x 250       | SRN7520K                  |       |
| 700 x 500 x 200       | SRN7525K                  |       |
| 700 x 500 x 250       | SRN8625K                  |       |
| 800 x 600 x 300       | SRN8630K                  |       |
| 800 x 800 x 300       | SRN8830K                  |       |
| 1000 x 600 x 250      | SRN10625K                 |       |
| 1000 x 600 x 300      | SRN10630K                 |       |
| 1000 x 800 x 300      | SRN10830K                 |       |
| 1200 x 600 x 300      | SRN12630K                 |       |
| 1200 x 800 x 300      | SRN12830K                 |       |
| 1200 x 800 x 400      | SRN12840K                 |       |

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### Glazed Door Enclosures IP65 - Nema 4, 12 & 13

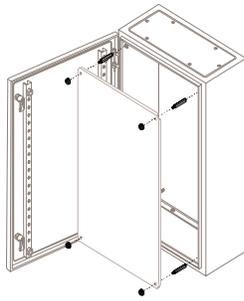
Top & Bottom Gland Plates included - Mounting Plate Sold Separately



|                  |            |  |
|------------------|------------|--|
| 500 x 400 x 200  | SRN5420VK  |  |
| 500 x 400 x 250  | SRN5425VK  |  |
| 600 x 400 x 200  | SRN6420VK  |  |
| 600 x 400 x 250  | SRN6425VK  |  |
| 800 x 600 x 250  | SRN8625VK  |  |
| 700 x 500 x 200  | SRN7520VK  |  |
| 700 x 500 x 250  | SRN7525VK  |  |
| 800 x 600 x 250  | SRN8625VK  |  |
| 800 x 600 x 300  | SRN8630VK  |  |
| 1000 x 600 x 250 | SRN10625VK |  |
| 1000 x 600 x 300 | SRN10630VK |  |
| 1000 x 800 x 300 | SRN10830VK |  |
| 1200 x 600 x 300 | SRN12630VK |  |
| 1200 x 800 x 300 | SRN12830VK |  |

# Enclosures

## IP65 sheet steel enclosure



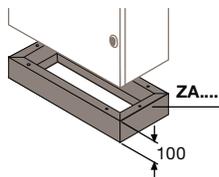
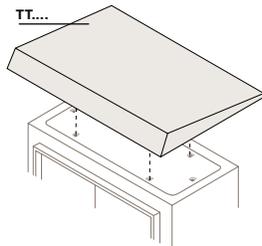
### Mounting Plates

| For enclosure       | Hmm x Wmm  | Product Hierarchy 3200003 |       |
|---------------------|------------|---------------------------|-------|
|                     |            | Order Code                | Price |
| SRN5420 & SRN5425   | 500 x 400  | PF5040                    |       |
| SRN6420 & SRN6425   | 600 x 400  | PF6040                    |       |
| SRN7520 & SRN7525   | 700 x 500  | PF7050                    |       |
| SRN8625 & SRN8630   | 800 x 600  | PF8060                    |       |
| SRN10625 & SRN10630 | 1000 x 600 | PF1060                    |       |
| SRN10830            | 1000 x 800 | PF1080                    |       |
| SRN12630            | 1200 x 600 | PF1260                    |       |
| SRN12830            | 1200 x 800 | PF1280                    |       |

### Rainhoods To improve protection against sprays of water.

Wmm x Dmm

|           |         |  |
|-----------|---------|--|
| 200 x 150 | TT2015  |  |
| 300 x 150 | TT3015  |  |
| 400 x 150 | TT4015  |  |
| 300 x 200 | TT3020  |  |
| 400 x 200 | TT4020  |  |
| 500 x 200 | TT5020  |  |
| 600 x 200 | TT6020  |  |
| 400 x 250 | TT4025  |  |
| 500 x 250 | TT5025  |  |
| 600 x 250 | TT6025K |  |
| 600 x 300 | TT6030K |  |
| 600 x 300 | TT8030K |  |



### Plinths 100mm height

Wmm x Dmm

|           |        |  |
|-----------|--------|--|
| 400 x 200 | ZA4020 |  |
| 400 x 250 | ZA4025 |  |
| 600 x 250 | ZA6025 |  |
| 600 x 300 | ZA6030 |  |



### IP55 Combining Gasket

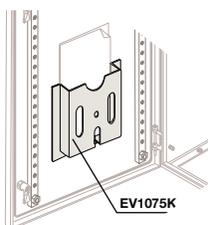
Hmm x Dmm

|           |        |  |
|-----------|--------|--|
| 400 x 200 | GZ4020 |  |
| 400 x 250 | GZ4025 |  |
| 600 x 250 | GZ6025 |  |
| 600 x 300 | GZ6030 |  |

### Accessories

Description

|                                                 |        |  |
|-------------------------------------------------|--------|--|
| Document pocket                                 | AA5600 |  |
| N.4 wall mounting brackets                      | AA1206 |  |
| Double tongue 7mm lock with DIN 5mm plastic key | AA8001 |  |
| Lock with Yale insert & key                     | AA8002 |  |
| T handle with Yale insert and key               | AA8003 |  |
| RAL7035 400ml spray can                         | VB7035 |  |



# Enclosures - IP44 & 55 Thermoplastic Adaptable Boxes



## IP44 Box

|                 |                                  | Product Hierarchy 3100007 |       |
|-----------------|----------------------------------|---------------------------|-------|
| Size            | Description                      | Order Code                | Price |
| ø65 - H35       | round with glands & press on lid | 00800                     |       |
| ø80 - H40       | round with glands & press on lid | 00802                     |       |
| 65 x 65 x 32    | with glands & screw on lid       | 00808                     |       |
| 80 x 80 x 40    | with glands & screw on lid       | 00810                     |       |
| 100 x 100 x 50  | with glands & screw on lid       | 00816                     |       |
| 105 x 70 x 50   | with glands & screw on lid       | 00820                     |       |
| 100 x 100 x 80  | with glands & screw on lid       | 00821                     |       |
| 153 x 110 x 66  | with glands & low screw on lid   | 00822                     |       |
| 160 x 135 x 77  | with glands & low screw on lid   | 1SL0824A00                |       |
| 220 x 170 x 80  | with glands & low screw on lid   | 1SL0826A00                |       |
| 310 x 240 x 110 | with glands & low screw on lid   | 1SL0828A00                |       |
| 160 x 135 x 150 | with glands & high screw on lid  | 1SL0830A00                |       |
| 220 x 170 x 150 | with glands & high screw on lid  | 1SL0832A00                |       |
| 310 x 240 x 160 | with glands & high screw on lid  | 1SL0834A00                |       |

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## IP55 Box

|                 |                                                   | Product Hierarchy 3100007 |       |
|-----------------|---------------------------------------------------|---------------------------|-------|
| Size            | Description                                       | Order Code                | Price |
| 100 x 100 x 50  | with smooth walls & low screw-on lid              | 00846                     |       |
| 105 x 70 x 50   | with smooth walls & low screw-on lid              | 00850                     |       |
| 100 x 100 x 80  | with smooth walls & low screw-on lid              | 00851                     |       |
| 153 x 110 x 66  | with smooth walls & low screw-on lid              | 00852                     |       |
| 160 x 135 x 77  | with smooth walls & low screw-on lid              | 1SL0854A00                |       |
| 220 x 170 x 80  | with smooth walls & low screw-on lid              | 1SL0856A00                |       |
| 310 x 240 x 110 | with smooth walls & low screw-on lid              | 1SL0858A00                |       |
| 153 x 110 x 66  | with smooth walls & transparent low screw-on lid  | 00872                     |       |
| 160 x 135 x 150 | with smooth walls & transparent high screw-on lid | 00880                     |       |
| 220 x 170 x 150 | with smooth walls & transparent low screw-on lid  | 1SL0882A00                |       |
| 310 x 240 x 160 | with smooth walls & transparent high screw-on lid | 1SL0884A00                |       |
| 160 x 135 x 150 | with smooth walls & high screw-on lid             | 1SL0860A00                |       |
| 220 x 170 x 150 | with smooth walls & high screw-on lid             | 1SL0862A00                |       |
| 310 x 240 x 160 | with smooth walls & high screw-on lid             | 1SL0864A00                |       |
| 160 x 135 x 70  | with smooth walls & transparent low screw-on lid  | 1SL0874A00                |       |
| 220 x 170 x 80  | with smooth walls & transparent low screw-on lid  | 1SL0876A00                |       |
| 310 x 240 x 110 | with smooth walls & transparent low screw-on lid  | 1SL0878A00                |       |



# Enclosures - IP65 in Polycarbonate Adaptable Boxes



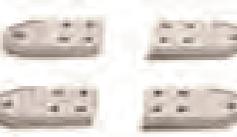
## IP65 Polycarbonate Enclosure

| Size HxWxD      | Product Hierarchy 3100007 |       |
|-----------------|---------------------------|-------|
|                 | Order Code                | Price |
| 220 x 140 x 140 | 12804                     |       |
| 220 x 205 x 140 | 12808                     |       |
| 220 x 275 x 140 | 12812                     |       |
| 370 x 275 x 140 | 12814                     |       |
| 570 x 275 x 140 | 12816                     |       |
| 570 x 380 x 140 | 12818                     |       |



## Aluminium Mounting Plate

| For Enclosure Type | Product Hierarchy 3100007 |       |
|--------------------|---------------------------|-------|
|                    | Order Code                | Price |
| 12804              | 12842                     |       |
| 12808              | 12844                     |       |
| 12812              | 12845                     |       |
| 12814              | 12846                     |       |
| 12816              | 12847                     |       |
| 12818              | 12848                     |       |



## Wall Mounting Brackets

| For Enclosure Type | Product Hierarchy 3100007 |       |
|--------------------|---------------------------|-------|
|                    | Order Code                | Price |
| Fits All           | 12858                     |       |

# Enclosures - IP40, IP55, IP65

## Modular Units



### IP40 Polycarbonate

| No. Modules | Size W x H x D  | Product Hierarchy 3100007 |       |
|-------------|-----------------|---------------------------|-------|
|             |                 | Order Code                | Price |
| 2           | 100 x 160 x 85  | 12702                     |       |
| 4           | 140 x 220 x 110 | 12704                     |       |
| 8           | 205 x 220 x 110 | 12708                     |       |
| 12          | 275 x 220 x 110 | 12712                     |       |
| 24          | 275 x 370 x 110 | 12714                     |       |
| 36          | 275 x 570 x 110 | 12716                     |       |



### IP55 Thermoplastic

| No. Modules  | Size W x H x D  | Product Hierarchy 3100007 |  |
|--------------|-----------------|---------------------------|--|
|              |                 | Order Code                |  |
| 4            | 125 x 180 x 105 | 12644                     |  |
| 6            | 160 x 180 x 105 | 12646                     |  |
| 10           | 230 x 180 x 105 | 12650                     |  |
| 20           | 230 x 320 x 135 | 12652                     |  |
| 10 - special | 250 x 320 x 135 | 12654                     |  |



### IP65 Polycarbonate Solid Door

| No. Modules | Size W x H x D  | Product Hierarchy 3100007 |  |
|-------------|-----------------|---------------------------|--|
|             |                 | Order Code                |  |
| 8           | 205 x 220 x 140 | 12728                     |  |
| 12          | 275 x 220 x 140 | 12732                     |  |
| 24          | 380 x 220 x 140 | 12733                     |  |
| 36          | 275 x 370 x 140 | 12734                     |  |



### IP65 Polycarbonate Clear Door

| No. Modules | Size W x H x D  | Product Hierarchy 3100007 |  |
|-------------|-----------------|---------------------------|--|
|             |                 | Order Code                |  |
| 4           | 140 x 220 x 140 | 12744                     |  |
| 8           | 205 x 220 x 140 | 12748                     |  |
| 12          | 275 x 220 x 140 | 12752                     |  |
| 18          | 380 x 220 x 140 | 12753                     |  |
| 24          | 275 x 370 x 140 | 12754                     |  |
| 36          | 275 x 570 x 140 | 12756                     |  |



### IP65 Polycarbonate Multiple Doors

| No. Modules | Size W x H x D  | Product Hierarchy 3100007 |  |
|-------------|-----------------|---------------------------|--|
|             |                 | Order Code                |  |
| 2/4         | 100 x 160 x 100 | 12742                     |  |
| 8           | 205 x 220 x 140 | 12743                     |  |
| 12          | 275 x 220 x 140 | 12745                     |  |
| 24          | 275 x 370 x 140 | 12746                     |  |
| 36          | 275 x 570 x 140 | 12747                     |  |



# Enclosures - IP40, IP55, IP65

## Modular Units Accessories



### Recommended Terminals & Terminal Holders Quantities

| For Switchboard type | Product Hierarchy 3100007 |       |            |       |
|----------------------|---------------------------|-------|------------|-------|
|                      | Terminal Holders          |       | Terminals  |       |
|                      | Order Code                | Price | Order Code | Price |
| 12704                | 12538 (x2)                | 3.86  | 12531 (x2) |       |
| 12708                | 12539 (x2)                | 4.33  | 12531 (x2) |       |
| 12712                | 12540 (x1)                | 5.01  | 12531 (x2) |       |
|                      |                           |       | 12532 (x1) |       |
| 12714                | 12540 (x2)                | 5.01  | 12533 (x2) |       |
| 12716                | 12540 (x2)                | 5.01  | 12534 (x2) |       |
| 12724 - 12744        | 12538 (x2)                | 3.86  | 12531 (x2) |       |
| 12728 - 12748        | 12539 (x2)                | 4.33  | 12531 (x2) |       |
| 12732 - 12752        | 12540 (x1)                | 5.01  | 12531 (x2) |       |
|                      |                           |       | 12532 (x1) |       |
| 12733 - 12753        | 12543 (x1)                | 9.67  | 12531 (x1) |       |
|                      |                           |       | 12535 (x1) |       |
| 12735 - 12755        | 12543 (x2)                | 9.67  | 12534 (x2) |       |
| 12736 - 12756        | 12540 (x2)                | 5.01  | 12534 (x2) |       |
| 12738 - 12758        | 12543 (x2)                | 9.67  | 12535 (x2) |       |
| 12743                | 12539 (x2)                | 4.33  | 12531 (x2) |       |
| 12745                | 12540 (x1)                | 5.01  | 12531 (x1) |       |
|                      |                           |       | 12532 (x1) |       |
| 12746                | 12540 (x2)                | 5.01  | 12533 (x2) |       |
| 12747                | 12540 (x2)                | 5.01  | 12534 (x2) |       |

(x) Quantity Required

5



### Terminal Blocks

| For Switchboard type     | Neutral terminals | Earth terminals   | Product Hierarchy 3100007 |       |
|--------------------------|-------------------|-------------------|---------------------------|-------|
|                          |                   |                   | Order Code                | Price |
| 12 644 - 12 684          | 2x4.5 + 3x5.6     | 2x4.5 + 3x5.6     | 12880                     |       |
| 12 646 - 12 686          | 6x4.5 + 5x5.6     | 2x4.5 + 3x5.6     | 12882                     |       |
| 12 650 - 12 690          | 6x4.5 + 5x5.6     | 2x4.5 + 3x5.6     | 12884                     |       |
| 12 652 - 12 692 - 12 654 | 2 (6x4.5 + 5x5.6) | 2 (2x4.5 + 3x5.6) | 12886                     |       |



### Accessories

| Description                    | Product Hierarchy 3100007 |       |
|--------------------------------|---------------------------|-------|
|                                | Order Code                | Price |
| Wall Mounting Brackets for Box | 12658                     |       |



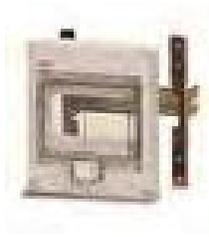
# Enclosures - Polycarbonate

## IP65 Switchboards - IP40 & IP55 Panel Fronts



### IP40 Front Panel

| No. Modules | Size HxWxD | Product Hierarchy 3100007 |       |
|-------------|------------|---------------------------|-------|
|             |            | Order Code                | Price |
| 2           | 9012362    | 12362                     |       |
| 3           | 9012362    | 12363                     |       |
| 4           | 9012362    | 12364                     |       |

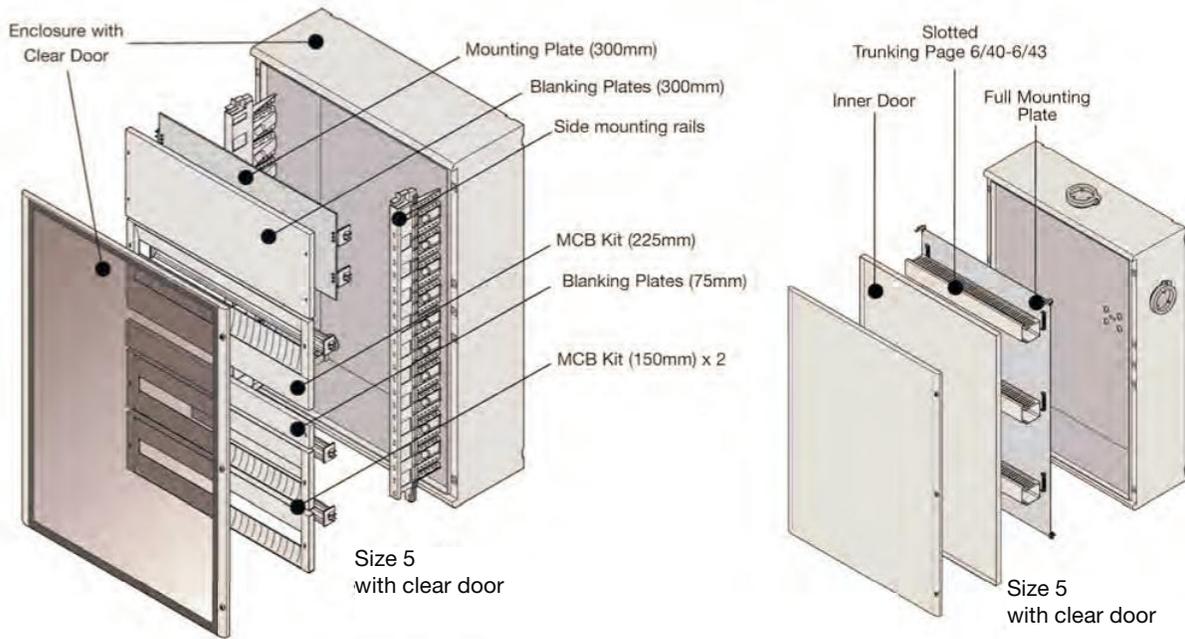


### IP55 Front Panel

| No. Modules | Size HxWxD     |       |  |
|-------------|----------------|-------|--|
| 4           | 180 x 125 x 34 | 12658 |  |
| 6           | 180 x 160 x 34 | 12659 |  |
| 10          | 180 x 230 x 34 | 12660 |  |

# Enclosures

## IP66 Gemini weather proof range



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### Gemini Enclosures

Components are suitable for any type and size of enclosure



#### Enclosure with Plain Door

| Size HxWxD       | Usable Height | Size | Product Hierarchy 3100007 |       |
|------------------|---------------|------|---------------------------|-------|
|                  |               |      | Order Code                | Price |
| 400 x 335 x 210  | 300           | 1    | 1SL0201A00                |       |
| 550 x 460 x 260  | 450           | 2    | 1SL0202A00                |       |
| 700 x 460 x 260  | 600           | 3    | 1SL0203A00                |       |
| 700 x 590 x 260  | 600           | 4    | 1SL0204A00                |       |
| 855 x 590 x 360  | 750           | 5    | 1SL0205A00                |       |
| 1005 x 840 x 360 | 900           | 6    | 1SL0206A00                |       |

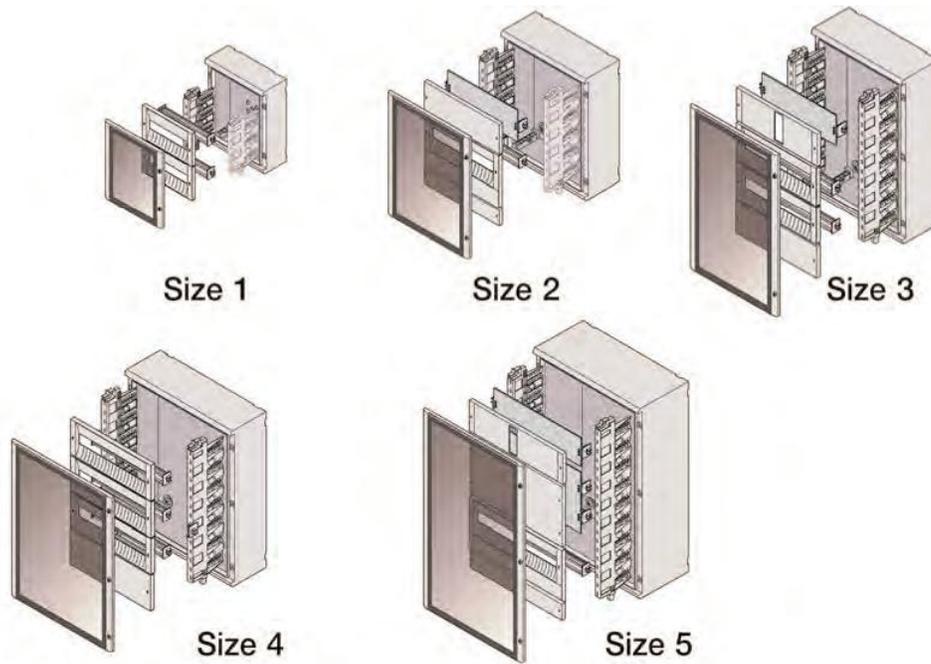


#### Enclosure with Plain Door

| Size HxWxD       | Usable Height | Size | Product Hierarchy 3100007 |       |
|------------------|---------------|------|---------------------------|-------|
|                  |               |      | Order Code                | Price |
| 400 x 335 x 210  | 300           | 1    | 1SL0211A00                |       |
| 550 x 460 x 260  | 450           | 2    | 1SL0212A00                |       |
| 700 x 460 x 260  | 600           | 3    | 1SL0213A00                |       |
| 700 x 590 x 260  | 600           | 4    | 1SL0214A00                |       |
| 855 x 590 x 360  | 750           | 5    | 1SL0215A00                |       |
| 1005 x 840 x 360 | 900           | 6    | 1SL0216A00                |       |

# Enclosures

## IP66 Gemini weather proof range



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### Full Mounting Plates

| Size HxW  | Size | Product Hierarchy 310007 |       |
|-----------|------|--------------------------|-------|
|           |      | Order Code               | Price |
| 285 x 235 | 1    | 1SL0259A00               |       |
| 435 x 360 | 2    | 1SL0260A00               |       |
| 585 x 360 | 3    | 1SL0261A00               |       |
| 585 x 485 | 4    | 1SL0262A00               |       |
| 735 x 485 | 5    | 1SL0263A00               |       |
| 885 x 735 | 6    | 1SL0264A00               |       |

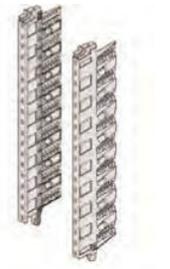
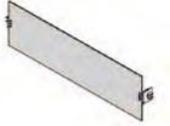
#### Also available:

- Perforated Mounting Plates suitable for use with floating nuts.
- Insulated Mounting Plates.

Please consult us for availability

# Enclosures

## IP66 Gemini weather proof range



### Mounting Plates

| Mounting Plates |              |      | Product Hierarchy 3100007 |       |
|-----------------|--------------|------|---------------------------|-------|
| Size HxW        | Nominal Size | Size | Order Code                | Price |
| 130 x 210       | 150          | 1    | 1SL0296A00                |       |
| 130 x 318       | 150          | 2    | 1SL0297A00                |       |
| 130 x 318       | 150          | 3    | 1SL0297A00                |       |
| 130 x 443       | 150          | 4    | 1SL0298A00                |       |
| 130 x 443       | 150          | 5    | 1SL0298A00                |       |
| 130 x 663       | 150          | 6    | 1SL0299A00                |       |
| 280 x 318       | 300          | 2    | 1SL0302A00                |       |
| 280 x 318       | 300          | 3    | 1SL0302A00                |       |
| 280 x 443       | 300          | 4    | 1SL0303A00                |       |
| 280 x 443       | 300          | 5    | 1SL0303A00                |       |
| 280 x 663       | 300          | 6    | 1SL0304A00                |       |

### Side Mounting Rails

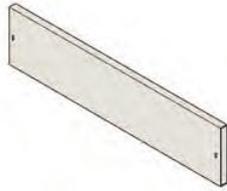
| Side Mounting Rails |  |      | Product Hierarchy 3100007 |       |
|---------------------|--|------|---------------------------|-------|
| Size H              |  | Size | Order Code                | Price |
| 300                 |  | 1    | 1SL0283A00                |       |
| 450                 |  | 2    | 1SL0284A00                |       |
| 600                 |  | 3    | 1SL0285A00                |       |
| 600                 |  | 4    | 1SL0285A00                |       |
| 750                 |  | 5    | 1SL0286A00                |       |
| 900                 |  | 6    | 1SL0287A00                |       |

### MCB Kits

| MCB Kits  |         |      | Product Hierarchy 3100007 |       |
|-----------|---------|------|---------------------------|-------|
| Size HxW  | Modules | Size | Order Code                | Price |
| 150 x 250 | 12      | 1    | 1SL0307A00                |       |
| 150 x 375 | 18      | 2    | 1SL0308A00                |       |
| 150 x 375 | 18      | 3    | 1SL0308A00                |       |
| 150 x 500 | 24      | 4    | 1SL0309A00                |       |
| 150 x 500 | 24      | 5    | 1SL0309A00                |       |
| 150 x 750 | 36      | 6    | 1SL0310A00                |       |
| 225 x 375 | 2       | 18   | 1SL0313A00                |       |
| 225 x 375 | 3       | 18   | 1SL0313A00                |       |
| 225 x 500 | 4       | 24   | 1SL0314A00                |       |
| 225 x 500 | 5       | 24   | 1SL0314A00                |       |
| 225 x 750 | 6       | 36   | 1SL0315A00                |       |

# Enclosures

## IP66 Gemini weather proof range



### Blanking Plates

| Blanking Plates |      | Product Hierarchy 3100007 |       |
|-----------------|------|---------------------------|-------|
| Size HxW        | Size | Order Code                | Price |
| 150 x 250       | 1    | 1SL0324A00                |       |
| 150 x 375       | 2    | 1SL0325A00                |       |
| 150 x 375       | 3    | 1SL0325A00                |       |
| 150 x 500       | 4    | 1SL0326A00                |       |
| 150 x 500       | 5    | 1SL0327A00                |       |
| 150 x 750       | 6    | 1SL0327A00                |       |



### Accessories

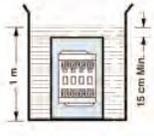
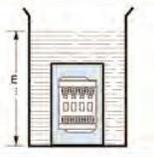
| Accessories                   |          | Product Hierarchy 3100007 |  |
|-------------------------------|----------|---------------------------|--|
| Description                   | Size     | Order Code                |  |
| Key lock and handle           | Fits All | 1SL0340A00                |  |
| Square lock                   | Fits All | 1SL0339A00                |  |
| Wall mounting brackets (4off) | Fits All | 1SL0342A00                |  |



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# Enclosures

## IP Ratings

| IP       |                                                                             |                                                                                     |                                                                                                                                                                                                                                                             |
|----------|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          |                                                                             | Protection against solid objects                                                    | Protection against liquids                                                                                                                                                                                                                                  |
| <b>0</b> | No protection                                                               |                                                                                     | <b>0</b> No protection                                                                                                                                                                                                                                      |
| <b>1</b> | Protected against solid objects up to 50mm<br>eg. accidental touch by hands |    | <b>1</b> Protected against vertically falling drops of water eg. condensation<br>                                                                                        |
| <b>2</b> | Protected against solid objects up to 12mm<br>eg. fingers                   |   | <b>2</b> Protected against direct sprays of water up to 15° from vertical<br>                                                                                            |
| <b>3</b> | Protected against solid objects over 2.5mm<br>(tools + wires)               |  | <b>3</b> Protected against direct sprays of water up to 60° from vertical<br><br>  |
| <b>4</b> | Protected against solid objects up to 1mm<br>(tools wires + small wires)    |  | <b>4</b> Protected against sprays of water from all directions<br><br>            |
| <b>5</b> | Protected against dust (no harmful deposit)                                 |  | <b>5</b> Protected against low pressure jets of water from all directions<br><br>  |
| <b>6</b> | Totally protected against dust                                              |  | <b>6</b> Protected against strong jets of water eg. for use on ship decks<br><br> |
|          |                                                                             |                                                                                     | <b>7</b> Protected against the effects of immersion between 15cm and 1m.<br><br>  |
|          |                                                                             |                                                                                     | <b>8</b> Protected against long periods of immersion under pressure<br><br> ... m |

# Enclosures

## Slotted trunking



5

| Size WxH  | Pack Quantity | Product Hierarchy 3300001 |       | Product Hierarchy 3300001  |       |
|-----------|---------------|---------------------------|-------|----------------------------|-------|
|           |               | 4/6mm Slots<br>Order Code | Price | 8/12mm Slots<br>Order Code | Price |
| 15 x 17   | 23            | 05119                     |       | 05019                      |       |
| 25 x 30   | 29            | 05133                     |       | 05033                      |       |
| 40 x 30   | 20            | 05135                     |       | 05035                      |       |
| 60 x 30   | 26            | 05137                     |       | 05037                      |       |
| 25 x 40   | 24            | 05143                     |       | 05043                      |       |
| 40 x 40   | 15            | 05145                     |       | 05045                      |       |
| 60 x 40   | 20            | 05147                     |       | 05047                      |       |
| 80 x 40   | 16            | 05149                     |       | 05049                      |       |
| 100 x 40  | 12            | 05151                     |       | 05051                      |       |
| 120 x 40  | 10            | 05153                     |       | 05053                      |       |
| 25 x 60   | 17            | 05163                     |       | 05063                      |       |
| 40 x 60   | 11            | 05165                     |       | 05065                      |       |
| 60 x 60   | 16            | 05167                     |       | 05067                      |       |
| 80 x 60   | 12            | 05169                     |       | 05069                      |       |
| 100 x 60  | 10            | 05171                     |       | 05071                      |       |
| 120 x 60  | 7             | 05173                     |       | 05073                      |       |
| 25 x 80   | 14            | 05183                     |       | 05083                      |       |
| 40 x 80   | 18            | 05185                     |       | 05085                      |       |
| 60 x 80   | 12            | 05187                     |       | 05087                      |       |
| 80 x 80   | 8             | 05189                     |       | 05089                      |       |
| 100 x 80  | 8             | 05191                     |       | 05091                      |       |
| 120 x 80  | 6             | 05193                     |       | 05093                      |       |
| 25 x 100  | 10            | 05194                     |       | 05094                      |       |
| 40 x 100  | 12            | 05195                     |       | 05095                      |       |
| 60 x 100  | 10            | 05196                     |       | 05096                      |       |
| 80 x 100  | 8             | 05197                     |       | 05097                      |       |
| 100 x 100 | 4             | 05198                     |       | 05098                      |       |
| 150 x 100 | 4             | 05199                     |       | 05099                      |       |

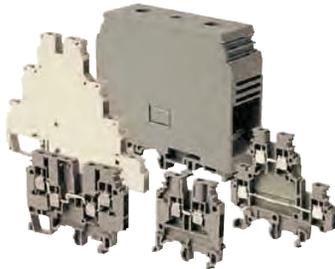
Prices are for 2 metre lengths, and sold in pack quantities

# Terminals



## SNK terminals

|                                    |      |
|------------------------------------|------|
| Feed through terminal blocks ..... | 6/2  |
| Double deck terminals.....         | 6/7  |
| Disconnect terminals .....         | 6/8  |
| Fuse terminals .....               | 6/11 |
| Accessories.....                   | 6/13 |



## Feed through terminals

|                                                |      |
|------------------------------------------------|------|
| Feed through terminal blocks .....             | 6/14 |
| Mini feed through & fuse terminal blocks ..... | 6/23 |
| Double deck terminals.....                     | 6/25 |
| Triple deck terminals .....                    | 6/32 |
| Disconnect terminals .....                     | 6/33 |
| Power terminals.....                           | 6/37 |
| Security terminals.....                        | 6/39 |
| Fuse terminals.....                            | 6/40 |
| Distribution blocks.....                       | 6/43 |
| General accessories .....                      | 6/44 |



## Spring clamp terminals

|                                    |      |
|------------------------------------|------|
| Spring clamp terminal blocks ..... | 6/45 |
|------------------------------------|------|

## ADO terminals

|                     |      |
|---------------------|------|
| ADO terminals ..... | 6/53 |
|---------------------|------|

### 5000 series



Full range of product and technical information place this part number in a search engine and download  
1SNC160001C0207

### SNK series



Full range of product and technical information place this part number in a search engine and download  
1SNC161001C0201

# Terminal blocks

## SNK terminal blocks (Price per 100)

6



### 4.0mm<sup>2</sup> Feed Through Terminal Blocks

|        |                                                                                 | Product Hierarchy<br>300010 |       |
|--------|---------------------------------------------------------------------------------|-----------------------------|-------|
| Type   | Description                                                                     | Order Code                  | Price |
| ZS4    | 4mm <sup>2</sup> feed through terminal (Grey) [pack size = 50]                  | 1SNK505010R0000             |       |
| ZS4-BL | 4mm <sup>2</sup> feed through terminal (Blue) [pack size = 50]                  | 1SNK505020R0000             |       |
| ZS4-PE | 4mm <sup>2</sup> feed through terminal, Earth (Green / Yellow) [pack size = 20] | 1SNK505150R0000             |       |
| ZS4-OR | 4mm <sup>2</sup> feed through terminal (Orange) [pack size = 50]                | 1SNK505030R0000             |       |
| ZS4-YL | 4mm <sup>2</sup> feed through terminal (Yellow) [pack size = 50]                | 1SNK505060R0000             |       |
| ZS4-GN | 4mm <sup>2</sup> feed through terminal (Green) [pack size = 50]                 | 1SNK505061R0000             |       |
| ZS4-RD | 4mm <sup>2</sup> feed through terminal (Red) [pack size = 50]                   | 1SNK505062R0000             |       |
| ZS4-PR | 4mm <sup>2</sup> feed through terminal (Purple) [pack size = 50]                | 1SNK505063R0000             |       |
| ZS4-BR | 4mm <sup>2</sup> feed through terminal (Brown) [pack size = 50]                 | 1SNK505064R0000             |       |
| ZS4-WH | 4mm <sup>2</sup> feed through terminal (White) [pack size = 50]                 | 1SNK505065R0000             |       |
| ZS4-BK | 4mm <sup>2</sup> feed through terminal (Black) [pack size = 50]                 | 1SNK505066R0000             |       |

### Accessories

|        |                                                                                         |                 |  |
|--------|-----------------------------------------------------------------------------------------|-----------------|--|
| ES4    | End Section 4 - 16mm <sup>2</sup> (dark grey) [pack size = 20]                          | 1SNK505910R0000 |  |
| CS     | Circuit Separator, fits into top of terminal (dark grey) [pack size = 20]               | 1SNK900101R0000 |  |
| CS-R1  | Circuit Separator 4 - 35mm <sup>2</sup> (dark grey) [pack size = 20]                    | 1SNK900103R0000 |  |
| TC5    | Test connector (Dark Grey) [pack size = 10]                                             | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10]                                 | 1SNK900201R0000 |  |
| TP2    | Adaptor for 2mm test plugs (Dark Grey) [pack size = 20]                                 | 1SNK900203R0000 |  |
| TP4    | Adaptor for 4mm test plugs (Dark Grey) [pack size = 20]                                 | 1SNK900205R0000 |  |
| SHBS   | Shield connector [pack size = 20]                                                       | 1SNK900600R0000 |  |
| PL5    | Transparent cover (clear) [pack size = 10]                                              | 1SNK900618R0000 |  |
| JB5-2  | Jumper Bar 2 Pole, 5mm Pitch [pack size = 50]                                           | 1SNK905302R0000 |  |
| JB5-3  | Jumper Bar 3 Pole, 5mm Pitch [pack size = 50]                                           | 1SNK905303R0000 |  |
| JB5-4  | Jumper Bar 4 Pole, 5mm Pitch [pack size = 50]                                           | 1SNK905304R0000 |  |
| JB5-5  | Jumper Bar 5 Pole, 5mm Pitch [pack size = 50]                                           | 1SNK905305R0000 |  |
| JB5-10 | Jumper Bar 10 Pole, 5mm Pitch [pack size = 30]                                          | 1SNK905310R0000 |  |
| JB5-50 | Jumper Bar 50 Pole, 5mm Pitch [pack size = 10]                                          | 1SNK905350R0000 |  |
| JB85-3 | Jumper Bar 3 Pole, links 1 x 8mm pitch block with 2 x 5mm pitch blocks [pack size = 10] | 1SNK900603R0000 |  |



Full range of product and technical information place this part number in a search engine and download  
1SNK161001C0201

# Terminal blocks

## SNK terminal blocks (Price per 100)



### 6.0mm<sup>2</sup> Feed Through Terminal Blocks

#### Product Hierarchy 300010

| Type   | Description                                                                      | Order Code      | Price |
|--------|----------------------------------------------------------------------------------|-----------------|-------|
| ZS6    | 6mm <sup>2</sup> feed through terminal (Grey) [pack size = 50]                   | 1SNK506010R0000 |       |
| ZS6-BL | 6mm <sup>2</sup> feed through terminal (Blue) [pack size = 50]                   | 1SNK506020R0000 |       |
| ZS6-PE | 6mm <sup>2</sup> feed through terminal, Ground (Green / Yellow) [pack size = 20] | 1SNK506150R0000 |       |
| ZS6-OR | 6mm <sup>2</sup> feed through terminal (Orange) [pack size = 50]                 | 1SNK506030R0000 |       |
| ZS6-YL | 6mm <sup>2</sup> feed through terminal (Yellow) [pack size = 50]                 | 1SNK506060R0000 |       |
| ZS6-GN | 6mm <sup>2</sup> feed through terminal (Green) [pack size = 50]                  | 1SNK506061R0000 |       |
| ZS6-RD | 6mm <sup>2</sup> feed through terminal (Red) [pack size = 50]                    | 1SNK506062R0000 |       |
| ZS6-PR | 6mm <sup>2</sup> feed through terminal (Purple) [pack size = 50]                 | 1SNK506063R0000 |       |
| ZS6-BR | 6mm <sup>2</sup> feed through terminal (Brown) [pack size = 50]                  | 1SNK506064R0000 |       |
| ZS6-WH | 6mm <sup>2</sup> feed through terminal (White) [pack size = 50]                  | 1SNK506065R0000 |       |
| ZS6-BK | 6mm <sup>2</sup> feed through terminal (Black) [pack size = 50]                  | 1SNK506066R0000 |       |

### Accessories

|        |                                                                           |                 |  |
|--------|---------------------------------------------------------------------------|-----------------|--|
| ES4    | End Section 4 - 16mm <sup>2</sup> (dark grey) [pack size = 20]            | 1SNK505910R0000 |  |
| CS     | Circuit Separator, fits into top of terminal (dark grey) [pack size = 20] | 1SNK900101R0000 |  |
| CS-R1  | Circuit Separator 4 - 35mm <sup>2</sup> (dark grey) [pack size = 20]      | 1SNK900103R0000 |  |
| TC5    | Test connector (Dark Grey) [pack size = 10]                               | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10]                   | 1SNK900201R0000 |  |
| ES-TC6 | Spacer for test connector (Dark Grey) [pack size = 10]                    | 1SNK900105R0000 |  |
| TP2    | Adaptor for 2mm test plugs (Dark Grey) [pack size = 20]                   | 1SNK900203R0000 |  |
| TP4    | Adaptor for 4mm test plugs (Dark Grey) [pack size = 20]                   | 1SNK900205R0000 |  |
| SHBS   | Shield connector [pack size = 20]                                         | 1SNK900600R0000 |  |
| PL6    | Transparent cover (Clear) [pack size = 10]                                | 1SNK900619R0000 |  |
| JB6-2  | Jumper bar, 2 pole, 6mm pitch (Orange) [pack size = 50]                   | 1SNK906302R0000 |  |
| JB6-3  | Jumper bar, 3 pole, 6mm pitch (Orange) [pack size = 50]                   | 1SNK906303R0000 |  |
| JB6-4  | Jumper bar, 4 pole, 6mm pitch (Orange) [pack size = 50]                   | 1SNK906304R0000 |  |
| JB6-5  | Jumper bar, 5 pole, 6mm pitch (Orange) [pack size = 50]                   | 1SNK906305R0000 |  |
| JB6-10 | Jumper bar, 10 pole, 6mm pitch (Orange) [pack size = 20]                  | 1SNK906310R0000 |  |
| JB6-50 | Jumper bar, 50 pole, 6mm pitch (Orange) [pack size = 10]                  | 1SNK906350R0000 |  |



Full range of product and technical information place this part number in a search engine and download

1SNK161001C0201

# Terminal blocks

## SNK terminal blocks (Price per 100)



### 10mm² Feed Through Terminal Blocks

|         |                                                                       | Product Hierarchy<br>300010 |       |
|---------|-----------------------------------------------------------------------|-----------------------------|-------|
| Type    | Description                                                           | Order Code                  | Price |
| ZS10    | 10mm² feed through terminal (Grey) [pack size = 50]                   | 1SNK508010R0000             |       |
| ZS10-BL | 10mm² feed through terminal (Blue) [pack size = 50]                   | 1SNK508020R0000             |       |
| ZS10-PE | 10mm² feed through terminal, Earth, (Green / Yellow) [pack size = 20] | 1SNK508150R0000             |       |
| ZS10-OR | 10mm² feed through terminal (Orange) [pack size = 50]                 | 1SNK508030R0000             |       |
| ZS10-YL | 10mm² feed through terminal (Yellow) [pack size = 50]                 | 1SNK508060R0000             |       |
| ZS10-GN | 10mm² feed through terminal (Green) [pack size = 50]                  | 1SNK508061R0000             |       |
| ZS10-RD | 10mm² feed through terminal (Red) [pack size = 50]                    | 1SNK508062R0000             |       |
| ZS10-PR | 10mm² feed through terminal (Purple) [pack size = 50]                 | 1SNK508063R0000             |       |
| ZS10-BR | 10mm² feed through terminal (Brown) [pack size = 50]                  | 1SNK508064R0000             |       |
| ZS10-WH | 10mm² feed through terminal (White) [pack size = 50]                  | 1SNK508065R0000             |       |
| ZS10-BK | 10mm² feed through terminal (Black) [pack size = 50]                  | 1SNK508066R0000             |       |

### Accessories

|        |                                                                           |                 |  |
|--------|---------------------------------------------------------------------------|-----------------|--|
| ES4    | End Section 4 - 16mm² (dark grey) [pack size = 20]                        | 1SNK505910R0000 |  |
| CS     | Circuit Separator, fits into top of terminal (dark grey) [pack size = 20] | 1SNK900101R0000 |  |
| CS-R1  | Circuit Separator 4 - 35mm² (dark grey) [pack size = 20]                  | 1SNK900103R0000 |  |
| TC5    | Test connector (Dark Grey) [pack size = 10]                               | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10]                   | 1SNK900201R0000 |  |
| ES-TC8 | Spacer for test connector (Dark Grey) [pack size = 10]                    | 1SNK900104R0000 |  |
| TP2    | Adaptor for 2mm test plugs (Dark Grey) [pack size = 20]                   | 1SNK900203R0000 |  |
| TP4    | Adaptor for 4mm test plugs (Dark Grey) [pack size = 20]                   | 1SNK900205R0000 |  |
| SHBS   | Shield connector [pack size = 20]                                         | 1SNK900600R0000 |  |
| PL8    | Transparent cover (Clear) [pack size = 10]                                | 1SNK900620R0000 |  |
| JB8-2  | Jumper bar, 2 pole, 8mm pitch (Orange) [pack size = 50]                   | 1SNK908302R0000 |  |
| JB8-3  | Jumper bar, 3 pole, 8mm pitch (Orange) [pack size = 50]                   | 1SNK908303R0000 |  |
| JB8-4  | Jumper bar, 4 pole, 8mm pitch (Orange) [pack size = 50]                   | 1SNK908304R0000 |  |
| JB8-5  | Jumper bar, 5 pole, 8mm pitch (Orange) [pack size = 40]                   | 1SNK908305R0000 |  |
| JB8-10 | Jumper bar, 10 pole, 8mm pitch (Orange) [pack size = 20]                  | 1SNK908310R0000 |  |



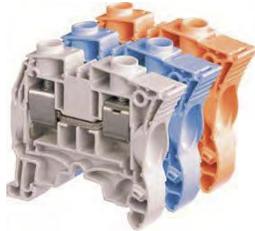
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# Terminal blocks

## SNK terminal blocks (Price per 100)



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### 16mm<sup>2</sup> Feed Through Terminal Blocks

#### Product Hierarchy 300010

| Type    | Description                                                                       | Order Code      | Price |
|---------|-----------------------------------------------------------------------------------|-----------------|-------|
| ZS16    | 16mm <sup>2</sup> feed through terminal (Grey) [pack size = 50]                   | 1SNK510010R0000 |       |
| ZS16-BL | 16mm <sup>2</sup> feed through terminal (Blue) [pack size = 50]                   | 1SNK510020R0000 |       |
| ZS16-PE | 16mm <sup>2</sup> feed through terminal, Earth, (Green / Yellow) [pack size = 20] | 1SNK510150R0000 |       |
| ZS16-OR | 16mm <sup>2</sup> feed through terminal (Orange) [pack size = 50]                 | 1SNK510030R0000 |       |

#### Accessories

|         |                                                                           |                 |  |
|---------|---------------------------------------------------------------------------|-----------------|--|
| ES4     | End Section 4 - 16mm <sup>2</sup> (dark grey) [pack size = 20]            | 1SNK505910R0000 |  |
| CS      | Circuit Separator, fits into top of terminal (dark grey) [pack size = 20] | 1SNK900101R0000 |  |
| CS-R1   | Circuit Separator 4 - 35mm <sup>2</sup> (dark grey) [pack size = 20]      | 1SNK900103R0000 |  |
| TP2     | Adaptor for 2mm test plugs (Dark Grey) [pack size = 20]                   | 1SNK900203R0000 |  |
| TP4     | Adaptor for 4mm test plugs (Dark Grey) [pack size = 20]                   | 1SNK900205R0000 |  |
| PL10    | Transparent cover (Clear) [pack size = 10]                                | 1SNK900621R0000 |  |
| JB10-2  | Jumper bar, 2 pole, 10mm pitch (Orange) [pack size = 50]                  | 1SNK910302R0000 |  |
| JB10-3  | Jumper bar, 3 pole, 10mm pitch (Orange) [pack size = 50]                  | 1SNK910303R0000 |  |
| JB10-4  | Jumper bar, 4 pole, 10mm pitch (Orange) [pack size = 40]                  | 1SNK910304R0000 |  |
| JB10-5  | Jumper bar, 5 pole, 10mm pitch (Orange) [pack size = 30]                  | 1SNK910305R0000 |  |
| JB10-10 | Jumper bar, 10 pole, 10mm pitch (Orange) [pack size = 20]                 | 1SNK910310R0000 |  |

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### 35mm<sup>2</sup> Feed Through Terminal Blocks

#### Product Hierarchy 300010

| Type    | Description                                                                       | Order Code      | Price |
|---------|-----------------------------------------------------------------------------------|-----------------|-------|
| ZS35    | 35mm <sup>2</sup> feed through terminal (Grey) [pack size = 20]                   | 1SNK516010R0000 |       |
| ZS35-BL | 35mm <sup>2</sup> feed through terminal (Blue) [pack size = 20]                   | 1SNK516020R0000 |       |
| ZS35-PE | 35mm <sup>2</sup> feed through terminal, Ground (Green / Yellow) [pack size = 20] | 1SNK516150R0000 |       |
| ZS35-OR | 35mm <sup>2</sup> feed through terminal (Orange) [pack size = 20]                 | 1SNK516030R0000 |       |

#### Accessories

|         |                                                  |                 |  |
|---------|--------------------------------------------------|-----------------|--|
| PL16    | Transparent cover (Clear) [pack size = 10]       | 1SNK900622R0000 |  |
| JB16-2  | Jumper bar, 2 pole, 16mm pitch [pack size = 10]  | 1SNK916302R0000 |  |
| JB16-3  | Jumper bar, 3 pole, 16mm pitch [pack size = 10]  | 1SNK916303R0000 |  |
| JB16-4  | Jumper bar, 4 pole, 16mm pitch [pack size = 10]  | 1SNK916304R0000 |  |
| JB16-5  | Jumper bar, 5 pole, 16mm pitch [pack size = 10]  | 1SNK916305R0000 |  |
| JB16-10 | Jumper bar, 10 pole, 16mm pitch [pack size = 10] | 1SNK916310R0000 |  |

# Terminal blocks

## SNK terminal blocks (Price per 100)



### 70mm² Feed Through Terminal Blocks

|         |                                                                             | Product Hierarchy<br>300010 |       |
|---------|-----------------------------------------------------------------------------|-----------------------------|-------|
| Type    | Description                                                                 | Order Code                  | Price |
| ZS70    | 70mm² feed through terminal block (Grey) [pack size = 10]                   | 1SNK522010R0000             |       |
| ZS70-BL | 70mm² feed through terminal block (Blue) [pack size = 10]                   | 1SNK522020R0000             |       |
| ZS70-PE | 70mm² feed through terminal block, Ground (Green / Yellow) [pack size = 10] | 1SNK522150R0000             |       |

### Accessories

|         |                                                 |                 |  |
|---------|-------------------------------------------------|-----------------|--|
| JB22-2  | Jumper bar, 2 pole, 22mm pitch [pack size = 5]  | 1SNK922302R0000 |  |
| JB22-3  | Jumper bar, 3 pole, 22mm pitch [pack size = 5]  | 1SNK922303R0000 |  |
| JB22-5  | Jumper bar, 5 pole, 22mm pitch [pack size = 5]  | 1SNK922305R0000 |  |
| JB22-10 | Jumper bar, 10 pole, 22mm pitch [pack size = 5] | 1SNK922310R0000 |  |



### 95mm² Feed Through Terminal Blocks

|         |                                                                       | Product Hierarchy<br>300010 |       |
|---------|-----------------------------------------------------------------------|-----------------------------|-------|
| Type    | Description                                                           | Order Code                  | Price |
| ZS95    | 95mm² feed through terminal (Grey) [pack size = 10]                   | 1SNK526010R0000             |       |
| ZS95-BL | 95mm² feed through terminal (Blue) [pack size = 10]                   | 1SNK526020R0000             |       |
| ZS95-PE | 95mm² feed through terminal, Ground (Green / Yellow) [pack size = 10] | 1SNK526150R0000             |       |

### Accessories

|         |                                                 |                 |  |
|---------|-------------------------------------------------|-----------------|--|
| JB26-2  | Jumper bar, 2 pole, 26mm pitch [pack size = 5]  | 1SNK926302R0000 |  |
| JB26-3  | Jumper bar, 3 pole, 26mm pitch [pack size = 5]  | 1SNK926303R0000 |  |
| JB26-5  | Jumper bar, 5 pole, 26mm pitch [pack size = 5]  | 1SNK926305R0000 |  |
| JB26-10 | Jumper bar, 10 pole, 26mm pitch [pack size = 5] | 1SNK926310R0000 |  |



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# Terminal blocks

## SNK terminal blocks (Price per 100)



### 4.0mm<sup>2</sup> Double Deck Terminal Blocks

#### Product Hierarchy 300010

| Type      | Description                                                                 | Order Code      | Price |
|-----------|-----------------------------------------------------------------------------|-----------------|-------|
| ZS4-D2    | 4mm <sup>2</sup> double deck terminal, 2 circuits (Grey) [pack size = 50]   | 1SNK505210R0000 |       |
| ZS4-D1    | 4mm <sup>2</sup> double deck terminal, 1 circuit (Grey) [pack size = 50]    | 1SNK505211R0000 |       |
| ZS4-D2-BL | 4mm <sup>2</sup> double deck terminal, 2 circuits (Blue) [pack size = 50]   | 1SNK505220R0000 |       |
| ZS4-D2-OR | 4mm <sup>2</sup> double deck terminal, 2 circuits (Orange) [pack size = 50] | 1SNK505230R0000 |       |

### Accessories

|        |                                                         |                 |  |
|--------|---------------------------------------------------------|-----------------|--|
| ES4-D2 | End Section for double deck terminals [pack size = 20]  | 1SNK505960R0000 |  |
| TC5    | Test connector (Dark Grey) [pack size = 10]             | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10] | 1SNK900201R0000 |  |
| TP2    | Adaptor for 2mm test plugs (Dark Grey) [pack size = 20] | 1SNK900203R0000 |  |
| TP4    | Adaptor for 4mm test plugs (Dark Grey) [pack size = 20] | 1SNK900205R0000 |  |
| SHB    | Shield connector [pack size = 20]                       | 1SNK900602R0000 |  |
| JB5-2  | Jumper Bar 2 Pole, 5mm Pitch [pack size = 50]           | 1SNK905302R0000 |  |
| JB5-3  | Jumper Bar 3 Pole, 5mm Pitch [pack size = 50]           | 1SNK905303R0000 |  |
| JB5-4  | Jumper Bar 4 Pole, 5mm Pitch [pack size = 50]           | 1SNK905304R0000 |  |
| JB5-5  | Jumper Bar 5 Pole, 5mm Pitch [pack size = 50]           | 1SNK905305R0000 |  |
| JB5-10 | Jumper Bar 10 Pole, 5mm Pitch [pack size = 30]          | 1SNK905310R0000 |  |

### 6.0mm<sup>2</sup> Double Deck Terminal Blocks

#### Product Hierarchy 300010

| Type      | Description                                                                 | Order Code      | Price |
|-----------|-----------------------------------------------------------------------------|-----------------|-------|
| ZS6-D2    | 6mm <sup>2</sup> double deck terminal, 2 circuits (Grey) [pack size = 50]   | 1SNK506210R0000 |       |
| ZS6-D1    | 6mm <sup>2</sup> double deck terminal, 1 circuit (Grey) [pack size = 50]    | 1SNK506211R0000 |       |
| ZS6-D2-BL | 6mm <sup>2</sup> double deck terminal, 2 circuits (Blue) [pack size = 50]   | 1SNK506220R0000 |       |
| ZS6-D2-OR | 6mm <sup>2</sup> double deck terminal, 2 circuits (Orange) [pack size = 50] | 1SNK506230R0000 |       |

### Accessories

|        |                                                          |                 |  |
|--------|----------------------------------------------------------|-----------------|--|
| ES4-D2 | End Section for double deck terminals [pack size = 20]   | 1SNK505960R0000 |  |
| TC5    | Test connector (Dark Grey) [pack size = 10]              | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10]  | 1SNK900201R0000 |  |
| ES-TC6 | Spacer for test connector (Dark Grey) [pack size = 10]   | 1SNK900105R0000 |  |
| TP2    | Adaptor for 2mm test plugs (Dark Grey) [pack size = 20]  | 1SNK900203R0000 |  |
| TP4    | Adaptor for 4mm test plugs (Dark Grey) [pack size = 20]  | 1SNK900205R0000 |  |
| SHB    | Shield connector [pack size = 20]                        | 1SNK900602R0000 |  |
| JB6-2  | Jumper bar, 2 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906302R0000 |  |
| JB6-3  | Jumper bar, 3 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906303R0000 |  |
| JB6-4  | Jumper bar, 4 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906304R0000 |  |
| JB6-5  | Jumper bar, 5 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906305R0000 |  |
| JB6-10 | Jumper bar, 10 pole, 6mm pitch (Orange) [pack size = 20] | 1SNK906310R0000 |  |



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# Terminal blocks

## SNK terminal blocks (Price per 100)



### 4.0mm<sup>2</sup> Disconnect (Blade) Terminal Block (Same profile as ZS4)

|             |                                                                                      | Product Hierarchy<br>300010 |       |
|-------------|--------------------------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                                          | Order Code                  | Price |
| ZS4-S       | 4mm <sup>2</sup> disconnect terminal (Grey) [pack size = 50]                         | 1SNK505310R0000             |       |
| ZS4-S-BL    | 4mm <sup>2</sup> disconnect terminal (Blue) [pack size = 50]                         | 1SNK505320R0000             |       |
| ZS4-S-OR    | 4mm <sup>2</sup> disconnect terminal (Orange) [pack size = 50]                       | 1SNK505330R0000             |       |
| ZS4-S-T2    | 4mm <sup>2</sup> disconnect terminal with 2mm test sockets (Grey) [pack size = 50]   | 1SNK505311R0000             |       |
| ZS4-S-T2-BL | 4mm <sup>2</sup> disconnect terminal with 2mm test sockets (Blue) [pack size = 50]   | 1SNK505321R0000             |       |
| ZS4-S-T2-OR | 4mm <sup>2</sup> disconnect terminal with 2mm test sockets (Orange) [pack size = 50] | 1SNK505331R0000             |       |
| ZS4-S-T2.3  | 4mm <sup>2</sup> disconnect terminal with 2.3mm test sockets (Grey) [pack size = 50] | 1SNK505312R0000             |       |

### Accessories

|       |                                                                      |                 |  |
|-------|----------------------------------------------------------------------|-----------------|--|
| ES4   | End Section 4 - 16mm <sup>2</sup> (dark grey) [pack size = 20]       | 1SNK505910R0000 |  |
| CS-R1 | Circuit Separator 4 - 35mm <sup>2</sup> (dark grey) [pack size = 20] | 1SNK900103R0000 |  |
| SHBS  | Shield connector [pack size = 20]                                    | 1SNK900600R0000 |  |
| PL5   | Transparent cover (clear) [pack size = 10]                           | 1SNK900618R0000 |  |

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### 4.0mm<sup>2</sup> Disconnect (Blade) Terminal Block

|             |                                                                | Product Hierarchy<br>300010 |       |
|-------------|----------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                    | Order Code                  | Price |
| ZS4-S-R1    | 4mm <sup>2</sup> disconnect terminal (Grey) [pack size = 50]   | 1SNK506310R0000             |       |
| ZS4-S-R1-BL | 4mm <sup>2</sup> disconnect terminal (Blue) [pack size = 50]   | 1SNK506320R0000             |       |
| ZS4-S-R1-OR | 4mm <sup>2</sup> disconnect terminal (Orange) [pack size = 50] | 1SNK506330R0000             |       |

### Accessories

|        |                                                          |                 |  |
|--------|----------------------------------------------------------|-----------------|--|
| TC5    | Test connector (Dark Grey) [pack size = 10]              | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10]  | 1SNK900201R0000 |  |
| ES-TC6 | Spacer for test connector (Dark Grey) [pack size = 10]   | 1SNK900105R0000 |  |
| TP2    | Adaptor for 2mm test plugs (Dark Grey) [pack size = 20]  | 1SNK900203R0000 |  |
| TP4    | Adaptor for 4mm test plugs (Dark Grey) [pack size = 20]  | 1SNK900205R0000 |  |
| JB6-2  | Jumper bar, 2 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906302R0000 |  |
| JB6-3  | Jumper bar, 3 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906303R0000 |  |
| JB6-4  | Jumper bar, 4 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906304R0000 |  |
| JB6-5  | Jumper bar, 5 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906305R0000 |  |
| JB6-10 | Jumper bar, 10 pole, 6mm pitch (Orange) [pack size = 50] | 1SNK906310R0000 |  |



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# Terminal blocks

## SNK terminal blocks (Price per 100)



### 4.0mm<sup>2</sup> Disconnect (Blade) Terminal Block

#### Product Hierarchy 300010

| Type           | Description                                                                          | Order Code      | Price |
|----------------|--------------------------------------------------------------------------------------|-----------------|-------|
| ZS4-S-T2-R1    | 4mm <sup>2</sup> disconnect terminal with 2mm test sockets (Grey) [pack size = 50]   | 1SNK506311R0000 |       |
| ZS4-S-T2-R1-BL | 4mm <sup>2</sup> disconnect terminal with 2mm test sockets (Blue) [pack size = 50]   | 1SNK506321R0000 |       |
| ZS4-S-T2-R1-OR | 4mm <sup>2</sup> disconnect terminal with 2mm test sockets (Orange) [pack size = 50] | 1SNK506331R0000 |       |
| ZS4-S-T2.3-R1  | 4mm <sup>2</sup> disconnect terminal with 2.3mm test sockets (Grey) [pack size = 50] | 1SNK506312R0000 |       |

#### Accessories

|        |                                                          |                 |  |
|--------|----------------------------------------------------------|-----------------|--|
| TC5    | Test connector (Dark Grey) [pack size = 10]              | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10]  | 1SNK900201R0000 |  |
| ES-TC6 | Spacer for test connector (Dark Grey) [pack size = 10]   | 1SNK900105R0000 |  |
| JB6-2  | Jumper bar, 2 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906302R0000 |  |
| JB6-3  | Jumper bar, 3 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906303R0000 |  |
| JB6-4  | Jumper bar, 4 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906304R0000 |  |
| JB6-5  | Jumper bar, 5 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906305R0000 |  |
| JB6-10 | Jumper bar, 10 pole, 6mm pitch (Orange) [pack size = 20] | 1SNK906310R0000 |  |

### 4.0mm<sup>2</sup> Disconnect (Blade) Terminal Block

#### Product Hierarchy 300010

| Type      | Description                                                                                               | Order Code      | Price |
|-----------|-----------------------------------------------------------------------------------------------------------|-----------------|-------|
| ZS4-SP    | 4mm <sup>2</sup> disconnect terminal (plug sold separately) (Grey) [pack size = 50]                       | 1SNK505313R0000 |       |
| ZS4-SP-T2 | 4mm <sup>2</sup> disconnect terminal with 2mm test sockets (plug sold separately) (Grey) [pack size = 50] | 1SNK505314R0000 |       |

#### Accessories

|        |                                                                |                 |  |
|--------|----------------------------------------------------------------|-----------------|--|
| ES4    | End Section 4 - 16mm <sup>2</sup> (dark grey) [pack size = 20] | 1SNK505910R0000 |  |
| PG5    | Component plug (Grey) [pack size = 20]                         | 1SNK900401R0000 |  |
| PG5-R1 | Plug with integral linking bar (Orange) [pack size = 25]       | 1SNK900402R0000 |  |
| SHBS   | Shield connector [pack size = 20]                              | 1SNK900600R0000 |  |

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# Terminal blocks

## SNK terminal blocks (Price per 100)



### 4.0mm<sup>2</sup> Disconnect (Pluggable) Terminal Block (Same profile as ZS4)

|              |                                                                                                           | Product Hierarchy<br>300010 |       |
|--------------|-----------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type         | Description                                                                                               | Order Code                  | Price |
| ZS4-SP-R1    | 4mm <sup>2</sup> disconnect terminal (plug sold separately) (Grey) [pack size = 50]                       | 1SNK506313R0000             |       |
| ZS4-SP-T2-R1 | 4mm <sup>2</sup> disconnect terminal with 2mm test sockets (plug sold separately) (Grey) [pack size = 50] | 1SNK506314R0000             |       |

### Accessories

|        |                                                          |                 |  |
|--------|----------------------------------------------------------|-----------------|--|
| PG5    | Component plug (Grey) [pack size = 20]                   | 1SNK900401R0000 |  |
| PG5-R1 | Plug with integral linking bar (Orange) [pack size = 25] | 1SNK900402R0000 |  |
| TC5    | Test connector (Dark Grey) [pack size = 10]              | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10]  | 1SNK900201R0000 |  |
| ES-TC6 | Spacer for test connector (Dark Grey) [pack size = 10]   | 1SNK900105R0000 |  |
| JB6-2  | Jumper bar, 2 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906302R0000 |  |
| JB6-3  | Jumper bar, 3 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906303R0000 |  |
| JB6-4  | Jumper bar, 4 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906304R0000 |  |
| JB6-5  | Jumper bar, 5 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906305R0000 |  |
| JB6-10 | Jumper bar, 10 pole, 6mm pitch (Orange) [pack size = 20] | 1SNK906310R0000 |  |

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### 4.0mm<sup>2</sup> Disconnect (Pluggable) Terminal Block (Same profile as ZS4)

|          |                                                                       | Product Hierarchy<br>300010 |       |
|----------|-----------------------------------------------------------------------|-----------------------------|-------|
| Type     | Description                                                           | Order Code                  | Price |
| ZS4-S-R2 | 4mm <sup>2</sup> disconnect terminal (Grey / Orange) [pack size = 50] | 1SNK506414R0000             |       |

### Accessories

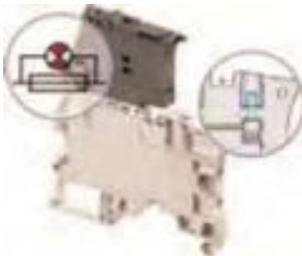
|        |                                                          |                 |  |
|--------|----------------------------------------------------------|-----------------|--|
| TC5    | Test connector (Dark Grey) [pack size = 10]              | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10]  | 1SNK900201R0000 |  |
| ES-TC6 | Spacer for test connector (Dark Grey) [pack size = 10]   | 1SNK900105R0000 |  |
| TP2    | Adaptor for 2mm test plugs (Dark Grey) [pack size = 20]  | 1SNK900203R0000 |  |
| TP4    | Adaptor for 4mm test plugs (Dark Grey) [pack size = 20]  | 1SNK900205R0000 |  |
| JB6-2  | Jumper bar, 2 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906302R0000 |  |
| JB6-3  | Jumper bar, 3 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906303R0000 |  |
| JB6-4  | Jumper bar, 4 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906304R0000 |  |
| JB6-5  | Jumper bar, 5 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906305R0000 |  |
| JB6-10 | Jumper bar, 10 pole, 6mm pitch (Orange) [pack size = 20] | 1SNK906310R0000 |  |



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# Terminal blocks

## SNK terminal blocks (Price per 100)



### 4.0mm<sup>2</sup> Disconnect (Lever) Terminal Block (Same profile as ZS4-SF1)

#### Product Hierarchy 300010

| Type     | Description                                                                                        | Order Code      | Price |
|----------|----------------------------------------------------------------------------------------------------|-----------------|-------|
| ZS4-S-R3 | 4mm <sup>2</sup> disconnect terminal with integral linking bar (Grey / Orange)<br>[pack size = 50] | 1SNK508416R0000 |       |

#### Accessories

|        |                                          |                 |  |
|--------|------------------------------------------|-----------------|--|
| ES4-SF | End Section (Dark Grey) [pack size = 20] | 1SNK508960R0000 |  |
|--------|------------------------------------------|-----------------|--|

### 4.0mm<sup>2</sup> 5x20mm Fuse Terminal

#### Product Hierarchy 300010

| Type      | Description                                                                                                      | Order Code      | Price |
|-----------|------------------------------------------------------------------------------------------------------------------|-----------------|-------|
| ZS4-SF    | 4mm <sup>2</sup> 5x20mm Fuse Terminal (Grey / Dark Grey) [pack size = 50]                                        | 1SNK506410R0000 |       |
| ZS4-SF-R1 | 4mm <sup>2</sup> 5x20mm Fuse Terminal with 24-60V LED blown fuse indicator (Grey / Dark Grey) [pack size = 50]   | 1SNK506412R0000 |       |
| ZS4-SF-R3 | 4mm <sup>2</sup> 5x20mm Fuse Terminal with 115-250V LED blown fuse indicator (Grey / Dark Grey) [pack size = 50] | 1SNK506415R0000 |       |

#### Accessories

|        |                                                         |                 |  |
|--------|---------------------------------------------------------|-----------------|--|
| TC5    | Test connector (Dark Grey) [pack size = 10]             | 1SNK900200R0000 |  |
| TC5-R1 | Test Connector, end module (Dark Grey) [pack size = 10] | 1SNK900201R0000 |  |
| ES-TC6 | Spacer for test connector (Dark Grey) [pack size = 10]  | 1SNK900105R0000 |  |
| TP2    | Adaptor for 2mm test plugs (Dark Grey) [pack size = 20] | 1SNK900203R0000 |  |
| TP4    | Adaptor for 4mm test plugs (Dark Grey) [pack size = 20] | 1SNK900205R0000 |  |

|        |                                                          |                 |  |
|--------|----------------------------------------------------------|-----------------|--|
| JB6-2  | Jumper bar, 2 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906302R0000 |  |
| JB6-3  | Jumper bar, 3 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906303R0000 |  |
| JB6-4  | Jumper bar, 4 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906304R0000 |  |
| JB6-5  | Jumper bar, 5 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906305R0000 |  |
| JB6-10 | Jumper bar, 10 pole, 6mm pitch (Orange) [pack size = 20] | 1SNK906310R0000 |  |



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# Terminal blocks

## SNK terminal blocks (Price per 100)



### 4.0mm<sup>2</sup> 5x20mm Fuse Terminal

|           |                                                                                                                                    | Product Hierarchy<br>300010 |       |
|-----------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type      | Description                                                                                                                        | Order Code                  | Price |
| ZS4-SF-T2 | 4mm <sup>2</sup> 5x20mm Fuse Terminal with 2mm test sockets (Grey / Dark Grey) [pack size = 50]                                    | 1SNK506411R0000             |       |
| ZS4-SF-R2 | 4mm <sup>2</sup> 5x20mm Fuse Terminal with 2mm test sockets, 24-60V LED blown fuse indicator (Grey / Dark Grey) [pack size = 50]   | 1SNK506413R0000             |       |
| ZS4-SF-R4 | 4mm <sup>2</sup> 5x20mm Fuse Terminal with 2mm test sockets, 115-250V LED blown fuse indicator (Grey / Dark Grey) [pack size = 50] | 1SNK506416R0000             |       |

### Accessories

|        |                                                          |                 |  |
|--------|----------------------------------------------------------|-----------------|--|
| TC5    | Test connector (Dark Grey) [pack size = 10]              | 1SNK900200R0000 |  |
| TC5-R1 | Test connector, end module (Dark Grey) [pack size = 10]  | 1SNK900201R0000 |  |
| ES-TC6 | Spacer for test connector (Dark Grey) [pack size = 10]   | 1SNK900105R0000 |  |
| JB6-2  | Jumper bar, 2 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906302R0000 |  |
| JB6-3  | Jumper bar, 3 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906303R0000 |  |
| JB6-4  | Jumper bar, 4 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906304R0000 |  |
| JB6-5  | Jumper bar, 5 pole, 6mm pitch (Orange) [pack size = 50]  | 1SNK906305R0000 |  |
| JB6-10 | Jumper bar, 10 pole, 6mm pitch (Orange) [pack size = 20] | 1SNK906310R0000 |  |

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### 4.0mm<sup>2</sup> 5x20mm Fuse Terminal

|            |                                                                                                                                         | Product Hierarchy<br>300010 |       |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type       | Description                                                                                                                             | Order Code                  | Price |
| ZS4-SF1    | 4mm <sup>2</sup> 5x20mm / 5x25mm Fuse Terminal (Grey / Dark Grey) [pack size = 50]                                                      | 1SNK508410R0000             |       |
| ZS4-SF1-R1 | 4mm <sup>2</sup> 5x20mm / 5x25mm Fuse Terminal, 24-60V blown fuse indicator (Grey / Dark Grey) [pack size = 50]                         | 1SNK508412R0000             |       |
| ZS4-SF1-R3 | 4mm <sup>2</sup> 5x20mm / 5x25mm Fuse Terminal, 115-250V blown fuse indicator (Grey / Dark Grey) [pack size = 50]                       | 1SNK508414R0000             |       |
| ZS4-SF1-T2 | 4mm <sup>2</sup> 5x20mm / 5x25mm Fuse Terminal with 2mm test sockets (Grey / Dark Grey) [pack size = 50]                                | 1SNK508411R0000             |       |
| ZS4-SF1-R2 | 4mm <sup>2</sup> 5x20mm / 5x25mm Fuse Terminal with 2mm test sockets, 24-60V blown fuse indicator (Grey / Dark Grey) [pack size = 50]   | 1SNK508413R0000             |       |
| ZS4-SF1-R4 | 4mm <sup>2</sup> 5x20mm / 5x25mm Fuse Terminal with 2mm test sockets, 115-250V blown fuse indicator (Grey / Dark Grey) [pack size = 50] | 1SNK508415R0000             |       |
| ZS4-R1     | 4mm <sup>2</sup> feed through terminal, (same profile as ZS4-SF1) (Grey) [pack size = 50]                                               | 1SNK508013R0000             |       |

### Accessories

|        |                                          |                 |  |
|--------|------------------------------------------|-----------------|--|
| ES4-SF | End Section (Dark Grey) [pack size = 20] | 1SNK508960R0000 |  |
|--------|------------------------------------------|-----------------|--|



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# Terminal blocks

## SNK terminal blocks (Price per 100)



### General Accessories (End Stops and Protective Covers)

|       |                                                                               | Product Hierarchy<br>300010 |       |
|-------|-------------------------------------------------------------------------------|-----------------------------|-------|
| Type  | Description                                                                   | Order Code                  | Price |
| BAM3  | TS35 rail screw down end stop (Dark Grey) [pack size = 50]                    | 1SNK900001R0000             |       |
| BAZH1 | TS35 rail screw down tall end stop (Dark Grey) [pack size = 20]               | 1SNK900102R0000             |       |
| KCO   | Protective cover mounting kit (2 x BAZH1 + seals) (Dark Grey) [pack size = 1] | 1SNK900624R0000             |       |
| CO    | 77mm x 30mm x 1m protective cover                                             | 1SNK900604R0000             |       |

### General Accessories (End Stops and Protective Covers)

|            |                                                                                  |                 |  |
|------------|----------------------------------------------------------------------------------|-----------------|--|
| LH         | 10mm label holder (fits into end stops) (Dark Grey) [pack size = 50]             | 1SNK900605R0000 |  |
| MCLH       | Card of 36 labels 30x8.8mm for LH label holder (White) [pack size = 25]          | 1SNK900630R0000 |  |
| MCLH-YL    | Card of 36 labels 30x8.8mm for LH label holder (Yellow) [pack size = 25]         | 1SNK900633R0000 |  |
| LH-R1      | 10mm label holder (fits into end stops) (Dark Grey) [pack size = 50]             | 1SNK900607R0000 |  |
| MCLH-R1    | Card of 15 labels 35.35x17.65mm for LH-R1 label holder (White) [pack size = 25]  | 1SNK900631R0000 |  |
| MCLH-R1-YL | Card of 15 labels 35.35x17.65mm for LH-R1 label holder (Yellow) [pack size = 25] | 1SNK900634R0000 |  |
| SAT        | 210 x 148mm self adhesive label sheet (white) [pack size = 5]                    | 1SNK900623R0000 |  |
| SAT5       | Sheet of 240 9 x 5.2mm self adhesive markers (White) [pack size = 5]             | 1SNK900614R0000 |  |
| SAT6       | Sheet of 240 9 x 5.8mm self adhesive markers (White) [pack size = 5]             | 1SNK900615R0000 |  |
| SAT8       | Sheet of 160 9 x 7.8mm self adhesive markers (White) [pack size = 5]             | 1SNK900616R0000 |  |

|         |                                                                                 |                 |  |
|---------|---------------------------------------------------------------------------------|-----------------|--|
| MC512   | MC512 marker card - contains 45 blank 5mm x 12mm tags (white) [pack size = 22]  | 1SNK140000R0000 |  |
| MC512PA | MC512PA marker card - contains 100 blank 5 x 12mm tags (white) [pack size = 20] | 1SNK149999R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [0->9]                                    | 1SNK140091R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [1->10]                                   | 1SNK140011R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [11->20]                                  | 1SNK140021R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [21->30]                                  | 1SNK140031R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [31->40]                                  | 1SNK140041R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [41->50]                                  | 1SNK140051R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [51->60]                                  | 1SNK140061R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [61->70]                                  | 1SNK140071R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [71->80]                                  | 1SNK140081R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [81->90]                                  | 1SNK140083R0000 |  |
| MC512PA | MC512PA marker card - horizontal 10 x [91->100]                                 | 1SNK140101R0000 |  |
| MC512PA | MC512PA marker card - horizontal [1->100]                                       | 1SNK145011R0000 |  |
| MC512PA | MC512PA marker card - horizontal 100 x                                          | 1SNK148041R0000 |  |
| MC512PA | MC512PA marker card - horizontal 20 x [L1 L2 L3 N PE]                           | 1SNK149001R0000 |  |



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# Terminal blocks

## SNK terminal blocks (Price per 100)



| General Accessories (Markers) |                                                                                                                                         | Product Hierarchy<br>300010 |       |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type                          | Description                                                                                                                             | Order Code                  | Price |
| MC612                         | MC612 marker card - contains 39 blank 6mm x 12mm tags (white)<br>[pack size = 22]                                                       | 1SNK150000R0000             |       |
| MC612PA                       | MC612PA marker card - contains 100 blank 6 x 12mm tags (white)<br>[pack size = 20]                                                      | 1SNK159999R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 10 x [1->10]                                                                                           | 1SNK150011R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 10 x [11->20]                                                                                          | 1SNK150021R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 10 x [21->30]                                                                                          | 1SNK150031R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 10 x [31->40]                                                                                          | 1SNK150041R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 10 x [41->50]                                                                                          | 1SNK150051R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 10 x [51->60]                                                                                          | 1SNK150061R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 10 x [61->70]                                                                                          | 1SNK150071R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 10 x [71->80]                                                                                          | 1SNK150081R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 10 x [91->100]                                                                                         | 1SNK150101R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal [1->100]                                                                                               | 1SNK155011R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 100 x                                                                                                  | 1SNK158041R0000             |       |
| MC612PA                       | MC612PA marker card - horizontal 20 x [L1 L2 L3 N PE]  | 1SNK159001R0000             |       |
| MC812                         | MC812 marker card - contains 30 blank 8mm x 12mm tags (white)<br>[pack size = 22]                                                       | 1SNK160000R0000             |       |
| MC812PA                       | MC812PA marker card - contains 100 blank 6 x 12mm tags (white)<br>[pack size = 20]                                                      | 1SNK169999R0000             |       |
| MC812PA                       | MC812PA marker card - horizontal 10 x [1->10]                                                                                           | 1SNK160011R0000             |       |
| MC812PA                       | MC812PA marker card - horizontal 10 x [11->20]                                                                                          | 1SNK160021R0000             |       |
| MC812PA                       | MC812PA marker card - horizontal 10 x [21->30]                                                                                          | 1SNK160031R0000             |       |
| MC812PA                       | MC812PA marker card - horizontal 10 x [31->40]                                                                                          | 1SNK160041R0000             |       |
| MC812PA                       | MC812PA marker card - horizontal 10 x [41->50]                                                                                          | 1SNK160051R0000             |       |
| MC812PA                       | MC812PA marker card - horizontal 10 x [51->60]                                                                                          | 1SNK160061R0000             |       |
| MC812PA                       | MC812PA marker card - horizontal 10 x [61->70]                                                                                          | 1SNK160071R0000             |       |
| MC812PA                       | MC812PA marker card - horizontal 10 x [71->80]                                                                                          | 1SNK160081R0000             |       |
| MC812PA                       | MC812PA marker card - horizontal 10 x [91->100]                                                                                         | 1SNK160101R0000             |       |

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# Terminals & connectors

## Feed through terminal blocks



### Feed Through Terminal Blocks 2.5mm<sup>2</sup>

#### Product Hierarchy 300002

| Type       | Description                                                     | Order Code      | Price |
|------------|-----------------------------------------------------------------|-----------------|-------|
| MA2,5/5    | 2.5mm <sup>2</sup> feed through terminal (Grey)                 | 1SNA115486R0300 |       |
| MA2,5/5.N  | 2.5mm <sup>2</sup> feed through terminal (Blue)                 | 1SNA125486R0500 |       |
| MA2,5/5.P  | 2.5mm <sup>2</sup> feed through terminal, Ground (Green/Yellow) | 1SNA165488R2700 |       |
| MA2,5/5.V0 | 2.5mm <sup>2</sup> feed through terminal (Beige) V0             | 1SNA195486R0400 |       |
| MA2,5/5    | 2.5mm <sup>2</sup> feed through terminal (White)                | 1SNA105052R2100 |       |
| MA2,5/5    | 2.5mm <sup>2</sup> feed through terminal (Yellow)               | 1SNA105486R1200 |       |
| MA2,5/5.1  | 2.5mm <sup>2</sup> feed through terminal with partition (Grey)  | 1SNA115485R0200 |       |

### Accessories

#### Product Hierarchy 300008

| Type     | Description                                                                                           | Order Code      | Price |
|----------|-------------------------------------------------------------------------------------------------------|-----------------|-------|
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey)                                             | 1SNA118368R1600 |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Blue)                                             | 1SNA128368R1000 |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Yellow)                                           | 1SNA103062R2100 |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Green)                                            | 1SNA103125R1500 |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Orange)                                           | 1SNA103126R1600 |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (White)                                            | 1SNA103312R2000 |       |
| FEM6 V0  | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Beige) V0                                         | 1SNA198368R1700 |       |
| FEM61    | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail                          | 1SNA114776R2300 |       |
| FEM6C    | Circuit separator 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover     | 1SNA114777R2400 |       |
| SCMA5    | Circuit separator 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) fits into top of terminal             | 1SNA116728R2500 |       |
| SCF6     | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) for CPM cover                     | 1SNA118707R0300 |       |
| SCF61    | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey)                                   | 1SNA114202R2500 |       |
| SCFM6    | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover | 1SNA114825R0500 |       |
| SCFCV1-2 | Separator end section (Grey) for CPV cover                                                            | 1SNA116795R1100 |       |
| BJMI5    | Jumper bar - 2 pole (IP20)                                                                            | 1SNA176278R1600 |       |
| BJMI5    | Jumper bar - 3 pole (IP20)                                                                            | 1SNA176279R1700 |       |
| BJMI5    | Jumper bar - 4 pole (IP20)                                                                            | 1SNA176280R0500 |       |
| BJMI5    | Jumper bar - 5 pole (IP20)                                                                            | 1SNA176281R2200 |       |
| BJMI5    | Jumper bar - 10 pole (IP20)                                                                           | 1SNA176282R2300 |       |
| EL6      | Connector plate for linking two jumper bars together                                                  | 1SNA173627R2100 |       |
| PC5      | Comb jumper bar - 10 poles                                                                            | 1SNA113544R1200 |       |
| EIP      | Insulating tip for comb jumper bar                                                                    | 1SNA113550R2400 |       |
| CPM      | Protective cover (Clear) 0.5 metres                                                                   | 1SNA187312R1400 |       |
| CPV1-2   | Protective cover (Clear) 1 metre                                                                      | 1SNA176816R1200 |       |
| AL2      | Test socket 2mm dia.                                                                                  | 1SNA163043R2100 |       |



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# Terminals & connectors

## Feed through terminal blocks

### Accessories

|      |                                              | Product Hierarchy<br>300008 |       |
|------|----------------------------------------------|-----------------------------|-------|
| Type | Description                                  | Order Code                  | Price |
| CBM5 | Screen bar 0.5mm thickness                   | 1SNA178745R1400             |       |
| CBM8 | Screen bar 0.8mm thickness                   | 1SNA178746R1500             |       |
| EPU5 | Yellow protection label (strip of 12 labels) | 1SNA107033R1000             |       |



### Feed Through Terminal Blocks 4.0mm<sup>2</sup>

|           |                                                                                           | Product Hierarchy<br>300002 |       |
|-----------|-------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type      | Description                                                                               | Order Code                  | Price |
| M4/6      | 4.0mm <sup>2</sup> feed through terminal (Grey)                                           | 1SNA115116R0700             |       |
| M4/6      | 4.0mm <sup>2</sup> feed through terminal (Blue)                                           | 1SNA125116R0100             |       |
| M4/6.P    | 4.0mm <sup>2</sup> feed through terminal, Ground screws onto dinrail (Green/Yellow)       | 1SNA165113R1600             |       |
| D4/6.P    | 4.0mm <sup>2</sup> feed through terminal, Ground snaps onto dinrail (Green/Yellow)        | 1SNA165809R0100             |       |
| M4/6      | 4.0mm <sup>2</sup> feed through terminal (Green)                                          | 1SNA105001R2700             |       |
| M4/6      | 4.0mm <sup>2</sup> feed through terminal (Orange)                                         | 1SNA105002R2000             |       |
| M4/6      | 4.0mm <sup>2</sup> feed through terminal (Black)                                          | 1SNA105031R1400             |       |
| M4/6      | 4.0mm <sup>2</sup> feed through terminal (Red)                                            | 1SNA105032R1500             |       |
| M4/6      | 4.0mm <sup>2</sup> feed through terminal (White)                                          | 1SNA105051R2000             |       |
| M4/6      | 4.0mm <sup>2</sup> feed through terminal (Yellow)                                         | 1SNA105116R1600             |       |
| M4/6      | 4.0mm <sup>2</sup> feed through terminal (Brown)                                          | 1SNA105209R1400             |       |
| M4/6 V0   | 4.0mm <sup>2</sup> feed through terminal (Beige) V0                                       | 1SNA195116R0000             |       |
| M4/6.1    | 4.0mm <sup>2</sup> feed through terminal with partition (Grey)                            | 1SNA115259R0600             |       |
| M4/6.C    | 4.0mm <sup>2</sup> feed through terminal with partition and 2.5mm dia. test socket (Grey) | 1SNA115208R0400             |       |
| M4/6.3A   | 4.0mm <sup>2</sup> feed through terminal (3 screw clamps) (Grey)                          | 1SNA115468R2000             |       |
| M4/6.3A   | 4.0mm <sup>2</sup> feed through terminal (3 screw clamps) (Blue)                          | 1SNA125468R2200             |       |
| M4/6.3A.P | 4.0mm <sup>2</sup> feed through terminal, (3 screw clamps) Ground (Green/Yellow)          | 1SNA195637R1200             |       |
| M4/6.3A.1 | 4.0mm <sup>2</sup> feed through terminal with partition (3 screw clamps) (Grey)           | 1SNA115483R0000             |       |
| M4/6.4A   | 4.0mm <sup>2</sup> feed through terminal (4 screw clamps) (Grey)                          | 1SNA115479R2300             |       |
| M4/6.4A   | 4.0mm <sup>2</sup> feed through terminal (4 screw clamps) (Blue)                          | 1SNA125479R2500             |       |
| M4/6.4A.P | 4.0mm <sup>2</sup> feed through terminal, (4 screw clamps) Ground (Green/Yellow)          | 1SNA195638R2300             |       |
| MS4/6     | 4.0mm <sup>2</sup> compact feed through terminal (Grey)                                   | 1SNA115265R2400             |       |



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### Accessories

|         |                                                               |                 |  |
|---------|---------------------------------------------------------------|-----------------|--|
| FEM6    | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey)     | 1SNA118368R1600 |  |
| FEM6    | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Blue)     | 1SNA128368R1000 |  |
| FEM6    | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Yellow)   | 1SNA103062R2100 |  |
| FEM6    | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Green)    | 1SNA103125R1500 |  |
| FEM6    | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Orange)   | 1SNA103126R1600 |  |
| FEM6    | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (White)    | 1SNA103312R2000 |  |
| FEM6 V0 | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Beige) V0 | 1SNA198368R1700 |  |
| FEM3A   | End section for M4/6.3A Series (Grey)                         | 1SNA116576R1500 |  |
| FEM3AP  | End section for M4/6.3A.P (Green)                             | 1SNA199876R2600 |  |
| FEM4A   | End section for M4/6.4A (Grey)                                | 1SNA116629R2200 |  |
| FEM4AP  | End section for M4/6.4A.P (Green)                             | 1SNA199879R0100 |  |



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# Terminals & connectors

## Feed through terminal blocks

| Accessories |                                                                                                       | Product Hierarchy<br>300008 |       |
|-------------|-------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                                                           | Order Code                  | Price |
| FEMS6       | Compact end section for MS4/6 (Grey)                                                                  | 1SNA113885R0100             |       |
| FEM6C       | Circuit separator 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover     | 1SNA114777R2400             |       |
| SCMA5       | Circuit separator 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) fits into top of terminal             | 1SNA116728R2500             |       |
| SCF6        | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) for CPM cover                     | 1SNA118707R0300             |       |
| SCF61       | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey)                                   | 1SNA114202R2500             |       |
| SCFM6       | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto Dinrail, for CPM cover | 1SNA114825R0500             |       |
| SCFCV1-2    | Separator end section (Grey) for CPV cover                                                            | 1SNA116795R1100             |       |
| BJMI6       | Jumper bar - 2 pole (IP20)                                                                            | 1SNA176663R0000             |       |
| BJMI6       | Jumper bar - 3 pole (IP20)                                                                            | 1SNA176664R0100             |       |
| BJMI6       | Jumper bar - 4 pole (IP20)                                                                            | 1SNA176665R0200             |       |
| BJMI6       | Jumper bar - 5 pole (IP20)                                                                            | 1SNA176666R0300             |       |
| BJMI6       | Jumper bar - 10 pole (IP20)                                                                           | 1SNA176667R0400             |       |
| EL6         | Connector plate for linking two jumper bars together                                                  | 1SNA173627R2100             |       |
| PC6         | Comb jumper bar - 2 pole for MS4/6 compact terminal                                                   | 1SNA113546R1400             |       |
| PC6         | Comb jumper bar - 10 pole for MS4/6 compact terminal                                                  | 1SNA113548R2600             |       |
| EIP         | Insulating tip for comb jumper bar                                                                    | 1SNA113550R2400             |       |
| CPM         | Protective cover (Clear) 0.5 metres                                                                   | 1SNA187312R1400             |       |
| CPV1-2      | Protective cover (Clear) 1 metre                                                                      | 1SNA176816R1200             |       |
| AL2         | Test socket 2mm dia.                                                                                  | 1SNA163043R2100             |       |
| FC2         | Test plug 2mm diameter                                                                                | 1SNA007865R2600             |       |
| CBM5        | Screen bar 0.5mm thickness                                                                            | 1SNA178745R1400             |       |
| CBM8        | Screen bar 0.8mm thickness                                                                            | 1SNA178746R1500             |       |
| EP6         | Protection label for 4 x 6mm pitch blocks                                                             | 1SNA163427R1700             |       |
| VSP6        | Nylon screw for EP6 label                                                                             | 1SNA163433R1500             |       |
| EPU6        | Yellow protection label (strip of 12 labels)                                                          | 1SNA107038R2500             |       |



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# Terminals & connectors

## Feed through terminal blocks



### Feed Through Terminal Blocks 6.0mm<sup>2</sup>

|         |                                                                                         | Product Hierarchy<br>300002 |       |
|---------|-----------------------------------------------------------------------------------------|-----------------------------|-------|
| Type    | Description                                                                             | Order Code                  | Price |
| M6/8    | 6.0mm <sup>2</sup> feed through terminal (Grey)                                         | 1SNA115118R1100             |       |
| M6/8.N  | 6.0mm <sup>2</sup> feed through terminal (Blue)                                         | 1SNA125118R1300             |       |
| M6/8.P  | 6.0mm <sup>2</sup> feed through terminal, Earth (Green/Yellow)                          | 1SNA165114R1700             |       |
| M6/8    | 6.0mm <sup>2</sup> feed through terminal (Yellow)                                       | 1SNA105118R2000             |       |
| M6/8.V0 | 6.0mm <sup>2</sup> feed through terminal (Beige) V0                                     | 1SNA195118R1200             |       |
| M6/8.1  | 6.0mm <sup>2</sup> feed through terminal with partition (Grey)                          | 1SNA115260R0300             |       |
| M6/8.4  | 6.0mm <sup>2</sup> feed through terminal with partition and 4mm dia. test socket (Grey) | 1SNA115219R2600             |       |

### Accessories

|          |                                                                                                       | Product Hierarchy<br>300008 |       |
|----------|-------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type     | Description                                                                                           | Order Code                  | Price |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey)                                             | 1SNA118368R1600             |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Blue)                                             | 1SNA128368R1000             |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Yellow)                                           | 1SNA103062R2100             |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Green)                                            | 1SNA103125R1500             |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Orange)                                           | 1SNA103126R1600             |       |
| FEM6     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (White)                                            | 1SNA103312R2000             |       |
| FEM6 V0  | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Beige) V0                                         | 1SNA198368R1700             |       |
| FEM6C    | Circuit separator 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover     | 1SNA114777R2400             |       |
| SCMA5    | Circuit separator 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) fits into top of terminal             | 1SNA116728R2500             |       |
| SCF6     | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) for CPM cover                     | 1SNA118707R0300             |       |
| SCF61    | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey)                                   | 1SNA114202R2500             |       |
| SCFM6    | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover | 1SNA114825R0500             |       |
| SCFCV1-2 | Separator end section (Grey) for CPV cover                                                            | 1SNA116795R1100             |       |
| BJMI8    | Jumper bar - 2 pole (IP20)                                                                            | 1SNA116795R1100             |       |
| BJMI8    | Jumper bar - 3 pole (IP20)                                                                            | 1SNA176670R1300             |       |
| BJMI8    | Jumper bar - 4 pole (IP20)                                                                            | 1SNA176671R0000             |       |
| BJMI8    | Jumper bar - 5 pole (IP20)                                                                            | 1SNA176672R0100             |       |
| BJMI8    | Jumper bar - 10 pole (IP20)                                                                           | 1SNA176673R0200             |       |
| EL6      | Connector plate for linking two jumper bars together                                                  | 1SNA173627R2100             |       |
| PC8      | Comb jumper bar - 10 pole                                                                             | 1SNA163313R2400             |       |
| CPM      | Protective cover (Clear) 0.5 metres                                                                   | 1SNA187312R1400             |       |
| CPV1-2   | Protective cover (Clear) 1 metre                                                                      | 1SNA176816R1200             |       |
| AL2      | Test socket 2mm dia.                                                                                  | 1SNA163043R2100             |       |
| AL4      | Test socket 4mm dia.                                                                                  | 1SNA163262R0100             |       |

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# Terminals & connectors

## Feed through terminal blocks

| Accessories |                                              | Product Hierarchy<br>300008 |       |
|-------------|----------------------------------------------|-----------------------------|-------|
| Type        | Description                                  | Order Code                  | Price |
| FC2         | Test plug 2mm diameter                       | 1SNA007865R2600             |       |
| CBM5        | Screen bar 0.5mm thickness                   | 1SNA178745R1400             |       |
| CBM8        | Screen bar 0.8mm thickness                   | 1SNA178746R1500             |       |
| EP6         | Protection label for 3 x 8mm pitch blocks    | 1SNA163427R1700             |       |
| EP8         | Protection label for 4 x 8mm pitch blocks    | 1SNA163428R2000             |       |
| VSP6        | Nylon screw for EP6 / EP8 Label              | 1SNA163433R1500             |       |
| EPU6        | Yellow protection label (strip of 12 labels) | 1SNA107038R2500             |       |

| Feed Through Terminal Blocks 10.0mm <sup>2</sup> |                                                                  | Product Hierarchy<br>300002 |       |
|--------------------------------------------------|------------------------------------------------------------------|-----------------------------|-------|
| Type                                             | Description                                                      | Order Code                  | Price |
| M10/10                                           | 10.0mm <sup>2</sup> feed through terminal (Grey)                 | 1SNA115120R1700             |       |
| M10/10.N                                         | 10.0mm <sup>2</sup> feed through terminal (Blue)                 | 1SNA125120R1100             |       |
| M10/10.P                                         | 10.0mm <sup>2</sup> feed through terminal, Ground (Green/Yellow) | 1SNA165115R1000             |       |
| M10/10                                           | 10.0mm <sup>2</sup> feed through terminal (Yellow)               | 1SNA105120R2600             |       |
| M10/10.V0                                        | 10.0mm <sup>2</sup> feed through terminal (Beige) V0             | 1SNA195120R1000             |       |
| M10/10.V0                                        | 10.0mm <sup>2</sup> feed through terminal (Blue) V0              | 1SNA199004R2000             |       |
| M10/10                                           | 10.0mm <sup>2</sup> feed through terminal (Black)                | 1SNA400188R0300             |       |
| M10/10                                           | 10.0mm <sup>2</sup> feed through terminal (Red)                  | 1SNA400189R0400             |       |
| M10/10.1                                         | 10.0mm <sup>2</sup> feed through terminal with partition (Grey)  | 1SNA115261R2000             |       |

| Accessories |                                                                                                       | Product Hierarchy<br>300008 |       |
|-------------|-------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                                                           | Order Code                  | Price |
| FEM6        | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey)                                             | 1SNA118368R1600             |       |
| FEM6        | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Blue)                                             | 1SNA128368R1000             |       |
| FEM6        | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Yellow)                                           | 1SNA103062R2100             |       |
| FEM6        | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Green)                                            | 1SNA103125R1500             |       |
| FEM6        | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Orange)                                           | 1SNA103126R1600             |       |
| FEM6        | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (White)                                            | 1SNA103312R2000             |       |
| FEM6 V0     | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Beige) V0                                         | 1SNA198368R1700             |       |
| FEM6C       | Circuit separator 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover     | 1SNA114777R2400             |       |
| SCMA5       | Circuit separator 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) fits into top of terminal             | 1SNA116728R2500             |       |
| SCF6        | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) for CPM cover                     | 1SNA118707R0300             |       |
| SCF61       | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey)                                   | 1SNA114202R2500             |       |
| SCFM6       | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover | 1SNA114825R0500             |       |
| SCFCV1-2    | Separator end section (Grey) for CPV cover                                                            | 1SNA116795R1100             |       |
| CPM         | Protective cover (Clear) 0.5 metres                                                                   | 1SNA187312R1400             |       |
| CPV1-2      | Protective cover (Clear) 1 metre                                                                      | 1SNA176816R1200             |       |



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# Terminals & connectors

## Feed through terminal blocks

| Accessories |                                              | Product Hierarchy<br>300008 |       |
|-------------|----------------------------------------------|-----------------------------|-------|
| Type        | Description                                  | Order Code                  | Price |
| AL2         | Test socket 2mm diameter                     | 1SNA163043R2100             |       |
| AL4         | Test socket 4mm diameter                     | 1SNA163262R0100             |       |
| FC2         | Test plug 2mm diameter                       | 1SNA007865R2600             |       |
| BJMI10      | Jumper bar - 2 pole (IP20)                   | 1SNA176675R0400             |       |
| BJMI10      | Jumper bar - 3 pole (IP20)                   | 1SNA176676R0500             |       |
| BJMI10      | Jumper bar - 4 pole (IP20)                   | 1SNA176677R0600             |       |
| BJMI10      | Jumper bar - 5 pole (IP20)                   | 1SNA176678R1700             |       |
| BJMI10      | Jumper bar - 10 pole (IP20)                  | 1SNA176679R1000             |       |
| PC10        | Comb jumper bar - 10 pole                    | 1SNA163315R2600             |       |
| EP8         | Protection label for 3 x 10mm blocks         | 1SNA163428R2000             |       |
| VSP6        | Nylon screw for EP8 label                    | 1SNA163433R1500             |       |
| EPU6        | Yellow protection label (strip of 12 labels) | 1SNA107038R2500             |       |

| Feed Through Terminal Blocks 16.0mm <sup>2</sup> |                                                                  | Product Hierarchy<br>300002 |       |
|--------------------------------------------------|------------------------------------------------------------------|-----------------------------|-------|
| Type                                             | Description                                                      | Order Code                  | Price |
| M16/12                                           | 16.0mm <sup>2</sup> feed through terminal (Grey)                 | 1SNA115129R1400             |       |
| M16/12.N                                         | 16.0mm <sup>2</sup> feed through terminal (Blue)                 | 1SNA125129R1600             |       |
| M16/12.P                                         | 16.0mm <sup>2</sup> feed through terminal, Ground (Green/Yellow) | 1SNA165130R2300             |       |
| M16/12.V0                                        | 16.0mm <sup>2</sup> feed through terminal (Beige) V0             | 1SNA195129R1500             |       |

| Accessories |                                                              | Product Hierarchy<br>300008 |       |
|-------------|--------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                  | Order Code                  | Price |
| FEM12       | End section 16mm <sup>2</sup> (Grey)                         | 1SNA118618R0100             |       |
| FEM12       | End section 16mm <sup>2</sup> (Blue)                         | 1SNA128618R0300             |       |
| FEM12       | End section 16mm <sup>2</sup> (Yellow)                       | 1SNA103065R2400             |       |
| FEM12 V0    | End section 16mm <sup>2</sup> (Beige) V0                     | 1SNA198618R0200             |       |
| SCF12       | Separator end section 16mm <sup>2</sup> (grey) for CPM cover | 1SNA113102R1000             |       |
| SCF12V0     | Separator end section 16mm <sup>2</sup> (beige) V0           | 1SNA193102R1100             |       |
| SCFCV1-2    | Separator end section (Grey) for CPV cover                   | 1SNA116795R1100             |       |
| CPM         | Protective cover (Clear) 0.5 metres                          | 1SNA187312R1400             |       |
| CPV1-2      | Protective cover (Clear) 1 metre                             | 1SNA176816R1200             |       |

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# Terminals & connectors

## Feed through terminal blocks

| Feed Through Terminal Blocks 16.0mm <sup>2</sup> |                                                                  | Product Hierarchy 300002 |       |
|--------------------------------------------------|------------------------------------------------------------------|--------------------------|-------|
| Type                                             | Description                                                      | Order Code               | Price |
| M16/12                                           | 16.0mm <sup>2</sup> feed through terminal (Grey)                 | 1SNA115129R1400          |       |
| M16/12.N                                         | 16.0mm <sup>2</sup> feed through terminal (Blue)                 | 1SNA125129R1600          |       |
| M16/12.P                                         | 16.0mm <sup>2</sup> feed through terminal, Ground (Green/Yellow) | 1SNA165130R2300          |       |
| M16/12.V0                                        | 16.0mm <sup>2</sup> feed through terminal (Beige) V0             | 1SNA195129R1500          |       |

| Accessories |                                                              | Product Hierarchy 300008 |  |
|-------------|--------------------------------------------------------------|--------------------------|--|
| Type        | Description                                                  | Order Code               |  |
| FEM12       | End section 16mm <sup>2</sup> (Grey)                         | 1SNA118618R0100          |  |
| FEM12       | End section 16mm <sup>2</sup> (Blue)                         | 1SNA128618R0300          |  |
| FEM12       | End section 16mm <sup>2</sup> (Yellow)                       | 1SNA103065R2400          |  |
| FEM12 V0    | End section 16mm <sup>2</sup> (Beige) V0                     | 1SNA198618R0200          |  |
| SCF12       | Separator end section 16mm <sup>2</sup> (grey) for CPM cover | 1SNA113102R1000          |  |
| SCF12V0     | Separator end section 16mm <sup>2</sup> (beige) V0           | 1SNA193102R1100          |  |
| SCFCV1-2    | Separator end section (Grey) for CPV cover                   | 1SNA116795R1100          |  |
| CPM         | Protective cover (Clear) 0.5 metres                          | 1SNA187312R1400          |  |
| CPV1-2      | Protective cover (Clear) 1 metre                             | 1SNA176816R1200          |  |

| Accessories |                                              | Product Hierarchy 300008 |  |
|-------------|----------------------------------------------|--------------------------|--|
| Type        | Description                                  | Order Code               |  |
| AL2         | Test socket 2mm diameter                     | 1SNA163043R2100          |  |
| AL4         | Test socket 4mm diameter                     | 1SNA163262R0100          |  |
| FC2         | Test plug 2mm diameter                       | 1SNA007865R2600          |  |
| BJMI12      | Jumper bar - 2 pole (IP20)                   | 1SNA179626R0600          |  |
| BJMI12      | Jumper bar - 3 pole (IP20)                   | 1SNA179628R1000          |  |
| BJMI12      | Jumper bar - 4 pole (IP20)                   | 1SNA179629R1100          |  |
| BJMI12      | Jumper bar - 5 pole (IP20)                   | 1SNA179630R1600          |  |
| BJMI12      | Jumper bar - 10 pole (IP20)                  | 1SNA179631R0300          |  |
| EPU6        | Yellow protection label (strip of 12 labels) | 1SNA107038R2500          |  |

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# Terminals & connectors

## Feed through terminal blocks

| Feed Through Terminal Blocks 35.0mm <sup>2</sup> |                                                                  | Product Hierarchy<br>300002 |       |
|--------------------------------------------------|------------------------------------------------------------------|-----------------------------|-------|
| Type                                             | Description                                                      | Order Code                  | Price |
| M35/16                                           | 35.0mm <sup>2</sup> feed through terminal (Grey)                 | 1SNA115124R0700             |       |
| M35/16.V0                                        | 35.0mm <sup>2</sup> feed through terminal (Beige) V0             | 1SNA195124R0000             |       |
| M35/16.N                                         | 35.0mm <sup>2</sup> feed through terminal (Blue)                 | 1SNA125124R0100             |       |
| M35/16.P                                         | 35.0mm <sup>2</sup> feed through terminal, Ground (Green/Yellow) | 1SNA165111R1400             |       |

| Accessories - feed through terminals are enclosed no end section required |                                            | Product Hierarchy<br>300008 |  |
|---------------------------------------------------------------------------|--------------------------------------------|-----------------------------|--|
| Type                                                                      | Description                                | Order Code                  |  |
| SCFT1                                                                     | Separator end section (grey)               | 1SNA103588R2600             |  |
| SCFCV1-2                                                                  | Separator end section (Grey) for CPV cover | 1SNA116795R1100             |  |
| CPV1-2                                                                    | Protective cover (Clear) 1 metre           | 1SNA176816R1200             |  |
| AL4                                                                       | Test socket 4mm diameter                   | 1SNA163262R0100             |  |
| FC2                                                                       | Test plug 2mm diameter                     | 1SNA007865R2600             |  |

|        |                             |                 |  |
|--------|-----------------------------|-----------------|--|
| BJMI16 | Jumper bar - 2 pole (IP20)  | 1SNA206217R0000 |  |
| BJMI16 | Jumper bar - 3 pole (IP20)  | 1SNA206218R1100 |  |
| BJMI16 | Jumper bar - 4 pole (IP20)  | 1SNA206219R1200 |  |
| BJMI16 | Jumper bar - 5 pole (IP20)  | 1SNA206220R1700 |  |
| BJMI16 | Jumper bar - 10 pole (IP20) | 1SNA206221R0400 |  |

| Feed Through Terminal Blocks 70.0mm <sup>2</sup> |                                                                         | Product Hierarchy<br>300002 |  |
|--------------------------------------------------|-------------------------------------------------------------------------|-----------------------------|--|
| Type                                             | Description                                                             | Order Code                  |  |
| M70/22                                           | 70.0mm <sup>2</sup> feed through terminal (Grey)                        | 1SNA115216R1300             |  |
| M70/22.N                                         | 70.0mm <sup>2</sup> feed through terminal (Blue)                        | 1SNA125216R1500             |  |
| M70/22.V0                                        | 70.0mm <sup>2</sup> feed through terminal (Beige) V0                    | 1SNA195216R1400             |  |
| M70/22.P                                         | 70.0mm <sup>2</sup> feed through terminal, Ground (Green/Yellow) closed | 1SNA399024R2300             |  |

| Accessories - feed through terminals are enclosed no end section required |                                          | Product Hierarchy<br>300008 |  |
|---------------------------------------------------------------------------|------------------------------------------|-----------------------------|--|
| Type                                                                      | Description                              | Order Code                  |  |
| FEM22                                                                     | End section 70mm <sup>2</sup> (Grey)     | 1SNA113065R1500             |  |
| FEM22                                                                     | End section 70mm <sup>2</sup> (Blue)     | 1SNA123065R1700             |  |
| FEM22                                                                     | End section 70mm <sup>2</sup> (Yellow)   | 1SNA103881R1400             |  |
| FEM22 V0                                                                  | End section 70mm <sup>2</sup> (Beige) V0 | 1SNA193065R1600             |  |

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# Terminal blocks

## Mini feed through & fuse terminal blocks



### 1.5mm² Mini Feed Through Terminal Blocks

|           |                                                         | Product Hierarchy<br>300002 |       |
|-----------|---------------------------------------------------------|-----------------------------|-------|
| Type      | Description                                             | Order Code                  | Price |
| DR1,5/5.1 | 1.5mm² mini feed through terminal with partition (grey) | 1SNA112086R0200             |       |

### Accessories

|       |                                      | Product Hierarchy<br>300008 |       |
|-------|--------------------------------------|-----------------------------|-------|
| Type  | Description                          | Order Code                  | Price |
| FEDR5 | End Section for 1.5mm² mini terminal | 1SNA117318R2300             |       |
| BJS5  | Unassembled jumper bar - 20 pole     | 1SNA177652R0600             |       |
| EVD5  | Post and screw for BJS5 jumper       | 1SNA167900R0200             |       |
| FC2   | Test Plug 2mm² diameter              | 1SNA007865R2600             |       |



### 4.00mm² Mini Feed Through Terminal Blocks

|           |                                                             | Product Hierarchy<br>300002 |       |
|-----------|-------------------------------------------------------------|-----------------------------|-------|
| Type      | Description                                                 | Order Code                  | Price |
| DR4/6     | 4.0mm² feed through terminal (Grey)                         | 1SNA110251R0500             |       |
| DR4/6.1   | 4.0mm² feed through terminal with partition (Grey)          | 1SNA110491R1700             |       |
| DR4/6.1.N | 4.0mm² feed through terminal with partition (Blue)          | 1SNA120491R1100             |       |
| DR4/6.P   | 4.0mm² feed through terminal block, Ground (Green / Yellow) | 1SNA160496R2600             |       |

### Accessories

|        |                                                            | Product Hierarchy<br>300002 |       |
|--------|------------------------------------------------------------|-----------------------------|-------|
| Type   | Description                                                | Order Code                  | Price |
| FEDR61 | End section for DR4/6 & DR4/6.1 terminal (Grey)            | 1SNA117600R0300             | 1.52  |
| FEDR61 | End section for DR4/6 & DR4/6.1 terminal (Blue)            | 1SNA127600R0500             | POA   |
| FEDR63 | End section for DR4/6.P terminal (Yellow)                  | 1SNA103975R2100             | 3.47  |
| SCDR61 | Separator end section for DR4/6 & DR4/6.1 terminals (Grey) | 1SNA173016R1000             | POA   |
| BJM62  | Jumper bar - 2 pole for DR4/6 terminal                     | 1SNA173217R2600             | POA   |
| BJM62  | Jumper bar - 4 pole for DR4/6 terminal                     | 1SNA173219R0000             | POA   |
| BJM62  | Jumper bar - 10 pole for DR4/6 terminal                    | 1SNA173226R2700             | 17.72 |

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# Terminal blocks

## Mini feed through & fuse terminal blocks

| 4.00mm <sup>2</sup> Mini Fuse Terminal Blocks |                                                       | Product Hierarchy<br>300002 |       |
|-----------------------------------------------|-------------------------------------------------------|-----------------------------|-------|
| Type                                          | Description                                           | Order Code                  | Price |
| DR4/8.SF                                      | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Grey) | 1SNA110368R1200             |       |

| Accessories |                                               | Product Hierarchy<br>300008 |       |
|-------------|-----------------------------------------------|-----------------------------|-------|
| Type        | Description                                   | Order Code                  | Price |
| FEM8S       | End section for DR4/8.SF fuse terminal (Grey) | 1SNA116951R1500             |       |

|      |                           |                 |  |
|------|---------------------------|-----------------|--|
| PC81 | Comb jumper bar - 10 pole | 1SNA173523R1100 |  |
|------|---------------------------|-----------------|--|

|      |                                                                |                 |  |
|------|----------------------------------------------------------------|-----------------|--|
| TGA8 | Assembly rod, 2 pole, to link flip top fuse terminals DR4/8.SF | 1SNA168672R1100 |  |
|------|----------------------------------------------------------------|-----------------|--|

|     |                                                                       |                 |  |
|-----|-----------------------------------------------------------------------|-----------------|--|
| ANT | Assembly ring locks TGA8 in place on flip top fuse terminals DR4/8.SF | 1SNA168675R1400 |  |
|-----|-----------------------------------------------------------------------|-----------------|--|

|       |                         |                 |  |
|-------|-------------------------|-----------------|--|
| FU520 | 5 x 20mm 250V 0.5A fuse | 1SNA008288R1500 |  |
|-------|-------------------------|-----------------|--|

|       |                       |                 |  |
|-------|-----------------------|-----------------|--|
| FU520 | 5 x 20mm 250V 1A fuse | 1SNA008290R1300 |  |
|-------|-----------------------|-----------------|--|

|       |                       |                 |  |
|-------|-----------------------|-----------------|--|
| FU520 | 5 x 20mm 250V 2A fuse | 1SNA008291R0000 |  |
|-------|-----------------------|-----------------|--|

|       |                          |                 |  |
|-------|--------------------------|-----------------|--|
| FU520 | 5 x 20mm 250V 3.15A fuse | 1SNA008289R1600 |  |
|-------|--------------------------|-----------------|--|

|       |                       |                 |  |
|-------|-----------------------|-----------------|--|
| FU520 | 5 x 20mm 250V 5A fuse | 1SNA008292R0100 |  |
|-------|-----------------------|-----------------|--|

|       |                         |                 |  |
|-------|-------------------------|-----------------|--|
| FU525 | 5 x 25mm 250V 2.5A fuse | 1SNA167548R0400 |  |
|-------|-------------------------|-----------------|--|

|       |                       |                 |  |
|-------|-----------------------|-----------------|--|
| FU525 | 5 x 25mm 250V 4A fuse | 1SNA167549R0500 |  |
|-------|-----------------------|-----------------|--|

|     |                      |                 |  |
|-----|----------------------|-----------------|--|
| CN5 | 5 x 25mm neutral bar | 1SNA179371R1600 |  |
|-----|----------------------|-----------------|--|

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# Terminal blocks

## Double deck feed through terminals



### 2.5mm<sup>2</sup> Double Deck Terminal Block

#### Product Hierarchy 300002

| Type          | Description                                                                                               | Order Code      | Price |
|---------------|-----------------------------------------------------------------------------------------------------------|-----------------|-------|
| MA2,5/5.D2    | 2.5mm <sup>2</sup> feed through terminal (Grey)                                                           | 1SNA115490R1300 |       |
| MA2,5/5.D2.N  | 2.5mm <sup>2</sup> feed through terminal (Blue)                                                           | 1SNA125490R1500 |       |
| MA2,5/5.D2.V0 | 2.5mm <sup>2</sup> feed through terminal (Beige) V0                                                       | 1SNA195490R1400 |       |
| MA2,5/5.D1.1  | 2.5mm <sup>2</sup> feed through terminal with vertical interconnection and partition on lower deck (Grey) | 1SNA115530R1200 |       |
| MA2,5/5.D2.1  | 2.5mm <sup>2</sup> feed through terminal with partition on upper and lower deck (Grey)                    | 1SNA115491R0000 |       |

### Accessories

#### Product Hierarchy 300008

| Type     | Description                                                                | Order Code      | Price |
|----------|----------------------------------------------------------------------------|-----------------|-------|
| FEM6D    | End section 2.5mm <sup>2</sup> - 4.0mm <sup>2</sup> double deck (Grey)     | 1SNA118499R2300 |       |
| FEM6D    | End section 2.5mm <sup>2</sup> - 4.0mm <sup>2</sup> double deck (Blue)     | 1SNA128499R2500 |       |
| FEM6D V0 | End section 2.5mm <sup>2</sup> - 4.0mm <sup>2</sup> double deck (Beige) V0 | 1SNA198499R2400 |       |
| SCMA5D   | Circuit separator (fits on top of terminal) (Grey)                         | 1SNA116720R2100 |       |
| BJMI5D   | Jumper bar - 2 pole (IP20)                                                 | 1SNA176736R2100 |       |
| BJMI5D   | Jumper bar - 3 pole (IP20)                                                 | 1SNA176737R2200 |       |
| BJMI5D   | Jumper bar - 4 pole (IP20)                                                 | 1SNA176738R0300 |       |
| BJMI5D   | Jumper bar - 5 pole (IP20)                                                 | 1SNA176739R0400 |       |
| BJMI5D   | Jumper bar - 10 pole (IP20)                                                | 1SNA176740R1100 |       |
| PC5      | Comb jumper bar - 10 poles                                                 | 1SNA113544R1200 |       |
| EIP      | Insulating tip for comb jumper bar                                         | 1SNA113550R2400 |       |
| ITV5     | Vertical interconnection to convert from 2 circuit to 1 circuit terminal   | 1SNA176259R1300 |       |

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# Terminal blocks

## Double deck feed through terminals



### 4.00mm<sup>2</sup> Double Deck Terminal Block

|             |                                                                                                          | Product Hierarchy<br>300002 |       |
|-------------|----------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                                                              | Order Code                  | Price |
| M4/6.D2     | 4.0mm double deck feed through terminal (Grey)                                                           | 1SNA115271R2200             |       |
| M4/6.D1     | 4.0mm double deck feed through terminal with vertical interconnection and partition on lower deck (Grey) | 1SNA115166R1100             |       |
| M4/6.D2.N   | 4.0mm double deck feed through terminal (Blue)                                                           | 1SNA125271R2400             |       |
| M4/6.D2.V0  | 4.0mm double deck feed through terminal (Beige) V0                                                       | 1SNA195271R2300             |       |
| M4/6.D2.1   | 4.0mm double deck feed through terminal with partition (Grey)                                            | 1SNA115126R0100             |       |
| M4/6.D2.1.N | 4.0mm double deck feed through terminal with partition (Blue)                                            | 1SNA125126R0300             |       |

### Accessories

|          |                                                                          | Product Hierarchy<br>300008 |  |
|----------|--------------------------------------------------------------------------|-----------------------------|--|
| Type     | Description                                                              | Order Code                  |  |
| FEM6D    | End section 2.5mm - 4.0mm double deck (Grey)                             | 1SNA118499R2300             |  |
| FEM6D    | End section 2.5mm - 4.0mm double deck (Blue)                             | 1SNA128499R2500             |  |
| FEM6D V0 | End section 2.5mm - 4.0mm double deck (Beige) V0                         | 1SNA198499R2400             |  |
| BJMI6D   | Jumper bar - 2 pole (IP20)                                               | 1SNA179668R2000             |  |
| BJMI6D   | Jumper bar - 3 pole (IP20)                                               | 1SNA179669R2100             |  |
| BJMI6D   | Jumper bar - 4 pole (IP20)                                               | 1SNA179670R2600             |  |
| BJMI6D   | Jumper bar - 5 pole (IP20)                                               | 1SNA179671R1300             |  |
| BJMI6D   | Jumper bar - 10 pole (IP20)                                              | 1SNA179672R1400             |  |
| EL6      | Connector plate for linking two jumper bars together                     | 1SNA173627R2100             |  |
| PC61     | Comb jumper bar - 10 pole                                                | 1SNA163311R2200             |  |
| ITV6     | Vertical interconnection to convert from 2 circuit to 1 circuit terminal | 1SNA168962R0400             |  |

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# Terminal blocks

## Double deck terminals



### 6.00mm<sup>2</sup> Double Deck Terminal Block

#### Product Hierarchy 300002

| Type    | Description                                                                                              | Order Code      | Price |
|---------|----------------------------------------------------------------------------------------------------------|-----------------|-------|
| M4/6.D2 | 6.0mm double deck feed through terminal (Grey)                                                           | 1SNA115501R1200 |       |
| M6/8.D1 | 6.0mm double deck feed through terminal with vertical interconnection and partition on lower deck (Grey) | 1SNA115498R1700 |       |

### Accessories

#### Product Hierarchy 300008

| Type   | Description                                        | Order Code      | Price |
|--------|----------------------------------------------------|-----------------|-------|
| FEM8D1 | End Section 6.0mm double deck, 1mm thick (Grey)    | 1SNA116656R2500 |       |
| FEM8D2 | End Section 6.0mm double deck, 4mm thick (Grey)    | 1SNA116657R2600 |       |
| SCM6   | Circuit separator (fits on top of terminal) (Grey) | 1SNA113003R1000 |       |
| SCF6D  | Separator end section (grey)                       | 1SNA118495R1700 |       |

|     |                          |                 |  |
|-----|--------------------------|-----------------|--|
| AL2 | Test socket 2mm diameter | 1SNA163043R2100 |  |
| AL4 | Test socket 4mm diameter | 1SNA163262R0100 |  |
| FC2 | Test plug 2mm diameter   | 1SNA007865R2600 |  |

|       |                             |                 |  |
|-------|-----------------------------|-----------------|--|
| BJM18 | Jumper bar - 2 pole (IP20)  | 1SNA176669R1600 |  |
| BJM18 | Jumper bar - 3 pole (IP20)  | 1SNA176670R1300 |  |
| BJM18 | Jumper bar - 4 pole (IP20)  | 1SNA176671R0000 |  |
| BJM18 | Jumper bar - 5 pole (IP20)  | 1SNA176672R0100 |  |
| BJM18 | Jumper bar - 10 pole (IP20) | 1SNA176673R0200 |  |



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# Terminal blocks

## Double deck terminals



### 4.00mm<sup>2</sup> Double Deck Blade Disconnect Terminal Block

|              |                                                                                                      | Product Hierarchy<br>300002 |       |
|--------------|------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type         | Description                                                                                          | Order Code                  | Price |
| M4/6.D2.SNBT | 4.0mm <sup>2</sup> double deck terminal with blade disconnect on upper deck (grey body / grey blade) | 1SNA115561R1500             |       |

### Accessories

|        |                                                      | Product Hierarchy<br>300008 |       |
|--------|------------------------------------------------------|-----------------------------|-------|
| Type   | Description                                          | Order Code                  | Price |
| FEMS6D | End section for M4/6.D2.SNBT                         | 1SNA116591R0500             |       |
| FC2    | Test plug 2mm diameter                               | 1SNA007865R2600             |       |
| BJMI6D | Jumper bar - 2 pole (IP20)                           | 1SNA179668R2000             |       |
| BJMI6D | Jumper bar - 3 pole (IP20)                           | 1SNA179669R2100             |       |
| BJMI6D | Jumper bar - 4 pole (IP20)                           | 1SNA179670R2600             |       |
| BJMI6D | Jumper bar - 5 pole (IP20)                           | 1SNA179671R1300             |       |
| BJMI6D | Jumper bar - 10 pole (IP20)                          | 1SNA179672R1400             |       |
| EL6    | Connector plate for linking two jumper bars together | 1SNA173627R2100             |       |

### 4.00mm<sup>2</sup> Double Deck Lever Disconnect Terminal Block

|             |                                                                                                                        | Product Hierarchy<br>300002 |       |
|-------------|------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                                                                            | Order Code                  | Price |
| M4/6.D2.2S2 | 4.0mm <sup>2</sup> double deck terminal with lever disconnect on both decks (grey body / 1 grey lever & 1 black lever) | 1SNA199444R2500             |       |

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# Terminal blocks

## Double deck terminals



### 4.00mm² Double Deck Component Holder Terminal Block

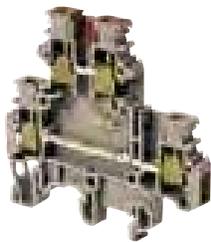
#### Product Hierarchy 300002

| Type     | Description                                                                        | Order Code      | Price |
|----------|------------------------------------------------------------------------------------|-----------------|-------|
| M4/6.DE1 | 4.0mm² double deck component holder terminal (lower circuit only) (Grey)           | 1SNA115177R1400 |       |
| M4/6.DE2 | 4.0mm² double deck component holder terminal (upper circuit only) (Grey)           | 1SNA115326R1100 |       |
| M4/6.DE  | 4.0mm² double deck component holder terminal (both upper and lower circuit) (Grey) | 1SNA115185R0500 |       |

### Accessories

#### Product Hierarchy 300008

| Type   | Description                                          | Order Code      | Price |
|--------|------------------------------------------------------|-----------------|-------|
| FEM6D  | End Section 2.5mm - 4.0mm double deck (Grey)         | 1SNA118499R2300 |       |
| BJMI6D | Jumper bar - 2 pole (IP20)                           | 1SNA179668R2000 |       |
| BJMI6D | Jumper bar - 3 pole (IP20)                           | 1SNA179669R2100 |       |
| BJMI6D | Jumper bar - 4 pole (IP20)                           | 1SNA179670R2600 |       |
| BJMI6D | Jumper bar - 5 pole (IP20)                           | 1SNA179671R1300 |       |
| BJMI6D | Jumper bar - 10 pole (IP20)                          | 1SNA179672R1400 |       |
| EL6    | Connector plate for linking two jumper bars together | 1SNA173627R2100 |       |



### 4.00mm² Double Deck Diode Terminal Block

#### Product Hierarchy 300002

| Type       | Description                                                                   | Order Code      | Price |
|------------|-------------------------------------------------------------------------------|-----------------|-------|
| M4/6.DE2.D | 4.0mm² double deck diode terminal with two negative outputs (Grey)            | 1SNA115327R1200 |       |
| M4/6.DE1.D | 4.0mm² double deck diode terminal with one negative output (Grey)             | 1SNA115371R2600 |       |
| M4/6.DD    | 4.0mm² double deck diode terminal with cathode connected to lower deck (Grey) | 1SNA115168R2300 |       |
| M4/6.DD1   | 4.0mm² double deck diode terminal with cathode connected to upper deck (Grey) | 1SNA115184R0400 |       |

### Accessories

#### Product Hierarchy 300008

| Type   | Description                                          | Order Code      | Price |
|--------|------------------------------------------------------|-----------------|-------|
| FEM6D  | End Section 2.5mm - 4.0mm double deck (Grey)         | 1SNA118499R2300 |       |
| BJMI6D | Jumper bar - 2 pole (IP20)                           | 1SNA179668R2000 |       |
| BJMI6D | Jumper bar - 3 pole (IP20)                           | 1SNA179669R2100 |       |
| BJMI6D | Jumper bar - 4 pole (IP20)                           | 1SNA179670R2600 |       |
| BJMI6D | Jumper bar - 5 pole (IP20)                           | 1SNA179671R1300 |       |
| BJMI6D | Jumper bar - 10 pole (IP20)                          | 1SNA179672R1400 |       |
| EL6    | Connector plate for linking two jumper bars together | 1SNA173627R2100 |       |



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# Terminal blocks

## Double deck terminals

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| 4.00mm <sup>2</sup> Double Deck Indicator Terminal Block |                                                                               | Product Hierarchy<br>300002 |       |
|----------------------------------------------------------|-------------------------------------------------------------------------------|-----------------------------|-------|
| Type                                                     | Description                                                                   | Order Code                  | Price |
| M4/6.DN                                                  | 4.0mm <sup>2</sup> double deck terminal with 110VAC / 127VDC neon lamp (Grey) | 1SNA115182R0200             |       |

| Accessories |                                              | Product Hierarchy<br>300008 |       |
|-------------|----------------------------------------------|-----------------------------|-------|
| Type        | Description                                  | Order Code                  | Price |
| FEM6D       | End Section 2.5mm - 4.0mm double deck (Grey) | 1SNA118499R2300             |       |

|        |                                                      |                 |  |
|--------|------------------------------------------------------|-----------------|--|
| BJMI6D | Jumper bar - 2 pole (IP20)                           | 1SNA179668R2000 |  |
| BJMI6D | Jumper bar - 3 pole (IP20)                           | 1SNA179669R2100 |  |
| BJMI6D | Jumper bar - 4 pole (IP20)                           | 1SNA179670R2600 |  |
| BJMI6D | Jumper bar - 5 pole (IP20)                           | 1SNA179671R1300 |  |
| BJMI6D | Jumper bar - 10 pole (IP20)                          | 1SNA179672R1400 |  |
| EL6    | Connector plate for linking two jumper bars together | 1SNA173627R2100 |  |

| 4.00mm <sup>2</sup> Double Deck Fuse Terminal Block |                                                                                                                   | Product Hierarchy<br>300002 |       |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type                                                | Description                                                                                                       | Order Code                  | Price |
| M4/8.D2.SFL                                         | 4.0mm <sup>2</sup> double deck terminal 5 x 20 / 5 x 25mm flip top fuse holder and 110-230V neon lamp (Grey)      | 1SNA115466R2200             |       |
| M4/8.D2.SFD                                         | 4.0mm <sup>2</sup> double deck terminal 5 x 20 / 5 x 25mm flip top fuse holder and 24V LED (Grey)                 | 1SNA115647R2300             |       |
| M4/8.SFJ                                            | 4.0mm <sup>2</sup> double deck terminal 5 x 20 / 5 x 25mm flip top fuse holder with internal jumper option (Grey) | 1SNA115692R1100             |       |

| Accessories |                                                          | Product Hierarchy<br>300008 |       |
|-------------|----------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                              | Order Code                  | Price |
| FEM8D2S     | End section for double deck fuse holder terminals (Grey) | 1SNA116913R0700             |       |

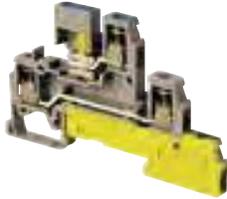
|       |                             |                 |  |
|-------|-----------------------------|-----------------|--|
| BJMI8 | Jumper bar - 2 pole (IP20)  | 1SNA176669R1600 |  |
| BJMI8 | Jumper bar - 3 pole (IP20)  | 1SNA176670R1300 |  |
| BJMI8 | Jumper bar - 4 pole (IP20)  | 1SNA176671R0000 |  |
| BJMI8 | Jumper bar - 5 pole (IP20)  | 1SNA176672R0100 |  |
| BJMI8 | Jumper bar - 10 pole (IP20) | 1SNA176673R0200 |  |



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# Terminal blocks

## Double deck terminals



### 4.00mm<sup>2</sup> Double Deck + Protection Terminal Block

**Product Hierarchy  
300002**

| Type      | Description                                                                                                             | Order Code      | Price |
|-----------|-------------------------------------------------------------------------------------------------------------------------|-----------------|-------|
| D4/6.NTLP | 4.0mm <sup>2</sup> neutral disconnect, live feed through and ground connection terminal block (Grey / Green / Yellow)   | 1SNA110439R2200 |       |
| D4/6.NLP  | 4.0mm <sup>2</sup> neutral feed through, live feed through and ground connection terminal block (Grey / Green / Yellow) | 1SNA110440R0700 |       |

### Accessories

**Product Hierarchy 300008**

| Type | Description                    | Order Code      | Price |
|------|--------------------------------|-----------------|-------|
| FED6 | End section for D4/6.NL blocks | 1SNA116964R1200 |       |



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# Terminal blocks

## Triple deck terminals



### 4.00mm<sup>2</sup> Triple Deck Fuse Terminal Block

|           |                                                                                                            | Product Hierarchy<br>300002 |       |
|-----------|------------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type      | Description                                                                                                | Order Code                  | Price |
| D4/6.T1   | 4.0mm <sup>2</sup> triple deck feed through terminal with vertical interconnection (Black) V0 closed block | 1SNA199219R0300             |       |
| D4/6.T3   | 4.0mm <sup>2</sup> triple deck feed through terminal (Grey) V0 closed block                                | 1SNA299683R0100             |       |
| D4/6.T3.P | 4.0mm <sup>2</sup> triple deck feed through terminal with 1 earth connection (Grey) V0 closed block        | 1SNA299684R0200             |       |
| D4/6.PT1  | 4.0mm <sup>2</sup> triple deck terminal with 7 earth connection (Green /Yellow) V0 closed block            | 1SNA199220R0000             |       |

### Accessories

|       |                                                                       | Product Hierarchy<br>300008 |       |
|-------|-----------------------------------------------------------------------|-----------------------------|-------|
| Type  | Description                                                           | Order Code                  | Price |
| BJM62 | Jumper bar - 2 pole fits D4/6.T3 & D4/6.T3P                           | 1SNA173217R2600             |       |
| BJM62 | Jumper bar - 4 pole fits D4/6.T3 & D4/6.T3P                           | 1SNA173219R0000             |       |
| BJM62 | Jumper bar - 10 pole fits D4/6.T3 & D4/6.T3P                          | 1SNA173226R2700             |       |
| PC61  | Comb jumper bar - 10 pole fits all 6mm spacing triple decks terminals | 1SNA163311R2200             |       |

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### 2.5mm<sup>2</sup> Triple Deck Sensor Terminal Block

|             |                                                                                                                | Product Hierarchy<br>300002 |       |
|-------------|----------------------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                                                                    | Order Code                  | Price |
| D2.5/6.DA   | 2.5mm <sup>2</sup> triple deck feed through terminal (Grey)                                                    | 1SNA115541R1100             |       |
| D2.5/6.DAL  | 2.5mm <sup>2</sup> triple deck feed through terminal with 24VDC red LED between upper and middle deck (Grey)   | 1SNA115535R0300             |       |
| D2.5/6.DAL2 | 2.5mm <sup>2</sup> triple deck feed through terminal with 24VDC green LED between lower and middle deck (Grey) | 1SNA115547R1700             |       |
| D2.5/6.D    | 2.5mm <sup>2</sup> triple deck sensor terminal (Grey)                                                          | 1SNA115542R1200             |       |
| D2.5/6.DL   | 2.5mm <sup>2</sup> triple deck sensor terminal with 24VDC red LED between upper and middle deck (Grey)         | 1SNA115537R0500             |       |

### Accessories

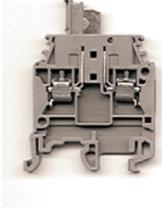
|       |                                                     | Product Hierarchy<br>300008 |       |
|-------|-----------------------------------------------------|-----------------------------|-------|
| Type  | Description                                         | Order Code                  | Price |
| FED3E | End section for triple deck sensor terminals (Grey) | 1SNA116771R2000             |       |



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# Terminal blocks

## Disconnect terminals



### 2.5mm<sup>2</sup> Disconnect (Switch) Terminal Block

#### Product Hierarchy 300002

| Type          | Description                                                                                             | Order Code      | Price |
|---------------|---------------------------------------------------------------------------------------------------------|-----------------|-------|
| MA2.5/5.SNB   | 2.5mm <sup>2</sup> disconnect terminal (Grey body, short grey blade)                                    | 1SNA115504R1500 |       |
| MA2.5/5.SNBTA | 2.5mm <sup>2</sup> disconnect terminal (Grey body, short grey blade) with 2 test sockets 2.3mm diameter | 1SNA115505R1600 |       |
| MA2.5/5.SNB   | 2.5mm <sup>2</sup> disconnect terminal (Grey body, short orange blade)                                  | 1SNA115699R2000 |       |

### Accessories

#### Product Hierarchy 300008

| Type  | Description                                                                                           | Order Code      | Price |
|-------|-------------------------------------------------------------------------------------------------------|-----------------|-------|
| FEM6  | End Section 2.5mm <sup>2</sup> disconnect terminal (Grey)                                             | 1SNA118368R1600 |       |
| SCF6  | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) for CPM cover                     | 1SNA118707R0300 |       |
| SCFM6 | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover | 1SNA114825R0500 |       |
| PC5   | Comb jumper bar - 10 poles                                                                            | 1SNA113544R1200 |       |
| CBM5  | Screen bar 0.5mm thickness                                                                            | 1SNA178745R1400 |       |
| CBM8  | Screen bar 0.8mm thickness                                                                            | 1SNA178746R1500 |       |

### 4.0mm<sup>2</sup> Disconnect (Switch) Terminal Block

#### Product Hierarchy 300002

| Type      | Description                                                                                                 | Order Code      | Price |
|-----------|-------------------------------------------------------------------------------------------------------------|-----------------|-------|
| M4/6.SNB  | 4.0mm <sup>2</sup> disconnect terminal (Orange body, short orange blade)                                    | 1SNA105053R2200 |       |
| M4/6.SNBT | 4.0mm <sup>2</sup> disconnect terminal (Orange body, short orange blade) with 2 test sockets 2.3mm diameter | 1SNA105054R2300 |       |
| M4/6.SNB  | 4.0mm <sup>2</sup> disconnect terminal (Grey body, short orange blade)                                      | 1SNA115986R0000 |       |
| M4/6.SNBT | 4.0mm <sup>2</sup> disconnect terminal (Grey body, short orange blade) with 2 test sockets 2.3mm diameter   | 1SNA115987R0100 |       |
| M4/6.SNB  | 4.0mm <sup>2</sup> disconnect terminal (Blue body, short orange blade)                                      | 1SNA125686R1500 |       |
| M4/6.SNB  | 4.0mm <sup>2</sup> disconnect terminal (Grey body, long grey blade)                                         | 1SNA115686R1300 |       |

### Accessories

#### Product Hierarchy 300008

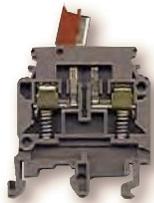
| Type  | Description                                                                                           | Order Code      | Price |
|-------|-------------------------------------------------------------------------------------------------------|-----------------|-------|
| FEM62 | End Section 4.0mm <sup>2</sup> disconnect terminal (Grey)                                             | 1SNA114994R0700 |       |
| FEM62 | End Section 4.0mm <sup>2</sup> disconnect terminal (Orange)                                           | 1SNA103612R2500 |       |
| SCFM6 | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover | 1SNA114825R0500 |       |
| CBM5  | Screen bar 0.5mm thickness                                                                            | 1SNA178745R1400 |       |
| CBM8  | Screen bar 0.8mm thickness                                                                            | 1SNA178746R1500 |       |



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# Terminal blocks

## Disconnect terminals



### 2.5mm<sup>2</sup> Disconnect (Switch) Terminal Block

**Product Hierarchy  
300002**

| Type      | Description                                                                                                             | Order Code      | Price |
|-----------|-------------------------------------------------------------------------------------------------------------------------|-----------------|-------|
| M4/6.SNTS | 4.0mm <sup>2</sup> disconnect safety terminal (Beige body, short orange blade) with 2 test sockets 2mm <sup>2</sup> dia | 1SNA195229R2100 |       |

### Accessories

**Product Hierarchy  
300008**

| Type  | Description                                                                                           | Order Code      |  |
|-------|-------------------------------------------------------------------------------------------------------|-----------------|--|
| FEM6  | End section for M4/6.SNTS disconnect terminal (grey)                                                  | 1SNA118368R1600 |  |
| SCF6  | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) for CPM cover                     | 1SNA118707R0300 |  |
| SCFM6 | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover | 1SNA114825R0500 |  |
| CBM5  | Screen bar 0.5mm thickness                                                                            | 1SNA178745R1400 |  |
| CBM8  | Screen bar 0.8mm thickness                                                                            | 1SNA178746R1500 |  |



### 4.0mm<sup>2</sup> Disconnect (Pluggable) Terminal Block

**Product Hierarchy  
300002**

| Type       | Description                                                                                                | Order Code      |  |
|------------|------------------------------------------------------------------------------------------------------------|-----------------|--|
| M4/6.SNBTA | 4.0mm <sup>2</sup> disconnect terminal with plug (grey body, grey plug) with 2 test sockets 2.3mm diameter | 1SNA115496R0500 |  |

### Accessories

**Product Hierarchy 300008**

| Type  | Description                                                                                           | Order Code      |  |
|-------|-------------------------------------------------------------------------------------------------------|-----------------|--|
| FEM62 | End section 4.0mm <sup>2</sup> disconnect (pluggable) terminals (Grey)                                | 1SNA114994R0700 |  |
| SCFM6 | Separator end section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Grey) snaps onto dinrail, for CPM cover | 1SNA114825R0500 |  |
| CBM5  | Screen bar 0.5mm thickness                                                                            | 1SNA178745R1400 |  |
| CBM8  | Screen bar 0.8mm thickness                                                                            | 1SNA178746R1500 |  |

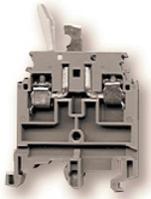
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# Terminal blocks

## Disconnect terminals



### 6.0mm<sup>2</sup> Disconnect (Switch) Terminal Block

**Product Hierarchy  
300002**

| Type     | Description                                                               | Order Code      | Price |
|----------|---------------------------------------------------------------------------|-----------------|-------|
| M6/8.SNB | 6.0mm <sup>2</sup> disconnect terminal (grey body, long grey blade)       | 1SNA115688R2500 |       |
| M6/8.STP | 6.0mm <sup>2</sup> push turn disconnect terminal (Grey body, yellow knob) | 1SNA115277R2000 |       |

### Accessories

**Product Hierarchy  
300008**

| Type  | Description                                                            | Order Code      | Price |
|-------|------------------------------------------------------------------------|-----------------|-------|
| FEM8  | End Section 6.0mm <sup>2</sup> for M6/8.SNB disconnect terminal (grey) | 1SNA113373R2600 |       |
| FEMT1 | End Section 6.0mm <sup>2</sup> for M6/8.STP disconnect terminal (grey) | 1SNA113137R0200 |       |

|     |                             |                 |  |
|-----|-----------------------------|-----------------|--|
| PC8 | Comb type jumper bar 10 way | 1SNA163313R2400 |  |
|-----|-----------------------------|-----------------|--|



### 6.0mm<sup>2</sup> Interruptible Neutral Terminal Block

**Product Hierarchy  
300002**

| Type    | Description                                                                            | Order Code      | Price |
|---------|----------------------------------------------------------------------------------------|-----------------|-------|
| M6/8.NT | 6.0mm <sup>2</sup> Neutral terminal with sliding link disconnect. Same profile as M6/8 | 1SNA125119R1400 |       |

### Accessories

**Product Hierarchy  
300008**

| Type | Description                                                | Order Code      | Price |
|------|------------------------------------------------------------|-----------------|-------|
| FEM6 | End section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Blue)  | 1SNA128368R1000 |       |
| B03  | 10mm <sup>2</sup> x 3mm <sup>2</sup> copper busbar 1 metre | 1SNA164406R2400 |       |
| VRB3 | Busbar lock                                                | 1SNA128035R1600 |       |



### 10mm<sup>2</sup> Interruptible Neutral Terminal Block

**Product Hierarchy 300002**

| Type      | Description                                                                          | Order Code      | Price |
|-----------|--------------------------------------------------------------------------------------|-----------------|-------|
| M10/10.NT | 10mm <sup>2</sup> Neutral Block with sliding link disconnect. Same profile as M10/10 | 1SNA125121R0600 |       |

### Accessories

**Product Hierarchy  
300008**

| Type | Description                                                | Order Code      | Price |
|------|------------------------------------------------------------|-----------------|-------|
| FEM6 | End Section 2.5mm <sup>2</sup> - 10mm <sup>2</sup> (Blue)  | 1SNA128368R1000 |       |
| B03  | 10mm <sup>2</sup> x 3mm <sup>2</sup> copper busbar 1 metre | 1SNA164406R2400 |       |
| VRB3 | Busbar lock                                                | 1SNA128035R1600 |       |



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# Terminal blocks

## Disconnect terminals



### 6.0mm<sup>2</sup> Sliding Link Disconnect Terminal Block

#### Product Hierarchy 300002

| Type             | Description                                                                                            | Order Code      | Price |
|------------------|--------------------------------------------------------------------------------------------------------|-----------------|-------|
| M6/8.ST1         | 6.0mm <sup>2</sup> sliding link disconnect terminal block                                              | 1SNA115236R1700 |       |
| M6/8.ST4         | 6.0mm <sup>2</sup> sliding link disconnect terminal block for jumper bars on right side (grey)         | 1SNA115240R0700 |       |
| M6/8.ST5         | 6.0mm <sup>2</sup> sliding link disconnect terminal block for jumper bars on left side (grey)          | 1SNA115241R2400 |       |
| M6/8.ST6         | 6.0mm <sup>2</sup> sliding link disconnect terminal block for jumper bars left and right sides (grey)  | 1SNA115242R2500 |       |
| M6/8.ST7         | 6.0mm <sup>2</sup> feed through terminal (same profile as sliding link disconnect blocks) (grey)       | 1SNA115243R2600 |       |
| M6/8.ST7.V0      | 6.0mm <sup>2</sup> feed through terminal (same profile as sliding link disconnect blocks) (beige)      | 1SNA195243R2700 |       |
| M6/8.ST1.V2.IP20 | 6.0mm <sup>2</sup> sliding link disconnect terminal block with 2 x 4mm IP20 test sockets (grey)        | 1SNA115971R1000 |       |
| M6/8.ST1.V0.IP20 | 6.0mm <sup>2</sup> sliding link disconnect terminal block with 2 x 4mm IP20 test sockets (beige)       | 1SNA195639R2400 |       |
| D6/8.ST1.RS      | 6.0mm <sup>2</sup> sliding link disconnect safety terminal block with 2 x 4mm IP20 test sockets (grey) | 1SNA115831R0400 |       |

### Accessories

#### Product Hierarchy 300008

| Type     | Description                                                           | Order Code      | Price |
|----------|-----------------------------------------------------------------------|-----------------|-------|
| FEMT2    | End Section for M6/8.ST series of disconnect blocks (grey)            | 1SNA113629R2700 |       |
| FEMT2.V0 | End Section for M6/8.ST1.V2.IP20 disconnect block (beige)             | 1SNA193629R2000 |       |
| FEM8T6   | End section for D6/8.ST1.RS disconnect terminal (Grey)                | 1SNA215266R0100 |       |
| SCFT2    | Separator End Section for M6/8.ST series of disconnect blocks (grey)  | 1SNA114522R0500 |       |
| SCFT2.V0 | Separator End Section for M6/8.ST series of disconnect blocks (beige) | 1SNA194522R0600 |       |
| AL4      | 4mm test socket                                                       | 1SNA163313R2400 |       |
| PC8      | Comb jumper bar - 10 pole                                             | 1SNA163313R2400 |       |
| PCS4     | Sliding switch bridge - 4 pole                                        | 1SNA199870R0400 |       |
| PCS2     | Sliding switch bridge - 2 pole                                        | 1SNA199871R2100 |       |

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# Terminal blocks

## Power terminals



### Single Stud Terminals

|           |                     | Product Hierarchy<br>300002 |       |
|-----------|---------------------|-----------------------------|-------|
| Type      | Description         | Order Code                  | Price |
| M35/26.F  | 1 x M6 studs (Grey) | 1SNA115141R1000             |       |
| M70/31.F  | 1 x M8 studs (Grey) | 1SNA115144R1300             |       |
| M120/35.F | 1 x M8 studs (Grey) | 1SNA115147R1600             |       |

### Double Stud Terminals

|            |                       |                 |  |
|------------|-----------------------|-----------------|--|
| D35/27.FF  | 2xM6 studs (Grey) V0  | 1SNA190001R2000 |  |
| D70/32.FF  | 2xM8 studs (Grey) V0  | 1SNA190002R2100 |  |
| D120/42.FF | 2xM10 studs (Grey) V0 | 1SNA190003R2200 |  |
| D185/55.FF | 2xM12 studs (Grey) V0 | 1SNA190004R2300 |  |
| D300/55.FF | 2xM16 studs (Grey) V0 | 1SNA190005R2400 |  |

|            |                      |                 |  |
|------------|----------------------|-----------------|--|
| M35/26.FF  | 2 x M6 studs (Grey)  | 1SNA115140R2300 |  |
| M70/31.FF  | 2 x M8 studs (Grey)  | 1SNA115143R1200 |  |
| M120/35.FF | 2 x M8 studs (Grey)  | 1SNA115146R1500 |  |
| M300/42.FF | 2 x M10 studs (Grey) | 1SNA115149R2000 |  |

### Accessories

|         |                                                              | Product Hierarchy<br>300008 |       |
|---------|--------------------------------------------------------------|-----------------------------|-------|
| Type    | Description                                                  | Order Code                  | Price |
| CPUF35  | Covers for D35/27.FF (2 required per terminal)               | 1SNA190016R1600             |       |
| CPUF70  | Covers for D70/32.FF (2 required per terminal)               | 1SNA190017R1700             |       |
| CPUF120 | Covers for D120/42.FF (2 required per terminal)              | 1SNA190018R2000             |       |
| CPUF185 | Covers for D185/55.FF & D300/55.FF (2 required per terminal) | 1SNA190019R2100             |       |

|        |                                              |                 |  |
|--------|----------------------------------------------|-----------------|--|
| BJS27  | Jumper bar 2 way for D35/27.FF               | 1SNA205772R1300 |  |
| BJS27  | Jumper bar 3 way for D35/27.FF               | 1SNA205773R1400 |  |
| BJS32  | Jumper bar 2 way for D70/32.FF               | 1SNA205774R1500 |  |
| BJS32  | Jumper bar 3 way for D70/32.FF               | 1SNA205775R1600 |  |
| BJS42  | Jumper bar 2 way for D120/42.FF              | 1SNA205776R1700 |  |
| BJS42  | Jumper bar 3 way for D120/42.FF              | 1SNA205777R1000 |  |
| BJS551 | Jumper bar 2 way for D185/55.FF & D300/55.FF | 1SNA205778R2100 |  |
| BJS551 | Jumper bar 3 way for D185/55.FF & D300/55.FF | 1SNA205779R2200 |  |

|       |                                                |                 |  |
|-------|------------------------------------------------|-----------------|--|
| ECP26 | Partition for M35/26.F & .FF terminals (Grey)  | 1SNA113689R2400 |  |
| ECP31 | Partition for M70/31.F & .FF terminals (Grey)  | 1SNA113690R2100 |  |
| ECP35 | Partition for M120/35.F & .FF terminals (Grey) | 1SNA113691R1600 |  |
| ECP42 | Partition for M300/42.FF terminals (Grey)      | 1SNA113692R1700 |  |

|        |                                                                               |                 |  |
|--------|-------------------------------------------------------------------------------|-----------------|--|
| CPP261 | Cover for 1 x M35/36.F or .FF terminal (2 ECP26 partitions required) (Clear)  | 1SNA168202R1300 |  |
| CPP262 | Cover for 2 x M35/36.F or .FF terminals (2 ECP26 partitions required) (Clear) | 1SNA168201R1200 |  |
| CPP263 | Cover for 3 x M35/36.F or .FF terminals (2 ECP26 partitions required) (Clear) | 1SNA163403R2000 |  |
| CPP311 | Cover for 1 x M70/32.F or .FF terminal (2 ECP31 partitions required) (Clear)  | 1SNA168204R1500 |  |
| CPP312 | Cover for 2 x M70/32.F or .FF terminals (2 ECP31 partitions required) (Clear) | 1SNA168203R1400 |  |



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# Terminal blocks

## Power terminals

| Accessories |                                                                                | Product Hierarchy<br>300002 |       |
|-------------|--------------------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                                    | Order Code                  | Price |
| CPP313      | Cover for 3 x M70/32.F or .FF terminals (2 ECP31 partitions required) (Clear)  | 1SNA163409R0600             |       |
| CPP351      | Cover for 1 x M120/32.F or .FF terminal (2 ECP35 partitions required) (Clear)  | 1SNA168206R1700             |       |
| CPP352      | Cover for 2 x M120/32.F or .FF terminals (2 ECP35 partitions required) (Clear) | 1SNA168205R1600             |       |
| CPP353      | Cover for 3 x M120/32.F or .FF terminals (2 ECP35 partitions required) (Clear) | 1SNA163418R2600             |       |
| CPP422      | Cover for 2 x M300/42.FF terminals (2 ECP42 partitions required) (Clear)       | 1SNA168207R1000             |       |
| CPP423      | Cover for 3 x M300/42.FF terminals (2 ECP42 partitions required) (Clear)       | 1SNA163424R1400             |       |

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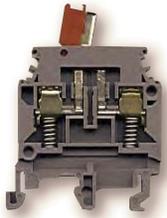


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# Terminal blocks

## Security terminals



### Safety Connection Terminal Blocks

#### Product Hierarchy 300002

| Type       | Description                                                                        | Order Code      | Price |
|------------|------------------------------------------------------------------------------------|-----------------|-------|
| M4/6.RS    | 4.0mm feed through terminal with safety connection (Grey)                          | 1SNA115930R1300 |       |
| M6/8.RS    | 6.0mm feed through terminal with safety connection (Grey)                          | 1SNA115685R1200 |       |
| M10/10.RS  | 10.0mm feed through terminal with safety connection (Grey)                         | 1SNA115320R2700 |       |
| M4/6.SNTS  | 4.0mm disconnect terminal (Grey body, short orange blade) with safety connection   | 1SNA115229R2000 |       |
| M6/8.STPRS | 6.0mm feed through terminal with safety connection (Grey) with 1/4 turn disconnect | 1SNA115678R0200 |       |

### Accessories

#### Product Hierarchy 300008

| Type   | Description                       | Order Code      | Price |
|--------|-----------------------------------|-----------------|-------|
| FEMR8  | End section for M4/6.RS & M6/8.RS | 1SNA116987R0200 |       |
| FEMR10 | End section for M10/10.RS         | 1SNA114434R0500 |       |
| FEM6   | End section for M4/6.SNTS         | 1SNA118368R1600 |       |
| FEMR8T | End section for M6/8.STPRS        | 1SNA116991R0600 |       |

|        |                                   |                 |  |
|--------|-----------------------------------|-----------------|--|
| AL4    | 4.0mm Test socket for M6/8.RS     | 1SNA179762R1600 |  |
| BP8.A4 | Bridging plug, 2 pole for M6/8.RS | 1SNA173888R2000 |  |

|       |                                                                   |                 |  |
|-------|-------------------------------------------------------------------|-----------------|--|
| BJS10 | Unassembled jumper bar, 2 pole for M10/10.RS                      | 1SNA164585R1700 |  |
| BJS10 | Unassembled jumper bar, 10 pole for M10/10.RS                     | 1SNA164588R2200 |  |
| BJS10 | Unassembled jumper bar, 20 pole for M10/10.RS                     | 1SNA177654R0000 |  |
| PL101 | Central socket and screw for unassembled jumper bar for M10/10.RS | 1SNA163181R1100 |  |
| BJS8  | Unassembled jumper bar, 2 pole for M6/8.RS                        | 1SNA164581R1300 |  |
| BJS8  | Unassembled jumper bar, 3 pole for M6/8.RS                        | 1SNA164582R1400 |  |
| BJS8  | Unassembled jumper bar, 5 pole for M6/8.RS                        | 1SNA164737R2600 |  |
| EV6I  | Screw, post and washer for jumper bar for M4/6.RS and M6/8.RS     | 1SNA206394R0200 |  |

|      |                                           |                 |  |
|------|-------------------------------------------|-----------------|--|
| EP6  | Protection label for 4 x 6mm pitch blocks | 1SNA163427R1700 |  |
| VSP6 | Nylon screw for EP6 label                 | 1SNA163433R1500 |  |

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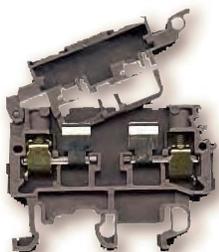


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# Terminal blocks

## Fuse terminals



### 4.0mm<sup>2</sup> Fuse Terminal Blocks

|            |                                                                                           | Product Hierarchy<br>300002 |       |
|------------|-------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type       | Description                                                                               | Order Code                  | Price |
| M4/8.SF    | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Grey)                                     | 1SNA115657R2500             |       |
| M4/8.SF2   | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Orange)                                   | 1SNA105135R1100             |       |
| M4/8.SF.V0 | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Beige) V0                                 | 1SNA195657R2600             |       |
| M4/8.SFL   | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Grey) with green neon lamp 110-230V       | 1SNA115661R2100             |       |
| M4/8.SFD   | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Grey) with 24V LED                        | 1SNA115663R2300             |       |
| M4/8.SFDT  | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Grey) with 24V LED and 2 test sockets 2mm | 1SNA115665R2500             |       |
| M4/8.SN2   | Fuse terminal (flip top) complete with CN5 neutral bar (Grey blue, Blue lever)            | 1SNA115659R0700             |       |
| M4/8.SN2   | Fuse terminal (flip top) complete with CN5 neutral bar (Orange)                           | 1SNA105136R1200             |       |
| M4/6.SB    | Disconnect terminal for BFAUTO mini automotive fuse holder (Grey)                         | 1SNA115435R0700             |       |

### Accessories

|       |                                                                                     | Product Hierarchy<br>300008 |       |
|-------|-------------------------------------------------------------------------------------|-----------------------------|-------|
| Type  | Description                                                                         | Order Code                  | Price |
| FEM8S | End section for M4/8.SF fuse terminal (Grey)                                        | 1SNA116951R1500             |       |
| FEM8S | End section for M4/8.SF fuse terminal (Orange)                                      | 1SNA103923R1500             |       |
| FEM8S | End section for M4/8.SF fuse terminal (Beige) V0                                    | 1SNA196951R1600             |       |
| PC81  | Jumper bar (comb style) 10 way                                                      | 1SNA173523R1100             |       |
| TGA8  | Assembly rod, 2 pole, to link flip top fuse carriers M4/8.SF M4/8.SN series.        | 1SNA168672R1100             |       |
| ANT   | Assembly ring locks TGA8 in place on flip top fuse carriers M4/8.SF M4/8.SN series. | 1SNA168675R1400             |       |

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### 4.0mm<sup>2</sup> Double Deck Fuse Terminal Blocks

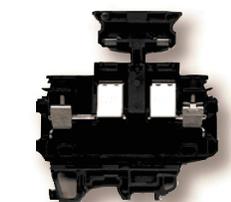
|            |                                                       | Product Hierarchy<br>300002 |       |
|------------|-------------------------------------------------------|-----------------------------|-------|
| Type       | Description                                           | Order Code                  | Price |
| M4/8.D2.SF | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Grey) | 1SNA115604R2100             |       |

### 6.0mm<sup>2</sup> Fuse Terminal Blocks

|            |                                                                                            |                 |  |
|------------|--------------------------------------------------------------------------------------------|-----------------|--|
| M10/16.SF1 | 6mm Fuse terminal (pull top) for 11/32" x 1 1/4" fuse (Grey body & holder) closed block    | 1SNA115375R2200 |  |
| M10/16.SN1 | 6mm Fuse terminal (pull top) for 11/32" x 1 1/4" fuse (Grey body blue holder) closed block | 1SNA115376R2300 |  |
| M10/16.SF  | 6mm Fuse terminal (pull top) for 1/4" x 1 1/4" fuse (Grey body & holder) closed block      | 1SNA115377R2400 |  |
| M10/16.SN  | 6mm Fuse terminal (pull top) for 1/4" x 1 1/4" fuse (Grey body blue holder) closed block   | 1SNA115379R0600 |  |

### Accessories

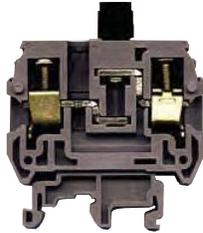
|         |                                                   | Product Hierarchy 300008 |       |
|---------|---------------------------------------------------|--------------------------|-------|
| Type    | Description                                       | Order Code               | Price |
| PC16    | Comb jumper bar, 4 pole for M10/16.SF terminals   | 1SNA116734R1300          |       |
| PC16    | Comb jumper bar, 10 poles for M10/16.SF terminals | 1SNA116735R1400          |       |
| FEM8D2S | End section for M4/8.D2.SF terminals              | 1SNA116913R0700          |       |



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# Terminal blocks

## Fuse terminals



### 10mm<sup>2</sup> Fuse Terminal Blocks

#### Product Hierarchy 300002

| Type          | Description                                                                                            | Order Code      | Price |
|---------------|--------------------------------------------------------------------------------------------------------|-----------------|-------|
| MB10/12.SF    | 10mm Fuse terminal (screw top) for 5x20, 5x25mm fuse (Grey)                                            | 1SNA111033R0300 |       |
| MB10/12.SFL   | 10mm Fuse terminal (screw top) for 5x20, 5x25mm fuse (Grey) with neon fuse blown indication (110/220v) | 1SNA111034R0400 |       |
| MB10/22.SF    | 10mm Fuse terminal (pull top) for 11/32" x 1'1/2" fuse (Grey body & holder) closed block               | 1SNA116302R2300 |       |
| MB10/22.SN    | 10mm Fuse terminal (pull top) for 11/32" x 1'1/2" fuse (Grey body blue holder) closed block            | 1SNA116304R2500 |       |
| MU10/14.5.SF1 | 10mm Fuse terminal (pull top) for 5x20 & 5x25mm fuse (Black body & holder) closed block                | 1SNA199011R1600 |       |
| MU10/14.5.SF2 | 10mm Fuse terminal (pull top) for 1/4" x 1'1/4" fuse (Black body & holder) closed block                | 1SNA199013R1000 |       |
| MU10/13.SF2   | 10mm Fuse terminal (pull top) for 1/4" x 1'1/4" fuse (Black body & holder) open block                  | 1SNA199014R1100 |       |
| MU10/13.SN3   | 10mm Fuse terminal (pull top) for 1/4" x 1'1/4" fuse (Black body & blue holder) open block             | 1SNA199021R1000 |       |
| ML10/13.SF    | 10mm Fuse terminal (flip top) for 1/4" x 1'1/4" fuse (Black body & holder) open block                  | 1SNA199095R1300 |       |
| ML10/13.SN    | 10mm Fuse terminal (flip top) for 1/4" x 1'1/4" fuse (Black body & blue holder) open block             | 1SNA199105R2200 |       |

### Accessories

#### Product Hierarchy 300008

| Type   | Description                                                       | Order Code      | Price |
|--------|-------------------------------------------------------------------|-----------------|-------|
| FEM12S | End section for MB10/12 fuse blocks                               | 1SNA117628R2200 |       |
| FEM13U | End section for MU10/13 & ML10/13 fuse blocks                     | 1SNA199635R2400 |       |
| BJS131 | Unassembled jumper bar, 10 pole for MU10/13 series fuse terminals | 1SNA175991R1100 |       |
| VJS11  | Screw for BJS131 jumper bar                                       | 1SNA163394R2600 |       |
| RJD11  | Washer for BJS131 jumper bar                                      | 1SNA168783R0100 |       |
| PC13   | Comb jumper bar 10 pole for MU10/13 series fuse terminals         | 1SNA173510R2000 |       |
| BJS12  | Unassembled jumper bar, 20 pole for MB10/12 series fuse terminals | 1SNA177653R0700 |       |
|        | Screw for BJS12 jumper bar                                        | 1SNA163574R2200 |       |
|        | Washer for BJS12 jumper bar                                       | 1SNA163633R2500 |       |
| PC22   | Comb jumper bar 3 pole for MB10/22 series fuse terminals          | 1SNA205295R0600 |       |
| PC22   | Comb jumper bar 10 pole for MB10/22 series fuse terminals         | 1SNA174151R2500 |       |



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# Terminal blocks

## Fuse terminals

| Accessories |                                                                     | Product Hierarchy<br>300008 |       |
|-------------|---------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                         | Order Code                  | Price |
| FU520       | 5 x 20mm 250V 0.5A fuse                                             | 1SNA008288R1500             |       |
| FU520       | 5 x 20mm 250V 1A fuse                                               | 1SNA008290R1300             |       |
| FU520       | 5 x 20mm 250V 2A fuse                                               | 1SNA008291R0000             |       |
| FU520       | 5 x 20mm 250V 3.15A fuse                                            | 1SNA008289R1600             |       |
| FU520       | 5 x 20mm 250V 5A fuse                                               | 1SNA008292R0100             |       |
| FU525       | 5 x 25mm 250V 2.5A fuse                                             | 1SNA167548R0400             |       |
| FU525       | 5 x 25mm 250V 4A fuse                                               | 1SNA167549R0500             |       |
| CN5         | 5 x 25mm neutral bar                                                | 1SNA179371R1600             |       |
| FU103       | 10.3 x 38mm 500V 8A fuse                                            | 1SNA167079R0100             |       |
| FU103       | 10.3 x 38mm 500V 10A fuse                                           | 1SNA167080R2700             |       |
| FU103       | 10.3 x 38mm 500V 25A fuse                                           | 1SNA167084R1700             |       |
| FU853       | 8.5 x 31.5mm 6A fuse                                                | 1SNA163849R0600             |       |
| FU633       | 6.35 x 32mm 4A quick blow fuse                                      | 1SNA168559R1000             |       |
| FU633       | 6.35 x 32mm 6.3A quick blow fuse                                    | 1SNA168560R1500             |       |
| CN          | 6.35 x 32mm neutral bar                                             | 1SNA173582R1500             |       |
| BFAUTO      | Automotive style fuse holder (black) for use with M4/6.SB terminals | 1SNA299486R2400             |       |

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# Terminal blocks

## Distribution blocks



### Distribution Bars

|      |                                           | Product Hierarchy<br>300002 |       |
|------|-------------------------------------------|-----------------------------|-------|
| Type | Description                               | Order Code                  | Price |
| DBTI | 7 way neutral bar DIN 3 mounting (Blue)   | 1SNA356100R1500             |       |
| DBTI | 7 way neutral bar DIN 3 mounting (Green)  | 1SNA356101R0200             |       |
| DBTI | 12 way neutral bar DIN 3 mounting (Blue)  | 1SNA356102R0300             |       |
| DBTI | 12 way neutral bar DIN 3 mounting (Green) | 1SNA356103R0400             |       |



### Distribution Terminals

|           |                                                            |                 |  |
|-----------|------------------------------------------------------------|-----------------|--|
| MB4/6.L2  | 2 x 4mm <sup>2</sup> terminals commoned internally (Grey)  | 1SNA115406R1300 |  |
| MB4/6.L3  | 3 x 4mm <sup>2</sup> terminals commoned internally (Grey)  | 1SNA115407R1400 |  |
| MB4/6.L4  | 4 x 4mm <sup>2</sup> terminals commoned internally (Grey)  | 1SNA115408R2500 |  |
| MB4/6.L5  | 5 x 4mm <sup>2</sup> terminals commoned internally (Grey)  | 1SNA115409R2600 |  |
| MB4/6.L10 | 10 x 4mm <sup>2</sup> terminals commoned internally (Grey) | 1SNA115412R0000 |  |



|          |                                                           |                 |  |
|----------|-----------------------------------------------------------|-----------------|--|
| MB6/8.L5 | 5 x 6mm <sup>2</sup> terminals commoned internally (Grey) | 1SNA115416R0400 |  |
|----------|-----------------------------------------------------------|-----------------|--|

|            |                                                            |                 |  |
|------------|------------------------------------------------------------|-----------------|--|
| MB10/10.L2 | 2 x 10mm <sup>2</sup> terminals commoned internally (Grey) | 1SNA115328R2300 |  |
|------------|------------------------------------------------------------|-----------------|--|

|            |                                                                                         |                 |  |
|------------|-----------------------------------------------------------------------------------------|-----------------|--|
| MB70/10.L4 | 1 x 70mm <sup>2</sup> stud + 4 x 10mm <sup>2</sup> terminals commoned internally (grey) | 1SNA115336R1300 |  |
| MB70/10.L6 | 1 x 70mm <sup>2</sup> stud + 6 x 10mm <sup>2</sup> terminals commoned internally (grey) | 1SNA115337R1400 |  |
| MB70/10.L8 | 1 x 70mm <sup>2</sup> stud + 8 x 10mm <sup>2</sup> terminals commoned internally (grey) | 1SNA115338R2500 |  |



|         |                                      |                 |  |
|---------|--------------------------------------|-----------------|--|
| BRU80A  | 80A distribution block (light grey)  | 1SNA356208R2500 |  |
| BRU125A | 125A distribution block (light grey) | 1SNA356204R1100 |  |
| BRU160A | 160A distribution block (light grey) | 1SNA356200R2100 |  |
| BRU175A | 175A distribution block (light grey) | 1SNA356212R0000 |  |
| BRU250A | 250A distribution block (light grey) | 1SNA179657R1500 |  |
| BRU400A | 400A distribution block (light grey) | 1SNA179650R2200 |  |

|          |                                                |                 |  |
|----------|------------------------------------------------|-----------------|--|
| BRTC125A | 125A four pole distribution block (light grey) | 1SNA356211R0700 |  |
| BRT80A   | 80A four pole distribution block (black)       | 1SNA179534R2200 |  |
| BRT125A  | 125A four pole distribution block (black)      | 1SNA179535R2300 |  |
| BRT160A  | 160A four pole distribution block (black)      | 1SNA179892R2200 |  |

### Accessories

|        |                                                              | Product Hierarchy<br>300008 |       |
|--------|--------------------------------------------------------------|-----------------------------|-------|
| Type   | Description                                                  | Order Code                  | Price |
| B016/5 | 16 x 5mm busbar to electrically connect two BRU160A together | 1SNA356201R1600             |       |



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# Terminal blocks

## General accessories



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### Din Rails

|        |                                                                          | Product Hierarchy<br>300002 |       |
|--------|--------------------------------------------------------------------------|-----------------------------|-------|
| Type   | Description                                                              | Order Code                  | Price |
| PR30   | DIN 3 (TS35) zinc plated, top hat shallow slotted din rail - 2 metres    | 1SNA173220R0500             |       |
| PR3    | DIN 3 (TS35) zinc plated, top hat shallow solid din rail - 2 metres      | 1SNA174300R1700             |       |
| PR3.G2 | DIN 3 (TS35) galvanised steel, top hat shallow solid din rail - 2 metres | 1SNA164800R0300             |       |
| PR50   | DIN 3 (TS35) zinc plated, top hat deep slotted din rail - 2 metres       | 1SNA178529R0400             |       |
| PR5    | DIN 3 (TS35) zinc plated, top hat deep solid din rail - 2 metres         | 1SNA168700R2200             |       |
| PR4    | DIN 3 (EN50022) zinc plated, top hat deep solid din rail - 2 metres      | 1SNA168500R1200             |       |
| PR1.Z2 | DIN 1 (TS32) zinc plated, "G" rail shallow solid din rail - 2 metres     | 1SNA163050R0400             |       |
| PR1.A2 | DIN 1 (TS32) aluminium, "G" rail shallow solid din rail - 3 metres       | 1SNA167120R2300             |       |
| PR2    | EN50045 zinc plated, 15mm symmetrical slotted rail - 2 metres            | 1SNA164600R1200             |       |
| PRH2R  | NFC93461 solid reinforced rail - 2 metres                                | 1SNA163350R1500             |       |

|      |                         |                 |  |
|------|-------------------------|-----------------|--|
| EM45 | 45° rail offset bracket | 1SNA008521R2600 |  |
|------|-------------------------|-----------------|--|

### End Stops

|       |                                                 |                 |  |
|-------|-------------------------------------------------|-----------------|--|
| BADL  | Screwless end stop for DIN 3 rail (light grey)  | 1SNA399903R0200 |  |
| BAM2  | Screwed end stop for DIN 3 rail (grey)          | 1SNA206351R1600 |  |
| BAMH  | Tall Screwed end stop for DIN 1 & 3 rail (grey) | 1SNA114836R0000 |  |
| BADH  | Tall Screwed end stop for DIN 3 rail (grey)     | 1SNA116900R2700 |  |
| BADRL | Screwless end stop for DIN 2 rail (light grey)  | 1SNA199420R2100 |  |
| BAR   | Screwless end stop for DIN 1 rail (beige)       | 1SNA164519R2400 |  |



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# Terminal blocks

## Spring clamp terminal blocks



### 1.5mm<sup>2</sup> Terminal Blocks 1in 1out

**Product Hierarchy  
300002**

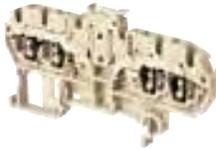
| Type       | Description                                                     | Order Code | Price |
|------------|-----------------------------------------------------------------|------------|-------|
| D1.5/4.2L  | 1.5mm feed through spring clamp terminal (Grey)                 | 29037112   |       |
| D1.5/4.P2L | 1.5mm feed through spring clamp terminal (Earth) Green / Yellow | 29037922   |       |

### Accessories

**Product Hierarchy  
300002 & 300008**

| Type    | Description                                               | Order Code | Price |
|---------|-----------------------------------------------------------|------------|-------|
| FED5.2L | End section for 1.5-4.0mm spring clamp terminals (Grey)   | 29106124   |       |
| FED5.2L | End section for 1.5-4.0mm spring clamp terminals (Orange) | 29106225   |       |

|         |                                                         |          |  |
|---------|---------------------------------------------------------|----------|--|
| SCD5.2L | Seperator for 1.5-4.0mm spring clamp terminals (Orange) | 29135204 |  |
| SCD5.2L | Seperator for 1.5-4.0mm spring clamp terminals (Grey)   | 29135103 |  |



### 1.5mm<sup>2</sup> Terminal Blocks 2in 2out

**Product Hierarchy  
300002 & 300005**

| Type       | Description                                                     | Order Code | Price |
|------------|-----------------------------------------------------------------|------------|-------|
| D1.5/4.4L  | 1.5mm feed through spring clamp terminal (Grey)                 | 29038105   |       |
| D1.5/4.4L  | 1.5mm feed through spring clamp terminal, (Blue)                | 29038307   |       |
| D1.5/4.P4L | 1.5mm feed through spring clamp terminal (Earth) Green / Yellow | 29038915   |       |

### Accessories

**Product Hierarchy  
300008**

| Type    | Description                                         | Order Code | Price |
|---------|-----------------------------------------------------|------------|-------|
| FED5.4L | End section for 1.5mm spring clamp terminals (Grey) | 29104120   |       |

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# Terminal blocks

## Spring clamp terminal blocks



### 2.5mm<sup>2</sup> Terminal Blocks 1in 1out

|             |                                                          | Product Hierarchy<br>300005 |       |
|-------------|----------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                              | Order Code                  | Price |
| D2.5/5.2L   | 2.5mm feed through spring terminal (Grey)                | 029002127                   |       |
| D2.5/5.N.2L | 2.5mm feed through spring terminal, (Blue)               | 029002321                   |       |
| D2.5/5.P2L  | 2.5mm feed through spring terminal, Earth (Green/Yellow) | 029002907                   |       |

### Accessories

|         |                                                           | Product Hierarchy<br>300008 - 300002 |       |
|---------|-----------------------------------------------------------|--------------------------------------|-------|
| Type    | Description                                               | Order Code                           | Price |
| FED5.2L | End section for 1.5-4.0mm spring clamp terminals (Grey)   | 029106124                            |       |
| FED5.2L | End section for 1.5-4.0mm spring clamp terminals (Orange) | 029106225                            |       |

|         |                                                         |           |  |
|---------|---------------------------------------------------------|-----------|--|
| SCD5.2L | Seperator for 1.5-4.0mm spring clamp terminals (Orange) | 029135204 |  |
| SCD5.2L | Seperator for 1.5-4.0mm spring clamp terminals (Grey)   | 029135103 |  |

|          |                          |           |  |
|----------|--------------------------|-----------|--|
| BJDL5.2  | Jumper bar 2 Way (IP20)  | 029110223 |  |
| BJDL5.3  | Jumper bar 3 Way (IP20)  | 029110324 |  |
| BJDL5.4  | Jumper bar 4 Way (IP20)  | 029110425 |  |
| BJDL5.5  | Jumper bar 5 Way (IP20)  | 029110526 |  |
| BJDL5.10 | Jumper bar 10 Way (IP20) | 029111026 |  |

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### 2.5mm<sup>2</sup> Terminal Blocks 1in 2out

|           |                                           | Product Hierarchy<br>300005 |       |
|-----------|-------------------------------------------|-----------------------------|-------|
| Type      | Description                               | Order Code                  | Price |
| D2.5/5.3L | 2.5mm feed through spring terminal (Grey) | 029003121                   |       |

### Accessories

|         |                                                     | Product Hierarchy<br>300008 |       |
|---------|-----------------------------------------------------|-----------------------------|-------|
| Type    | Description                                         | Order Code                  | Price |
| FED5.3L | End section for 2.5mm spring clamp terminals (Grey) | 029106124                   |       |

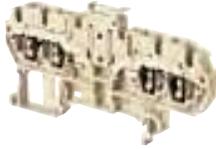
|          |                          |           |  |
|----------|--------------------------|-----------|--|
| BJDL5.2  | Jumper bar 2 Way (IP20)  | 029110223 |  |
| BJDL5.3  | Jumper bar 3 Way (IP20)  | 029110324 |  |
| BJDL5.4  | Jumper bar 4 Way (IP20)  | 029110425 |  |
| BJDL5.5  | Jumper bar 5 Way (IP20)  | 029110526 |  |
| BJDL5.10 | Jumper bar 10 Way (IP20) | 029111026 |  |



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# Terminal blocks

## Spring clamp terminal blocks



### 2.5mm² Terminal Blocks 2in 2out

**Product Hierarchy  
300005**

| Type         | Description                                                         | Order Code | Price |
|--------------|---------------------------------------------------------------------|------------|-------|
| D2.5/5.4L    | 2.5mm feed through spring terminal (Grey)                           | 029001125  |       |
| D2.5/5.N.4L  | 2.5mm feed through spring terminal (Blue)                           | 029001327  |       |
| D2.5/5.P4L   | 2.5mm feed through spring terminal Earth (Green / Yellow + C30)     | 029001905  |       |
| D2.5/5.2L.2L | 2.5mm feed through spring terminal (Grey) (2 Independent circuits ) | 029000104  |       |

### Accessories

**Product Hierarchy  
300008**

| Type     | Description                                         | Order Code | Price |
|----------|-----------------------------------------------------|------------|-------|
| FED5.4L  | End section for 2.5mm spring clamp terminals (Grey) | 029104120  |       |
| BJDL5.2  | Jumper bar 2 Way (IP20)                             | 029110223  |       |
| BJDL5.3  | Jumper bar 3 Way (IP20)                             | 029110324  |       |
| BJDL5.4  | Jumper bar 4 Way (IP20)                             | 029110425  |       |
| BJDL5.5  | Jumper bar 5 Way (IP20)                             | 029110526  |       |
| BJDL5.10 | Jumper bar 10 Way (IP20)                            | 029111026  |       |



### 2.5mm² Terminal Blocks Double Deck

**Product Hierarchy  
300005**

| Type        | Description                                           | Order Code | Price |
|-------------|-------------------------------------------------------|------------|-------|
| D2.5/5.D2.L | 2.5mm feed through double deck spring terminal (Grey) | 029016100  |       |

### Accessories

**Product Hierarchy  
300008**

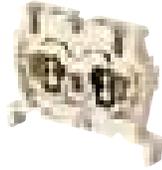
| Type     | Description                                                     | Order Code | Price |
|----------|-----------------------------------------------------------------|------------|-------|
| FED5.D.L | End section for 2.5mm double deck spring clamp terminals (Grey) | 029144126  |       |
| BJDL5.2  | Jumper bar 2 Way (IP20)                                         | 029110223  |       |
| BJDL5.3  | Jumper bar 3 Way (IP20)                                         | 029110324  |       |
| BJDL5.4  | Jumper bar 4 Way (IP20)                                         | 029110425  |       |
| BJDL5.5  | Jumper bar 5 Way (IP20)                                         | 029110526  |       |
| BJDL5.10 | Jumper bar 10 Way (IP20)                                        | 029111026  |       |



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# Terminal blocks

## Spring clamp terminal blocks



### 2.5mm<sup>2</sup> Miniblock Terminals

|              |                                                                         | Product Hierarchy<br>300005 |       |
|--------------|-------------------------------------------------------------------------|-----------------------------|-------|
| Type         | Description                                                             | Order Code                  | Price |
| DR2.5/5.2L   | 2.5mm feed through miniblock spring terminal (Grey)                     | 029020111                   |       |
| DR2.5/5.2L   | 2.5mm feed through miniblock spring terminal (Orange)                   | 029020212                   |       |
| DR2.5/10.P4L | 2.5mm (4 spring) feed through miniblock terminal (Earth) Green / Yellow | 029021912                   |       |

### Accessories

|          |                                                 | Product Hierarchy<br>300008 |       |
|----------|-------------------------------------------------|-----------------------------|-------|
| Type     | Description                                     | Order Code                  | Price |
| FED1.L   | End section for 2.5mm miniblock terminal (Grey) | 029130102                   |       |
| BJDL5.2  | Jumper bar 2 Way (IP20)                         | 029110223                   |       |
| BJDL5.3  | Jumper bar 3 Way (IP20)                         | 029110324                   |       |
| BJDL5.4  | Jumper bar 4 Way (IP20)                         | 029110425                   |       |
| BJDL5.5  | Jumper bar 5 Way (IP20)                         | 029110526                   |       |
| BJDL5.10 | Jumper bar 10 Way (IP20)                        | 029111026                   |       |



### 2.5mm<sup>2</sup> Terminal Block for Sensor & Actuators

|             |                                                           | Product Hierarchy<br>300005 |       |
|-------------|-----------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                               | Order Code                  | Price |
| D2.5/5 C3.L | 2.5mm <sup>2</sup> Terminal block for sensors / actuators | 029035021                   |       |

### Accessories

|           |                             | Product Hierarchy<br>300008 |       |
|-----------|-----------------------------|-----------------------------|-------|
| Type      | Description                 | Order Code                  | Price |
| FED5.C3.L | End section for D2.5/5 C3.L | 029035825                   |       |
| BJDL5.2   | Jumper bar 2 Way (IP20)     | 029110223                   |       |
| BJDL5.3   | Jumper bar 3 Way (IP20)     | 029110324                   |       |
| BJDL5.4   | Jumper bar 4 Way (IP20)     | 029110425                   |       |
| BJDL5.5   | Jumper bar 5 Way (IP20)     | 029110526                   |       |
| BJDL5.10  | Jumper bar 10 Way (IP20)    | 029111026                   |       |

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# Terminal blocks

## Spring clamp terminal blocks



### 2.5mm² Terminal Blocks 1in 1out

Product Hierarchy 300005

| Type        | Description                                              | Order Code | Price |
|-------------|----------------------------------------------------------|------------|-------|
| D2.5/5.2L   | 2.5mm feed through spring terminal (Grey)                | 029104120  |       |
| D2.5/5.N.2L | 2.5mm feed through spring terminal, (Blue)               | 029002321  |       |
| D2.5/5.P2L  | 2.5mm feed through spring terminal, Earth (Green/Yellow) | 029002907  |       |

### Accessories

Product Hierarchy 300002 & 300008

| Type    | Description                                               | Order Code | Price |
|---------|-----------------------------------------------------------|------------|-------|
| FED5.2L | End section for 1.5-4.0mm spring clamp terminals (Grey)   | 029106124  |       |
| FED5.2L | End section for 1.5-4.0mm spring clamp terminals (Orange) | 029106225  |       |

|         |                                                         |           |  |
|---------|---------------------------------------------------------|-----------|--|
| SCD5.2L | Seperator for 1.5-4.0mm spring clamp terminals (Orange) | 029135204 |  |
| SCD5.2L | Seperator for 1.5-4.0mm spring clamp terminals (Grey)   | 029135103 |  |

|          |                          |           |  |
|----------|--------------------------|-----------|--|
| BJDL5.2  | Jumper bar 2 Way (IP20)  | 029110223 |  |
| BJDL5.3  | Jumper bar 3 Way (IP20)  | 029110324 |  |
| BJDL5.4  | Jumper bar 4 Way (IP20)  | 029110425 |  |
| BJDL5.5  | Jumper bar 5 Way (IP20)  | 029110526 |  |
| BJDL5.10 | Jumper bar 10 Way (IP20) | 029111026 |  |

### 2.5mm² Terminal Blocks 1in 2out

Product Hierarchy 300005

| Type      | Description                               | Order Code | Price |
|-----------|-------------------------------------------|------------|-------|
| D2.5/5.3L | 2.5mm feed through spring terminal (Grey) | 029003121  |       |

### Accessories

Product Hierarchy 300008

| Type    | Description                                         | Order Code | Price |
|---------|-----------------------------------------------------|------------|-------|
| FED5.3L | End section for 2.5mm spring clamp terminals (Grey) | 029106124  |       |

|         |                         |           |  |
|---------|-------------------------|-----------|--|
| BJDL5.2 | Jumper bar 2 Way (IP20) | 029110223 |  |
| BJDL5.3 | Jumper bar 3 Way (IP20) | 029110324 |  |
| BJDL5.4 | Jumper bar 4 Way (IP20) | 029110425 |  |

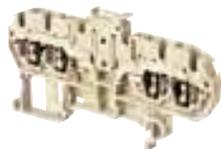
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# Terminal blocks

## Spring clamp terminal blocks



### 4.0mm<sup>2</sup> Terminal Blocks 2in 2out

|         |                                                  | Product Hierarchy<br>300005 |       |
|---------|--------------------------------------------------|-----------------------------|-------|
| Type    | Description                                      | Order Code                  | Price |
| D4/6.4L | 4.0mm feed through spring clamp terminal (Grey)  | 029041006                   |       |
| D4/6.4L | 4.0mm feed through spring clamp terminal, (Blue) | 029041224                   |       |

### Accessories

|         |                                                         | Product Hierarchy<br>300008 |       |
|---------|---------------------------------------------------------|-----------------------------|-------|
| Type    | Description                                             | Order Code                  | Price |
| FED6.4L | End section for 1.5-4.0mm spring clamp terminals (Grey) | 029169626                   |       |
| BJDL6.2 | Jumper bar 2 Way (IP20)                                 | 029112824                   |       |
| BJDL6.3 | Jumper bar 3 Way (IP20)                                 | 029112925                   |       |

### 6.0mm<sup>2</sup> Terminal Blocks 1in 1out



|           |                                                                 | Product Hierarchy<br>300005 |       |
|-----------|-----------------------------------------------------------------|-----------------------------|-------|
| Type      | Description                                                     | Order Code                  | Price |
| D6/8.2L   | 6.0mm feed through spring clamp terminal (Grey)                 | 029008124                   |       |
| D6/8.N.2L | 6.0mm feed through spring clamp terminal, (Blue)                | 029008326                   |       |
| D6/8.P2L  | 6.0mm feed through spring clamp terminal (Earth) Green / Yellow | 029008904                   |       |

### Accessories

|         |                                                     | Product Hierarchy<br>300008 |       |
|---------|-----------------------------------------------------|-----------------------------|-------|
| Type    | Description                                         | Order Code                  | Price |
| FED8.2L | End section for 6.0mm spring clamp terminals (Grey) | 029116125                   |       |
| BJDL8.2 | Jumper bar 2 Way (IP20)                             | 029112216                   |       |

### 10mm<sup>2</sup> Terminal Blocks 1in 1out



|             |                                                                  | Product Hierarchy<br>300005 |       |
|-------------|------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                      | Order Code                  | Price |
| D10/10.2L   | 10.0mm feed through spring clamp terminal (Grey)                 | 029029103                   |       |
| D10/10.N.2L | 10.0mm feed through spring clamp terminal, (Blue)                | 029029305                   |       |
| D10/10.P2L  | 10.0mm feed through spring clamp terminal (Earth) Green / Yellow | 029029913                   |       |

### Accessories

|          |                                                      | Product Hierarchy<br>300008 |       |
|----------|------------------------------------------------------|-----------------------------|-------|
| Type     | Description                                          | Order Code                  | Price |
| FED10.2L | End section for 10.0mm spring clamp terminals (Grey) | 029029913                   | 2.65  |
| BJDL10.2 | Jumper bar 2 Way (IP20)                              | 029147225                   | 1.18  |



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# Terminal blocks

## Spring clamp terminal blocks



### 16mm² Terminal Blocks 1in 1out

|             |                                                                  | Product Hierarchy<br>300005 |       |
|-------------|------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                      | Order Code                  | Price |
| D16/12.2L   | 16.0mm feed through spring clamp terminal (Grey)                 | 039958127                   |       |
| D16/12.N.2L | 16.0mm feed through spring clamp terminal, (Blue)                | 039958220                   |       |
| D16/12.P.2L | 16.0mm feed through spring clamp terminal (Earth) Green / Yellow | 039958422                   |       |

### Accessories

|          |                                                      | Product Hierarchy<br>300008 |       |
|----------|------------------------------------------------------|-----------------------------|-------|
| Type     | Description                                          | Order Code                  | Price |
| FED12.2L | End section for 16.0mm spring clamp terminals (Grey) | 039957104                   |       |

### 35mm² Terminal Blocks 1in 1out

|             |                                                                  | Product Hierarchy<br>300005 |       |
|-------------|------------------------------------------------------------------|-----------------------------|-------|
| Type        | Description                                                      | Order Code                  | Price |
| D35/16.2L   | 35.0mm feed through spring clamp terminal (Grey)                 | 039961702                   |       |
| D35/16.N.2L | 35.0mm feed through spring clamp terminal, (Blue)                | 039961813                   |       |
| D35/16.P.2L | 35.0mm feed through spring clamp terminal (Earth) Green / Yellow | 039962011                   |       |

### 2.5mm² Disconnect (switch) Terminal Blocks 1in 1out

|                |                                                            | Product Hierarchy<br>300005 |       |
|----------------|------------------------------------------------------------|-----------------------------|-------|
| Type           | Description                                                | Order Code                  | Price |
| D2.5/5.SNBT.2L | 2.5mm² disconnect terminal (Grey body, short orange blade) | 029004103                   |       |

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### Accessories

|         |                                                           | Product Hierarchy<br>300008 |       |
|---------|-----------------------------------------------------------|-----------------------------|-------|
| Type    | Description                                               | Order Code                  | Price |
| FED5.2L | End section for 1.5-4.0mm spring clamp terminals (Grey)   | 029106124                   |       |
| FED5.2L | End section for 1.5-4.0mm spring clamp terminals (Orange) | 029106225                   |       |

|         |                                                         |           |  |
|---------|---------------------------------------------------------|-----------|--|
| SCD5.2L | Seperator for 1.5-4.0mm spring clamp terminals (Orange) | 029135204 |  |
|---------|---------------------------------------------------------|-----------|--|

|          |                          |           |  |
|----------|--------------------------|-----------|--|
| BJDL5.2  | Jumper bar 2 Way (IP20)  | 029110223 |  |
| BJDL5.3  | Jumper bar 3 Way (IP20)  | 029110324 |  |
| BJDL5.4  | Jumper bar 4 Way (IP20)  | 029110425 |  |
| BJDL5.5  | Jumper bar 5 Way (IP20)  | 029110526 |  |
| BJDL5.10 | Jumper bar 10 Way (IP20) | 029111026 |  |



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# Terminal blocks

## Spring clamp terminal blocks

| 2.5mm <sup>2</sup> Disconnect (switch) Terminal Blocks 2in 2out |                                                                      | Product Hierarchy<br>300005 |       |
|-----------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------|-------|
| Type                                                            | Description                                                          | Order Code                  | Price |
| D2.5/5.SNBT.4L                                                  | 2.5mm <sup>2</sup> disconnect terminal (Grey body, short grey blade) | 029013324                   |       |

| Accessories |                                                     | Product Hierarchy<br>300008 |       |
|-------------|-----------------------------------------------------|-----------------------------|-------|
| Type        | Description                                         | Order Code                  | Price |
| FED5.4L     | End section for 2.5mm spring clamp terminals (Grey) | 029104120                   |       |

|          |                          |           |  |
|----------|--------------------------|-----------|--|
| BJDL5.2  | Jumper bar 2 Way (IP20)  | 029110223 |  |
| BJDL5.3  | Jumper bar 3 Way (IP20)  | 029110324 |  |
| BJDL5.4  | Jumper bar 4 Way (IP20)  | 029110425 |  |
| BJDL5.5  | Jumper bar 5 Way (IP20)  | 029110526 |  |
| BJDL5.10 | Jumper bar 10 Way (IP20) | 029111026 |  |

| 2.5mm Fuse terminals |                                                                                                     | Product Hierarchy<br>300005 |       |
|----------------------|-----------------------------------------------------------------------------------------------------|-----------------------------|-------|
| Type                 | Description                                                                                         | Order Code                  | Price |
| D2.5/8.SFT.2L        | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Grey)                                               | 029009126                   |       |
| D2.5/8.SFDT.2L       | Fuse terminal (flip top) for 5x20, 5x25mm fuse (Grey) with test socket & fuse blown indicator (24v) | 029009421                   |       |

| Accessories |                                                     | Product Hierarchy<br>300008 |       |
|-------------|-----------------------------------------------------|-----------------------------|-------|
| Type        | Description                                         | Order Code                  | Price |
| FED8SF.2L   | End section for 2.5mm spring clamp terminals (Grey) | 029113117                   |       |
| BJDL8.2     | Jumper bar 2 Way (IP20)                             | 029112216                   |       |

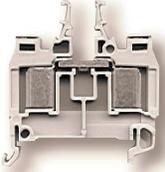
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# Terminal blocks

## ADO terminals



### 1mm² ADO Feed Through Terminal Blocks

#### Product Hierarchy 300006

| Type      | Description                                                  | Order Code      | Price |
|-----------|--------------------------------------------------------------|-----------------|-------|
| D1/5.ADO  | 1mm² feed through terminal, ADO-ADO (Grey)                   | 1SNA199563R2400 |       |
| D1/5.PADO | 1mm² feed through terminal, Ground, ADO-ADO (Green / Yellow) | 1SNA399031R2200 |       |
| D1/5.ADO  | 1mm² feed through terminal, ADO-ADO (Orange)                 | 1SNA199564R2500 |       |

### Accessories

#### Product Hierarchy 300008

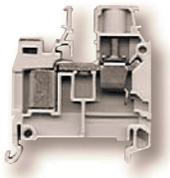
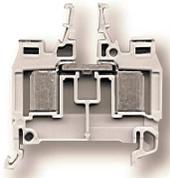
| Type       | Description                                                | Order Code      | Price |
|------------|------------------------------------------------------------|-----------------|-------|
| D2,5/5.ADO | 1mm² ADO - 2.5mm² screw clamp feed through terminal (Grey) | 1SNA199554R2300 |       |
| FEMAD3     | End section (Grey)                                         | 1SNA199341R0500 |       |
| FEMAD3     | End section (Yellow)                                       | 1SNA199343R0700 |       |
| FC2        | Test Plug 2mm diameter                                     | 1SNA007865R2600 |       |
| BJMI5      | Jumper bar - 2 pole (IP20)                                 | 1SNA176278R1600 |       |
| BJMI5      | Jumper bar - 3 pole (IP20)                                 | 1SNA176279R1700 |       |
| BJMI5      | Jumper bar - 4 pole (IP20)                                 | 1SNA176280R0500 |       |
| BJMI5      | Jumper bar - 5 pole (IP20)                                 | 1SNA176281R2200 |       |
| BJMI5      | Jumper bar - 10 pole (IP20)                                | 1SNA176282R2300 |       |
| EL6        | Connector Plate to link two jumper bars together           | 1SNA173627R2100 |       |
| CBM5       | Screen Bar 0.5mm thickness                                 | 1SNA178745R1400 |       |
| CBM8       | Screen Bar 0.8mm thickness                                 | 1SNA178746R1500 |       |



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# Terminal blocks

## ADO terminals



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### 1.5mm<sup>2</sup> ADO Feed Through Terminal Blocks

|              |                                                                                    | Product Hierarchy<br>300006 |       |
|--------------|------------------------------------------------------------------------------------|-----------------------------|-------|
| Type         | Description                                                                        | Order Code                  | Price |
| D1,5/6.ADO   | 1.5mm <sup>2</sup> ADO feed through terminal (Grey)                                | 1SNA199051R2600             |       |
| D1,5/6.N.ADO | 1.5mm <sup>2</sup> ADO feed through terminal (Blue)                                | 1SNA199053R2000             |       |
| D1,5/6.P.ADO | 1.5mm <sup>2</sup> ADO feed through terminal, Ground (Green / Yellow)              | 1SNA199098R2600             |       |
| D1,5/6.ADO   | 1.5mm <sup>2</sup> ADO feed through terminal (Red)                                 | 1SNA199081R1500             |       |
| D4/6.ADO     | 1.5mm <sup>2</sup> ADO - 4mm <sup>2</sup> screw clamp feed through terminal (Grey) | 1SNA199034R1500             |       |

|            |                                                                                                      |                 |  |
|------------|------------------------------------------------------------------------------------------------------|-----------------|--|
| D4/6.N.ADO | 1.5mm <sup>2</sup> ADO - 4mm <sup>2</sup> screw clamp feed through terminal (Blue)                   | 1SNA199036R1700 |  |
| D4/6.P.ADO | 1.5mm <sup>2</sup> ADO - 4mm <sup>2</sup> screw clamp feed through terminal, Ground (Green / Yellow) | 1SNA199050R0100 |  |
| D4/6.ADO   | 1.5mm <sup>2</sup> ADO - 4mm <sup>2</sup> screw clamp feed through terminal (Orange)                 | 1SNA199035R1600 |  |
| D4/6.ADO   | 1.5mm <sup>2</sup> ADO - 4mm <sup>2</sup> screw clamp feed through terminal (Red)                    | 1SNA199069R0000 |  |

### Accessories

|        |                                                                      | Product Hierarchy<br>300008 |       |
|--------|----------------------------------------------------------------------|-----------------------------|-------|
| Type   | Description                                                          | Order Code                  | Price |
| FEMAD3 | End section for 1-4mm ADO-ADO terminals (Grey)                       | 1SNA199341R0500             |       |
| FEMAD3 | End section for 1-4mm ADO-ADO terminals (Yellow)                     | 1SNA199343R0700             |       |
| FEDAD1 | End section for 1-4mm ADO - 2.5 - 4mm screw clamp terminals (Grey)   | 1SNA199336R2000             |       |
| FEDAD1 | End section for 1-4mm ADO - 2.5 - 4mm screw clamp terminals (Yellow) | 1SNA199339R0300             |       |
| FC2    | Test Plug 2mm diameter                                               | 1SNA007865R2600             |       |

|       |                                                      |                 |  |
|-------|------------------------------------------------------|-----------------|--|
| BJMI6 | Jumper bar - 2 pole (IP20)                           | 1SNA176663R0000 |  |
| BJMI6 | Jumper bar - 3 pole (IP20)                           | 1SNA176664R0100 |  |
| BJMI6 | Jumper bar - 4 pole (IP20)                           | 1SNA176665R0200 |  |
| BJMI6 | Jumper bar - 5 pole (IP20)                           | 1SNA176666R0300 |  |
| BJMI6 | Jumper bar - 10 pole (IP20)                          | 1SNA176667R0400 |  |
| EL6   | Connector plate for linking two jumper bars together | 1SNA173627R2100 |  |

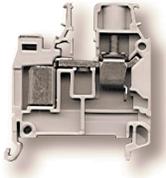
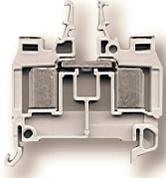
|      |                            |                 |  |
|------|----------------------------|-----------------|--|
| CBM5 | Screen Bar 0.5mm thickness | 1SNA178745R1400 |  |
| CBM8 | Screen Bar 0.8mm thickness | 1SNA178746R1500 |  |



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# Terminal blocks

## ADO terminals



### 2.5mm² ADO Feed Through Terminal Blocks

#### Product Hierarchy 300006

| Type        | Description                                               | Order Code      | Price |
|-------------|-----------------------------------------------------------|-----------------|-------|
| D2,5/8.ADO  | 2.5mm² ADO feed through terminal (Grey)                   | 1SNA199059R0600 |       |
| D2,5/8.ADO  | 2.5mm² ADO feed through terminal (Blue)                   | 1SNA199061R2000 |       |
| D2,5/8.PADO | 2.5mm² ADO feed through terminal, Ground (Green / Yellow) | 1SNA199091R1700 |       |
| D2,5/8.ADO  | 2.5mm² ADO feed through terminal (Black)                  | 1SNA199089R2500 |       |

|            |                                                                              |                 |  |
|------------|------------------------------------------------------------------------------|-----------------|--|
| D6/8.ADO   | 2.5mm² ADO - 6mm² screw clamp feed through terminal (Grey)                   | 1SNA199042R2500 |  |
| D6/8.PADO  | 2.5mm² ADO - 6mm² screw clamp feed through terminal, Ground (Green / Yellow) | 1SNA199118R2600 |  |
| D6/8.ADO   | 2.5mm² ADO - 6mm² screw clamp feed through terminal (Orange)                 | 1SNA199043R2600 |  |
| D6/8.ADO   | 2.5mm² ADO - 6mm² screw clamp feed through terminal (Black)                  | 1SNA199077R2000 |  |
| D6/8.1.ADO | 2.5mm² ADO - 6mm² screw clamp feed through terminal with partition (Grey)    | 1SNA199046R2100 |  |

### Accessories

#### Product Hierarchy 300008

| Type   | Description                                                          | Order Code      | Price |
|--------|----------------------------------------------------------------------|-----------------|-------|
| FEMAD3 | End section for 1-4mm ADO-ADO terminals (Grey)                       | 1SNA199341R0500 |       |
| FEMAD3 | End section for 1-4mm ADO-ADO terminals (Yellow)                     | 1SNA199343R0700 |       |
| FEDAD1 | End section for 1-4mm ADO - 2.5 - 6mm screw clamp terminals (Grey)   | 1SNA199336R2000 |       |
| FEDAD1 | End section for 1-4mm ADO - 2.5 - 6mm screw clamp terminals (Yellow) | 1SNA199339R0300 |       |

|       |                                                      |                 |  |
|-------|------------------------------------------------------|-----------------|--|
| BJMI8 | Jumper bar - 2 pole (IP20)                           | 1SNA176669R1600 |  |
| BJMI8 | Jumper bar - 3 pole (IP20)                           | 1SNA176670R1300 |  |
| BJMI8 | Jumper bar - 4 pole (IP20)                           | 1SNA176671R0000 |  |
| BJMI8 | Jumper bar - 5 pole (IP20)                           | 1SNA176672R0100 |  |
| BJMI8 | Jumper bar - 10 pole (IP20)                          | 1SNA176673R0200 |  |
| EL6   | Connector plate for linking two jumper bars together | 1SNA173627R2100 |  |

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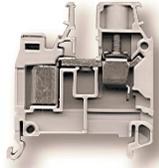


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# Terminal blocks

## ADO terminals



### 4mm² ADO Feed Through Terminal Blocks

|           |                                                          | Product Hierarchy<br>300006 |       |
|-----------|----------------------------------------------------------|-----------------------------|-------|
| Type      | Description                                              | Order Code                  | Price |
| D4/8.ADO  | 4mm² ADO feed through terminal (Grey)                    | 1SNA399244R1400             |       |
| D4/8.ADO  | 4mm² ADO feed through terminal (Blue)                    | 1SNA399318R1600             |       |
| D6/8.ADO3 | 4mm² ADO - 6mm² screw clamp feed through terminal (Grey) | 1SNA399245R1500             |       |

### Accessories

|        |                                                      | Product Hierarchy<br>300008 |       |
|--------|------------------------------------------------------|-----------------------------|-------|
| Type   | Description                                          | Order Code                  | Price |
| FEMAD3 | End section for 1-4mm ADO-ADO terminals (Grey)       | 1SNA199341R0500             |       |
| FEMAD3 | End section for 1-4mm ADO-ADO terminals (Yellow)     | 1SNA199343R0700             |       |
| BJMI8  | Jumper bar - 2 pole (IP20)                           | 1SNA176669R1600             |       |
| BJMI8  | Jumper bar - 3 pole (IP20)                           | 1SNA176670R1300             |       |
| BJMI8  | Jumper bar - 4 pole (IP20)                           | 1SNA176671R0000             |       |
| BJMI8  | Jumper bar - 5 pole (IP20)                           | 1SNA176672R0100             |       |
| BJMI8  | Jumper bar - 10 pole (IP20)                          | 1SNA176673R0200             |       |
| EL6    | Connector plate for linking two jumper bars together | 1SNA173627R2100             |       |



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### ADO Disconnect Terminal Blocks

|                 |                                                                         | Product Hierarchy<br>300006 |       |
|-----------------|-------------------------------------------------------------------------|-----------------------------|-------|
| Type            | Description                                                             | Order Code                  | Price |
| D1,5/6.SNT2.ADO | 1.5mm² ADO - ADO blade disconnect terminal with 2mm test sockets (Grey) | 1SNA199144R2000             |       |
| D2,5/8.SNT2.ADO | 2.5mm² ADO - ADO blade disconnect terminal with 2mm test sockets (Grey) | 1SNA199231R2700             |       |
| D4/6.SN.ADO     | 1.5mm² ADO - 4mm² screw clamp blade disconnect terminal (Grey)          | 1SNA199231R2700             |       |
| D4/8.SN.ADO     | 2.5mm² ADO - 4mm² screw clamp blade disconnect terminal (Grey)          | 1SNA199137R1100             |       |



### Accessories

|           |                                                                                     | Product Hierarchy<br>300008 |       |
|-----------|-------------------------------------------------------------------------------------|-----------------------------|-------|
| Type      | Description                                                                         | Order Code                  | Price |
| FEDAD5    | End section for 1.5-2.5mm ADO-ADO blade disconnect terminals (Grey)                 | 1SNA199354R0200             |       |
| FEDAD4    | End section for 1.5-2.5mm ADO- 2.5mm² screw clamp blade disconnect terminals (Grey) | 1SNA199352R0000             |       |
| BJADO6.4  | Push in jumper bar, 4 pole for 6mm pitch ADO blade disconnect terminals (Orange)    | 1SNA205976R0000             |       |
| BJADO6.20 | Push in jumper bar, 20 pole for 6mm pitch ADO terminals (Orange)                    | 1SNA205992R2100             |       |



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# Terminal blocks

## ADO terminals



### ADO Fuse Terminal Blocks

#### Product Hierarchy 300006

| Type            | Description                                                                                           | Order Code      | Price |
|-----------------|-------------------------------------------------------------------------------------------------------|-----------------|-------|
| D1,5/8.SFT.ADO  | 1.5mm <sup>2</sup> ADO - ADO 5 x 20 / 5 x 25mm flip top fuse terminal (Grey)                          | 1SNA199208R1100 |       |
| D2,5/8.SFT.ADO2 | 2.5mm <sup>2</sup> ADO - ADO 5 x 20 / 5 x 25mm flip top fuse terminal (Grey)                          | 1SNA199184R1100 |       |
| D4/8.SF.I.ADO   | 1.5mm <sup>2</sup> ADO - 4mm <sup>2</sup> screw clamp 5 x 20 / 5 x 25mm flip top fuse terminal (Grey) | 1SNA399785R0300 |       |

### Accessories

#### Product Hierarchy 300008

| Type    | Description                                                                         | Order Code      | Price |
|---------|-------------------------------------------------------------------------------------|-----------------|-------|
| FEDAD7  | End section for ADO - ADO fuse terminals (Grey)                                     | 1SNA199382R2700 |       |
| FEDAD10 | End section for ADO - screw clamp fuse terminals (Grey)                             | 1SNA399758R2700 |       |
| TGA8    | Assembly rod, 2 pole, to link flip top fuse carriers M4/8.SF M4/8.SN series.        | 1SNA168672R1100 |       |
| ANT     | Assembly ring locks TGA8 in place on flip top fuse carriers M4/8.SF M4/8.SN series. | 1SNA168675R1400 |       |
| FU520   | 5 x 20mm 250V 0.5A fuse                                                             | 1SNA008288R1500 |       |
| FU520   | 5 x 20mm 250V 1A fuse                                                               | 1SNA008290R1300 |       |
| FU520   | 5 x 20mm 250V 2A fuse                                                               | 1SNA008291R0000 |       |
| FU520   | 5 x 20mm 250V 3.15A fuse                                                            | 1SNA008289R1600 |       |
| FU520   | 5 x 20mm 250V 5A fuse                                                               | 1SNA008292R0100 |       |
| FU525   | 5 x 25mm 250V 2.5A fuse                                                             | 1SNA167548R0400 |       |
| FU525   | 5 x 25mm 250V 4A fuse                                                               | 1SNA167549R0500 |       |
| CN5     | 5 x 25mm neutral bar                                                                | 1SNA179371R1600 |       |

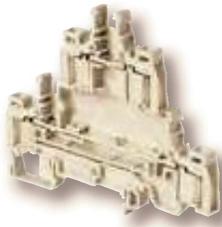


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# Terminal blocks

## ADO terminals



### ADO Double Deck Terminal Blocks

| Product Hierarchy |       |
|-------------------|-------|
| 300006            |       |
| Order Code        | Price |
| 1SNA199242R0200   |       |

| Type        | Description                                                                       |
|-------------|-----------------------------------------------------------------------------------|
| D4/6.D2.ADO | 1.5mm <sup>2</sup> ADO - 4mm <sup>2</sup> screw clamp double deck terminal (Grey) |



### Accessories

| Product Hierarchy |       |
|-------------------|-------|
| 300008            |       |
| Order Code        | Price |
| 1SNA199242R0200   |       |

| Type    | Description                                                    |
|---------|----------------------------------------------------------------|
| FED2AD1 | End section for ADO - Screw clamp double deck terminals (Grey) |

|       |                                                      |                 |  |
|-------|------------------------------------------------------|-----------------|--|
| BJMI6 | Jumper bar - 2 pole (IP20)                           | 1SNA176663R0000 |  |
| BJMI6 | Jumper bar - 3 pole (IP20)                           | 1SNA176664R0100 |  |
| BJMI6 | Jumper bar - 4 pole (IP20)                           | 1SNA176665R0200 |  |
| BJMI6 | Jumper bar - 5 pole (IP20)                           | 1SNA176666R0300 |  |
| BJMI6 | Jumper bar - 10 pole (IP20)                          | 1SNA176667R0400 |  |
| EL6   | Connector plate for linking two jumper bars together | 1SNA173627R2100 |  |



|           |                                                                              |                 |  |
|-----------|------------------------------------------------------------------------------|-----------------|--|
| BJADO6.4  | Push in jumper bar, 4 pole for 6mm pitch ADO double deck terminals (Orange)  | 1SNA205976R0000 |  |
| BJADO6.20 | Push in jumper bar, 20 pole for 6mm pitch ADO double deck terminals (Orange) | 1SNA205992R2100 |  |

|     |                                                        |                 |  |
|-----|--------------------------------------------------------|-----------------|--|
| PC6 | Comb jumper bar - 2 pole for ADO double deck terminal  | 1SNA113546R1400 |  |
| PC6 | Comb jumper bar - 10 pole for ADO double deck terminal | 1SNA113548R2600 |  |

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### General ADO Accessories - Tools

| Product Hierarchy |       |
|-------------------|-------|
| 300006            |       |
| Order Code        | Price |
| 1SNA178944R0400   |       |
| 1SNA179466R0600   |       |
| 1SNA205284R0300   |       |

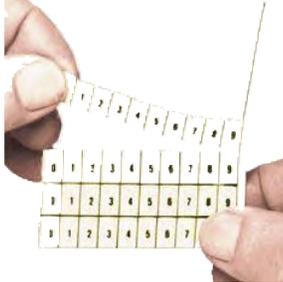
| Type  | Description                                         |
|-------|-----------------------------------------------------|
| OUPAD | Semi automatic ADO hand tool                        |
| OUMAD | ADO hand tool                                       |
| OUTA  | Replacement head for OUPAD semi automatic hand tool |



Full range of product and technical information place this part number in a search engine and download  
1SNC160001C0207

# Terminal blocks

## Marker cards



### RC410 Marker Cards

|       |                           | Product Hierarchy<br>300008 |       |
|-------|---------------------------|-----------------------------|-------|
| Type  | Description               | Order Code                  | Price |
| RC410 | RC410 Marker Card - BLANK | 1SNA229000R1500             |       |

### RC55 Marker Cards

|      |                                            |                 |  |
|------|--------------------------------------------|-----------------|--|
| RC55 | RC55 Marker Card - Blank                   | 1SNA230000R1200 |  |
| RC55 | RC55 Marker Card - Horizontal 10 x [0-9]   | 1SNA230001R0700 |  |
| RC55 | RC55 Marker Card - Horizontal 10 x [1-10]  | 1SNA230002R0000 |  |
| RC55 | RC55 Marker Card - Horizontal 10 x [1-100] | 1SNA230030R0700 |  |

### RC510 Marker Cards

|       |                                              |                 |  |
|-------|----------------------------------------------|-----------------|--|
| RC510 | RC510 Marker Card - BLANK                    | 1SNA231000R0700 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [1-10]   | 1SNA231002R2500 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [11-20]  | 1SNA231003R2600 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [21-30]  | 1SNA231004R2700 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [31-40]  | 1SNA231005R2000 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [41-50]  | 1SNA231006R2100 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [51-60]  | 1SNA231007R2200 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [61-70]  | 1SNA231008R0300 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [71-80]  | 1SNA231009R0400 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [81-90]  | 1SNA231010R2000 |  |
| RC510 | RC510 Marker Card - Horizontal 10 x [91-100] | 1SNA231011R1500 |  |
| RC510 | RC510 Marker Card - Horizontal [1-100]       | 1SNA231030R2400 |  |
| RC510 | RC510 Marker Card - Horizontal [101-200]     | 1SNA231031R1100 |  |
| RC510 | RC510 Marker Card - Horizontal [301-400]     | 1SNA231033R1300 |  |
| RC510 | RC510 Marker Card - Horizontal [401-500]     | 1SNA231034R1400 |  |
| RC510 | RC510 Marker Card - Vertical 10 x [1-10]     | 1SNA231041R2300 |  |
| RC510 | RC510 Marker Card - Vertical 10 x [11-20]    | 1SNA231042R2400 |  |
| RC510 | RC510 Marker Card - Vertical 10 x [21-30]    | 1SNA231043R2500 |  |
| RC510 | RC510 Marker Card - Vertical [1-100]         | 1SNA231060R0200 |  |
| RC510 | RC510 Marker Card - Red Text [1-100]         | 1SNA231074R2400 |  |
| RC510 | RC510 Marker Card - Horizontal 100 x         | 1SNA231115R1200 |  |

### RC65 Marker Cards

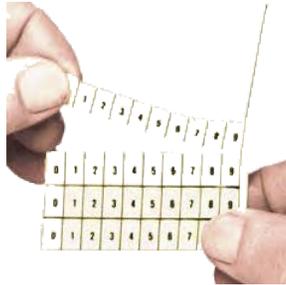
|      |                                            |                 |  |
|------|--------------------------------------------|-----------------|--|
| RC65 | RC65 Marker Card - BLANK                   | 1SNA232000R0000 |  |
| RC65 | RC65 Marker Card - Horizontal 10 x [1-10]  | 1SNA232002R2600 |  |
| RC65 | RC65 Marker Card - Horizontal 10 x [11-20] | 1SNA232003R2700 |  |
| RC65 | RC65 Marker Card - Horizontal 10 x [21-30] | 1SNA232004R2000 |  |
| RC65 | RC65 Marker Card - Horizontal [1-100]      | 1SNA232030R2500 |  |
| RC65 | RC65 Marker Card - Horizontal [101-200]    | 1SNA232031R1200 |  |



Full range of product and technical information place this part number in a search engine and download  
1SNC160001C0207

# Terminal blocks

## Marker cards



### RC610 Marker Cards

|       |                                                     | Product Hierarchy<br>300008 |       |
|-------|-----------------------------------------------------|-----------------------------|-------|
| Type  | Description                                         | Order Code                  | Price |
| RC610 | RC610 Marker Card - BLANK                           | 1SNA233000R0100             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [1-10]          | 1SNA233002R2700             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [11-20]         | 1SNA233003R2000             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [21-30]         | 1SNA233004R2100             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [31-40]         | 1SNA233005R2200             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [41-50]         | 1SNA233006R2300             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [51-60]         | 1SNA233007R2400             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [61-70]         | 1SNA233008R0500             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [71-80]         | 1SNA233009R0600             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [81-90]         | 1SNA233010R2200             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [91-100]        | 1SNA233011R1700             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [101-110]       | 1SNA233012R1000             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [111-120]       | 1SNA233013R1100             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [121-130]       | 1SNA233014R1200             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [131-140]       | 1SNA233015R1300             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [141-150]       | 1SNA233016R1400             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [151-160]       | 1SNA233017R1500             |       |
| RC610 | RC610 Marker Card - Horizontal 10 x [161-170]       | 1SNA233018R2600             |       |
| RC610 | RC610 Marker Card - Horizontal [1-100]              | 1SNA233030R2600             |       |
| RC610 | RC610 Marker Card - Horizontal [101-200]            | 1SNA233031R1300             |       |
| RC610 | RC610 Marker Card - Horizontal [201-300]            | 1SNA233032R1400             |       |
| RC610 | RC610 Marker Card - Horizontal [301-400]            | 1SNA233033R1500             |       |
| RC610 | RC610 Marker Card - Horizontal [401-500]            | 1SNA233034R1600             |       |
| RC610 | RC610 Marker Card - Horizontal [501-600]            | 1SNA233035R1700             |       |
| RC610 | RC610 Marker Card - Vertical 10 x [1-10]            | 1SNA233041R2500             |       |
| RC610 | RC610 Marker Card - Vertical 10 x [11-20]           | 1SNA233042R2600             |       |
| RC610 | RC610 Marker Card - Vertical 10 x [21-30]           | 1SNA233043R2700             |       |
| RC610 | RC610 Marker Card - Vertical 10 x [41-50]           | 1SNA233045R2100             |       |
| RC610 | RC610 Marker Card - Vertical 10 x [61-70]           | 1SNA233047R2300             |       |
| RC610 | RC610 Marker Card - Vertical [1-100]                | 1SNA233060R0400             |       |
| RC610 | RC610 Marker Card - Vertical [101-200]              | 1SNA233061R2100             |       |
| RC610 | RC610 Marker Card - Vertical [201-300,]             | 1SNA233062R2200             |       |
| RC610 | RC610 Marker Card - Horizontal 20 x [L1 L2 L3 N PE] | 1SNA233131R1400             |       |
| RC610 | RC610 Marker Card - Horizontal 2 x [1-50]           | 1SNA233141R2600             |       |

6

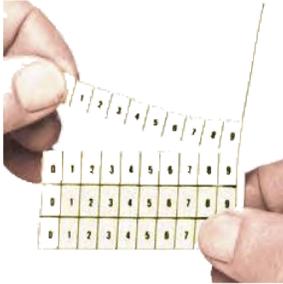


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# Terminal blocks

## Marker cards



### RC610 Marker Cards

|       |                                             | Product Hierarchy<br>300008 |       |
|-------|---------------------------------------------|-----------------------------|-------|
| Type  | Description                                 | Order Code                  | Price |
| RC810 | RC810 Marker Card - BLANK                   | 1SNA234000R0200             |       |
| RC810 | RC810 Marker Card - Horizontal 10 x [1-10]  | 1SNA234002R2000             |       |
| RC810 | RC810 Marker Card - Horizontal 10 x [11-20] | 1SNA234003R2100             |       |
| RC810 | RC810 Marker Card - Horizontal 10 x [21-30] | 1SNA234004R2200             |       |
| RC810 | RC810 Marker Card - Horizontal 10 x [31-40] | 1SNA234005R2300             |       |
| RC810 | RC810 Marker Card - Horizontal 10 x [41-50] | 1SNA234006R2400             |       |
| RC810 | RC810 Marker Card - Horizontal [1-100]      | 1SNA234030R2700             |       |
| RC810 | RC810 Marker Card - Vertical 10 x [1-10]    | 1SNA234041R2600             |       |
| RC810 | RC810 Marker Card - Vertical 10 x [11-20]   | 1SNA234042R2700             |       |
| RC810 | RC810 Marker Card - Vertical [1-100]        | 1SNA234060R0500             |       |

### Marker Cards - General

|        |                                                            |                 |  |
|--------|------------------------------------------------------------|-----------------|--|
| ---    | Permenant Marker Pen                                       | 1SNA164386R2700 |  |
| REH3   | Marker Card Red Text 22 x [1-30] & 1 x [1-20]              | 1SNA164695R2500 |  |
| RTM7   | 0.5m Strip of blank markers for Top of 6mm pitch terminals | 1SNA168410R0700 |  |
| RCPEB  | Sheet of 54 Markers                                        | 1SNA178430R0500 |  |
| EPR1   | Sheet of 54 Clear Covers for RCPEB Markers                 | 1SNA178431R2200 |  |
| RCCV   | RCCV Card of 48 blank wire markers                         | 1SNA235460R0400 |  |
| PETC53 | Clear Holder For RCCV Markers                              | 1SNA168741R1600 |  |
| RCT610 | RCT 610 Top Marker Card - BLANK                            | 1SNA236000R0400 |  |
| RCT810 | RCT 810 Top Marker Card - BLANK                            | 1SNA236500R0600 |  |
| RC1010 | RC1010 Marker Card - BLANK                                 | 1SNA238000R1600 |  |

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### AMS500 Plotter Accessories

|              |                                             |                 |  |
|--------------|---------------------------------------------|-----------------|--|
| AMS PEN 0,25 | 0.25mm Pen for AMS500 Plotter               | 1SNA360100R2500 |  |
| AMS PEN 0,35 | 0.35mm Pen for AMS500 Plotter               | 1SNA360101R1200 |  |
| ---          | 0.35mm Disposable Pen for AMS500 Plotter    | 1SNA360121R0500 |  |
| AMS INK      | Pack of 5 ink cartridges for AMS500 Plotter | 1SNA360150R2600 |  |
| AMS CLEANER  | Pen Cleaner for AMS500 pens                 | 1SNA360155R1700 |  |



Full range of product and technical information place this part number in a search engine and download

1SNC160001C0207



# Jokab Safety



## Jokab Safety

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- Sensors & switches..... 7/32
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- Contact rails and bumpers..... 7/52
- Safety mats ..... 7/54
- Fencing systems ..... 7/56



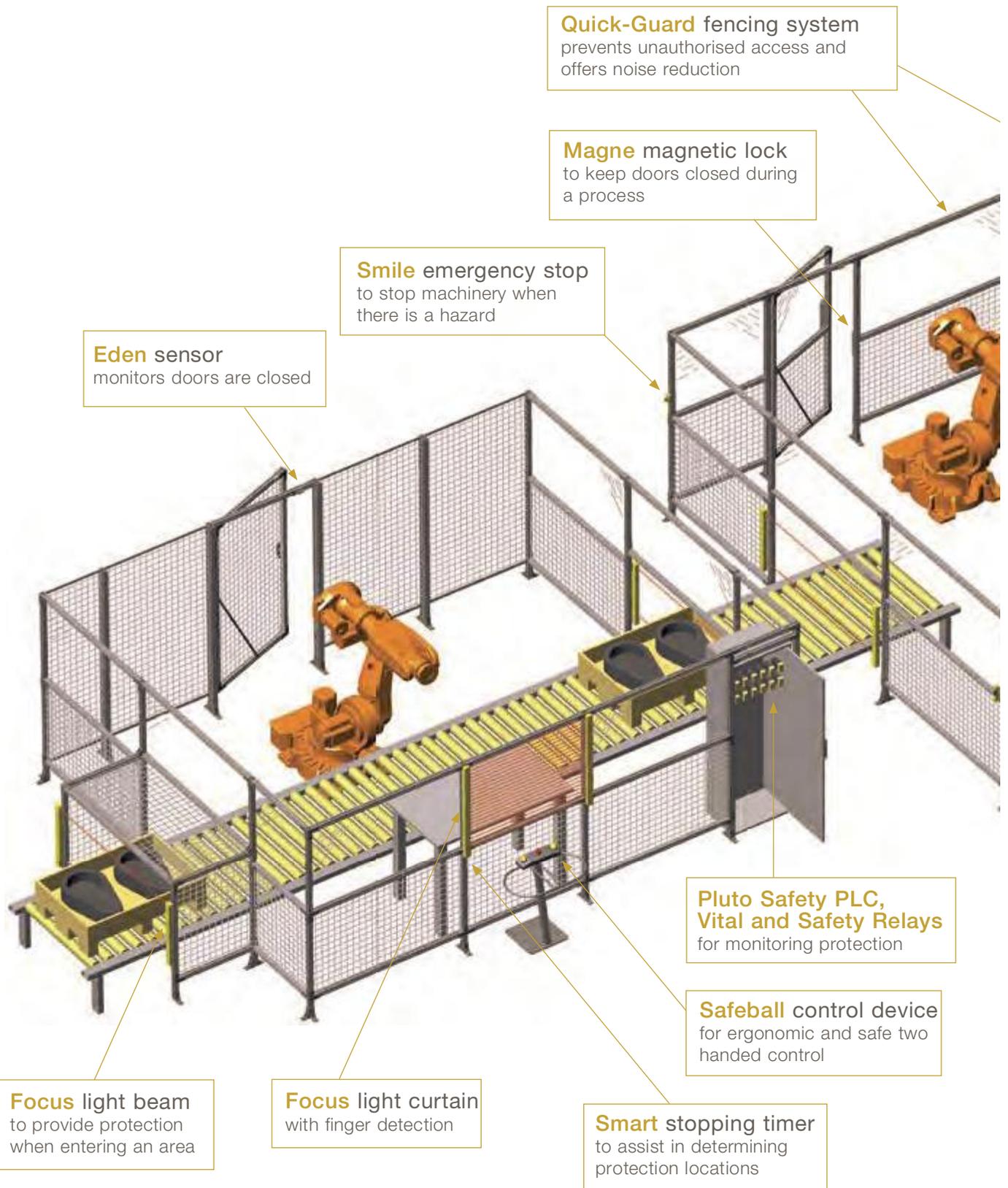
### Jokab Safety



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 Safety Handbook  
 27LC172001C0201

# Jokab Safety

## Production-friendly safety systems



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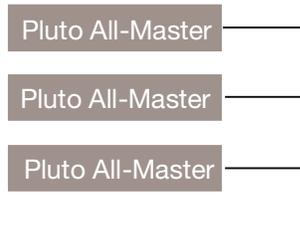


| Product Groups |                                                                                                                                              |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------|
|                | <b>Training &amp; Advice</b><br>Practical application of standards and regulations, along with CE-labelling.                                 |
|                | <b>Pluto Safety PLC</b><br>A unique All-Master safety PLC for dynamic and static safety circuits.                                            |
|                | <b>Vital Safety System</b><br>Dynamic safety circuit for several sensors in accordance with the highest safety category.                     |
|                | <b>Tina Adapter Units</b><br>Transformation of static signals to dynamic safety signals, etc.                                                |
|                | <b>Safety Relays</b><br>The market's most flexible safety relays for different protection purposes and categories.                           |
|                | <b>Stopping Time &amp; Machinery Diagnosis</b><br>Used for stopping time measurement, annual maintenance and for trouble shooting machinery. |
|                | <b>Light Curtain/Light Beam/Scanner</b><br>Complete range of light beams, light curtains and scanners.                                       |
|                | <b>Sensors/Switches/Locks</b><br>Dynamic non-contact sensors, key switches and solenoid switches.                                            |
|                | <b>Control Devices</b><br>Ergonomic three-position control units, two-handed control units and foot pedals.                                  |
|                | <b>Emergency Stop Devices</b><br>Emergency stop devices for dynamic and static safety circuits.                                              |
|                | <b>Contact Strips/Bumpers/Safety Mats</b><br>Sensitive edges, bumpers and safety mats.                                                       |
|                | <b>Fencing Systems/SafeCAD/Roller Doors</b><br>A stable and flexible fencing system that is easy to install.                                 |

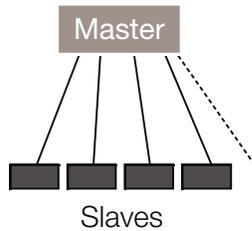
# Pluto safety PLC's

## for simplifying design and changes to safety systems

### Our solution with All-Master

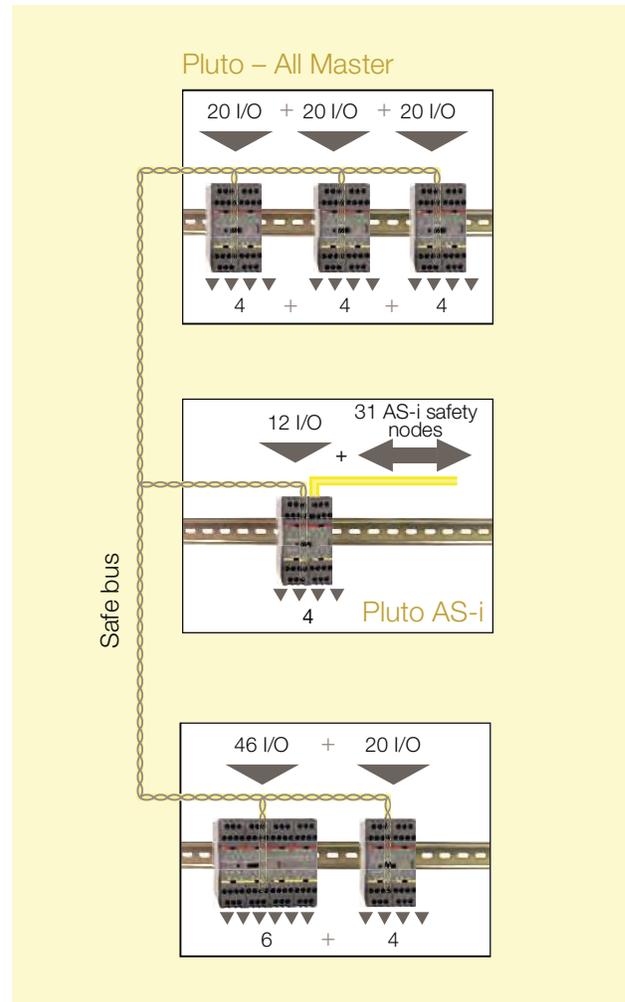


### Traditional safety PLC



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Pluto is an "All-Master" safety PLC concept, that simplifies the design of safety systems and achieves the highest safety level PL e according to EN ISO 13849-1 and SIL 3 according to EN 62061 and EN 61508. The key difference between Pluto and conventional safety PLC's is that there is no "Master-Slave" relationship between the control units connected to the safety bus. Each Pluto is a 'Master' unit and can see the other Plutos' inputs and outputs, and can thereby make decisions about its own safety environment.



This concept enables simple communication, programming and changes to the safety system. With the use of a 'Gateway' device, a Pluto can communicate with other bus systems and thereby form part of a larger network. Gateway units are available for several different bus systems, such as Profibus, CanOpen, DeviceNet, Profinet, Ethernet/IP and Modbus TCP. With a Pluto AS-i, both safety slaves and standard slaves can be handled. Pluto offers an economic solution for both single machines and for major machine systems.

# Pluto safety PLC's to supervise safety devices



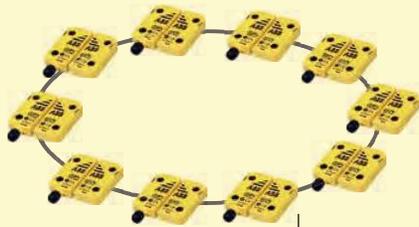
Most safety devices on the market can be connected directly to Pluto units. By using dynamic signals with sensors from ABB Jokab Safety only one input is needed to achieve the highest level of safety, compared to two inputs for other manufacturers' PLCs. It is also possible to connect up to 10 sensors in series to a single input on Pluto and still achieve the highest level of safety.

For example non-contact Eden sensors, Spot light beams and Tina emergency stop buttons can all be connected in series to a single Pluto input. Even mechanical switches can be connected to the 'dynamic' safety circuit using ABB Jokab Safety's various Tina adapters. Pluto also has IO connections that can be used as both inputs and outputs.

## to save on inputs!

### Dynamic signals

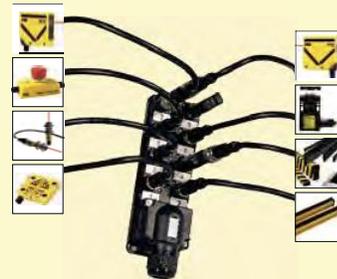
1-10 doors with one Eden per door  
PL e



One input

### Dynamic signals

1-10 sensors  
PL e



One input

### Pluto

has inputs for static and dynamic sensors. Several sensors can be connected to one dynamic input in accordance with PL e.



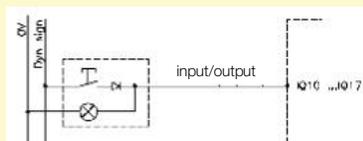
One connection

Two inputs

### IO connections

Pluto has IO connections that can be used in three ways:

- input
- output
- both input and output at the same time (e.g. for a reset button with lamp indication)



Static inputs (mechanical switches)  
2 for each door = PL e



# Pluto safety PLC's



## Technical data - general

|                                           |                                              |
|-------------------------------------------|----------------------------------------------|
| Colour:                                   | Grey                                         |
| Operating voltage:                        | 24V DC ±15%                                  |
| Electrical insulation:                    | Category II in accordance with IEC 61010-1   |
| Safety level                              |                                              |
| EN 954-1                                  | Cat. 4                                       |
| EN ISO 13849-1                            | PL e/cat. 4                                  |
| EN 61508                                  | SIL 3                                        |
| EN 62061                                  | SIL 3                                        |
| PFH <sub>d</sub>                          |                                              |
| Relay output                              | 2,00×10 <sup>-9</sup>                        |
| Transistor output                         | 1,50×10 <sup>-9</sup>                        |
| Pluto safety bus                          |                                              |
| Max number of Pluto units on the databus: | 32                                           |
| Databus type:                             | CAN                                          |
| Databus speeds:                           | 100, 125, 200, 250, 400, 500, 800, 1000 kb/s |
| Databus cable length:                     | Up to 600 m, 150 m at 400 kb/s               |

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## Selection

| Description                               | Part No.  | Product Hierarchy 4700001 |       |
|-------------------------------------------|-----------|---------------------------|-------|
|                                           |           | Order Code                | Price |
| Pluto S20 20- I/O Non-Pluto safety bus    | 20-070-05 | 2TLA020070R0500           |       |
| Pluto B46-6 46- I/O with Pluto safety bus | 20-070-17 | 2TLA020070R1700           |       |
| Pluto S46-6 46- I/O Non-Pluto safety bus  | 20-070-18 | 2TLA020070R1800           |       |
| Pluto A20 20- I/O Current monitoring      | 20-070-03 | 2TLA020070R0300           |       |
| Pluto B16 16- I/O Non-failsafe outputs    | 20-070-07 | 2TLA020070R0700           |       |
| Pluto B20 20- I/O with Pluto safety bus   | 20-070-06 | 2TLA020070R0600           |       |
| Pluto AS-i v2                             | 20-070-11 | 2TLA020070R1100           |       |
| IDFIX-R identifier pre-programmed         | 20-070-20 | 2TLA020070R2000           |       |
| IDFIX-RW identifier programmable          | 20-070-21 | 2TLA020070R2100           |       |
| Pluto USB cable for programing            | 20-070-58 | 2TLA020070R5800           |       |
| GATE-P2 Pluto Gateway PROFIBUS-DP         | 20-070-70 | 2TLA020071R8000           |       |
| GATE-C2 Pluto Gateway CANopen             | 20-070-71 | 2TLA020071R8100           |       |
| GATE-D2 Pluto Gateway DeviceNet           | 20-070-72 | 2TLA020071R8200           |       |
| GATE-E2 Pluto Gateway Ethernet            | 20-070-73 | 2TLA020071R8300           |       |



### Jokab Safety



Full range of products and technical information place this part number in a search engine and download

Safety Handbook  
2TLC172001C0201

# Vital - safety controller

Control of an entire safety system based on the dynamic safety circuit



Vital is based on a single channel safety concept where multiple safety sensors can be connected in series and monitored with a single safety controller. A dynamic signal is sent from Vital through all connected sensors, and then returned to Vital which then evaluates the received signal. As each safety sensor inverts the signal, it is possible to detect short circuits or faults in any of the sensors. Vital 2 and Vital 3 are designed for use with ABB Jokab Eden sensors, Tina components and Spot light grids or similar products. Vital 2 and 3 are both safety controllers with two safe input functions and two output groups, the only difference between the two models being in the input configuration.

## Technical data - general data for Vital 1

TÜV Nord – Vital 1  
TÜV Rheinland – Vital 2 and 3



|                                                                                 |                                                                     |                                                                                                                                                                             |                                                                      |
|---------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Level of safety<br>EN ISO 13849-1<br>EN 62061<br>IEC/EN 61508-1...7<br>EN 954-1 | PL e, category 4<br>SIL 3<br>SIL 3<br>Category 4                    | Number of sensors<br>Max. number of Eden/Tina to Vital 1<br>Total max. cable length to Eden/Tina<br>Max. number of Spot T/R to Vital<br>Total max. cable length to Spot T/R | 30<br>1000 m<br>6 pairs<br>600 m                                     |
| PFHd                                                                            | 1,01x10 <sup>-8</sup>                                               | Relay outputs<br>NO<br>Max switching capacity, resistive load                                                                                                               | 2<br>6A/250 VAC/1500 VA/150W                                         |
| Power supply<br>Vital, A1-A2<br>From Vital to sensors/units, B1-B2              | 24 VDC ±15%<br>24 VDC                                               | Minimum load<br>Contact material<br>Mechanical life<br>External fuse (EN 60947-5-1)                                                                                         | 10 mA/10V<br>AgCdO<br>>10 <sup>7</sup> operations<br>6.3A or 4A slow |
| Dynamic safety circuit<br>T 1<br>R 1                                            | Output signal<br>Input signal                                       |                                                                                                                                                                             |                                                                      |
| Reset input X1<br>Supply for reset input<br>Reset current                       | +24VDC<br>30 mA max. (inrush current 300 mA during contact closure) |                                                                                                                                                                             |                                                                      |
| Minimum contact closure time for reset                                          | 80 ms                                                               |                                                                                                                                                                             |                                                                      |

### Connection of S1

Even numbers of sensors (Eden + Spot T/R + Tina) require a connection between B1 and S1. S1 is not connected for odd numbers of sensors. Odd number, no connection between B1 and S1.

## Selection



|         |           | Product Hierarchy 4700002 |       |
|---------|-----------|---------------------------|-------|
| Type    | Part No   | Order Code                | Price |
| Vital 2 | 20-070-43 | 2TLA020070R4300           |       |
| Vital 3 | 20-070-44 | 2TLA020070R4400           |       |

7

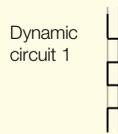
# Vital - safety controller

## Features

- Easy installation
- Flexible
- Cost effective
- A wide range of safety sensors can be connected into the circuit
- Several safe outputs
- Information output
- Outputs with time delay (Vital 2 and 3)
- Display for troubleshooting (Vital 2 and 3)

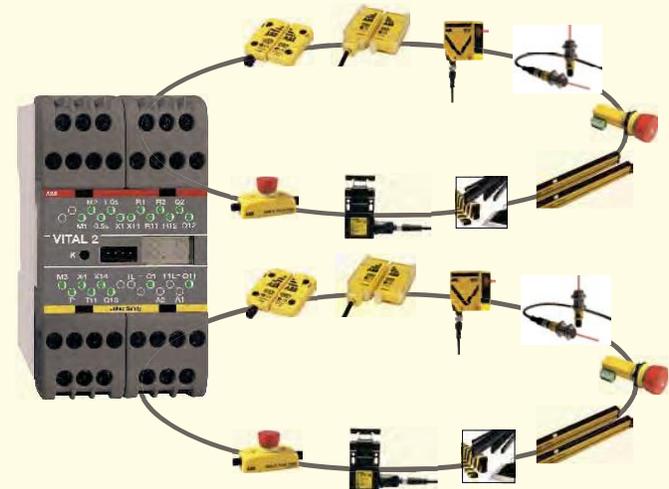
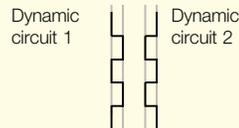
### Vital 1 Safety controller

Up to 30 sensors can be connected to the same dynamic safety circuit



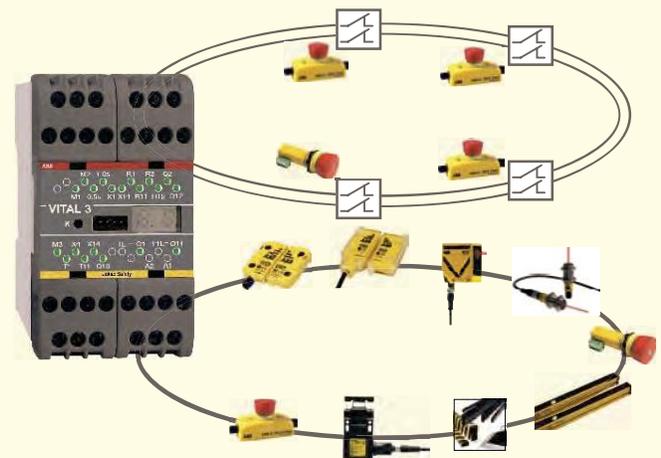
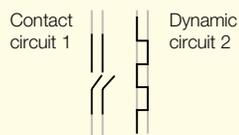
### Vital 2 Safety controller

- Two safety circuits are monitored by one module
- Simple system with extensive functionality
- Up to 10 sensors can be connected to each dynamic safety circuit
- Output group 2 can be set for time delay
- Three different modes of operation



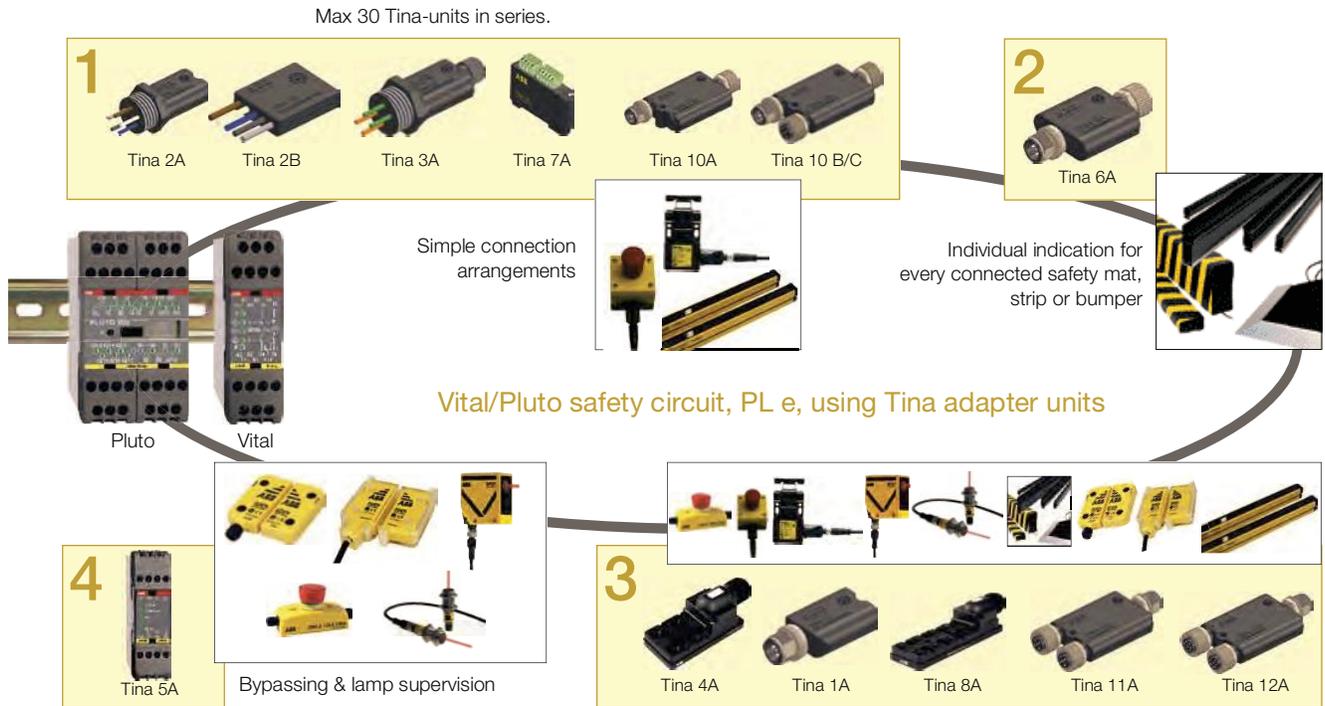
### Vital 3 Safety controller

- Two safety circuits are monitored by one module
- Devices with two-channel, opening contacts can be connected to one circuit
- Simple system with extensive functionality
- Output group 2 can be set for time delay
- Three different modes of operation



# Tina - adapter units

Application - adaption of many different types of safety devices to the dynamic system



## Why you should choose Tina?

- Safety circuit, PL e, EN ISO 13849-1
- Individual status indication of every connected unit in the safety circuit
- Supervision of lamp indicating bypassing of safety device
- Quick release M12 connector

Jokab Safety

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# Tina - adapter units

## Tina is available in several versions

Tina is available in several versions depending on the type of safety component that is connected to the Vital or Pluto circuit. Also available is a bypassing unit, three connector blocks with 2, 4 or 8 M12 connectors, and a blind plug for un-used connections. As an accessory there is a Y-connector for series or parallel connection and even for connection of light beams

with separate transmitter and receiver. Tina units are also included in emergency stop models Smile Tina and Tina Inca. This is to adapt ABB Jokab Safety's products to dynamic safety circuits.

All Tina-units are designed to decode the dynamic signal in the safety circuit of Vital/Pluto.

### 1 Tina 2A/B, Tina 3A and Tina 7A

are used to connect safety components with mechanical contacts, such as emergency stops, switches and light curtains/light beams with relay outputs.

### Tina 10A/B/C

units are used for connection of Focus light beams/curtains to Vital or Pluto. Tina 10B has an extra M12 connector that enables reset, a reset lamp and switching of the Focus supply voltage. The Tina 10C has an additional M12 connector that permits a Focus transmitter to receive power.

### 2 Tina 6A

is used to connect door sensitive edges and safety mats.

### 3 Tina 4A, Tina 8A, Tina 11A and Tina 12A

are used as terminal blocks and simplify connection to a Vital safety circuit.

### 4 Tina 5A

is used to bypass the safety sensors in Vital security loop.

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### Tina adapters

| Description                    | Group | Part No   | Product Hierarchy 4700002 |       |
|--------------------------------|-------|-----------|---------------------------|-------|
|                                |       |           | Order Code                | Price |
| Tina 1A plug for Tina 4/8      | 3     | 20-054-00 | 2TLA020054R0000           |       |
| Tina 2A adapter unit           | 1     | 20-054-01 | 2TLA020054R0100           |       |
| Tina 2B w cable to emergency   | 1     | 20-054-11 | 2TLA020054R1100           |       |
| Tina 3A adapter unit           | 1     | 20-054-02 | 2TLA020054R0200           |       |
| Tina 4A connection block       | 3     | 20-054-03 | 2TLA020054R0300           |       |
| Tina 5A bypass unit            | 4     | 20-054-04 | 2TLA020054R0400           |       |
| Tina 8A connection block w M12 | 3     | 20-054-05 | 2TLA020054R0500           |       |
| Tina 6A adapter unit           | 2     | 20-054-06 | 2TLA020054R0600           |       |
| Tina 7A adapter unit           | 1     | 20-054-07 | 2TLA020054R0700           |       |
| Tina 10A                       | 1     | 20-054-12 | 2TLA020054R1200           |       |
| Tina 10B                       | 1     | 20-054-13 | 2TLA020054R1300           |       |
| Tina 10C                       | 1     | 20-054-16 | 2TLA020054R1600           |       |
| Tina 11A                       | 3     | 20-054-17 | 2TLA020054R1700           |       |
| Tina 12A                       | 3     | 20-054-18 | 2TLA020054R1800           |       |

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# Safety relays

## Why should you use safety relays?

### to meet existing safety standards

A fault in the control circuit logic, or failure of or damage to the control circuit must not lead to dangerous situations. This is the requirement in the EU's Machinery Directive 98/37/EC under the heading 1.2.7. "Failure of the control circuit". The directive implies that no person should be put at risk if for example, a relay sticks or if a transistor or two electrical conductors short-circuit.

A safety relay will fulfill these requirements. A safety relay has, for example, inputs that are checked for short-circuits and

dual redundant circuits that are checked at each operation. This can be compared to the dual brake circuits in a car. If one of the circuits is faulty the other will stop the car. In a safety relay there is an additional function which only allows a machine to start if both circuits are ok.

The standard for safety related parts of the control system describes various safety categories depending on the level of risk and application. One single universal relay with selectable safety categories solves this.

### to supervise safety devices



### for safe stops and reliable restarts



Dual stop signals when the gate is opened.

Entering or putting a hand or limb into a hazardous area must cause all machinery that can cause personal injury to stop safely. Many serious accidents occur when machinery is believed to have stopped but is in fact only pausing in its program sequence. The safety relay monitors the gate interlock switch and cables and gives dual stop signals.



Supervised reset when there can be a person within the risk area.

To make sure that nobody is within the restricted area when activating the reset button. A supervised reset button must be pressed and released before a reset can occur. Many serious accidents have been caused by an unintentional and unsupervised reset.



Timed reset when you cannot see the entire risk area.

Sometimes a double reset function is necessary to make sure that no one is left behind in the risk area. First, after ensuring no other person is inside the hazardous area, the pre-reset button must be activated, followed by the reset button outside the risk area within an acceptable time period e.g 10 seconds. A safety timer and a safety relay can provide this function.



Automatic reset for small hatches.

Where body entry is not possible through a hatch, the safety circuit can be automatically reset. The safety relays are reset immediately when the hatch interlock switch contacts are closed.

# Safety relays

## The most flexible safety relays on the market

We have the most flexible safety relays on the market. Our first universal relay was developed in 1988.

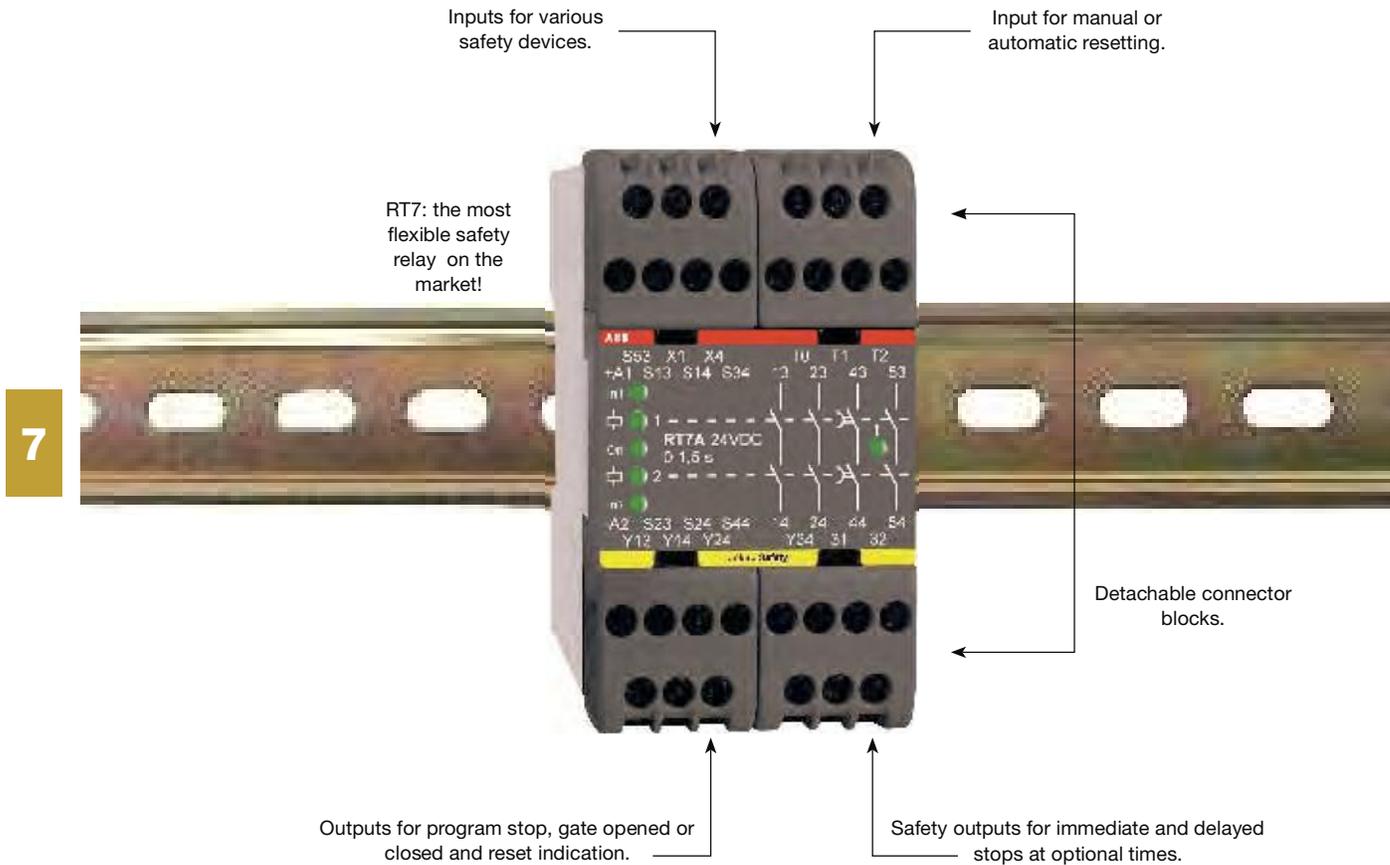
Nowadays, the flexibility is even greater and size has been reduced by 85 %. A universal relay is a safety relay with various input options for various safety devices and risk levels.

Internally, the safety relay is of the highest safety level (PL e according to EN ISO 13849-1). A machine supplier can therefore, with one single safety relay, select the input configuration that best suits their customers' safety requirements. In addition, our safety relays have detachable connector blocks for ease of replacement and testing. As our universal relays incorporate all input options,

they are compatible with all our previous safety relays as well as with other manufacturers' products.

Is a universal relay expensive? No, our latest patented construction is extremely simple and the number of major components is less compared to our previous universal relays. This means that the safety relays are even more reliable than before.

We also have a great deal of experience from safety solutions in our own system developments. It would be our pleasure to share these experiences with you! Please see the complete safety solutions in the section "Connection examples". Please do not hesitate to contact us if you should require any other safety solutions.



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### Some of the advantages with ABB Jokab Safety's safety relays:

- Universal relays
- Excellent reliability
- Approved in Europe, USA, Canada
- Supervised reset
- Time reset
- Small and compact
- Detachable connector blocks
- Low power consumption
- Permits the use of long emergency stop cables
- EX compatibility
- Functions set by external hardwired links
- LED indication for inputs and outputs
- Powerful switching capacity

# Safety Relays

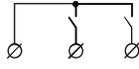
## Selection

|                                | Safety relays |     |     |        |      |       |                       |                    | Safety-timers |            | Expansion relays |       |       |       |
|--------------------------------|---------------|-----|-----|--------|------|-------|-----------------------|--------------------|---------------|------------|------------------|-------|-------|-------|
|                                | RT6           | RT7 | RT9 | JSRT11 | JSR4 | JSR14 | JSRT15T, BT50T, BT51T | JSRT15, BT50, BT51 | JSHT1A/B      | JSHT2A/B/C | ETT              | JSR1T | JSR2A | JSR3T |
| Interlocking switch/Gate/Hatch | •             | •   | •   | •      | •    | •     | •                     | •                  |               |            |                  |       |       |       |
| Light curtains                 | •             | •   | •   | •      |      |       |                       |                    |               |            |                  |       |       |       |
| Light beams                    | •             | •   | •   | •      |      |       |                       |                    |               |            |                  |       |       |       |
| Safety mats                    | •             | •   | •   |        | •    | •     |                       |                    |               |            |                  |       |       |       |
| Contact strips                 | •             | •   | •   |        | •    | •     |                       |                    |               |            |                  |       |       |       |
| Two-hand control device        |               |     |     |        | •    |       |                       |                    |               |            |                  |       |       |       |
| Emergency stop                 | •             | •   | •   | •      | •    | •     | •                     | •                  |               |            |                  |       |       |       |
| Hold to run/enabling device    | •             | •   | •   | •      | •    | •     |                       |                    | •             |            |                  |       |       |       |
| Foot control device            | •             | •   | •   | •      | •    | •     |                       |                    | •             |            |                  |       |       |       |
| Area supervision               | •             | •   | •   | •      | •    | •     |                       |                    |               |            |                  |       |       |       |
| Time resetting                 |               |     |     |        |      |       |                       |                    | •             |            |                  |       |       |       |
| Time bypassing                 |               |     |     |        |      |       |                       |                    | •             | •          |                  |       |       |       |
| Inching                        |               |     |     |        |      |       |                       |                    |               | •          |                  |       |       |       |
| Output expansion               | •             | •   | •   | •      |      | •     | •                     | •                  |               |            | •                | •     | •     |       |
| Delayed output                 |               | •   |     |        |      |       | •                     |                    |               |            | •                | •     |       | •     |

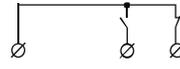
### Input alternatives (see also technical data on the next page)



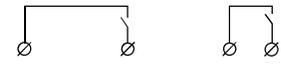
**Single-channel, 1 NO from +24 V  
Category 1, up to PL c**  
The input must be closed before the outputs can be activated. A stop signal is given when the input is opened.



**Two-channel, 2 NO from +24 V  
Category 3, up to PL d**  
Both the inputs must be closed before the outputs can be activated. A stop signal is given if one or both of the inputs are opened. Both the inputs must be opened and reclosed before the outputs can be reactivated. A short-circuit between the inputs is not monitored by the safety relay. Category 4 can only be achieved if a safety device with short circuit monitored outputs is connected.



**Two-channel, 1 NO & 1 NC from +24V  
Category 4, up to PL e**  
One input must be closed and one must be opened before the outputs can be activated. A stop signal is given if one or both of the inputs change position or if the inputs short-circuit. Both inputs must be put into their initial position before the outputs can be reactivated.



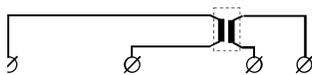
**Two-channel, 1 NO from 0 V &  
Category 4, up to PL e**  
Both the inputs must be closed before the outputs can be activated. A stop signal is given if one or both of the inputs are opened. Both the inputs must be opened and reclosed before the outputs can be reactivated. A Stop signal is given if there is a short-circuit between the inputs.

# Safety Relays

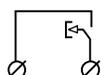
|                                               | Safety relays |                |      |         |       |       |                |                |                |              |      | Safety-timers  |                | Expansion relays |      |       |                |
|-----------------------------------------------|---------------|----------------|------|---------|-------|-------|----------------|----------------|----------------|--------------|------|----------------|----------------|------------------|------|-------|----------------|
|                                               | RT6           | RT7            | RT9  | JSBRT11 | JSBR4 | JSBT4 | JSBT5T         | BT50T          | BT51T          | BT50 (JSBT5) | BT51 | JSHT1A/B       | JSHT2A/B/C     | ETT              | JSRT | JSR2A | JSR3T          |
| <b>Safety category</b>                        | 1-4           | 1-4            | 1-4  | 1-4     | 4     | 4     | 1-4°           | 1-4°           | 1-4°           | 1-4°         | 1-4° | 1-4            | 1-4            | 1-4              | 1-4  | 1-4   | 1-4            |
| <b>Safety input</b>                           |               |                |      |         |       |       |                |                |                |              |      |                |                |                  |      |       |                |
| Single-channel, 1 NO from +24 V               | •             | •              | •    | •       |       |       | •              | •              | •              | •            | •    | •              | •              | •                | •    | •     | •              |
| Two-channel, 2 NO from +24 V                  | •             | •              | •    | •       |       |       |                |                |                |              |      |                |                |                  |      |       |                |
| Two-channel, 1 NO & 1 NC from +24 V           | •             | •              | •    | •       |       |       |                |                |                |              |      |                |                |                  |      |       |                |
| Two-channel, 1 NO from 0 V & 1 NO from + 24 V | •             | •              | •    | •       | •     | •     |                |                |                |              |      | •              | •              | •                | •    | •     | •              |
| Contact strips/Safety mats                    | •             | •              | •    |         | •     | •     |                |                |                |              |      |                |                |                  |      |       |                |
| <b>Reset &amp; test input</b>                 |               |                |      |         |       |       |                |                |                |              |      |                |                |                  |      |       |                |
| Monitored manual                              | •             | •              | •    | •       | •     |       |                |                |                |              |      |                |                |                  |      |       |                |
| Automatic/Unmonitored manual                  | •             | •              | •    | •       |       | •     | •              | •              | •              | •            | •    |                |                |                  |      |       |                |
| Testing of contactors, relays, valves, etc.   | •             | •              | •    | •       | •     | •     | •              | •              | •              | •            | •    | •              | •              |                  |      |       |                |
| <b>Output</b>                                 |               |                |      |         |       |       |                |                |                |              |      |                |                |                  |      |       |                |
| NO                                            | 3             | 2              | 2    | 7       | 3     | 3     |                |                |                | 3            | 4    |                |                | 4*               | 4*   | 4     |                |
| NO delayed                                    |               | 2              |      |         |       |       | 3 <sup>†</sup> | 3              | 4              |              |      |                |                | 4*               | 4*   |       | 2 <sup>‡</sup> |
| NO impulse outputs                            |               |                |      |         |       |       |                |                |                |              |      | 2 <sup>‡</sup> | 2 <sup>‡</sup> |                  |      |       |                |
| NC                                            | 1             | 1              |      | 2       | 1     | 1     |                |                |                | 1            |      |                |                |                  | 1*   | 1     |                |
| NC delayed                                    |               |                |      |         |       |       | 1 <sup>†</sup> | 1              |                |              |      |                |                |                  | 1*   |       |                |
| Info. output                                  | 2             | 3              | 1    |         |       |       |                | 1              | 1              |              |      |                |                |                  |      |       |                |
| <b>Switching capacity (resistive load)</b>    |               |                |      |         |       |       |                |                |                |              |      |                |                |                  |      |       |                |
| 6A/250VAC/1500VA/150W                         | 4             | 3              | 2    | 9       | 4     | 4     | 4              | 4 <sup>†</sup> | 4 <sup>†</sup> | 4            | 4    |                |                | 4                | 5    |       |                |
| 4A/250VAC/1000VA/100W                         |               |                |      |         |       |       |                |                |                |              |      | 2 <sup>‡</sup> | 2 <sup>‡</sup> |                  |      |       | 2 <sup>‡</sup> |
| 6A/250VAC/1380VA/138W                         |               | 2 <sup>†</sup> |      |         |       |       |                |                |                |              |      |                |                |                  |      |       |                |
| 10A/250VAC/1840VA/192W                        |               |                |      |         |       |       |                |                |                |              |      |                |                |                  |      | 5     |                |
| <b>Width (mm)</b>                             | 45            | 45             | 22,5 | 100     | 45    | 45    | 22,5           | 22,5           | 22,5           | 22,5         | 22,5 | 45             | 45             | 22,5             | 45   | 45    | 22,5           |
| <b>Supply voltage</b>                         |               |                |      |         |       |       |                |                |                |              |      |                |                |                  |      |       |                |
| 12VDC                                         |               |                |      |         |       |       | •              |                |                |              |      |                |                |                  |      |       |                |
| 24VDC                                         | •             | •              | •    | •       | •     | •     | •              | •              | •              | •            | •    | •              | •              | •                | •    | •     | •              |
| 24VAC                                         | •             | •              |      | •       | •     | •     | •              |                |                |              |      | •              | •              |                  |      | •     | •              |
| 48VAC                                         | •             | •              |      | •       | •     | •     |                |                |                |              |      | •              | •              |                  |      | •     |                |
| 115VAC                                        | •             | •              |      | •       | •     | •     |                |                |                |              |      | •              | •              |                  |      | •     |                |
| 230VAC                                        | •             | •              |      | •       | •     | •     |                |                |                |              |      | •              | •              |                  |      | •     |                |

\* Indicates the possibility of selecting delayed outputs    ‡ Indicates one relay contact per output (other relays having two contacts per output)  
<sup>†</sup> delayed    ° Category 4 depending on connection (When used as expansion relay with Pluto Safety PLC, then Category 4)    † fixed 0.5 s delay

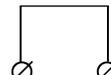
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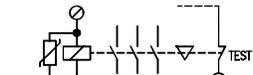
**Contact strips/Safety mats**  
**Category 3, up to PL d**  
 For an unpressurised mat/strip, both the relay inputs must be closed for the outputs to be activated. In the case of an activated mat/strip and short-circuit input channels, the relay will be de-energized. Current limitation prevents the safety relay from being overloaded when the channels short-circuit.



**Monitored manual reset**  
 A monitored reset means that the safety relay will not be reset if the reset button gets jammed when pressed in or if the input short-circuits. In order for the resetting to be complete, the input must be closed and opened before the outputs can close.



**Automatic/unmonitored manual reset**  
 Automatic reset means that the outputs are closed immediately when both the input conditions are satisfied and the test input is closed.



**Testing of contactors, relays & valves**  
 Can be carried out with both automatic and manual reset.

# Safety Relays



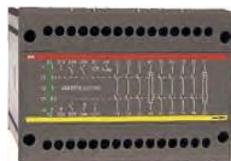
JSBR4



JSHT1



JSR1T



JSBRT11



RT6



JSBT5



JSHT2



JSR2A

## Safety Relays

| Description                     | Part No.  | Product Hierarchy 4700003 |       |
|---------------------------------|-----------|---------------------------|-------|
|                                 |           | Order Code                | Price |
| JSBR4 24DC Safety relay         | 10-002-00 | 2TLA010002R0000           |       |
| JSBR4 24AC Safety relay         | 10-002-02 | 2TLA010002R0200           |       |
| JSBR4 115AC Safety relay        | 10-002-04 | 2TLA010002R0400           |       |
| JSBR4 230AC Safety relay        | 10-002-05 | 2TLA010002R0500           |       |
| JSBT5 24AC/DC Safety relay      | 10-005-01 | 2TLA010005R0100           |       |
| JSBT5 12VDC Safety relay        | 10-005-07 | 2TLA010005R0700           |       |
| JSBT5T 24AC/DC Safety relay     | 10-005-11 | 2TLA010005R1100           |       |
| JSHT1A 24DC Time module         | 10-011-00 | 2TLA010011R0000           |       |
| JSHT1B 24DC Time module         | 10-011-10 | 2TLA010011R1000           |       |
| JSHT2A 24AC Time module         | 10-012-02 | 2TLA010012R0000           |       |
| JSHT2B 24DC Time module         | 10-012-10 | 2TLA010012R1000           |       |
| JSHT2C 24DC Time module         | 10-012-20 | 2TLA010012R1000           |       |
| JSR1T 0s Expan. relay 6A 24 DC  | 10-015-00 | 2TLA010015R0000           |       |
| JSR1T 1.5s Expan. relay 6A 24DC | 10-015-05 | 2TLA010015R0500           |       |
| JSR1T 8s Expan. relay 6A 24 DC  | 10-015-06 | 2TLA010015R0600           |       |
| JSR1T 0.5s Expan. relay 6A 24 D | 10-015-10 | 2TLA010015R1000           |       |
| JSR1T 10s Expan. relay 6A 24DC  | 10-015-20 | 2TLA010015R2000           |       |
| JSR1T 1s Expan. relay 6A 24 DC  | 10-015-30 | 2TLA010015R3000           |       |
| JSR1T 2s Expan. relay 6A 24 DC  | 10-015-40 | 2TLA010015R4000           |       |
| JSR1T 3s Expan. relay 6A 24 DC  | 10-015-50 | 2TLA010015R5000           |       |
| JSR1T 5s Expan. relay 6A 24DC   | 10-015-60 | 2TLA010015R6000           |       |
| JSR3T Expan. relay. 24 AC/DC    | 10-017-01 | 2TLA010017R0100           |       |
| JSBRT11 24DC Safety relay       | 10-025-00 | 2TLA010025R0000           |       |
| JSBRT11 115AC Safety relay      | 10-025-04 | 2TLA010025R0400           |       |
| JSBRT11 230AC Safety relay      | 10-025-05 | 2TLA010025R0500           |       |
| RT6 24DC Safety relay           | 10-026-00 | 2TLA010026R0000           |       |
| RT6 24AC Safety relay           | 10-026-02 | 2TLA010026R0200           |       |
| RT6 115AC Safety relay          | 10-026-04 | 2TLA010026R0400           |       |
| RT6 230AC Safety relay          | 10-026-05 | 2TLA010026R0500           |       |
| JSR2A Expan. relay 10A 24AC/DC  | 10-027-01 | 2TLA010027R0100           |       |
| JSR2A Expan. relay 10A 115AC    | 10-027-04 | 2TLA010027R0400           |       |
| JSR2A Expan. relay 10A 230AC    | 10-027-05 | 2TLA010027R0500           |       |

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# Safety Relays



## Safety Relays

| Description                   | Part No.  | Product Hierarchy 4700003 |       |
|-------------------------------|-----------|---------------------------|-------|
|                               |           | Order Code                | Price |
| RT7B 24DC Safety relay 3s     | 10-028-10 | 2TLA010028R1000           |       |
| RT7B 115AC Safety relay 3s    | 10-028-14 | 2TLA010028R1400           |       |
| RT7B 230AC Safety relay 3s    | 10-028-15 | 2TLA010028R1500           |       |
| RT7A 24DC Safety relay 1.5s   | 10-028-20 | 2TLA010028R2000           |       |
| RT7A 24AC Safety relay 1.5s   | 10-028-22 | 2TLA010028R2000           |       |
| RT7A 115AC Safety relay 1.5s  | 10-028-24 | 2TLA010028R2400           |       |
| RT7A 230AC Safety relay 1.5s  | 10-028-25 | 2TLA010028R2500           |       |
| RT9 24DC Safety relay         | 10-029-00 | 2TLA010029R0000           |       |
| E1T 0s Expansion relay 24DC   | 10-030-00 | 2TLA010030R0000           |       |
| E1T 0.5s Expansion relay 24DC | 10-030-10 | 2TLA010030R1000           |       |
| E1T 1s Expansion relay 24DC   | 10-030-20 | 2TLA010030R2000           |       |
| E1T 1.5s Expansion relay 24DC | 10-030-30 | 2TLA010030R3000           |       |
| E1T 2s Expansion relay 24DC   | 10-030-40 | 2TLA010030R4000           |       |
| E1T 3s Expansion relay 24DC   | 10-030-50 | 2TLA010030R5000           |       |
| BT50 24DC Safety relay        | 10-033-00 | 2TLA010033R0000           |       |
| BT50T 24DC Safety relay       | 10-033-10 | 2TLA010033R1000           |       |
| BT51 24DC Safety relay        | 10-033-20 | 2TLA010033R2000           |       |
| BT51T 24DC Safety Relay       | 10-033-30 | 2TLA010033R3000           |       |

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# Safety light grids, curtains and scanners Focus II

## Application:

Optical protection in an opening or around a risk area



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## A light grid/light curtain with many possibilities



Focus II is a new version of our previous light beam/light curtain Focus. Features such as muting and override are standard in all Focus II light curtains and light beams. For light curtains, blanking and break functions are also standard. The optical sensors on Focus II also have variable frequency. The Focus II units are light grids/curtains with safety functions intended for applications where it is of great importance to protect persons from a dangerous machine, robot or other automated systems where it is possible to access to a dangerous area.

Focus II creates a protection field with infrared beams. If any beam is interrupted the safety mechanism is triggered and the dangerous machine is stopped. Focus II fulfills the requirements for non-contact safety equipment type 4 (Focus 4 series) according to the international regulation standard EN 61496-1.

Units are available with safety heights between 150 and 2400 mm. All electronic control and monitoring functions are included in the light curtain profiles. External connection is made via a M12

connection at the end of the profile. Synchronization between transmitter and receiver is achieved optically. No electrical connection between the units is required. Control and monitoring of the beam transmission is carried out by two micro-processors which also give information on the status and alignment of the light curtain via several LEDs.

### Muting and Override included in all Focus II

The "Muting" and "Override" functions are available on all Focus II light grids/curtains and is enabled directly when an indication lamp LMS is connected. Muting implies that one or more segments or the whole light curtain can be bypassed during in and out passage of material.

In the Focus II with Muting there is also an Override function which makes it possible to bypass the light grid/curtain i.e. activate the outputs if a machine start is necessary even if one or more light beams are interrupted. This is the case when the muting function is chosen and the A and B inputs

# Safety light grids, curtains and scanners

## Focus II

### Features

- Type 4 according to EN 61496
- Flexible assembly
- LED indication
- High protection class (IP65)
- Range 3-40 m
- Time reset
- Muting
- Single/Double Break function
- External Device Monitoring (EDM)
- Available with different resolutions
- Up to PL e according to EN 954-1/EN ISO 13849-1

### Technical data - general

#### Performance

|                          |                                                                                                                                                                                                                              |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protective height        | 150mm - 2400mm                                                                                                                                                                                                               |
| Object resolution        | 14mm and 30mm                                                                                                                                                                                                                |
| Beam pitch (centre)      | 7.5mm and 18mm                                                                                                                                                                                                               |
| Operating range          | 0.2m - 3.0m (14mm resolution), default<br>3.0m - 6.0m (14mm resolution), DIP switch option<br>0.2m - 7.0m (30mm resolution), default<br>7.0m - 14m (30mm resolution), DIP switch option                                      |
| Effective aperture angle | For FI-2-xx-yyyy: $\pm 5^\circ$ maximum, transmitter and receiver according to IEC61496-2 for distances >3m<br>For FI-4-xx-yyyy: $\pm 2.5^\circ$ maximum, transmitter and receiver according to IEC61496-2 for distances >3m |
| Response time ON to OFF  | Maximum: 103ms.                                                                                                                                                                                                              |
| Light source             | Infrared emitting LEDs, wavelength 880nm<br>Power dissipation: <3mW class 1 acc. EN60825-1                                                                                                                                   |

#### Mechanical

|                           |                                      |
|---------------------------|--------------------------------------|
| Housing material          | Painted aluminium, yellow, RAL 1018  |
| Front plastic material    | Polycarbonate                        |
| Connector material        | Polyamide 6.6                        |
| End cup material          | Polycarbonate                        |
| Sealing, gasket material  | EPDM                                 |
| Mounting bracket material | Black powder coated stainless steel  |
| Mounting bolt             | Stainless steel M6                   |
| Wiring connectors         | 8 pin receiver and 5 pin transmitter |

#### Environmental

|                           |                                         |
|---------------------------|-----------------------------------------|
| Enclosure rating          | IP65                                    |
| Operating temperature     | -10°C ... +55°C                         |
| Storage temperature       | -25°C ... +70°C                         |
| Relative humidity         | 95% maximum. non condensing             |
| Vibration (IEC 60086-2-6) | 10-70 Hz, 0,35mm, maximum on all 3 axes |
| Shock (IEC 60086-2-29)    | 30 G for 16ms, 1000 shock on all 3 axes |

#### Electrical

|                         |                                           |
|-------------------------|-------------------------------------------|
| Power transmitter       | 24VDC $\pm 20\%$ , maximum current 70mA   |
| Power receiver          | 24VDC $\pm 20\%$ , maximum current 100mA  |
| Input voltage threshold | $V_{H,min} = 17VDC$ , $V_{L,max} = 6V$    |
| Test/reset              | 10mA, 24VDC, normally closed input, >2,5s |
| Muting A                | 10mA, 24VDC                               |
| Muting B                | 10mA, 24VDC                               |
| EDM                     | 10mA, 24VDC                               |
| Muting lamp             | 50mA min, 24VDC                           |

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# Safety light grids, curtains and scanners

## Focus II

### Technical data - general

#### Electrical

|                                       |                                                                                                                                                                                                                       |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety outputs (OSSD)                 | Two PNP safety outputs, each sourcing 500mA 24VDC. Short circuit protection.                                                                                                                                          |
| Voltage drop                          | < 2,3 v                                                                                                                                                                                                               |
| Leakage current                       | < 1 mA                                                                                                                                                                                                                |
| Capacitive load                       | < 250 nF for OSSD output                                                                                                                                                                                              |
| Inductive load                        | Please contact us                                                                                                                                                                                                     |
| Test pulse data                       | Test pulse <300us<br>Test interval, response time x 0,33<br>Repetition, response time x 0,66                                                                                                                          |
| Power supply                          | Must meet the requirements of EN/IEC60204-1 and EN/IEC61496-1, and must guarantee safe insulation from the mains voltage in accordance with IEC60742 and be able to cover a drop of supply voltage of at least 20 ms. |
| Protection class (IEC 536 or VDE 106) | III                                                                                                                                                                                                                   |
| Power on delay                        | <2 s                                                                                                                                                                                                                  |
| Insulation resistance                 | > 20 M ohms                                                                                                                                                                                                           |
| Dielectric voltage strength           | 350 vAC (1 min)                                                                                                                                                                                                       |

#### Connections

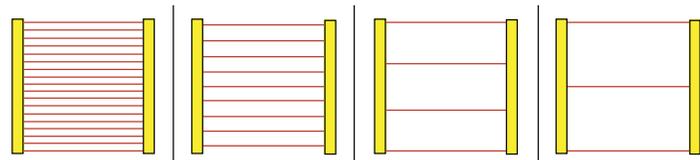
|                           |                                                                                                         |
|---------------------------|---------------------------------------------------------------------------------------------------------|
| Cable length Focus II     | Shielded cables:<br>Max. 100m, 0,4mm <sup>2</sup><br>Max. 50m, 0,2mm <sup>2</sup>                       |
| Cable length Focus II Mix | Shielded cables, M12 connector 8-pin these cables are shipped with the sensors. Maximum length is 0,9m. |

#### Conformity

|                                                     |                                                                                                                                                                                                                             |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AOPD (ESPE)                                         | FII-2-xx-yyyy: Type 2 acc. to EN/IEC 61496-1 and EN/IEC 61496-2<br>FII-4-xx-yyyy: Type 4 acc. to EN/IEC 61496-1 and EN/IEC 61496-2                                                                                          |
| Category                                            | FII-2-xx-yyyy system is suitable for safety control systems up to category 2 acc. EN 954-1<br>FII-4-xx-yyyy system is suitable for safety control systems up to category 4 acc. EN 954-1                                    |
| Safety integrity level                              | Focus II system is suitable for up to SIL 3 per IEC 61508                                                                                                                                                                   |
| Performance level                                   | Focus II type 2 systems is suitable for safety control systems up to Performance level c acc. EN ISO 13849-1. Focus II type 4 systems is suitable for safety control systems up to Performance level c acc. EN ISO 13849-1. |
| Mean time to dangerous failure (MTTF <sub>d</sub> ) | 450 years                                                                                                                                                                                                                   |
| PFH                                                 | 2,5*10 <sup>-09</sup>                                                                                                                                                                                                       |
| Proof test interval                                 | Every 20 years                                                                                                                                                                                                              |

# Safety light grids, curtains and scanners

## Focus II - light curtain/grid, Type 4 (FII-4)



| Type 4                       | FII-4-14-zzzz                                                                                                          | FII-4-30-zzzz                                                                                                          | FII-4-K4-zzzz   |      | FII-4-K3-800    |
|------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-----------------|------|-----------------|
| Resolution                   | 14                                                                                                                     | 30                                                                                                                     | 300             | 400  | 400             |
| Height (mm=zzzz)             | 150<br>300<br>450<br>600<br>750<br>900<br>1050<br>1200<br>1350<br>1500<br>1650<br>1800<br>1950<br>2100<br>2250<br>2400 | 150<br>300<br>450<br>600<br>750<br>900<br>1050<br>1200<br>1350<br>1500<br>1650<br>1800<br>1950<br>2100<br>2250<br>2400 | 900             | 1200 | 800             |
| Range (m)<br>SR<br>LR        | 0,2-3<br>3-6                                                                                                           | 0,2-7<br>7-14                                                                                                          | 0,5-20<br>20-40 |      | 0,5-20<br>20-40 |
| Reaction time off (ms)       | 12-68                                                                                                                  | 9-31                                                                                                                   | 13              |      | 13              |
| Reaction time on (ms)        | 138-104                                                                                                                | 141-119                                                                                                                | 142             |      | 142             |
| Manual reset                 | •                                                                                                                      | •                                                                                                                      | •               |      | •               |
| Automatic reset              | •                                                                                                                      | •                                                                                                                      | •               |      | •               |
| Pre reset                    | •                                                                                                                      | •                                                                                                                      | •               |      | •               |
| Muting inputs                | •                                                                                                                      | •                                                                                                                      | •               |      | •               |
| Muting lamp supervision      | •                                                                                                                      | •                                                                                                                      | •               |      | •               |
| Override                     | •                                                                                                                      | •                                                                                                                      | •               |      | •               |
| Muting T/L/X                 | • / • / •                                                                                                              | • / • / •                                                                                                              | • / • / •       |      | • / • / •       |
| Blanking 3 types             | • / • / •                                                                                                              | • / • / •                                                                                                              | - / - / -       |      | - / - / -       |
| Single/Double break          | • / •                                                                                                                  | • / •                                                                                                                  | - / -           |      | - / -           |
| EDM                          | •                                                                                                                      | •                                                                                                                      | •               |      | •               |
| Dyn. Adaption to Vital/Pluto | □                                                                                                                      | □                                                                                                                      | □               |      | □               |

• Standard

□ With Tina 10A/10B/10C or FMC-Tina

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| FII-4-K2-500    |                 | FII-4-K4-zzzz D |                 | FII-4-K3-800 D | FII-4-K2-500 D |           | FII-4-K2C-zzzz |     | FII-4-K2C-800 | FII-4-K1C-500 |
|-----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------|----------------|-----|---------------|---------------|
| 500             | 300             | 400             | 400             | 400            | 500            | 300       | 400            | 800 | 500           |               |
| 500             | 900             | 1200            | 800             | 500            | 900            | 1200      | 800            | 500 |               |               |
| 0,5-20<br>20-40 | 0,5-20<br>20-40 | 0,5-20<br>20-40 | 0,5-20<br>20-40 | 0,5-7          | 0,5-8          | 0,5-12    |                |     |               |               |
| 13              | 13              | 13              | 13              | 13             | 13             | 13        |                |     |               |               |
| 142             | 142             | 142             | 142             | 142            | 142            | 142       |                |     |               |               |
| •               | •               | •               | •               | •              | •              | •         |                |     |               |               |
| •               | •               | •               | •               | •              | •              | •         |                |     |               |               |
| •               | •               | •               | •               | •              | •              | •         |                |     |               |               |
| •               | •               | •               | •               | •              | •              | •         |                |     |               |               |
| •               | •               | •               | •               | •              | •              | •         |                |     |               |               |
| •               | •               | •               | •               | •              | •              | •         |                |     |               |               |
| • / • / •       | • / • / •       | • / • / •       | • / • / •       | • / • / •      | • / • / •      | • / • / • |                |     |               |               |
| - / - / -       | - / - / -       | - / - / -       | - / - / -       | - / - / -      | - / - / -      | - / - / - |                |     |               |               |
| - / -           | - / -           | - / -           | - / -           | - / -          | - / -          | - / -     |                |     |               |               |
| •               | •               | •               | •               | •              | •              | •         |                |     |               |               |
| □               | □               | □               | □               | □              | □              | □         |                |     |               |               |

# Safety light grids, curtains and scanners

## Focus II - FMC, FMI, FRM- versions and Tina units

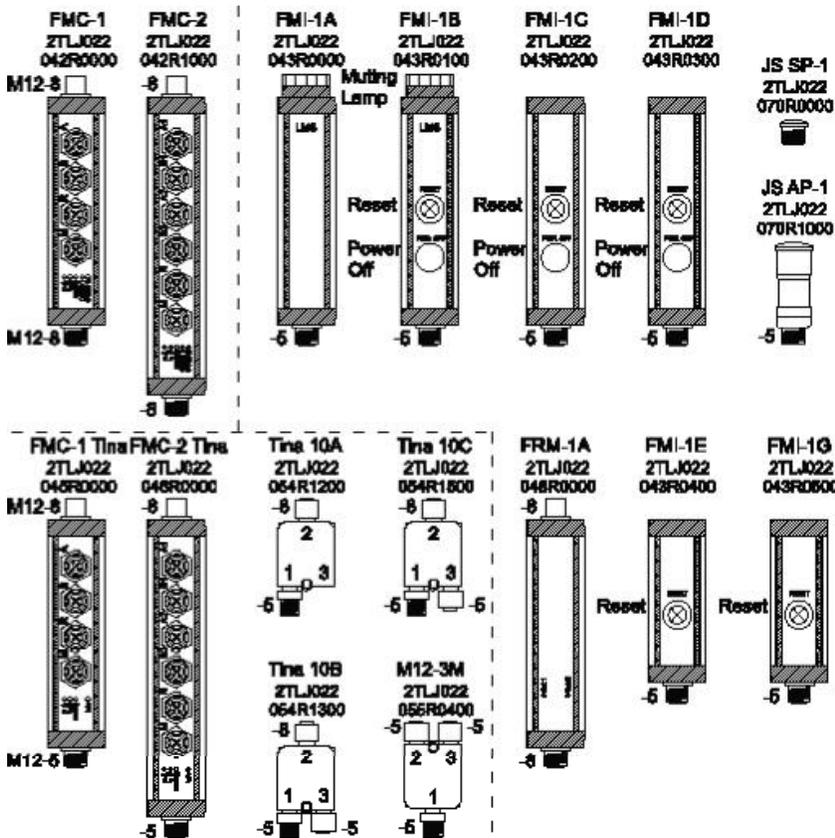


The FMC Focus Muting Connector, is a small, optimal unit which is used when the Focus light grid/curtain is required to be bypassed for in and out passage to and from a dangerous area. The FMC-unit is easily connected to Focus with a M12 connector.

The FMI Focus Muting Indicator, is a small unit with built-in muting lamp, reset button, "power off" (for alignment and override). The FMI unit is connected to the FMC unit with M12 connectors to facilitate the muting function connection.

## Tina-versions have dynamic safety outputs for Vital/Pluto

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- FMC-1(2): with connectors for muting sensors (A+B), reset, power off and muting lamp (R) and muting lamp (M).
- FMI-1A: with muting lamp only.
- FMI-1B: with reset, power off and muting lamp.
- FMI-1C: with reset and power off.
- FMI-1D: with reset, power off and internal resistor for the muting lamp.
- FMI-1E: as pre reset connected to connector A (A2) on FMC-1(2) (Tina).
- FMI-1G: with reset, and internal resistor for the muting lamp.
- FMC-1 (2)Tina: same as FMC-1(2) but connected to Vital or Pluto.
- Tina 10A: adaptor unit for connecting Focus to Vital or Pluto.
- Tina 10B: simplified FMC-1(2) Tina including only the connector (R).
- Tina 10C: simplified FMC-1(2) Tina including only power supply on con.no.3.
- M12-3M: bypass unit for easy connection outside the cabinet
- FRM-1A: translates the two OSSD outputs to relay outputs (and power supply).
- JS SP-1: protection plug for not used connectors.
- JS AP-1: adaptor for FMC units to use instead of FMI-1B or -1D on the (R) connector including muting resistor.

# Safety light grids, curtains and scanners

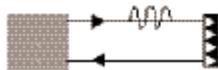
## Muting sensors – Mute R



### Retro-reflective with polarizing filters



10...30 VDC  
PNP  
Dark-on output



#### Features

- Range adjustable
- Light reserve warning indicator
- Transistor output, PNP
- 1000 Hz switching frequency
- Short-circuit protection, reverse polarity protection and power-up output suppression
- Connector M12
- EMC tested according to IEC 801 and EN50081-1/EN 50082-2

#### Technical data - general

| Description                          |                                                                           | Product Hierarchy 4700004 |        |
|--------------------------------------|---------------------------------------------------------------------------|---------------------------|--------|
|                                      |                                                                           | Order Code                | Price  |
|                                      | Part No                                                                   |                           |        |
|                                      | Mute R (FSTR-1)                                                           | 2TLA022044R0000           | 227.40 |
| Output                               | PNP, dark on                                                              |                           |        |
| Connection                           | Connector M12                                                             |                           |        |
| Range adjustment                     | Yes                                                                       |                           |        |
| Range                                | 0.15... 2.5 m (with reflector FZR 1)<br>0.15...5m (with reflector FZR 2A) |                           |        |
| Light source                         | Visible-red, 660 nm, pulsed with polarizing filter                        |                           |        |
| Supply voltage                       | 10...30 VDC                                                               |                           |        |
| Allowable ripple                     | ± 10% of $U_s$                                                            |                           |        |
| Current consumption (without load)   | <15 mA                                                                    |                           |        |
| Max. load current                    | 100 mA                                                                    |                           |        |
| Residual voltage                     | <1,6 V                                                                    |                           |        |
| Max. switching frequency             | 1000 Hz                                                                   |                           |        |
| Protection class                     | IP67                                                                      |                           |        |
| Temperature (operating and storage)  | -25 to +65° C                                                             |                           |        |
| Weight                               | approx. 15 g                                                              |                           |        |
| All technical data at 25° C and 24V. |                                                                           |                           |        |

# Safety light grids, curtains and scanners

## Bjorn - strong supports for light grids and mirrors

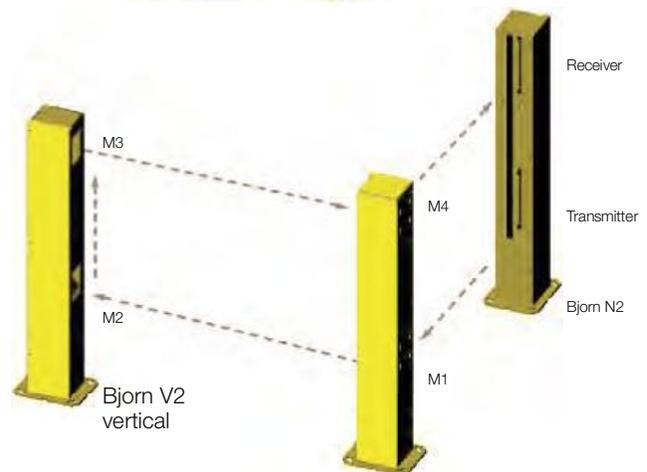


### Protects light curtain, light grids and mirror

Bjorn is a very stable and flexible stand system in which Focus safety light beams and mirrors are mounted in the stand. The fixings for the mirrors in the stand can be turned to provide either vertical or horizontal angles. The robust material of the Bjorn protects Focus units from direct collisions, and thus prevents unnecessary material damage and halts in production.

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Bjorn is available in stock as a standard version for dual safety light beams. Bjorn versions can also be ordered for Focus 3 and 4-beams.



### Technical data - general

| Description                                        |                                                          |
|----------------------------------------------------|----------------------------------------------------------|
| Colour:                                            | Yellow powder-coated (RAL 1018)                          |
| Material:                                          | 3 mm steel                                               |
| Dimensions:<br>Cross section<br>Foot               | 146 mm x 130 mm<br>230 mm x 190 mm                       |
| Weight:<br>H2, V2 and N2<br>H3<br>H4-1, H4-2<br>N5 | 15 kg/piece<br>17 kg/piece<br>20 kg/piece<br>27 kg/piece |
| Mirror reduction:                                  | ≤10 %                                                    |

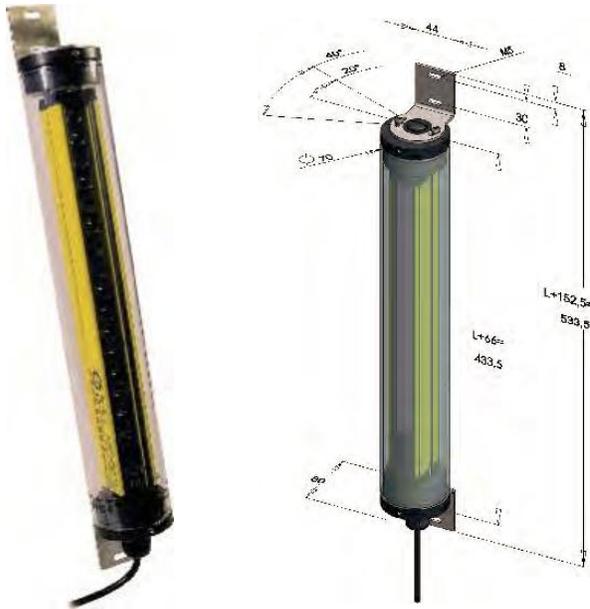
### Selection

| Type       | Part No.  | Product Hierarchy 4700004 |       |
|------------|-----------|---------------------------|-------|
|            |           | Order Code                | Price |
| Bjorn H2   | 22-041-40 | 2TLA022041R4000           |       |
| Bjorn V2   | 22-041-41 | 2TLA022041R4100           |       |
| Bjorn H3   | 22-041-42 | 2TLA022041R4200           |       |
| Bjorn H4-1 | 22-041-43 | 2TLA022041R4300           |       |
| Bjorn H4-2 | 22-041-44 | 2TLA022041R4400           |       |
| Bjorn N2   | 22-041-45 | 2TLA022041R4500           |       |
| Bjorn N3   | 22-041-46 | 2TLA022041R4600           |       |
| Bjorn N4-1 | 22-041-47 | 2TLA022041R4700           |       |
| Bjorn N4-2 | 22-041-48 | 2TLA022041R4800           |       |
| Bjorn N5   | 22-041-48 | 2TLA022041R4900           |       |

H = Horizontal reflection  
V = Vertical reflection  
N = Floor stand for Focus

# Safety light grids, curtains and scanners

## Focus Wet - protection against water and dust for Focus light curtains and light beams



### Protection in severe environments

- Adjustable  $\pm 20^\circ$
- Rotatable and replaceable tube
- Capable of draining and through ventilation

Wet is used for protection against water (or dust) where extreme washing conditions are encountered. The protective encapsulation rating (IP68) now enables Focus light curtains and light beams to be used for such applications as the food industry where the use of high pressure washing for cleaning machinery often occurs. The draining and through ventilation capabilities mean that condensation can be avoided.

Wet, with Focus light curtains or light beams, is pre-assembled complete with cabling, on request. During installation on a machine a Wet unit can be adjusted by  $\pm 20^\circ$  with the accompanying angle bracket. The plastic tube is rotatable and the outside is easy to clean.

#### Technical data - general

##### Description

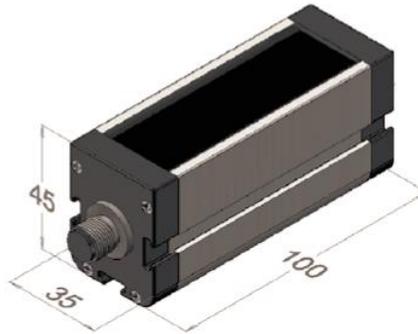
|                           |                                  |
|---------------------------|----------------------------------|
| Colour:                   | Transparent plastic              |
| Length including lid:     | light curtain/light beam + 66 mm |
| Material:                 |                                  |
| Tube                      | PC                               |
| Lid                       | PEHD-300                         |
| Angle bracket             | Stainless steel                  |
| Max. ambient temperature: | +55°C                            |
| Installation adjustment   | $\pm 20^\circ$                   |
| Protection rating         | IP68 (IP69K)                     |

#### Selection

|                |           | Product Hierarchy 4700004 |       |
|----------------|-----------|---------------------------|-------|
| Type           | Part No.  | Order Code                | Price |
| WET-150 FII    | 22-038-00 | 2TLJ022038R0000           |       |
| WET-300 FII    | 22-038-01 | 2TLJ022038R0100           |       |
| WET-450 FII    | 22-038-02 | 2TLJ022038R0200           |       |
| WET-600 FII    | 22-038-03 | 2TLJ022038R0300           |       |
| WET-750 FII    | 22-038-04 | 2TLJ022038R0400           |       |
| WET-900 FII    | 22-038-05 | 2TLJ022038R0500           |       |
| WET-1050 FII   | 22-038-14 | 2TLJ022038R1400           |       |
| WET-1200 FII   | 22-038-06 | 2TLJ022038R0600           |       |
| WET-1350 FII   | 22-038-15 | 2TLJ022038R1500           |       |
| WET-1500 FII   | 22-038-07 | 2TLJ022038R0700           |       |
| WET-1650 FII   | 22-038-08 | 2TLJ022038R0800           |       |
| WET-1800 FII   |           | 2TLJ022038R1900           |       |
| WET-K-500 FII  | 22-038-09 | 2TLJ022038R0900           |       |
| WET-K-800 FII  | 22-038-10 | 2TLJ022038R1000           |       |
| WET-K-900 FII  | 22-038-11 | 2TLJ022038R1100           |       |
| WET-K-1200 FII | 22-038-12 | 2TLJ022038R1200           |       |
| WET-L- FII     |           | 2TLJ022038R1800           |       |
| WET-T- FII     |           | 2TLJ022038R1700           |       |

# Safety light grids, curtains and scanners

## Laser aligners - JSRL-2 & 3



When the solution involves one or more mirrors JSRL-3 facilitates alignment of light beams or light curtains. The JSRL-3 is easily secured using the accompanying elasticated tape around the transmitter and receiver unit, and must be placed so that the flat rear of the unit is up against the front glass of the light curtain. When the laser aligner is switched on the red laser spot should be visible at the corresponding unit, even via mirrors.

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The JSRL-3 contains two type AAA batteries that are changed by unscrewing the bottom end cap.

### Selection

|        |           | Product Hierarchy 4700004 |       |
|--------|-----------|---------------------------|-------|
| Type   | Part No   | Order Code                | Price |
| JSRL-2 | 20-008-01 | 2TLA020008R0100           |       |
| JSRL-3 | 20-008-02 | 2TLA020008R0200           |       |



Laser aligner JSRL2 for light beam Spot T/R.

# Safety light grids, curtains and scanners

## Spot - safety light beams



### Photoelectric guarding of an entrance or risk area

- Safety level Type 4 according to EN 61496
- Versatile mounting
- LED indication
- Protection class IP67
- 10 m or 35 m range
- Bypassing possibility
- Light beam, emergency stop and Eden in the same safety circuit together with Vital/Pluto achieves PL e according to EN SO 13849-1

### A light beam for the highest safety level

The light beam is available in two versions Spot 10 for distances up to 10 m and Spot 35 for up to 35 m. The light beams can be mounted at different heights and be angled around a machine using our mirrors and brackets.

Spot and Vital/Pluto in combination fulfils the requirements for PL e according to EN ISO 13849-1 and type 4 according to EN 61496. Several light beams, Eden sensors and emergency stops can be connected in series achieving the high safety level for the safety circuit. A number of solutions for bypassing of light beams for material transport are available.

For indication there are LED's on the transmitter and on the receiver which indicate 'contact' between transmitter and receiver and safety status. The 'contact' information is available via the light beam receiver connection cables.

### Function

The Spot light beam is supervised by the Vital safety controller or by the Pluto safety-PLC. A unique coded signal is sent out from the control unit to the transmitter (Spot T). The signal which comes back from the receiver (Spot R) is then compared in the Vital/Pluto. If the correct coded signal is received the Vital/Pluto switches the necessary safety output contacts to permit dangerous machine movements. Coding guarantees that no output signals can be produced by light from other sources, interference or faults in components in the transmitter or receiver. The light beam is dynamically supervised which means that if the signal stops pulsating at the correct frequency it is immediately detected. By means of coding, the dynamic signal can pass between up to 6 pairs of transmitters and receivers, with only one pair needing to be electrically connected to a Vital.

### Technical data - general



#### Description

|                                                            |                                                                                |
|------------------------------------------------------------|--------------------------------------------------------------------------------|
| Safety level<br>EN/IEC 61496<br>EN 954-1<br>EN ISO 13849-1 | Type 4 with Vital/Pluto<br>Category 4<br>PL e                                  |
| PFH <sub>d</sub>                                           | 1,14x10 <sup>-9</sup>                                                          |
| Power supply                                               | 17 – 27 VDC, ripple ±10%                                                       |
| Light source                                               | Red visible light, 660 nm, <±2°                                                |
| Protection class                                           | IP 67                                                                          |
| Range                                                      |                                                                                |
| Spot 10:                                                   | 0 - 10 m                                                                       |
| Spot 35:                                                   | 0 - 35 m                                                                       |
| Installation                                               |                                                                                |
| Spot 10:                                                   | 2xM18 nuts (provided)                                                          |
| Spot 35:                                                   | Either via mounting holes in the casing or with angle bracket JSM63 (provided) |
| Operating temperature range                                | -25°C – +65°C                                                                  |
| Cable connection                                           | M12 fixed connector                                                            |

### Selection

| Selection   |           | Product Hierarchy 4700004 |        |
|-------------|-----------|---------------------------|--------|
| Type        | Part No   | Order Code                | Price  |
| Spot 10 T/R | 20-009-05 | 2TLA020009R0600           | 227.40 |
| Spot 35 T/R | 20-009-06 | 2TLA020009R0500           | 259.75 |

# Safety light grids, curtains and scanners

## Look - laser scanner



### A laser scanner that has the ability to scan four individual areas

7

The Laser Scanner 'Look' has the ability to scan four individual areas. Each area can be programmed individually for the specific application, making it ideal for auto-carriers that need to operate along different paths. The safety level is according to Type 3, EN 61496-3. It is approved for use as personnel protection in robot working areas, conveyor equipment etc. The small design makes it easy to install. Look is not affected by ambient light levels (sun etc) or welding arcs/sparks. The protection fields are quick and easy to create on a PC in a Windows environment. It has four individual programmable protection areas. Each area consists of one personnel protection field with maximum 4 m radius, and one warning field of maximum 15 m radius. Changing between the areas is easily achieved using additional sensors.

| Selection  |            | Product Hierarchy 4700004 |  |
|------------|------------|---------------------------|--|
| Part No    | Order Code | Price                     |  |
| Look JS4-4 | 50034195   | 251.31                    |  |

### Photoelectric guarding of several risk areas

- Type 3, IEC61496-3
- Easy to install
- Protected from welding sparks/arcs
- Easy to program
- 4 individual programmable protection areas simultaneously with Pluto

### Technical data - general



| Description                                                                                                                                                 |                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safety level<br>EN/IEC 61496<br>EN 954-1<br>EN ISO 13849-1<br>PFH <sub>d</sub>                                                                              | Type 3<br>Category 3<br>PL d<br>1,50E-07                                                                                                                     |
| General data<br>Scanning rate:<br>Scanning angle:<br>Operating voltage:<br>Transmitter:<br>Current consumption:<br>Angle resolution:<br>Weight:<br>Housing: | 25 Scans/sec<br>190°<br>24 VDC +20%/ -30%<br>Laserdiode; Protection class 1<br>approx. 300 mA<br>0,36°<br>2 kg<br>H=155 mm, W=140 mm, D=135 mm               |
| Personnel protection field<br>Scanning distance:<br>Area:<br>Output:<br>Resolution:<br>Response time:<br>Reflectance factor:                                | Radius 0.2 - 4 m<br>4 areas, switchable by 24 VDC input<br>2 x OSSD; 250 mA; failsafe<br>transistor PNP outputs 24 VDC<br>70 mm at 4 m<br>80 ms<br>min 1,8 % |
| Warning field<br>Scanning distance:<br>Area:<br>Output:<br>Resolution:<br>Response time:<br>Reflectance factor:                                             | Radius 0 - 15 m<br>4 areas, switchable by 24 VDC input<br>PNP-transistor, 24 VDC/100 mA<br>150 mm at 15 m, ± 20%<br>80 ms<br>min 20%                         |
| Contour measurement<br>Measurement range:<br>Output:<br>Response time:<br>Reflectance factor:<br>Reset:<br>Suitable interface safety relay:                 | Radius 0- 50 m<br>RS 232/422<br>80 ms<br>min 20%<br>manual or automatic<br>RT6, RT7, RT9, JSBRT11 or Pluto                                                   |
| Conformity:                                                                                                                                                 | Machine directive<br>2006/42/EG<br>EN ISO 12100-1/2, EN 954-1,<br>EN ISO 13849-1, -2, EN 61496-1                                                             |

# Stopping time and machine diagnosis tools

## Smart manager



Smart is ideal for safety supervision and for diagnosis of machine operation

Smart shows graphs/values for:

- Stopping time
- Stopping distance
- Speed
- Position of stopping signal

Smart has many valuable features for machine diagnosis:

- Graphic presentation of measurements
- Easy to analyse stopping characteristics and movement
- Gives parameters for safety design (e.g. stop time)
- Calculates minimum allowed safety distance
- Shows how the stop distance can be optimised
- Electrical reaction time and mechanical/hydraulic breaking can be identified and analysed
- Digital in/out signals and analogue inputs

Smart is perfect for periodic monitoring of safety parameters and other conditions for the maintenance and trouble-shooting of machines. Because Smart can compare old and new graphs, it becomes easy to find out the reasons for machine malfunctions. One can also supervise machines during operation and compare how they perform over time.

Easy to use:

- Measurements with or without electrical connection
- Ideal for machine performance diagnosis
- Calculation of correct safety distances

Stopping units and sensors

Smart is a further development of our well established JSSM1 Stopping Analyser. All the stopping units and sensors for the JSSM1 can also be used with Smart. The amount of connection possibilities have also increased. Smart has 9 digital I/O, one input for an incremental sensor (for position and speed) and two analogue inputs. This makes it easy to measure sequences in conjunction with motion lapse and other analogue values.

# Stopping time and machine diagnosis tools

## Smart & accessories



### Smart & accessories

| Description            | Application                                                                           | Part No   | Product Hierarchy 4700005 |       |
|------------------------|---------------------------------------------------------------------------------------|-----------|---------------------------|-------|
|                        |                                                                                       |           | Order Code                | Price |
| Smart logger           | -                                                                                     | 70-300-01 | 2TLA070300R0100           |       |
| SM2 button unit        | Two-handed control unit, Emergency stop, etc.                                         | 70-300-02 | 2TLA070300R0200           |       |
| SM3 Relay unit         | Electrical connection providing a stop pulse.                                         | 70-300-03 | 2TLA070300R0300           |       |
| SM11 Flag unit         | Light curtain, light beam                                                             | 70-300-11 | 2TLA070300R1100           |       |
| SM5/1250 Linear sensor | Linear movement, e.g. press tools                                                     | 70-300-04 | 2TLA070300R0400           |       |
| SM5/2500 Linear sensor |                                                                                       | 70-300-05 | 2TLA070300R0500           |       |
| SM7 Rotation sensor    | Rotating motion, e.g. lathes, rollers                                                 | 70-300-07 | 2TLA070300R0700           |       |
| SM13 Battery pack      | Negative pole at the centre of the charging connector                                 | 70-300-23 | 2TLA070300R2300           |       |
| SM9 Carrying case      | -                                                                                     | 70-300-09 | 2TLA070300R0900           |       |
| SM6                    | AC/DC converter for Smart                                                             | 70-300-06 | 2TLA070300R0600           |       |
| SM14                   | Charger for flag unit SM11 and battery pack SM13                                      | 70-300-24 | 2TLA070300R2400           |       |
| USB cable              | USB cable for communication with computer                                             | 70-300-15 | 2TLA070300R1500           |       |
| Extension cables       | ABB Jokab Safety's extension cables with 5 conductors ideal for all Smart accessories | 70-300-01 | 2TLA020056R2000           |       |
|                        |                                                                                       | 70-300-01 | 2TLA020056R2100           |       |
|                        |                                                                                       | 70-300-01 | 2TLA020056R2200           |       |
|                        |                                                                                       | 70-300-01 | 2TLA020056R2300           |       |
|                        |                                                                                       | 70-300-01 | 2TLA020056R2400           |       |

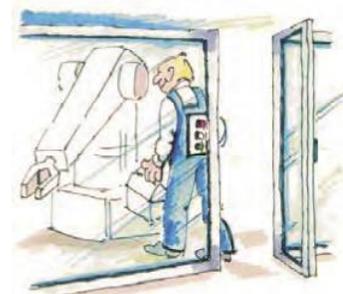
# Sensors and switches

## Why you should use sensors and switches



### - to supervise doors and hatches around dangerous machines!

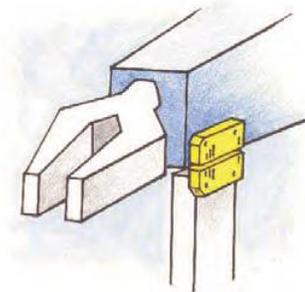
Assurance that a machine stops when a door or a hatch is opened can be solved by using different types of switches and sensors which are monitored with a safety relay or a safety PLC. Switches and sensors are available both as non-contact (dynamic or magnetic) and various types of interlocking devices. Interlocking devices can be used when it is required, via a signal, to lock a gate during processes that cannot be stopped during certain operations. They are also used with machines that have a long stopping time to prevent someone from entering before the machine has stopped.



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### - to ensure that a position is reached!

The sensor monitors that the robot is standing still in a monitored position when someone enters the robot's working area. The robot is then only stopped by the program. If the robot leaves the position the power will be cut directly. This is used when the robot does not stop safely without restarting problems.



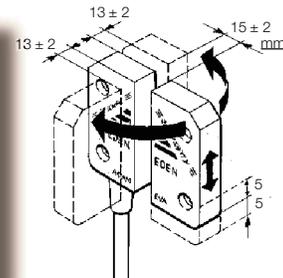
### - to manage the safety in harsh environments!

Non-contact dynamic sensors have a long lifetime because they are not physically mechanically operated. They also endure very harsh environments, e.g. cold, heat, high-pressure wash-down which is important in the food industry for example. Because the sensors are small, they are very easy to position and can even be completely concealed in doors and hatches.



# Sensors and switches

## Eden - non contact safety sensor



Flexible mounting and  
The ability to operate at long  
distances.

### A non-contact safety sensor for the highest safety level

Eden - Adam and Eva are a non-contact safety sensor for use on interlocked gates, hatches etc. A coded signal is transmitted from the control device Vital or from the safety PLC Pluto via Adam to Eva which modifies the signal and sends it back again. The maximum sensing distance between Adam and Eva is currently 15 mm ± 2 mm.

Up to 30 Edens can be connected in series to Vital and still achieve the same safety level in the safety circuit. It is also possible to connect safety light beams and E-stops in the same safety circuit.

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Adam is available with cable lengths up to 10 m and with M12 connectors. The LED on Adam provides indication of three different conditions, contact/non-contact between Adam and Eva and safety status. The same information is also available via the Adam connection cable. Eden E is available for harsh environments, as are Adam E and Eva E. Rapid blinking serves as an alignment aid. There are also coded versions, Eden C, Eden EC, Adam EC and Eva EC.

| Type            | Part No   | Product Hierarchy 4700006 |       |
|-----------------|-----------|---------------------------|-------|
|                 |           | Order Code                | Price |
| Eva             | 20-046-00 | 2TLA020046R0000           | POA   |
| Eva E           | 20-046-06 | 2TLA020046R0600           | POA   |
| Adam M12        | 20-051-00 | 2TLA020051R0000           | POA   |
| Adam 3 m        | 20-051-02 | 2TLA020051R0200           | POA   |
| Adam 5 m M12    | 20-051-03 | 2TLA020051R0300           | POA   |
| Adam 10 m       | 20-051-04 | 2TLA020051R0400           | POA   |
| Adam 20 m       | 20-051-05 | 2TLA020051R0500           | POA   |
| Adam E 10 m M12 | 20-051-06 | 2TLA020051R0600           | POA   |
| Adam E 0.5 M12  | 20-051-07 | 2TLA020051R0700           | POA   |
| Adam E 20 m M12 | 20-051-08 | 2TLA020051R0800           | POA   |
| Adam E 1 m      | 20-051-09 | 2TLA020051R0900           | POA   |
| Eden C 10 m     | 20-051-14 | 2TLA020051R0400           | POA   |
| Eden EC 10 m    | 20-051-16 | 2TLA020051R0600           | POA   |
| Adam 0.5 m M12  | 20-051-20 | 2TLA020051R2000           | POA   |

### Applications

- Doors and hatches
- Position control
- Sector detection
- Slot detection

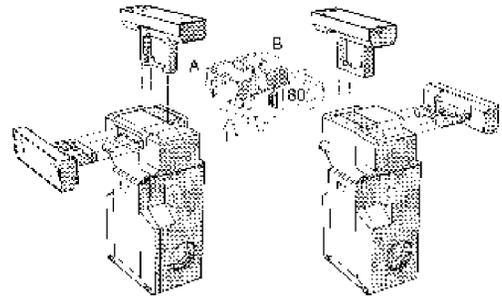
### Technical data - general

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| Description                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Safety level<br>IEC/EN 61508-1...7<br>EN 62061<br>EN ISO 13849-1                                    | SIL3<br>SIL3<br>cat. 4/PL e                                                 |
| Power supply                                                                                        | 24VDC +15%-25%                                                              |
| Protection class<br>Eden<br>Eden E                                                                  | IP67<br>IP69K                                                               |
| Detection distance max<br>Adam/Eva 15 ± 2 mm<br>Adam E/Eva E 12 ± 2 mm<br>Hysteresis approx. 1 mm   | Flash 2 mm before red position.<br>Flash 2 mm before red position.          |
| Metal may have influence on detection distance.<br>This can be prevented by protection plates, DA1. |                                                                             |
| Minimum distance to metal when there is metal on one or more sides.                                 | Adam/Eva<br>Adam E/Eva E                                                    |
|                                                                                                     | One<br>0 mm<br>0 mm                                                         |
|                                                                                                     | More<br>2,5 mm<br>0 mm                                                      |
| Minimum distance between Eden pairs                                                                 | 50 mm                                                                       |
| Cable                                                                                               | 3 or 10 m, ø 5.7mm, black, PVC<br>5 x 0.34mm <sup>2</sup> + screen, UL 2464 |
| Connector                                                                                           | M12: 5-pin male contact                                                     |

# Sensors and switches

## JSNY5 - safety interlock switch



After opening the snap-on cover, the head portion can be removed (version A), after turning the head through 180° (version B) it can be replaced onto the body of the switch and be locked into position by closing the snap-on cover. This ensures 4 actuating positions are possible.

### Applications

- Gates
- Hatches

### Switch operational description

JSNY5 offers three contacts which gives both the two contacts needed for high safety level as well as a contact for the indication of operating status.

The advanced design offers the choice of four operating positions from only two actuator entries by simply rotating the head through 180°.

However, when installed and in its working condition only one entry can be used, ensuring no other element can tamper with the switch function.

When mounting the switch from the front two elongated holes are provided to aid alignment with two set screw holes for accurate fixing. Top fixing is also possible.

Three cable entries allow for a variety of cabling options including through wiring.

### Positive forced disconnected contacts

The design assures that the contacts will not fail or be held in a normally closed position, due to failure of the spring mechanism or the welding/sticking of the contacts.

### Protection from unauthorised or incidental access

To avoid unauthorised operation the JSNY5 switch is manufactured using multicoding to GS-ET 15. The switch cannot be defeated by screwdrivers, magnets or any other mechanism.

### Features

- 2 NC + 1 NO (actuator in)
- 4 actuating positions
- Actuator holding force 10 or 30 N

### Safety level

The positive forced disconnect contacts gives a high safety level. By combining the JSNY 5 with one of our suitable safety relays as for example from the RT-series, the safety PLC Pluto or Vital (Tina) the requirements for both hatch and gate switch supervision can be fulfilled. To obtain the same level of safety as Eden, two switches per gate are required.

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### Regulations and Standards

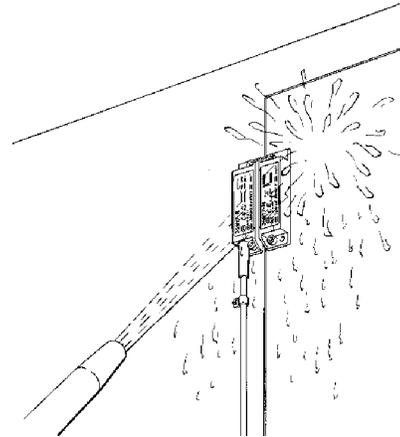
The JSNY5 is designed and approved in accordance with appropriate directives and standards. See technical data



| Selection                        | Product Hierarchy 4700006                 |       |
|----------------------------------|-------------------------------------------|-------|
|                                  | Order Code                                | Price |
| Part No                          |                                           |       |
| JSNY5A holding force 10 N        | 2TLA020022R0000                           |       |
| JSNY5B holding force 30 N        | 2TLA020022R0100                           |       |
| JSNY5 flexible key               | 2TLA020032R0600                           |       |
| Contacts (actuator key inserted) | 2 NC + 1NO (NC are direct opening action) |       |

# Sensors and switches

## JSNY7 - magnetic switch



JSNY7 is resistant to both dirt and water.

### Applications

- Gates
- Hatches
- Position control

### Features

- Small size
- IP67

### Switch operational description

The magnetic switch is designed to operate in dirty industrial environments and is certified to the highest level of safety regulation when working together with a suitable ABB Jokab Safety safety relay or Safety-PLC Pluto. The magnetic switch is small and resistant to both dirt and water, and has no dust collecting cavities making it useful in environments where hygiene is paramount. The small size of the switch makes it easy to position and hide on gates and hatches.

The magnetic switch has a long working life since no mechanical contact is made during operation.

### Contacts

The magnetic switch has one closing and one opening contact. Both contacts have to be monitored. The contacts may be monitored by either the RT9 safety relay or other suitable relays in the new RT-series, i.e. RT6, RT9 or Safety PLC Pluto.

### Protection from unauthorised or incidental access

To avoid unauthorised operation of the JSNY7 switch it is only possible to actuate the JSNY7R with the coded magnet, JSNY7M. Other magnets, screwdrivers and tools have no effect on the switch contacts.

### Safety level

The JSNY7 is approved to the highest level of safety regulations, PL e according to EN ISO 13849-1 together with safety relay in the RT-series or Pluto PLC.

### Regulations and Standards

The JSNY7 is designed and approved in accordance with appropriate directives and standards. See technical data.

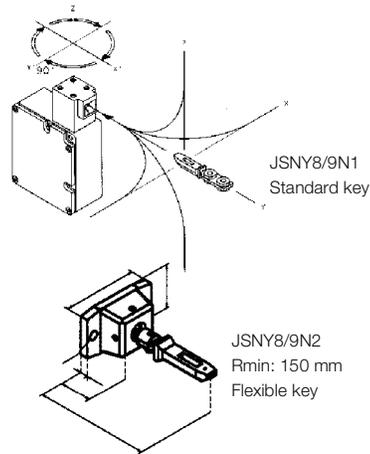


### Selection

| Part No                              | Product Hierarchy 4700006 |       |
|--------------------------------------|---------------------------|-------|
|                                      | Order Code                | Price |
| JSNY7R-3 Magnetic switch 3m cable    | 2TLA020023R0000           |       |
| JSNY7R-6 Magnetic switch 6m cable    | 2TLA020023R0100           |       |
| JSNY7R-10 Magnetic switch 10 m cable | 2TLA020023R0200           |       |
| JSNY7M Magnetic switch               | 2TLA020024R0000           |       |
| Supply voltage max                   | 30 VDC                    |       |
| Protection class                     | IP67                      |       |

# Sensors and switches

## JSNY8 - safety interlock switch



### Applications

- Gates
- Hatches

### Features

- Robust design
- Universal installation
- 2 NC + 2 NC outputs
- 1000 N actuator holding force

### Description

The JSNY8 Safety Interlock Switch, in conjunction with the machine control system, enables gates/movable guards etc to be locked in their protective positions, thus preventing access to machinery until dangerous operations have ceased.

Applications include:

- processes which cannot be interrupted, such as welding.
- machinery with a long stopping procedure, such as paper machinery that requires a long braking operation.
- prevention of unauthorised access to a particular area.

The JSNY8 has 2NC + 2NC positive force disconnection contacts. The first pair closes when the actuator key is pushed into the head. The other pair closes when the locking mechanism is in the locked position. The head can be set in four positions, thus providing the safety device with four different operating positions. These are selected by twisting the head as shown in the diagram above. The leading edges of the actuator key are reinforced and bevelled in order to guide it properly into the hole. The JSNY8 is encased in a robust metal housing (IP67) providing a high level of protection to the internal operating components.

### Two versions

The JSNY8 is available in two basic versions, either with a spring lock or a magnetic lock.

In the spring lock (JSNY8S) version, the locking mechanism moves into the locked position directly when the door is closed and the actuator key is pushed into the lock. The actuator key can only be released and the gate opened by supplying operational voltage to the solenoid (E1-E2).

The JSNY8S also has a emergency 'unlocking' facility to enable the actuator key to be released without the energisation of the solenoid (E1-E2).

In the magnetic lock (JSNY8M) version, the locking mechanism is only in the locked position when the solenoid (E1-E2) is supplied with operating voltage. Release of the actuator key is only possible when the operating voltage is removed from the solenoid (E1-E2).

### Optional features

The following optional features are available:

- actuator to operate at smaller radius.
- customer specific applications.

### Safety level

The JSNY8 has double forced disconnection contacts to the actuator key and the locking mechanism. The actuator key has a triple coding design. To achieve maximum safety level in the connection to the machine's control system, it is recommended that the JSNY8 is monitored by an appropriate ABB Jokab Safety safety relay, Pluto safety-PLC or Vital. To obtain the same level of safety as Eden, two switches per gate are required.

### Regulations & standards

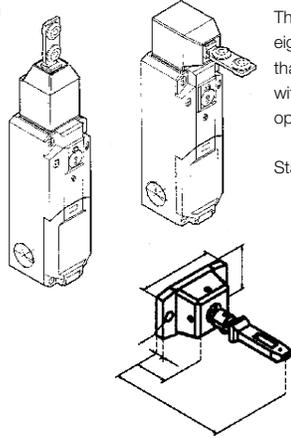
The JSNY8 is designed and approved in accordance with appropriate directives and standards. See technical data.



| Selection                          | Product Hierarchy 4700006 |       |
|------------------------------------|---------------------------|-------|
|                                    | Order Code                | Price |
| Part No                            |                           |       |
| JSNY8M 24DC                        | 2TLA020030R0000           |       |
| JSNY8S 24DC                        | 2TLA020030R0100           |       |
| JSNY8S 230AC                       | 2TLA020030R0500           |       |
| JSNY8M 230AC                       | 2TLA020030R1500           |       |
| JSNY8/9N1 standard key             | 2TLA020032R0400           |       |
| JSNY8/9N2 flexible key             | 2TLA020032R0500           |       |
| Enclosure                          | Metal housing             |       |
| Actuator holding force             | 1000 N                    |       |
| Contacts                           |                           |       |
| actuator key inserted              | 2 NC                      |       |
| locking mechanism, locked position | 2 NC                      |       |
| Enclosure class                    | IP67                      |       |
| Operating voltage                  | 24V DC, 230 V AC          |       |

# Sensors and switches

## JSNY9 - safety interlock switch



The control unit offers eight operating positions that provide the actuator with eight different input options.

Standard key.

JSNY8/9N2  
Rmin: 150 mm  
Flexible key

### Applications

- Gates
- Hatches

### Features

- Compact and robust
- Universal installation
- 2x(1NO+1NC)
- Actuator holding force 1500 N
- Eight head configurations
- LED status indication (optional)



### Description

The JSNY9 is used for locking a gate/hatch, to prevent access to machinery, until hazardous operations have ceased.

Applications include:

- processes which cannot be interrupted, e.g. welding.
- machinery with a long stopping time, e.g. paper machinery which requires a long braking operation.
- prevention of unauthorised access to a particular area.

The JSNY9 is equipped with a 2 x (1NO + 1 NC) contact configuration, the first pair of contacts changeover when the key is inserted. The second pair of contacts changeover when the locking mechanism is in the locked position.

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The JSNY9 switch is encased in a robust plastic housing and can be mounted either horizontally or vertically. The advanced design of the head provides eight possible key insertion options, this is achieved by mounting the head either vertically or horizontally on the base unit, as shown in the diagram. The location for the actuator key is reinforced and bevelled to ensure a smooth operation.

### Two versions

The JSNY9 switch is available in two basic versions, either with a spring lock or an electro-magnetic locking mechanism.

The JSNY9S (spring lock) switch operates immediately when the gate/hatch is closed, i.e. when the key actuator is inserted into the locking mechanism. The gate/hatch can be opened and the actuator key released only by supplying the operational voltage to the solenoid connections (E1 E2). The JSNY9S also has a manual emergency unlocking facility to enable authorised release of the actuator key.

In the JSNY9M (magnetic lock) version, the mechanism is only locked when the gate/hatch is closed i.e. the actuator key inserted and the solenoid (E1 E2) supplied with the operating voltage. The gate/hatch can only be opened when this operating voltage is removed

### Optional features

The following optional features are available:

- LED display, indicating the status of the actuator key, locking mechanism and contacts.
- Actuator to operate at smaller radii.
- Customer specific applications.

### Safety level

In order to achieve a high safety level, the JSNY9 switch is equipped with dual sets of contacts operated with a coded actuator key. In order to meet the required installation safety level it is recommended that the JSNY9 safety switch is monitored by an appropriate ABB Jokab Safety safety relay. To obtain the same level of safety as Eden, two switches per gate are required.

### Regulations & standards

The JSNY9 is designed and approved in accordance with appropriate directives and standards. See technical data.

| Selection                            | Product Hierarchy 4700006                  |       |
|--------------------------------------|--------------------------------------------|-------|
|                                      | Order Code                                 | Price |
| Part No                              |                                            |       |
| JSNY9S 24V DC                        | 2TLA020036R0100                            | 9.23  |
| JSNY9LA 24V UC                       | 2TLA020036R0200                            |       |
| JSNY9M 24V UC                        | 2TLA020036R2100                            |       |
| JSNY9MLA 24V UC                      | 2TLA020036R3200                            |       |
| JSNY9LA 24V UC                       | 2TLA020036R0200                            |       |
| Enclosure                            | Metal housing                              |       |
| Actuator holding force               | 1500 N                                     |       |
| Contacts actuator in                 | 1 NO + 1 NC                                |       |
| Locking mechanism in locked position | 1 NO + 1 NC (NC are direct opening action) |       |
| Enclosure class                      | IP67                                       |       |
| Operating voltage                    | 24 V AC/DC                                 |       |

# Sensors and switches

## Magne - magnetic lock with indication



TÜV Nord **CE**

### Magnetic lock with indication

Magne is a magnetic lock that is designed for industrial applications and that can withstand harsh environments. As it is designed with no moving parts, it is durable and long lasting. Magne, with its electro-magnet, keeps a door locked with a holding force up to 1,500 N and also magnetic material does not attach to the magnetic surface when the power is off.

Use of M12 connectors makes it easy to connect several Magne units and Eden sensors in series enabling control and monitoring by either a Pluto safety PLC or a Vital safety controller. Via the connection cable it is also possible to obtain an indication signal informing if the Magne unit is locked or not.

### Accessories:

- Mounting kit for conventional door, with fitting and screws for assembly on ABB Jokab Safety Quick-Guard fencing system (5-15 mm door gap)
- Plastic handle
- Handle profile for mounting on a hinged door with ABB Jokab Safety's Quick-Guard fencing system (5-15 mm door gap).



Magne is easy to assemble, adjust and dismantle in and out of the T-slot of the Quick-Guard fencing system.

### Applications

- Electrical locking of doors and hatches to production applications that are sensitive to unintentional/unnecessary interruptions.
- For safety supervision the Magne 2 has an integrated Eden.

### Features

- No moving parts
- Strong Magnetic holding force: 1500N
- Can stand and operate in harsh environments
- Locked/unlocked indication. Possible to connect in series with Eden sensors
- No current peaks on activation
- Magne 2 in combination with a handle profile provides a complete door solution

### Selection

|           |                                                                                                                            | Product Hierarchy 4700006 |       |
|-----------|----------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|
| Part No   | Description                                                                                                                | Order Code                | Price |
| Magne 1A  | Process lock, Incl. anchor plate                                                                                           | 2TLA042022R0000           |       |
| Magne 2A  | Process lock with built-in Eden, incl. anchor plate                                                                        | 2TLA042022R1000           |       |
| Magne 1B  | Process lock incl. anchor plate with built-in permanent magnet (30 N)                                                      | 2TLA042022R0100           |       |
| Magne 2B  | Process lock incl. anchor plate with built-in Eden and built-in permanent magnet (30 N)                                    | 2TLA042022R1200           |       |
| Magne 2Ax | Process lock with built-in Eden and 5-pin M12 connector for Urax, incl. anchor plate                                       | 2TLA042022R1300           |       |
| Magne 2Bx | Process lock with built-in Eden and 5-pin M12 connector for Urax, incl. anchor plate with built-in permanent magnet (30 N) | 2TLA042022R1400           |       |

### Accessories

|          |                                    |                 |  |
|----------|------------------------------------|-----------------|--|
| JSM D21B | Assembly kit for anchor plate      | 2TLA042023R0100 |  |
|          | Handle profile for Magne           | 2TLA042023R0200 |  |
| JSM D23  | Fixture for sliding door           | 2TLA042023R0300 |  |
| JSM D24  | Assembly kit for Eva               | 2TLA042023R0400 |  |
|          | Anchor plate with permanent magnet | 2TLA042023R1000 |  |
|          | Handle for JSM D21B                | 2TLA042023R1000 |  |

# Sensors and switches

## Dalton - process lock



### Applications

- Doors
- Hatches

### Advantages

- Small and robust
- Integrated with Eden
- Flexible installation
- High enclosure classification – IP 67
- Withstands severe environments
- Low current consumption
- Status information with LED on the lock housing and in the cable connection.

### Dalton – the intelligent process lock

Dalton is a locking unit that is intended for use in preventing unnecessary process stoppages, i.e. it is not a safety lock. It can be used either as a free-standing lock or integrated with Eden as a safety sensor. In the unlocked state the door is held closed by a ball catch and in locked state the balls are mechanically blocked so the lock tongue can not be pulled out. If necessary, the holding force of the ball catch can be adjusted. The device only allows to lock when the ball latch is centred around the lock tongue, and when Eva is with Adam (depending on version). When an input is supplied with voltage, the ball catch is locked.

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Dalton is easily connected with an M12 connector. The Tina junction block can be used for distribution of both the safety and locking functions. The Dalton status is indicated by LEDs and can also be read by a PLC via the information output.

### Dalton has a modular structure

The Dalton process lock has a modular structure and can be combined in different ways depending on position, installation and function. You choose the lock housing, lock tongue and fixing plate yourself to create a complete Dalton.

### Installation

Dalton offers many different installation possibilities as the lock tongue may enter the ball catch from three directions. In order to ensure that Dalton works without any problems, the ball catch must be resting, i.e. the balls not pressed in by the lock tongue when the door is in closed position. Dalton's brackets are therefore made to ensure easy adjustment of the lock tongue and ball latch positions.

### Selection

#### Description

Locking function M - Locked when energised L - Only ball latch

Operating voltage 24 VDC +25/-20%

Enclosure classification IP67

Holding force Unlocked 25-100 N Locked 2000 N



Dalton is easy to install, adjust and dismantle in the Quick-Guard fence system's T-slots.

# Sensors and switches

## Knox - safety lock



Knox is easy to assemble, adjust and dismantle in and out of the T-slot of the Quick-Guard fencing system.

### Applications

- Safe locking of door to a cell/line with long stopping time.
- Prevents unintentional interrupts of processes

### Advantages

- Double locking function as specified in PL e/ cat. 4 (EN ISO 13849-1)
- Withstands harsh environments
- Status information with LEDs on the lock and at cable connection
- Controlled to locked and unlocked positions-position remains in the event of power failure
- Electronic connection only on the door frame
- Robust design

### Knox - double safety lock

Knox is a double lock that complies with the highest safety level (two lock cylinders with monitored positions) that can be used both as a safety and process lock. The locking function is electrically controlled and is bi-stable, i.e. it retains its position (unlocked/locked) in the event of a power failure. Dual signal for unlocking is safe at both short-circuits and cable breaks.

The handles operate as they would on a normal door but the exterior handle also have a reset function, why a separate reset

button is not necessary and the interior handle that can be used for emergency opening also in locked state. The design and durability of the lock mean that it is ideal for harsh environments as the sensors are non-contact and the lock is manufactured of stainless steel. Knox is available in a number of adaptations such as left-hung door, right-hung door, inward and outward opening, with manual unlocking and for sliding door.

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### Selection

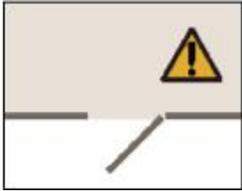
| Description                                       | Part No      | Product Hierarchy 4700006 |       |
|---------------------------------------------------|--------------|---------------------------|-------|
|                                                   |              | Order Code                | Price |
| Knox door part for inward-opening right-hung door | Knox 1B-R v2 | 2TLA020105R5200           |       |
| Knox door part for inward-opening left-hung door  | Knox 1B-L v2 | 2TLA020105R5300           |       |

### Accessories

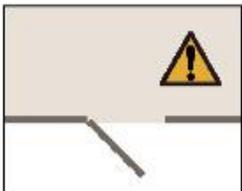
|                                 |          |                 |  |
|---------------------------------|----------|-----------------|--|
| Distribution block for two Knox | Tina 12A | 2TLA020054R1800 |  |
|---------------------------------|----------|-----------------|--|

# Sensors and switches

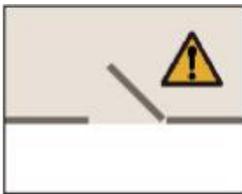
## Knox - safety lock



Knox door part 1A-R and frame part 2A



Knox door part 1A-L and frame part 2A



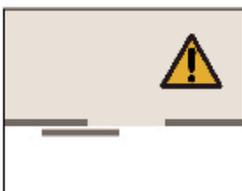
Knox door part 1B-R and frame part 2A



Knox door part 1B-L and frame part 2A



Knox door part 1F-R and frame part 2A

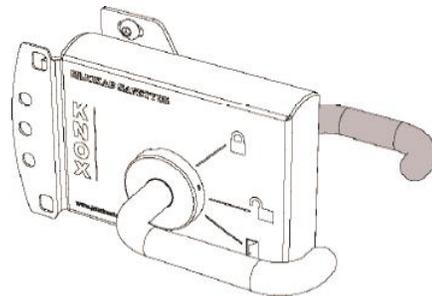


Knox door part 1F-L and frame part 2A

## Models and ordering data

|               |                                                                                                                                                                   | Product Hierarchy 4700006 |       |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|
| Door part     |                                                                                                                                                                   | Order Code                | Price |
| Knox 1B-R v2  | Knox door part for inward-opening right-hung door                                                                                                                 | 2TLA020105R5200           |       |
| Knox 1B-L v2  | Knox door part for inward-opening left-hung door                                                                                                                  | 2TLA020105R5300           |       |
| Knox 1AX-R v2 | Knox door part for outward-opening right-hung door with the option for manual unlocking from the outside                                                          | 2TLA020105R5800           |       |
| Knox 1AX-L v2 | Knox door part for outward-opening left-hung door with the option for manual unlocking from the outside                                                           | 2TLA020105R5900           |       |
| Knox 1F-R v2  | Knox door part for sliding door that opens to the right. Incl. additional fastening fixtures for the frame.                                                       | 2TLA020105R6000           |       |
| Knox 1F-L v2  | Knox door part for a sliding door that opens to the left. Incl. additional fastening fixtures for the frame.                                                      | 2TLA020105R6100           |       |
| Knox 1BX-R v2 | Knox door part for inward-opening right-hung door with the option for manual unlocking from the outside                                                           | 2TLA020105R6200           |       |
| Knox 1BX-L v2 | Knox door part for inward-opening left-hung door with the option for manual unlocking from the outside                                                            | 2TLA020105R6300           |       |
| Knox 1FX-R v2 | Knox door part for sliding door that opens to the right with the option for manual unlocking from the outside. Incl. additional fastening fixtures for the frame. | 2TLA020105R6400           |       |
| Knox 1FX-L v2 | Knox door part for sliding door that opens to the left with the option for manual unlocking from the outside. Incl. additional fastening fixtures for the frame.  | 2TLA020105R6500           |       |
| Frame part    |                                                                                                                                                                   |                           |       |
| Knox 2X v2    | Knox process lock, no duplicate unlocking signal, with 5-pin M12 contact                                                                                          | 2TLA020105R2300           |       |
| Accessories   |                                                                                                                                                                   |                           |       |
| Tina 12A      | Distribution block for two Knox                                                                                                                                   | 2TLA020054R1800           |       |

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Door part Knox1



Frame part Knox 2

# Control devices

## Why you should use control devices

for the machine operator to be able to directly start and stop dangerous machine movement

### Three-position device

Three-position devices, hold-to-run devices and enabling devices are used during trouble-shooting, programming and test running when no other safety components are possible or suitable. The device is held in the hand and the operator can in an emergency situation either press harder or entirely release the device to stop the machine.



In an emergency situation the operator can either press harder or release the three-position device to stop the machine.

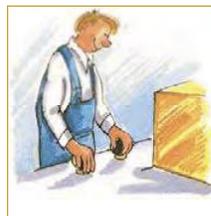


### Two hand control device

A two-hand control device is used when it must be guaranteed that the operator's hands will be kept outside the risk area. If there is a risk that someone else other than the operator can reach into the machine without the operator seeing it, the safety device must be supplemented by something more, e.g. a light beam.

To be able to operate the machine with the two-hand device, all the buttons on the device have to be operated within 0.5 seconds of each other. This is called concurrence. All the buttons also have to be returned to their initial position before one can start again. If any button is released during the machine movement the machine will be stopped. Using the stopping time one can calculate the necessary safety distance. A safety distance of less than 100 mm must not be used.

The highest safety level is assured by connecting the buttons of the two-hand device to a safety relay. The safety relay checks for concurrence and that all the buttons have returned to their initial position before a new start can be made. The safety relay also gives a stop signal if any of the buttons are released.



The two-hand device protects against "after-grasp"; if the operator by reflex tries to enter or reach into a machine during the dangerous machine movement.



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### Foot operated switches

A foot operated switch is used when the operator has to hold the material during processing. The pedal must have a safety cover to prevent unintentional start. For seated work one must also have a foot support to facilitate the operator holding his foot on the pedal's off position.

The highest safety level is secured by monitoring the pedal with a safety relay.



The foot operated switch is used when the operator has to hold the material with both hands during processing.

# Control devices

## JSHD4 three position devices



### Applications

- Troubleshooting
- Test running
- Programming

### Advantages

- Ergonomic
- LED information
- Adaptable
- Cheat Safe
- Adapted for AS-i

### Pre-assembled three position devices

#### Selection

| Part No     | Product Hierarchy 4700007 |       |
|-------------|---------------------------|-------|
|             | Order Code                | Price |
| JSHD4-1AA   | 2TLA019995R0000           |       |
| JSHD4-1AC   | 2TLA019995R0100           |       |
| JSHD4-2AB   | 2TLA019995R0200           |       |
| JSHD4-2AB-A | 2TLA019995R0300           |       |
| JSHD4-2AD   | 2TLA019995R0400           |       |
| JSHD4-2AD-A | 2TLA019995R0500           |       |
| JSHD4-2AF   | 2TLA019995R0600           |       |
| JSHD4-2AF-A | 2TLA019995R0700           |       |
| JSHD4-2AH   | 2TLA019995R0800           |       |
| JSHD4-2AH-A | 2TLA019995R0900           |       |
| JSHD4-3AB   | 2TLA019995R1200           |       |
| JSHD4-3AB-A | 2TLA019995R1300           |       |
| JSHD4-3AD   | 2TLA019995R1400           |       |
| JSHD4-3AD-A | 2TLA019995R1500           |       |
| JSHD4-3AE   | 2TLA019995R1600           |       |
| JSHD4-3AF   | 2TLA019995R1700           |       |
| JSHD4-3AF-A | 2TLA019995R1800           |       |
| JSHD4-3AG   | 2TLA019995R1900           |       |
| JSHD4-3AH   | 2TLA019995R2000           |       |
| JSHD4-3AH-A | 2TLA019995R2100           |       |
| JSHD4-4AB   | 2TLA019995R2400           |       |
| JSHD4-4AB-A | 2TLA019995R2500           |       |
| JSHD4-4AD   | 2TLA019995R2500           |       |
| JSHD4-4AD-A | 2TLA019995R2700           |       |
| JSHD4-4AF   | 2TLA019995R2800           |       |
| JSHD4-4AF-A | 2TLA019995R2900           |       |
| JSHD4-4AH   | 2TLA019995R3000           |       |
| JSHD4-4AH-A | 2TLA019995R3100           |       |
| JSHD4-5AB   | 2TLA019995R3400           |       |
| JSHD4-5AB-A | 2TLA019995R3500           |       |
| JSHD4-5AD   | 2TLA019995R3600           |       |
| JSHD4-5AD-A | 2TLA019995R3700           |       |
| JSHD4-5AF   | 2TLA019995R3800           |       |
| JSHD4-5AF-A | 2TLA019995R3900           |       |
| JSHD4-5AH   | 2TLA019995R4000           |       |
| JSHD4-5AH-A | 2TLA019995R4100           |       |



# Control devices

## JSHD4 design a three position device for your needs

### 1. Choose between five different top units



JSHD4-1

JSHD4-2

JSHD4-3

JSHD4-4

JSHD4-5

### 2. Choose a bottom part suitable for your assembly



AA, AH, AJ

AB

AC, AD

AF, AG

AE

#### 1. Choose between five different top units

| Description                            | Product Hierarchy 4700007 |       |
|----------------------------------------|---------------------------|-------|
|                                        | Order Code                | Price |
| JSHD4-1                                | 2TLA020006R2100           |       |
| JSHD4-2 LEDs, front button, top button | 2TLA020006R2200           |       |
| JSHD4-3 LEDs                           | 2TLA020006R2300           |       |
| JSHD4-4 LEDs, front button             | 2TLA020006R2400           |       |
| JSHD4-5 LEDs, top button               | 2TLA020006R2500           |       |

#### 2. Choose a bottom part suitable for your assembly

|                                                                                   |                 |  |
|-----------------------------------------------------------------------------------|-----------------|--|
| AA – with cable gland                                                             | 2TLA020005R1000 |  |
| AB – with Cannon connection                                                       | 2TLA020005R1100 |  |
| AC – with M12 connection (5 poles)                                                | 2TLA020005R1200 |  |
| AD – with M12 connection (8 poles)                                                | 2TLA020005R1300 |  |
| AE – with M12 connection (8 poles) and emergency stop                             | 2TLA020005R1400 |  |
| AF – with M12 connection (4 poles) and 2 AS-i nodes (for front and top button)    | 2TLA020005R1500 |  |
| AG – with M12 connection (4 poles) and 1 AS-i node (without front and top button) | 2TLA020005R1600 |  |
| AH – with cable gland and PCB with 10 screw connections                           | 2TLA020005R1700 |  |
| AJ – with cable gland and PCB with 16 screw connections                           | 2TLA020005R1800 |  |

#### 3. Choose hand recognition for making your three position device cheat protected (option)

|                 |                 |  |
|-----------------|-----------------|--|
| Anti-tamper PCB | 2TLA020005R0900 |  |
|-----------------|-----------------|--|

#### 4. Choose a bottom plate (option)

|                                                        |                 |  |
|--------------------------------------------------------|-----------------|--|
| JSM50G, bottom plate for Safety Interlock switch JSNY5 | 2TLA020205R6300 |  |
| JSM50H, bottom plate for non-contact sensor Eden (Eva) | 2TLA020205R6400 |  |



3 2TLA020005R0900



4 2TLA020205R6300



4 2TLA020205R6400

# Control devices

## JSHD4 combination and accessories

### Available combinations of bottom - and top parts

| Type | Function           | JSHD4-1   | JSHD4-2     | JSHD4-3     | JSHD4-4     | JSHD4-5     |
|------|--------------------|-----------|-------------|-------------|-------------|-------------|
| AA   | without Cheat Safe | JSHD4-1AA | -           | -           | -           | -           |
|      | with Cheat Safe    | -         | -           | -           | -           | -           |
| AB   | without Cheat Safe | -         | JSHD4-2AB   | JSHD4-3AB   | JSHD4-4AB   | JSHD4-5AB   |
|      | with Cheat Safe    | -         | JSHD4-2AB-A | JSHD4-3AB-A | JSHD4-4AB-A | JSHD4-5AB-A |
| AC   | without Cheat Safe | JSHD4-1AC | -           | -           | -           | -           |
|      | with Cheat Safe    | -         | -           | -           | -           | -           |
| AD   | without Cheat Safe | -         | JSHD4-2AD   | JSHD4-3AD   | JSHD4-4AD   | JSHD4-5AD   |
|      | with Cheat Safe    | -         | JSHD4-2AD-A | JSHD4-3AD-A | JSHD4-4AD-A | JSHD4-5AD-A |
| AE   | without Cheat Safe | -         | -           | JSHD4-3AE   | -           | -           |
|      | with Cheat Safe    | -         | -           | -           | -           | -           |
| AF   | without Cheat Safe | -         | JSHD4-2AF   | JSHD4-3AF   | JSHD4-4AF   | JSHD4-5AF   |
|      | with Cheat Safe    | -         | JSHD4-2AF-A | JSHD4-3AF-A | JSHD4-4AF-A | JSHD4-5AF-A |
| AG   | without Cheat Safe | -         | -           | JSHD4-3AG   | -           | -           |
|      | with Cheat Safe    | -         | -           | -           | -           | -           |
| AH   | without Cheat Safe | -         | JSHD4-2AH   | JSHD4-3AH   | JSHD4-4AH   | JSHD4-5AH   |
|      | with Cheat Safe    | -         | JSHD4-2AH-A | JSHD4-3AH-A | JSHD4-4AH-A | JSHD4-5AH-A |



JSHK0 12 pole connector for JSHD4.



Cable, available in different lengths.



Spiral cable, available in different lengths.



JSM55 Wall bracket for three-position device.



JSM5B Wall bracket for interlock switches and three-position device.



JSHD4 protection coat



Cable drum

## Accessories

### Selection

#### Description

M12-C01 M12 5-pole female, straight

M12-C03 M12 8-pole female, straight

JSHK0 12-pole connector for JSHD4

### Product Hierarchy 4700007

| Order Code      | Price |
|-----------------|-------|
| 2TLA020055R1000 |       |
| 2TLA020055R1600 |       |
| 2TLA020003R0300 |       |

#### Cable with 5 conductors:

|                               |                 |  |
|-------------------------------|-----------------|--|
| C5 Cable 5x0,34 cut to length | 2TLA020057R0000 |  |
| C5 Cable 5x0,34 cut to length | 2TLA020056R1000 |  |
| C5 Cable 5x0,34 cut to length | 2TLA020056R1400 |  |
| C5 Cable 5x0,34 cut to length | 2TLA020057R1000 |  |
| C5 Cable 5x0,34 cut to length | 2TLA020056R4000 |  |
| C5 Cable 5x0,34 cut to length | 2TLA020056R4100 |  |

#### Cable with 12 conductors:

|                                   |                 |  |
|-----------------------------------|-----------------|--|
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R5500 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R4700 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R4800 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R4900 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R5000 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R5100 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R5200 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R3500 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R3600 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R5300 |  |
| HKC12 Cable 12x0,25 cut to length | 2TLA020003R5400 |  |

#### Brackets:

|                                                     |                 |  |
|-----------------------------------------------------|-----------------|--|
| JSM55 Wall bracket for three position device        | 2TLA040005R0500 |  |
| JSM5B Wall bracket for 2 JSNY5 (ordered separately) | 2TLA040005R0700 |  |

#### Other:

|                       |                 |  |
|-----------------------|-----------------|--|
| JSHD4 protection coat | 2TLA020200R4600 |  |
|-----------------------|-----------------|--|

# Control devices

## Safeball™ one and two hand devices



### Applications

- Presses
- Punches
- Fixtures
- Shearing machines

### Advantages

- Ergonomic
- Low activation force
- Flexible mounting
- Several grip possibilities
- Highest safety level
- Two channel switching in each hand

## SAFEBALL™

### Unique world wide two hand device

Safeball™ consists of a spherical ball containing two embedded pushbutton switches, one on each side of the ball. By using this pushbutton configuration, the risk of unintentional activation is minimised and the device is simple and ergonomic to use.

Safeball™ can be utilised for either One hand (one Safeball™) or Two hand (two Safeballs™) applications. In either application, and in order to meet the required level of safety, the Safeball™ switches are monitored by specified/certified ABB Jokab Safety relays.

In the case where Two hand control is used, both Safeballs™ i.e. all four pushbuttons have to be activated within 0.5 seconds. If one or more pushbuttons are released a Stop signal is given to the machine. In order to provide the highest level of safety the Safeball™ design provides the operator with a dual switching function and short-circuit supervision in each hand.

Each Safeball™ is ergonomically designed and has both its cover and actuator made of environmentally-friendly polypropylene. The design allows for comfort of use for all hand sizes and operation from numerous gripping positions. Mounting of the Safeball™ is also very flexible allowing the device to be mounted in the most ergonomic position for the operator.

### When can a two hand or one hand control be used ?

A Two hand control can be used when it is necessary to ensure that the operator is outside and must be prevented from reaching into the hazardous area. If the operator decides, after the start signal has been given to the machine, to make an 'after-grasp' i.e. try to adjust the part that has been placed into the machine, then a dual stop signal is given to the machine.

A one hand control device can be used when the operator cannot reach the hazardous area with his/her free hand or on less dangerous machines.

### Highest safety level

The Safeball™ is certified by Inspecta in Sweden for use as a Two hand control device, when used with a JSBR4 ABB Jokab Safety Safety relay or Pluto Safety-PLC, in accordance with the highest safety level in standard EN 574 (type IIIc).

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### Two hand device adapted for AS-i

The two hand device, Safeball also comes in a version adapted for direct attachment to the AS-i bus.

| Selection                                                | Product Hierarchy 4700007 |       |
|----------------------------------------------------------|---------------------------|-------|
|                                                          | Order Code                | Price |
| Description                                              |                           |       |
| JSTD1-A Safeball 1 NO + 1 NC with 2 m cable              | 2TLA020007R3000           |       |
| JSTD1-B Safeball Safeball 1 NO + 1 NC with 0.2 m cable   | 2TLA020007R3100           |       |
| JSTD1-C Safeball 1 NO + 1 NC with 10 m cable             | 2TLA020007R3200           |       |
| JSTD1-E Safeball 2 NO 0,2 m cable                        | 2TLA020007R3400           |       |
| Protection class: IP67. Not intended for use under water |                           |       |

# Control devices

## Safeball™ JSTD25 two hand devices



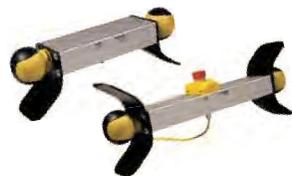
### Applications

- Presses
- Punches
- Fixtures
- Shearing machines

### Advantages

- Ergonomic
- Low activation force
- Flexible mounting
- Several grip possibilities
- Highest safety level
- Two channel switching in each hand

With a JSTD25 two hand control station you have a prepared two hand unit that is easy to install, while utilising the good ergonomics of the Safeball. There are several variants to meet differing needs. All versions meet EN 574, EN 954-1 and EN 13849-1 and are supplied with the internal connections made, to simplify installation.



### Selection

| Description                                                 | Part No | Product Hierarchy 4700007 |       |
|-------------------------------------------------------------|---------|---------------------------|-------|
|                                                             |         | Order Code                | Price |
| <b>JSTD25 for fixed installation</b>                        |         |                           |       |
| 2 Safeball control station                                  | JSTD25A | 2TLA020007R5000           |       |
| 2 Safeball control station, JSMC5                           | JSTD25D | 2TLA020007R5300           |       |
| 2 Safeball control station and emergency stop button        | JSTD25B | 2TLA020007R5100           |       |
| 2 Safeball control station JSM C5 and emergency stop button | JSTD25E | 2TLA020007R5400           |       |

### JSTD25 for mobile installation

|                                                   |         |                 |  |
|---------------------------------------------------|---------|-----------------|--|
| 2 Safeball control station, 5 pole M12 connection | JSTD25F | 2TLA020007R6000 |  |
| 2 Safeball control station, 8 pole M12 connection | JSTD25H | 2TLA020007R6300 |  |
| As JSTD25F but can be customised                  | JSTD25G | 2TLA020007R6200 |  |

### JSTD25 for mobile installation with built in Eden sensor

|                                                                                                   |           |                 |  |
|---------------------------------------------------------------------------------------------------|-----------|-----------------|--|
| 2 Safeballs mounted on the ends, shield over hand guards built-in Eva sensor for position control | JSTD25P-1 | 2TLA020007R6500 |  |
|---------------------------------------------------------------------------------------------------|-----------|-----------------|--|

### Accessories - JSTD25

|                                                                                          |         |                 |  |
|------------------------------------------------------------------------------------------|---------|-----------------|--|
| Stand with spacer ring for JSTD25 A-E (JSTS30 without spacer ring). Height 850 to 1100mm | JSTS31  | 2TLA020007R4100 |  |
| Angled ball joint for installation of a Safeball on a table or a steel housing           | JSM C5  | 2TLA020007R0900 |  |
| 4 m long spiral cable for JSTD25P-1                                                      | JSTK40S | 2TLA020007R6700 |  |
| 8 m long spiral cable for JSTD25P-1                                                      | JSTK80S | 2TLA020007R6800 |  |

# Control devices

## FOX foot operated safety switches



### Features

- Control device that frees the hands
- Three-position pedal
- High safety level
- Robust

In order to fulfil the need for a small and easy to install E-stop, Smile has been developed. The size of the device makes it possible to be installed wherever you want. With M12 connections or cable and centralised mounting holes Smile is very easy to install, especially on aluminium extrusions. Smile is available for E-stops in both dynamic and static safety circuits i.e. for interfacing to Vital system/Pluto safety PLC and Safety relays. Each version is available with either one or two M12 connections or cable. Two M12 connectors are used to enable the connection of E-stops in series, which is often used with dynamic safety circuits fulfilling safety category 4. In the top of the Smile Tina E-stop unit, LEDs show the actual status according to the dynamic system:

Green = everything is OK, Red = E-stop activated.

Flashing Red/Green = Stop activated from another preceding device.

Smile is also available with black push button and used as a safety stop.

See section on safety stops.

### Three-position function, Fox 31/32

A safe three-position foot operated device means that:

1. Stop signals are provided in the top and bottom positions.
2. Start/ready signals for separate starting are provided in a distinct middle position.
3. After a stop in the bottom position a start or clear signal cannot be given before the reset knob has been operated and then the pedal pushed into its middle position.

### Two-position function, Fox 21/22

A two-position foot operated device means that:

1. A stop signal is provided in the top, or pedal released, position.
2. A start/ready signal for separate starting is given in the bottom, or fully depressed, position

Safety cover protects against unintentional actuation.

A robust metal safety cover prevents unintentional machine start by a person or falling objects, thereby fulfilling the standards which demand this. The robust aluminium safety cover can withstand harsh environments.

### Safety level

A high safety level is secured by monitoring the pedal's double contacts with one of our safety relays.

Furthermore the third 'emergency' position of the Fox 31/32 pedal enhances safety.

### Selection

| Description                             | Part No   | Product Hierarchy 4700007 |       |
|-----------------------------------------|-----------|---------------------------|-------|
|                                         |           | Order Code                | Price |
| FOX 21 Two position single footswitch   | 20-160-21 | 2TLA020007R5000           |       |
| FOX 22 Two position double footswitch   | 20-160-22 | 2TLA020007R5300           |       |
| FOX 31 Three position single footswitch | 20-160-01 | 2TLA020007R5100           |       |
| FOX 32 Three position double footswitch | 20-160-02 | 2TLA020007R5400           |       |

# Emergency stops

## Why you need emergency stops



So that anyone is able to stop a machine during a malfunction or if someone is in danger

### How do I recognise an E-stop?

E-stop buttons shall according to relevant standards be red with a yellow background. An emergency stop grab wire shall be red for high visibility. A sign that indicates the location of the E-stop shall be green with a white picture and possibly with text in the local country's language.

### How shall an E-stop stop the machine?

An E-stop shall stop the machine as quickly as possible. To obtain a quick stop one either removes the power directly or one lets a frequency converter 'run down' and afterwards after a little delay, remove the power. An E-stop shall not create other hazards. Therefore a risk analysis must be made for the E-stop to be correctly connected.

7

## Requirements for E-stops are stated in the following standards and regulations

### 2006/42/EC The Machinery Directive

Clause 1.2.4.3 in Annex 1 gives requirements for the emergency stop function for new machines. See also clause 1.2.2 Control devices. (see chapter "Standard and Regulations")

### Council Directive 89/655/EEC (with amendments) concerning the minimum safety and health requirements for the use of work equipment by workers at work

Clause 2.4 gives the requirements for the emergency stop function for older machines. See also clause 2.1. (see chapter "Standard and Regulations")

### EN ISO 13850 Safety of machinery - Emergency stop Principles for design

A harmonized standard that gives technical specifications for the requirements in the Machinery Directive. Could also be used for older machinery.

### EN 60204-1 Safety of Machinery - Electrical equipment of machines – Part 1: General requirements.

Harmonized standard that gives requirements for the electrical equipment of machinery including the emergency stop actuator/function. See clauses 9.2.2 and 9.2.5.4.2.

# Emergency stops

## Inca1 & Inca1 Tina emergency stops for enclosures



### Advantages

- Terminal blocks
- Emergency push button up to cat. 4/PL e acc. to EN ISO 13849-1
- Only 53 mm's construction depth
- Push button IP65, connector IP20
- Available as safety stop (black pushbutton)
- With LED info in print
- With LED info in push button (Inca1 Tina)
- Info output (Inca1 Tina)

**Inca1** is an emergency stop designed for installation in 22.5 mm holes on cabinets. "INCA 1" has potential free contacts for connection to safety relays. The connection is made in cabinets via a removable terminal which also have excellent measuring points. Inca 1 is also available with a black pushbutton and used as a safety stop.

**Inca1 Tina** is also available with electronic adjustment of the dynamic safety loop for connection to the Vital and Pluto units. The connection is made in equipment cabinets via a removable terminal block which also has marked measuring points. Inca 1 Tina is also available with black push button and is used in this case as a safety stop.



### Selection

| Description              | Part No                                        | Product Hierarchy 4700008 |       |
|--------------------------|------------------------------------------------|---------------------------|-------|
|                          |                                                | Order Code                | Price |
| INCA 1                   | 30-054-01                                      | 2TLA030054R0100           |       |
| INCA 1 Tina              | 30-054-00                                      | 2TLA030054R0000           |       |
| INCA 1S                  | 30-054-03                                      | 2TLA030054R0300           |       |
| INCA 1S Tina             | 30-054-02                                      | 2TLA030054R0200           |       |
| Mounting:                | 22,5mm diameter                                |                           |       |
| Operating voltage (LED): | INCA 1: 24 VDC<br>INCA 1 Tina: 24VDC +15% -25% |                           |       |

# Emergency stops

## Smile emergency stops with LED



### Advantages

- Emergency push button up to cat. 4/PL e acc. to EN ISO 13849-1
- Robust
- Push button IP65, enclosure IP67
- Available as safety stop (black pushbutton)
- With LED info in push button



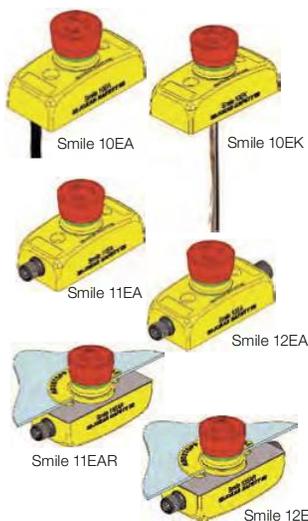
### Smile small and cost effective E-stop

In order to fulfil the need for a small and easy to install E-stop, Smile has been developed. The size of the device makes it possible to be installed wherever you want. With M12 connection/s or cable and centralised mounting holes Smile is very easy to install, especially on aluminium extrusions. Smile is available for E-stops in both dynamic and static safety circuits i.e. for interfacing to Vital/Pluto and Safety relays. Each version is available with either one or two M12 connections or cable. At the top of Smile, a LED shows the current status as: green = protection OK, red = this emergency stop has been pressed and if the LED is off, an emergency stop earlier in the loop has been actuated. Smile is also available with black push button and is used as a safety stop. See section on safety stops.

Smile emergency stop has six different variants:

1. Smile 10EA has a 1 m cable connected through the base of the unit.
2. Smile 10EK has four 1 m short connecting leads through the base of the unit. No LED.
3. Smile 11EA has a five-pole M12 connector on one end of the unit.
4. Smile 12EA has two five-pole M12 connectors, one on each end of the unit.
5. Smile 11EAR has one 5-pole M12 connector at one end.
6. Smile 12EAR has two 5-pole M12 connectors at each end.

7



### Selection

| Description                                                | Part No   | Product Hierarchy 4700008 |       |
|------------------------------------------------------------|-----------|---------------------------|-------|
|                                                            |           | Order Code                | Price |
| Smile 10EA with 1 m cable                                  | 30-051-04 | 2TLA030051R0400           |       |
| Smile 10EK with short connecting leads (No LED connection) | 30-051-06 | 2TLA030051R0600           |       |
| Smile 11EA with M12 male connector                         | 30-051-00 | 2TLA030051R0000           |       |
| Smile 12EA with male and female M12 connectors             | 30-051-02 | 2TLA030051R0200           |       |
| Smile 11EAR                                                | 30-051-01 | 2TLA030051R0100           |       |
| JST2 termination for Smile 12                              | -         | 2TLA030051R1300           |       |

# Emergency stops

## Smile Tina emergency stops with LED



### Advantages

- Emergency push button up to cat. 4/PL e acc. to EN ISO 13849-1
- Light grids, emergency stop and Eden in the same safety loop together with Vital or Pluto gives cat. 4/PL e acc. to EN ISO 13849-1
- With LED indication on push button
- Robust
- Info-signal from each emergency stop
- Push button IP 65, housing IP67
- Available as safety stop (black push button)



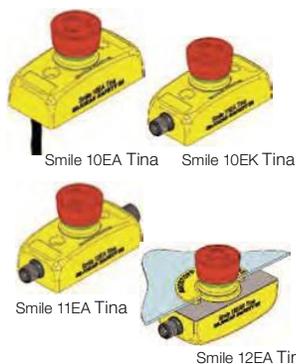
### Smile small and cost effective E-stop

In order to fulfil the need for a small and easy to install E-stop, Smile has been developed. The size of the device makes it possible to be installed wherever you want. With M12 connections or cable and centralised mounting holes Smile is very easy to install, especially on aluminium extrusions. Smile is available for E-stops in both dynamic and static safety circuits i.e. for interfacing to Vital system/Pluto safety PLC and Safety relays. Each version is available with either one or two M12 connections or cable. Two M12 connectors are used to enable the connection of E-stops in series, which is often used with dynamic safety circuits fulfilling safety category 4. In the top of the Smile Tina E-stop unit, LEDs show the actual status according to the dynamic system: Green = everything is OK, Red = E-stop activated. Flashing Red/Green = Stop activated from another preceding device. Smile is also available with black push button and used as a safety stop. See section on safety stops.

Smile emergency stop has four different variants:

1. Smile 10EA Tina has a 1 m cable connected via the base of the unit.
2. Smile 11EA Tina has a five-pole M12 connector on the end of the unit for connecting the ABB Jokab Safety cable.
3. Smile 12EA Tina has two five-pole M12 connectors, one on each end of the unit for connecting the ABB Jokab Safety cable.
4. Smile 11EAR Tina has one 5-pole M12 connector at one end for connection of cable from ABB Jokab Safety.

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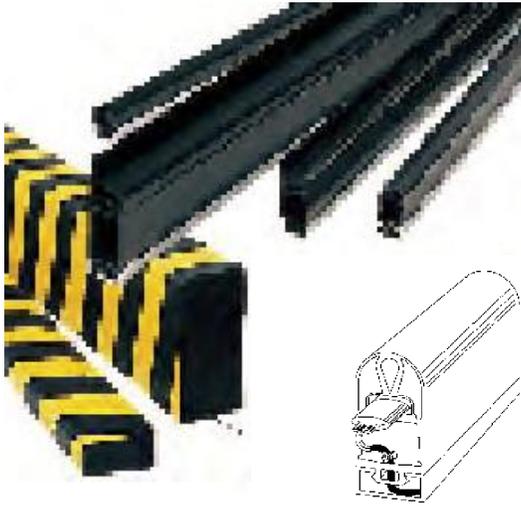


### Selection

| Description                                         | Part No   | Product Hierarchy 4700008 |       |
|-----------------------------------------------------|-----------|---------------------------|-------|
|                                                     |           | Order Code                | Price |
| Smile 10EA Tina with 1 m connection cable           | 30-050-04 | 2TLA030050R0400           |       |
| Smile 11EA Tina with M12 male connector             | 30-050-00 | 2TLA030050R0000           |       |
| Smile 12EA Tina with male and female M12 connectors | 30-050-02 | 2TLA030050R0200           |       |
| Smile 11EAR Tina                                    | 30-050-01 | 2TLA030050R0100           |       |
| Smile 11SA Tina                                     | 30-050-05 | 2TLA030050R0500           |       |

Note. There are versions for use with relay technology (without Tina).

# Contact rails and bumpers



## Utilisation

- Protection against squeezing accidents on moving machine parts and automatic doors

## Advantages

- Can be connected to a safety relay, Vital or Pluto
- Supplied in customised lengths
- IP 65
- Simple assembly on site
- Lengths up to 25 m

## Safety contact rails and bumpers as safety devices for potentially dangerous machines

### Safety contact rails

Contact edges are used as protection against crushing injuries, for example, moving machine parts, automatic doors.

7

### Contact edges with cast-in contact strips

Our new contact edges consist of a rubber profile with a cast-in contact strip. They are made up simply using connection plugs that are glued to the ends together with a terminal cap. The rubber profile is fitted on an aluminium profile.

Available in EPDM design. Supplied in lengths up to 25 m.

### Contact edges with contact strips SKS 18

The contact edge consists of a rubber profile with a safety contact strip inside. The contact edge is fitted on an aluminium profile.

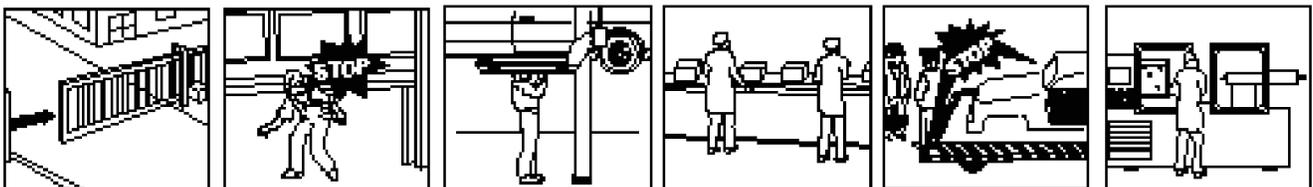
The special design of rubber profiles of EPDM or NBR rubber protect the inner contact strip in the best way possible against damage and also allow for a contact angle exceeding  $\pm 45^\circ$ . Normally supplied in lengths up to 25 m.

### Bumpers

Bumpers are employed on automatic production lines to minimise danger to both people and machines. The large foam rubber cushions enable long practical braking and run-through distances, thus enabling designers to optimise protection for both personnel and machines.

The safety contact strips are mounted inside aluminium profiles which are, in turn, protected by the large foam cushions that are glued to the carrier profile and then sprayed with a thin film of polyurethane which makes the bumper waterproof and helps to minimise wear and tear.

The bumpers are delivered mounted to the carrier profile in ordered lengths (0,2 m – 3 m).



# Contact rails and bumpers

## Technical data - Contact Rails

|                                       |                                                         |
|---------------------------------------|---------------------------------------------------------|
| Mechanical load max <sup>1</sup>      | 500 N                                                   |
| Actuating angle (DIN) <sup>1</sup>    | 2x 20°                                                  |
| Mechanical life <sup>1</sup>          | 10 <sup>5</sup>                                         |
| Max. operate temp. range <sup>2</sup> | -20°C to +55°C                                          |
| Max. temperature range                | -25°C to +70°C                                          |
| Protection classification             | IP 65                                                   |
| Max. Electrical load                  | 24V 100mA                                               |
| Resistance                            | 0.6 Ohm/m                                               |
| Conductors                            | GP: 2x 0.38 mm <sup>2</sup> GE: 2x 0.34 mm <sup>2</sup> |
| Conductors insulation material        | GP: PVC GE: PUR matt blackt                             |

(1) According to DIN 31006-2 (GS - BE - 17)

(2) Not including DIN 31006-2 (GS - BE - 17)

## Technical data - Bumpers

|                     |                                     |
|---------------------|-------------------------------------|
| Dimensions - Length | Max. 3000mm                         |
| Protection rating   | IP 65                               |
| Connection cable    | 2 x 2m; 2 x 0,34 mm <sup>2</sup> PU |

## Selection

| Description                    | Part No   | Product Hierarchy 4700008 |       |
|--------------------------------|-----------|---------------------------|-------|
|                                |           | Order Code                | Price |
| Safety contact rail 25-25 EPDM | 76-025-25 | 2TLJ076025R2500           |       |
| Safety contact rail 25-40 EPDM | 76-025-40 | 2TLJ076025R4000           |       |
| Safety contact rails 25-25 NBR | 76-125-25 | 2TLJ076125R2500           |       |
| Safety contact rails 25-40 NBR | 76-125-40 | 2TLJ076125R4000           |       |
| Production cost 2+2m cable     | 76-009-01 | 2TLJ076009R0100           |       |
| Production cost 5+5 m cable    | 76-009-05 | 2TLJ076009R0500           |       |
| Production cost 7+7 m cable    | 76-009-08 | 2TLJ076009R0800           |       |
| Production cost 10+10 m cable  | 76-009-10 | 2TLJ076009R1000           |       |
| Bumper ASB 53/100 black        | 76-200-01 | 2TLJ076200R0100           |       |
| Bumper ASB 100/200 black       | 76-200-02 | 2TLJ076200R0200           |       |
| Bumper ASB 150/300 black       | 76-200-03 | 2TLJ076200R0300           |       |
| Bumper ASB 200/400 black       | 76-200-04 | 2TLJ076200R0400           |       |
| Bumper ASB 53/100 black/yellow | 76-200-05 | 2TLJ076200R0500           |       |
| Bumper ASB 100/200 bl./yl.     | 76-200-06 | 2TLJ076200R0600           |       |
| Bumper ASB 150/300 bl./yl.     | 76-200-07 | 2TLJ076200R0700           |       |
| Bumper ASB 200/400 bl./yl.     | 76-200-08 | 2TLJ076200R0800           |       |

# Safety mats



Certified according to EN 1760-1.

## Application:

- Personal protection within the dangerous areas around presses, robots, production lines, machines etc.

## Features:

- Can be connected to a safety relay, Vital or Pluto
- Very durable
- IP 67



## The ASK Safety Mat is used as personal protection within the dangerous areas.

When connected to a suitable monitoring system stepping on the Safety Mat will immediately be detected causing dangerous machine movements to be stopped. This is made possible by the detection of electrical contacts closing within the sandwich construction of the Mat. As a load-bearing component the Mat is made with a bottom plate of either synthetic material or metal. The Safety Mat is provided with a ribbed surface, which is fixed by adhesive to the surface of the Safety Mat.

The safety mat and its connection cabling can be supervised by a suitable ABB Jokab Safety safety relay, which provides PL d.

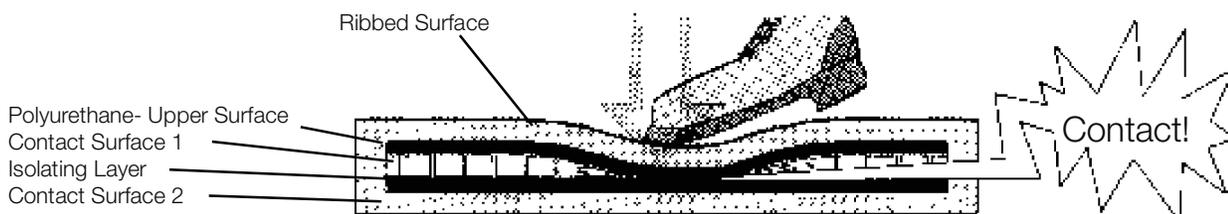
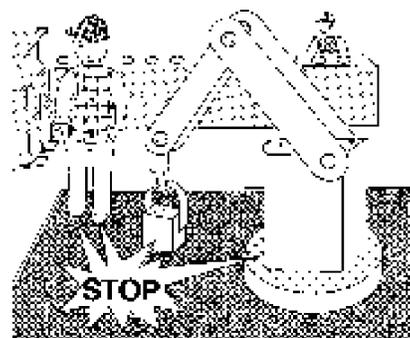
isolating layer. The internal switching surface is cast into a durable polyurethane to protect against moisture, and this is then covered with a top layer of ribbed or chequered rubber mat or a thin aluminium plate.

Attachment to the floor is by means of a ramped edge trim or a z-profile made of aluminium. The ramp profile has a channel for connection cables.

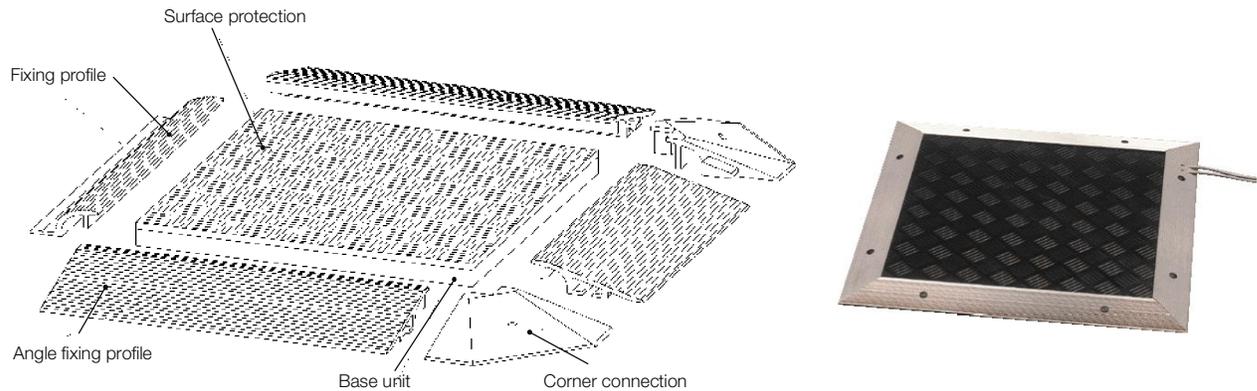
Custom Mats can be made, i.e. special shape, resistant against harsh industrial environments (mineral oil, acid, bleach etc.) or with a non-slip surface or M12-contacts.

7

The basic Mat construction consists of a ground plate of either PVC, Aluminium or Stainless Steel which provides protection against uneven ground etc. The Mat is made up of a sandwich construction, the pressure contact switch consisting of two conducting sheets separated from each other by a webbed



# Safety mats



| Technical data - general                                                           |                                                                                                           |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Max. area                                                                          | Entire mat = 2350 x 1350 mm<br>10 m <sup>2</sup> (divided mat)<br>Rec. relation max 3:1<br>Min 100x100 mm |
| Height                                                                             | 10mm without ribbed surface<br>max 14.5 mm with ribbed surface                                            |
| Inactive Area                                                                      | Nominally 10 mm from Mat edge                                                                             |
| Material                                                                           | Black polyurethane, other colours on request                                                              |
| Protection Class                                                                   | IP 67                                                                                                     |
| Ambient Air Temperature                                                            | 0°C to +60°C                                                                                              |
| Chemical Resistance<br>Oil, grease<br>10% acid<br>10% alkaline (caustic) solutions | good<br>resistant<br>resistant                                                                            |
| Cable                                                                              | 2 x 5 m, 2 x 0,34 mm <sup>2</sup> ,<br>PU sheathed                                                        |
| Mechanical Life                                                                    | > 1,5x10 <sup>6</sup> load shifting                                                                       |

7

## Selection

| Description                                      | Part No   | Product Hierarchy 4700009 |       |
|--------------------------------------------------|-----------|---------------------------|-------|
|                                                  |           | Order Code                | Price |
| Safety mat ASK-1U4.4-RF 750x1000mm, 5+5m cables  | 76-310-05 | 2TLJ076310R0500           |       |
| Safety mat ASK-1U4.4-RF 1000x1000mm, 5+5m cables | 76-310-06 | 2TLJ076310R0600           |       |
| Safety mat ASK-1U4-RF 1000x1500mm, 5+5m cables   | 76-310-07 | 2TLJ076310R0700           |       |
| Safety mat ASK-1T4.4-RF 750x1000mm, 5+5m cables  | 76-310-10 | 2TLJ076310R1000           |       |
| Safety mat ASK-1T4.4-RF 1000x1000mm, 5+5m cables | 76-310-11 | 2TLJ076310R1100           |       |
| Safety mat ASK-1T4.4-RF 1000x1500mm, 5+5m cables | 76-310-12 | 2TLJ076310R1200           |       |
| RS 14, Ramp rail in aluminium                    | 76-300-05 | 2TLJ076300R0500           |       |
| BS 14 profile for ASK and KMS in alumi           | 76-300-08 | 2TLJ076300R0800           |       |
| Corner piece                                     | 76-300-09 | 2TLJ076300R0900           |       |

# Fencing systems

## Quick-Guard



Quick-Guard Standard assembled with mesh.



Quick-Guard Standard with black and transparent Polycarbonate in-fill panels as used for medical applications.



Quick-Guard E with few components and easy to angle at up to 45°.

### Adaption and Modification

Quick-Guard is a very flexible fencing system consisting of a minimum of different components, e.g. aluminium profiles, patented brackets, net-locks, mesh, solid or noise reduction panels. Using these components there are almost no limitations as to what can be built. Quick-Guard fencing costs little to assemble and modify.

### Assembly

Due to our patented screw-lock system, we can supply all brackets pre-mounted with fixing screws and nuts. No holes need to be drilled in the profiles and all cutting is straight. This makes assembly and modification very easy.

### Two versions of Quick-Guard

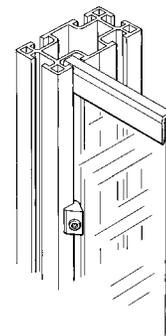
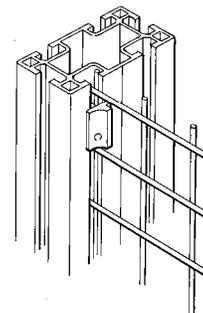
The Quick-Guard fencing system is available in two versions, Quick-Guard (Standard) and Quick-Guard E which also can be combined. The fencing systems are also easy to adjust when production equipment is modified and/or moved.

### Proposal and ordering

By utilising our AutoCAD-based SafeCAD program we are able to make system designs in 3-D very quickly. Drawings, cutting lists, etc. are generated from SafeCAD and the drawings can also be used for installation purposes.

Our policy - To create systems that are environmentally friendly and provide ergonomic working conditions.

Quick-Guard is environmentally friendly. All components in the Fencing System can easily be disassembled and reused. All materials in the Fencing System are 100% recyclable. Quick-Guard can also provide a pleasing ergonomic working environment.

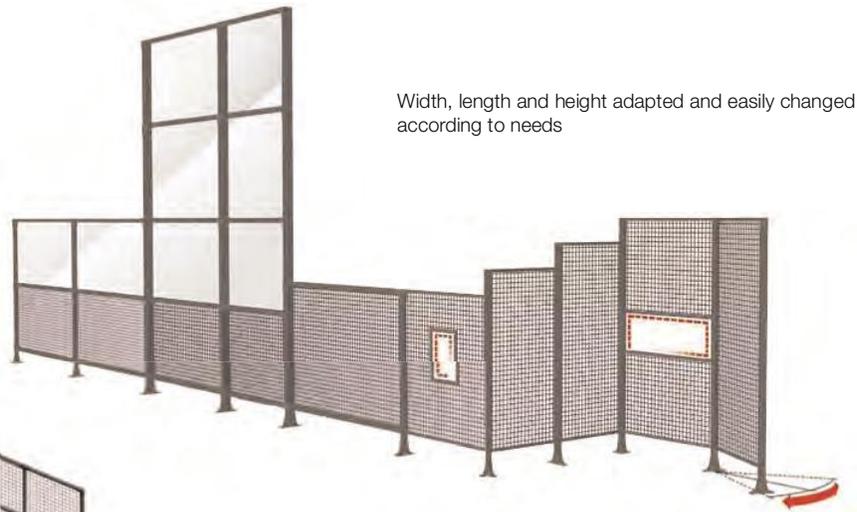


# Fencing systems Quick-Guard

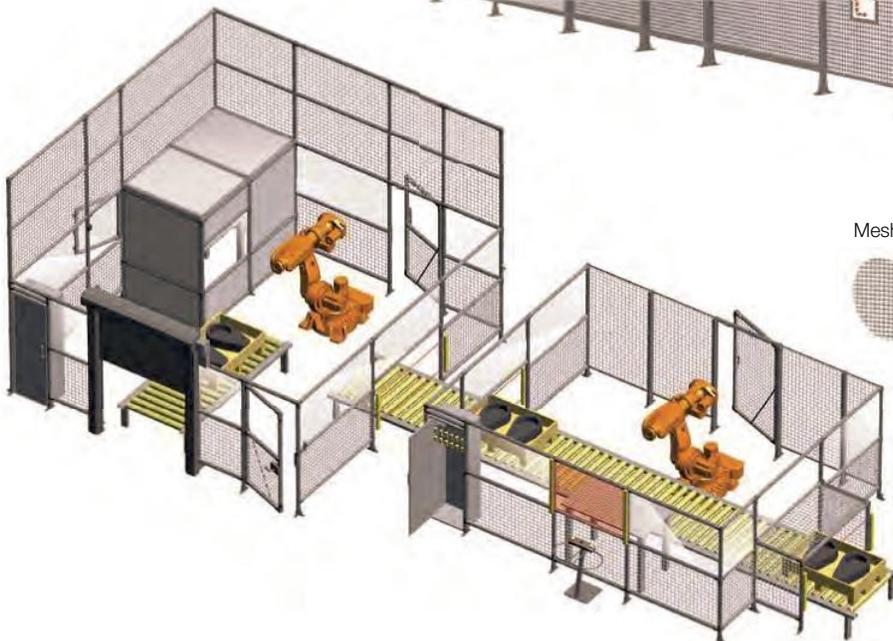
A flexible and stable fencing system which is easy to install



Fixings with pre-mounted screws and nuts mean easy assembly



Width, length and height adapted and easily changed according to needs



# Fencing systems

## Quick-Guard

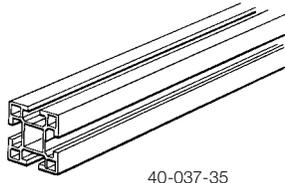
### Selection

### Product Hierarchy 4700009

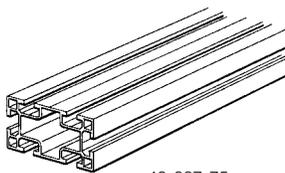
| Description | Part No | Order Code | Price |
|-------------|---------|------------|-------|
|-------------|---------|------------|-------|

#### Fencing profiles

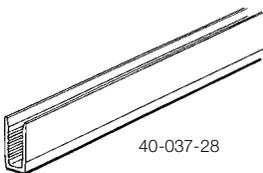
|                                                  |           |                 |  |
|--------------------------------------------------|-----------|-----------------|--|
| JSM A44A Al. extrusion 44x44mm, untreated, per m | 40-037-97 | 2TLJ040037R9700 |  |
| JSM A44A Al. extrusion 44x44mm, L=1400mm         | 40-037-98 | 2TLJ040037R9800 |  |
| JSM A44A Al extr. 44x44mm per m                  | 40-037-35 | 2TLJ040037R3500 |  |
| JSM A44A Al extr. 44x44mm, L=1100mm              | 40-037-36 | 2TLJ040037R3600 |  |
| JSM A44A Al extr. 44x44mm, L=2000mm              | 40-037-37 | 2TLJ040037R3700 |  |
| JSM A44A Al extr. 44x44mm, L=2200mm              | 40-037-38 | 2TLJ040037R3800 |  |
| JSM A44A Al extr. 44x44mm, L=2400mm              | 40-037-39 | 2TLJ040037R3900 |  |
| JSM A44A Al extr. 44x44mm, L=2500mm              | 40-037-40 | 2TLJ040037R4000 |  |
| JSM A44A Al extr. 44x44mm, L=6000mm              | 40-037-41 | 2TLJ040037R4100 |  |
| JSM A4488A Al extr. 44x88mm per m                | 40-037-42 | 2TLJ040037R4200 |  |
| JSM A4488A Al extr. 44x88mm, L=2200mm            | 40-037-44 | 2TLJ040037R4400 |  |
| JSM A4488A Al extr. 44x88mm, L=6000mm            | 40-037-45 | 2TLJ040037R4500 |  |
| JSM A4416 Al. extrusion 44x16.5mm per m          | 40-037-70 | 2TLJ040037R7000 |  |
| JSM A4416 Al. extrusion 44x16.5mm, L=6000mm      | 40-037-74 | 2TLJ040037R7400 |  |
| JSM A8888 Al. extrusion 88x88mm per m            | 40-037-75 | 2TLJ040037R7500 |  |
| JSM A8888 Al. extrusion 88x88mm, L=6000mm        | 40-037-79 | 2TLJ040037R7900 |  |
| JSM A4426 Al. extrusion 44x26mm per m            | 40-037-80 | 2TLJ040037R8000 |  |
| JSM A4426 Al. extrusion 44x26mm, L=6000mm        | 40-037-81 | 2TLJ040037R8100 |  |



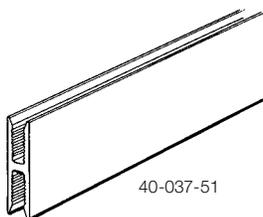
40-037-35



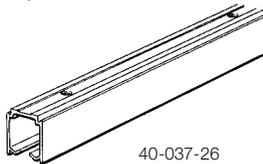
40-037-75



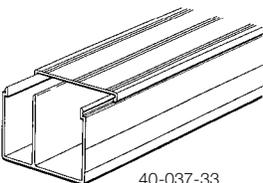
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40-037-51



40-037-26



40-037-33

#### Fencing U profiles

|                                         |           |                 |  |
|-----------------------------------------|-----------|-----------------|--|
| JSM A12 Edge protection U-profile per m | 40-037-28 | 2TLJ040037R2800 |  |
| JSM A12-1076 U-profile L=1076mm         | 40-037-27 | 2TLJ040037R2700 |  |
| JSM A12-1476 U-profile L=1476mm         | 40-037-46 | 2TLJ040037R4600 |  |
| JSM A12-2000 U-profile L=2000mm         | 40-037-47 | 2TLJ040037R4700 |  |

#### Fencing H profiles

|                                                               |           |                 |  |
|---------------------------------------------------------------|-----------|-----------------|--|
| JSM A13 H-profile, natural anodised for Express per m         | 40-037-50 | 2TLJ040037R5000 |  |
| JSM A13-1076 H-profile natural anodised for Express, L=1076mm | 40-037-51 | 2TLJ040037R5100 |  |
| JSM A13-1076 H-profile natural anodised for Express, L=1476mm | 40-037-52 | 2TLJ040037R5200 |  |
| JSM A13-1076 H-profile natural anodised for Express, L=2020mm | 40-037-53 | 2TLJ040037R5300 |  |

#### Guide rails

|                                                     |           |                 |  |
|-----------------------------------------------------|-----------|-----------------|--|
| JSM A3130B guide rail incl. mounting components     | 40-037-26 | 2TLJ040037R2600 |  |
| JSM A56 Guiding rail in alu. incl. screw, L=2m      | 40-037-08 | 2TLJ040037R0800 |  |
| JSM A56 Guiding rail in alu. incl. screws           | 40-037-49 | 2TLJ040037R4900 |  |
| JSM A56-6000 Guiding rail in alu. L=6m incl. screws | 40-037-48 | 2TLJ040037R4800 |  |

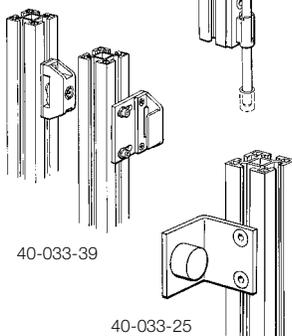
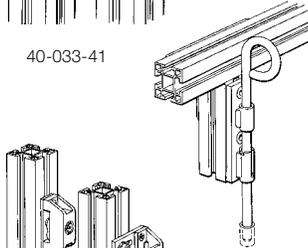
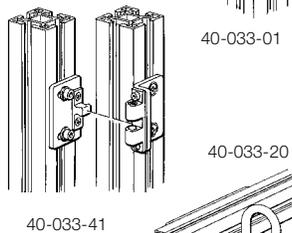
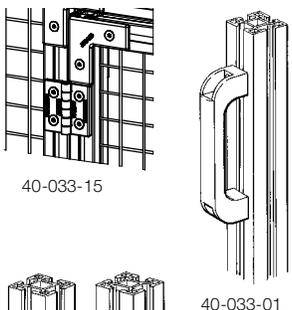
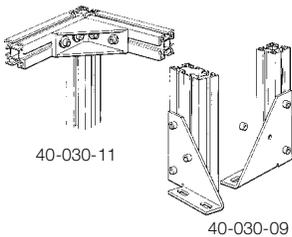
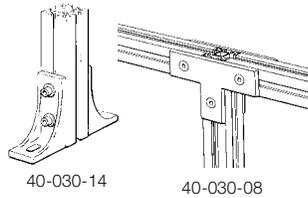
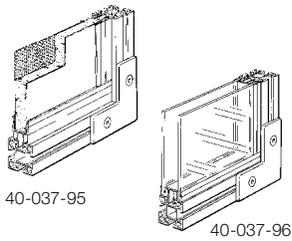
#### Cable ducting

|                                                       |           |                 |  |
|-------------------------------------------------------|-----------|-----------------|--|
| JSM A11 Coverstrip alu. L=2m                          | 40-037-12 | 2TLJ040037R1200 |  |
| JSM A25A Cable duct 44x25mm, w. holes incl. cap, L=2m | 40-037-13 | 2TLJ040037R1300 |  |
| JSM A25B Cable duct 44x25mm incl. cap, L=2m           | 40-037-14 | 2TLJ040037R1400 |  |
| JSM A60A Cable duct 44x60mm w. holes incl. cap, L=2m  | 40-037-15 | 2TLJ040037R1500 |  |
| JSM A60B Cable duct 44x60mm incl. cap, L=2m           | 40-037-16 | 2TLJ040037R1600 |  |
| JSM A88 Cable duct 88x68mm, L=2m                      | 40-037-33 | 2TLJ040037R3300 |  |
| JSM A4488A Al extr. 44x88mm, L=2000mm                 | 40-037-43 | 2TLJ040037R4300 |  |
| JSM A4488A Al extr. 44x88mm, L=2000mm                 | 40-037-43 | 2TLJ040037R4300 |  |

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# Fencing systems

## Quick-Guard



### Selection

| Description | Part No | Product Hierarchy 4700009 |       |
|-------------|---------|---------------------------|-------|
|             |         | Order Code                | Price |

#### Acoustic damping profiles

|                                                          |           |                 |  |
|----------------------------------------------------------|-----------|-----------------|--|
| JSM AS1 Al-Profile for 25mm sound absorbing panel, per m | 40-037-95 | 2TLJ040037R9500 |  |
| JSM AS2 Al-Profile for 2x5mm PC sheet, per m             | 40-037-96 | 2TLJ040037R9600 |  |
| JSM AS1 Al-Profile for 25mm sound abs. panel, L=2m       | 40-037-09 | 2TLJ040037R0900 |  |
| JSM AS2 Al-Profile for 2x5mm PC sheet, L=2m              | 40-037-10 | 2TLJ040037R1000 |  |

#### Fittings

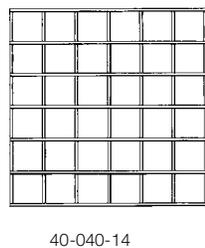
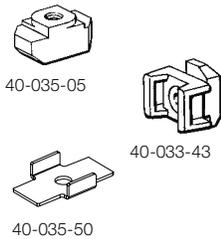
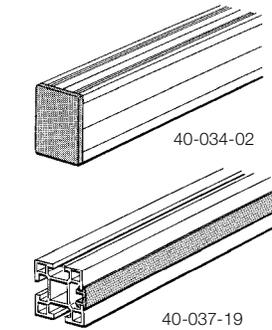
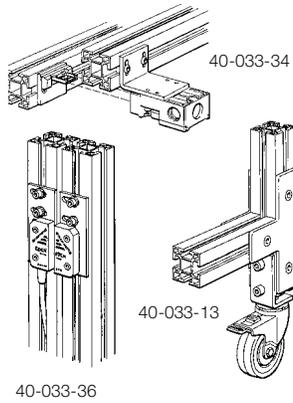
|                                                |           |                 |  |
|------------------------------------------------|-----------|-----------------|--|
| JSM 39-K Floor/angle bracket Alu. Premounted   | 40-030-14 | 2TLJ040030R1500 |  |
| JSM 30B-K Floor bracket                        | 40-030-06 | 2TLJ040030R0700 |  |
| JSM 30B-K1 Angle bracket with four screws      | 40-030-11 | 2TLJ040030R1300 |  |
| JSM 31B-K Small angular bracket                | 40-030-13 | 2TLJ040030R1400 |  |
| JSM 36-K1 Floorbracket in steel for JSM A4488A | 40-030-09 | 2TLJ040030R1000 |  |
| JSM 36-K2 Floorbracket in steel for JSM A44A   | 40-030-10 | 2TLJ040030R1100 |  |
| JSM 32B-K L-bracket premounted                 | 40-030-07 | 2TLJ040030R0800 |  |
| JSM 33B-K T-bracket premounted                 | 40-030-08 | 2TLJ040030R0900 |  |
| JSM 37 Support clip Express                    | 40-033-31 | 2TLJ040033R3100 |  |
| JSM 35-K Hinge w. screw c-c47                  | 40-033-14 | 2TLJ040033R1500 |  |
| JSM 34B-K I-bracket premounted with screws     | 40-030-15 | 2TLJ040031R0600 |  |

#### Door components

|                                                           |           |                 |  |
|-----------------------------------------------------------|-----------|-----------------|--|
| JSM D1A Hinge incl screw c-c62                            | 40-033-15 | 2TLJ040033R1600 |  |
| JSM D2 Handle incl. screws                                | 40-033-01 | 2TLJ040033R0200 |  |
| JSM D3 Doorcloser incl mounting comp                      | 40-033-02 | 2TLJ040033R0400 |  |
| JSM D11B Ball latch                                       | 40-033-41 | 2TLJ040033R4100 |  |
| JSM D11C Ball latch for sliding door                      | 40-033-42 | 2TLJ040033R4200 |  |
| JSM D16 Key for JSM D15 Cam lock                          | 40-033-44 | 2TLJ040033R4400 |  |
| JSM D4K Fitting EDEN/EDEN E Stainless steel               | 40-033-45 | 2TLJ040033R4500 |  |
| JSM D10A Pullock extended                                 | 40-033-21 | 2TLJ040033R2200 |  |
| JSM D10 Pullock                                           | 40-033-20 | 2TLJ040033R2100 |  |
| JSM D10B Door bolt with spring                            | 40-033-38 | 2TLJ040033R3800 |  |
| JSM D15 Cam lock excl. key, polyamid black                | 40-033-39 | 2TLJ040033R3900 |  |
| JSM D13A Doorstop angular                                 | 40-033-26 | 2TLJ040033R2700 |  |
| JSM D13B Doorstop horizontal                              | 40-033-27 | 2TLJ040033R2800 |  |
| JSM D14 Crossbar L= 1160 mm                               | 40-033-28 | 2TLJ040033R3000 |  |
| JSM D5 Suspension wheel                                   | 40-033-04 | 2TLJ040033R0500 |  |
| JSM D6 Sliding element, rect.                             | 40-033-05 | 2TLJ040033R0600 |  |
| JSM D7 Sliding element, round                             | 40-033-06 | 2TLJ040033R0700 |  |
| JSM D8 Sliding element, guide                             | 40-033-07 | 2TLJ040033R0800 |  |
| JSM D12 Guiding pin vertical                              | 40-033-22 | 2TLJ040033R2300 |  |
| JSM D12A Guiding pin horizontal                           | 40-033-23 | 2TLJ040033R2400 |  |
| JSM D12B Guiding bracket                                  | 40-033-24 | 2TLJ040033R2500 |  |
| JSM D13 Doorstop vertical                                 | 40-033-25 | 2TLJ040033R2600 |  |
| JSM D9 Guide roller w. locking mechanism                  | 40-033-08 | 2TLJ040033R0900 |  |
| JSM D4A Fittings for JSNY5 conv. opening door             | 40-033-09 | 2TLJ040033R1000 |  |
| JSM D4B Fittings for JSNY5 switch fittings                | 40-033-10 | 2TLJ040033R1100 |  |
| JSM D9-K Guide roller w. Lock mechanism 75/79 incl. angle | 40-033-11 | 2TLJ040033R1200 |  |

# Fencing systems

## Quick-Guard



### Selection

| Description | Part No | Product Hierarchy 4700009 |       |
|-------------|---------|---------------------------|-------|
|             |         | Order Code                | Price |

#### Door components cont.

|                                                |           |                 |  |
|------------------------------------------------|-----------|-----------------|--|
| JSM D9A Guide roller 75/79                     | 40-033-12 | 2TLJ040033R1300 |  |
| JSM D9A-K Guide roller 75/79 incl. angle       | 40-033-13 | 2TLJ040033R1400 |  |
| JSM D4H Fitting for ADAM/EVA incl. accessories | 40-033-36 | 2TLJ040033R3600 |  |
| JSM D4AA Fittings for JSNY5                    | 40-033-34 | 2TLJ040033R3400 |  |
| JSM D4D Fittings for JSNY8 sliding door        | 40-033-17 | 2TLJ040033R1800 |  |
| JSM D4E Fitting for JSNY7M/R                   | 40-033-18 | 2TLJ040033R2000 |  |
| JSM D4G Fittings for JSNY7                     | 40-033-33 | 2TLJ040033R3300 |  |
| JSM D4C Fittings for JSNY8/9 conventional door | 40-033-16 | 2TLJ040033R1700 |  |

#### Terminal caps and strips

|                                            |           |                 |  |
|--------------------------------------------|-----------|-----------------|--|
| JSM L1A Terminal cap yellow for JSM A44A   | 40-034-00 | 2TLJ040034R0000 |  |
| JSM L2 Term. cap for JSM A25 grey          | 40-034-01 | 2TLJ040034R0100 |  |
| JSM L3 Term. cap for JSM A60 grey          | 40-034-02 | 2TLJ040034R0200 |  |
| JSM L1B Terminal cap grey for JSM A44A     | 40-034-03 | 2TLJ040034R0300 |  |
| JSM L4A Terminal cap yellow for JSM A4488A | 40-034-04 | 2TLJ040034R0400 |  |
| JSM L4B Terminal cap grey for JSM A4488A   | 40-034-05 | 2TLJ040034R0500 |  |
| JSM T3A Coverstrip yellow, L=2m            | 40-037-31 | 2TLJ040037R3100 |  |
| JSM T3B Coverstrip grey, L=2m              | 40-037-32 | 2TLJ040037R3200 |  |
| JSM T2A Wide cover strip yellow            | 40-037-19 | 2TLJ040037R1900 |  |

#### Accessories

|                                                          |           |                 |  |
|----------------------------------------------------------|-----------|-----------------|--|
| JSM M5B Specialnut M5                                    | 40-035-04 | 2TLJ040035R0400 |  |
| JSM M6B Specialnut M6                                    | 40-035-05 | 2TLJ040035R0500 |  |
| JSM M8B Specialnut M8                                    | 40-035-06 | 2TLJ040035R0600 |  |
| JSM M4B Specialnut M4                                    | 40-035-07 | 2TLJ040035R0700 |  |
| JSM X1 Cable tie 2.5-7.8mm, nylon black UV stable, 10pcs | 40-033-43 | 2TLJ040033R4300 |  |
| JSM B4C Centering plate M4 Steel galvanised              | 40-035-50 | 2TLJ040035R5000 |  |
| JSM B5C Centering plate M5 Steel galvanised              | 40-035-51 | 2TLJ040035R5100 |  |
| JSM B6C Centering plate M6 Steel galvanised              | 40-035-52 | 2TLJ040035R5200 |  |
| JSM B8C Centering plate M8 Steel galvanised              | 40-035-53 | 2TLJ040035R5300 |  |

#### Surfaces

|                                                        |           |                 |  |
|--------------------------------------------------------|-----------|-----------------|--|
| JSM YN40W1 Welded mesh black, 40x40x3.5mm, 2020x865mm  | 40-040-13 | 2TLJ040040R1300 |  |
| JSM YN40W2 Welded mesh black, 40x40x3.5mm, 1074x1816mm | 40-040-14 | 2TLJ040040R1400 |  |
| JSM YN40W3 Welded mesh black, 40x40x3.5mm, 1074x2016mm | 40-040-15 | 2TLJ040040R1500 |  |
| JSM YN40W9 Welded mesh black, 40x40x3.5mm, cut to size | 40-040-16 | 2TLJ040040R1600 |  |
| JSM YN40WE2 Stainless steel, 40x40x3.5mm, 1074x1816mm  | 40-040-18 | 2TLJ040040R1800 |  |
| JSM YN40WE9 Stainless steel, 40x40x3.5mm, cut to size  | 40-040-19 | 2TLJ040040R1900 |  |
| JSM YN40W4 Welded mesh black, 40x40x3.5mm, 1474x2016mm | 40-040-20 | 2TLJ040040R2000 |  |
| JSM YN40W5 Welded mesh black, 40x40x3.5mm, 1474x1816mm | 40-040-21 | 2TLJ040040R2100 |  |
| JSM YN40WE1 Stainless steel, 40x40x3.5mm, 2020x864mm   | 40-040-25 | 2TLJ040040R2500 |  |
| JSM YN40W6 Welded mesh black, 40x40x3.5mm, 2020x754mm  | 40-040-26 | 2TLJ040040R2600 |  |
| JSM YN40W7 Welded black mesh, 40x40x3.5mm, 2020x1174mm | 40-040-27 | 2TLJ040040R2700 |  |
| JSM YN40W10 Welded black mesh 40x40x3,5m               | 40-040-28 | 2TLJ040040R2800 |  |
| JSM YN40W11 Welded black mesh 40x40x3,5m               | 40-040-29 | 2TLJ040040R2900 |  |

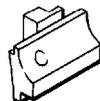
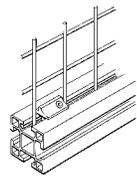
# Fencing systems

## Quick-Guard

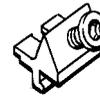
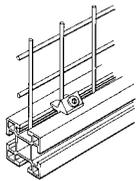
### Selection

### Product Hierarchy 4700009

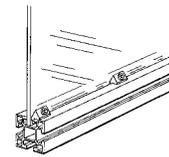
| Description                                                    | Part No   | Product Hierarchy 4700009 |       |
|----------------------------------------------------------------|-----------|---------------------------|-------|
|                                                                |           | Order Code                | Price |
| <b>Surfaces cont.</b>                                          |           |                           |       |
| JSM NL2 Netlock in PA f welded                                 | 40-031-06 | 2TLJ040031R0800           |       |
| JSM NL3 Netlock f. welded mesh                                 | 40-031-08 | 2TLJ040031R0900           |       |
| JSM YPC5A1 PC sheet 5mm, uncoloured, 2020x865mm                | 40-039-10 | 2TLJ040039R1000           |       |
| JSM YPC5A2 PC sheet 5mm, uncoloured, 2020x1175mm               | 40-039-11 | 2TLJ040039R1100           |       |
| JSM YPC5A9 PC sheet 5mm, uncoloured, cut to size               | 40-039-12 | 2TLJ040039R1200           |       |
| JSM YPC4A9 PC sheet 4mm, uncoloured, cut to size               | 40-039-16 | 2TLJ040039R1600           |       |
| JSM YPC5A3 PC sheet 5mm, uncoloured, 1076x1816mm               | 40-039-17 | 2TLJ040039R1700           |       |
| JSM YPC5A4 PC sheet 5mm, uncoloured, 1076x2016mm               | 40-039-18 | 2TLJ040039R1800           |       |
| JSM YPC5A5 PC sheet 5mm, uncoloured, 960x1698mm                | 40-039-19 | 2TLJ040039R1900           |       |
| JSM YPC3AC9 PC for welding, dark brown 3mm, cut to size        | 40-039-24 | 2TLJ040039R2400           |       |
| JSM YPC3AC1 PC for welding, dark brown 3mm, 2050x3000mm        | 40-039-25 | 2TLJ040039R2500           |       |
| JSM YLA25A1 Sound absorbing panel 25mm, white/gal, 1963x1200mm | 40-039-26 | 2TLJ040039R2600           |       |
| JSM YGP1A9 Steel panel 1.0mm, X-reinforced, per m2             | 40-039-07 | 2TLJ040039R0700           |       |
| JSM PL1A Securing strip L=842mm                                | 40-038-01 | 2TLJ040038R0100           |       |
| JSM PL1B Securing strip L=1152mm                               | 40-038-02 | 2TLJ040038R0200           |       |
| JSM PL1C Securing strip L=2000mm                               | 40-038-03 | 2TLJ040038R0300           |       |
| JSM PL1D Securing strip L=732mm                                | 40-038-04 | 2TLJ040038R0400           |       |
| JSM G2 Cellular rubber for securing glass, self-adhesive       | 40-038-06 | 2TLJ040038R0600           |       |
| JSM PL2A Securing strip L=842mm, for 4mm sheets                | 40-038-07 | 2TLJ040038R0700           |       |
| JSM PL2B Securing strip L=1152mm, for 4mm sheets               | 40-038-08 | 2TLJ040038R0800           |       |
| JSM PL2C Securing strip L=2000mm, for 4mm sheets               | 40-038-09 | 2TLJ040038R0900           |       |
| JSM PL2D Securing strip L=732mm, for 4mm sheets                | 40-038-10 | 2TLJ040038R1000           |       |
| JSM PL3 Securing component for 5mm infill panels               | 40-038-11 | 2TLJ040038R1100           |       |



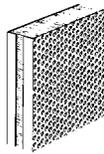
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40-031-08



40-038-11



40-039-26

# Terms and Conditions

- (k) costs in connection with interruption of operation, or
  - (l) any special, incidental or consequential loss or damage, howsoever caused even if ABB was advised of the possibility of them in advance.
- 15.2. To the maximum extent permitted by law, and notwithstanding anything to the contrary in this contract, ABB's total liability in respect of any and all claims for damages or losses, caused by breach of contract, warranty, guarantee, indemnity, tort (including negligence), strict liability, statutory duty or otherwise, which may arise in connection with its performance or non-performance under this contract shall not exceed in the aggregate the total purchase price.
- 15.3. The Purchaser acknowledges that the contents of this Article 15 have been especially brought to the Purchaser's attention, and agree the exclusions and limitations on liability are reasonable in the circumstances.
- 16. LIMITATION PERIOD
- 16.1. Subject to law as regards personal injury and death, the Purchaser shall have no claim against ABB, in contract or in tort, in relation to anything performed or delivered under this contract (including claims for defective Products, services or goods), unless ABB has been notified in writing of such claim within twenty-four (24) months of delivery of the Product.
- 17. TERMINATION
- 17.1. Should
  - (a) the Purchaser's payments be overdue by more than fourteen (14) days;
  - (b) a breach of the contract occurs in the circumstances set out in Article 11.1(d) or in Article 19.1;
  - (c) proceedings be commenced to wind up the Purchaser (except for the purpose of solvent amalgamation or reconstruction);
  - (d) any composition or arrangement with the Purchaser's creditors be made;
  - (e) the Purchaser be put into administration, or if a receiver is appointed;
  - (f) the Purchaser stops or suspend payment of its debts or is unable to, or has no real prospect of being able to, or admits an inability to, pay its debts as they fall due or fails to satisfy any judgment debt in whole or in part within fourteen (14) days; or
  - (g) the Purchaser ceases or threatens to cease to carry on the whole or a substantial part of its business or is dissolved;ABB shall be entitled (without incurring any liability to the Purchaser) to terminate the contract immediately by notice in writing to the Purchaser, and thereupon to recover any loss or damage ABB has suffered or incurred as a result of such termination.
- 18. EXCLUSION OF THIRD PARTY RIGHTS
- 18.1. The parties do not intend that a person who is not a party to this contract shall have any rights to enforce any term of this contract.
- 19. MISCELLANEOUS
- 19.1. The Purchaser shall acquaint itself and comply with ABB's Code of Conduct as displayed on ABB's website (<http://www.abb.com>) as may be updated or modified from time to time.
- 19.2. This contract constitutes the complete understanding between the parties and save in respect of fraud supersedes all previous representations, negotiations and agreements in respect thereof. Neither party shall be bound by any terms other than as expressly provided in this contract or as subsequently agreed between the parties in writing.
- 19.3. The Purchaser shall not use the name or logo of ABB or product designations on any letter heading, publication, advertisement or other literature without prior written approval of ABB, such approval shall be at ABB's sole discretion.
- 19.4. The Purchaser may not subcontract, transfer or assign any of its rights or obligations in connection with this contract.
- 19.5. The invalidity, illegality or unenforceability of any provision of this contract shall not affect the validity of the remaining provisions. If any provision proves to be invalid, illegal or unenforceable, the parties shall replace such provision by a valid new one having an effect as close as possible to the original provision.
- 20. GOVERNING LAW
- 20.1. This contract shall in all respects be governed by and construed in accordance with the laws of England and Wales. The parties agree that the United Nations Convention On Contracts For The International Sale Of Goods 1980 shall not apply to this contract (even if the UK or any part thereof should accede to the said convention).

# Terms and Conditions

9. LIABILITY FOR DEFECTS
- 9.1. Except as expressly set out in Orgalime S2000 and this Addendum, all conditions, warranties and representations, implied by statute, common law or otherwise, in relation to the supply, non supply or delay in supplying the Products are excluded to the fullest extent permitted by law and the warranties, as stipulated in Clauses 22-36 and Article 9.2, are exclusive and in lieu of all other warranties, conditions, terms, representations, statements, undertakings and obligations whether expressed or implied by statute, common law, custom, usage or otherwise, all of which are excluded to the fullest extent permitted by law.
- 9.2. Save as stipulated in Clauses 22-36, the necessary repair, replacement or re-performance shall constitute ABB's total liability to the Purchaser for defects in design, material or workmanship.
10. FORCE MAJEURE
- 10.1. Should a Force Majeure event occur, the delivery date(s) shall be extended by a period equal to the duration of the Force Majeure event plus a reasonable time to overcome the consequences and all additional costs and expenses incurred by ABB shall be paid by the Purchaser in addition to the purchase price.
- 10.2. For the elimination of any doubt, "circumstances beyond the control of the parties", (cf. Clause 39), shall be deemed to include, without limitation, any acts of God, act of terrorism, sanction, blockage, import restriction or any other act or failure to act of any state or national government authority.
11. EXPORT RESTRICTIONS AND NON-AUTHORISED USE
- 11.1. Unless expressly agreed otherwise in writing by ABB, the Product is provided on strict condition that:
- the Product is solely for civil use;
  - the Product is not to be supplied to any country whether directly or indirectly or for any application where such supply or application is prohibited by any law or regulation binding or effective in that country, in the UK, the US or the country of manufacture;
  - the Product will not in any way be installed, used or applied in or in connection with the operation of any nuclear facilities such as but not limited to nuclear power plants, nuclear fuel manufacturing plants, uranium enrichment plants, spent nuclear fuel stores or research reactors; and
  - whenever ABB so requests, the Purchaser shall provide ABB with an end-user certificate, which shall be on such terms and in such form as ABB may require and signed by the end-user confirming that it shall comply with Article 11.1 (a) to (c) . Until such time as ABB has received such end-user certificate, ABB shall be entitled to suspend the performance under this contract. The end-user certificate shall form part of this contract. The Purchaser agrees and accepts that it shall be liable for any acts or omissions in relation to the use of the Products (including (without limit) the acts or omissions of its employees, agents, subcontractors, customers, any end user of the Products and/or any third party) in breach any of the provisions set out in Article 11.1 (a) to (c) and further agrees that such a breach shall be deemed a fundamental breach of contract by the Purchaser, and shall entitle ABB to terminate the contract forthwith by giving notice to the Purchaser.
- 11.2 The Purchaser shall comply with all laws and other restrictions on the export, re-export or import of any Product or technology licensed under the contract as may be imposed from time to time by the UK or US Governments or their agencies, and shall procure such export licence or other Government approval as may be required. The Purchaser shall require that all third parties receiving such Product or technology from the Purchaser comply with this requirement. ABB shall assist the Purchaser in every reasonable way in obtaining of such licences at the Purchaser's cost.
- 11.3 The performance by either of the parties of an obligation under this contract, which performance requires an export or import licence or other government approval, and any other obligation affected shall, to the extent it is necessary, automatically be suspended until such licence or approval as mentioned in Article 11.2 is given. If such licence is not granted within a reasonable time or is revoked by the appropriate authorities, ABB shall be entitled to terminate this contract, and the Purchaser shall indemnify ABB on demand for any loss or damage which ABB may suffer or incur as a result of such termination.
- 11.4 ABB may at its reasonable discretion, without breaching the contract, delay, withhold or refuse the provision of services to be undertaken in any territory or upon any site deemed by ABB to be unsafe or unfit for ABB's personnel, upon notice of which the parties may agree to reschedule or remove said portion of services from scope.
- 11.5 The Purchaser shall keep ABB, its officers, directors, employees, agents and advisers indemnified against any and all claims and liabilities arising out of any breach by the Purchaser or any for whom the Purchaser is liable (which shall, without limitation, include the end-user) of any of the provisions set out in this Article 11.
12. CONFIDENTIALITY
- 12.1. The Purchaser shall keep all information communicated to the Purchaser in connection with this contract, or otherwise concerning ABB's business, secret and confidential, and will not use the same except for the purposes of performing this contract.
13. INSURANCE
- 13.1. ABB shall maintain Employer's Liability insurance as required by law and Public/Products Liability insurance in respect of its obligations and liabilities under the contract for an amount of two million pounds (£2,000,000) per one event and in the aggregate. ABB shall upon request produce to the Purchaser evidence of satisfactory policies of insurance in the form of its Brokers letter.
14. INDEMNIFICATION
- 14.1. If Products are to be manufactured or any process is to be applied to Products by ABB in accordance with a specification submitted by the Purchaser, the Purchaser shall indemnify ABB against all losses, damages, costs (including legal costs), expenses, liabilities and claims suffered or incurred by ABB in connection with infringement of any intellectual property rights of any third party resulting from ABB's use of the Purchaser's specification.
15. LIMITATION OF LIABILITY
- 15.1. To the maximum extent permitted by law, and notwithstanding anything to the contrary in this contract, other than the express provisions for liquidated damages, in no event shall ABB be liable to the Purchaser, whether as a result of breach of contract, warranty, guarantee, indemnity, tort (including negligence), strict liability, statutory duty or otherwise, for any of the following damages or losses, in each case whether direct or indirect, such as, but not limited to:
- |                               |                             |
|-------------------------------|-----------------------------|
| (a) loss of revenue,          | (b) loss of profit,         |
| (c) loss of contract,         | (d) loss of business,       |
| (e) loss of use,              | (f) loss of production,     |
| (g) interruption of business, | (h) loss of operation time, |
| (i) costs of capital,         | (j) economic loss,          |

# Contact us

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for a better world™

