Connection and automation technology

New products for 2017

ELECTROUSTIC
DISTRIBUTION OF CONNECTIVITY SOLUTIONS

PHŒNIX CONTACT
INSPIRING INNOVATIONS

New products for 2017 – Innovative products for your industrial systems

As a leading manufacturer of connection technology and automation components, we are always working to turn the growing demands of your applications and markets into new innovations. Our products act just like parts of the nervous system in your industrial facilities and help you increase the efficiency, availability and safety of your systems. Find out about our wide range of new products from the fields of connection technology, automation components, surge protection, marking and tools.

Find out more with the web code

You can find our web code in each product table: a hash symbol followed by a four-digit number combination.

ℹ️ Web code: #1234 (example)

This allows you to access additional product information and product versions on our website quickly.

It could not be easier:

1. Go to the Phoenix Contact website
2. Enter # and the number combination in the search field
3. Get more information and product versions

| #1234 | Search |

Or use the direct link:
phoenixcontact.net/webcode/#1234

Contents

Ready-to-connect distribution blocks with Push-in connection

PTFIX distribution blocks with Push-in connection come ready to be connected in different numbers of positions and mounting options. They can be used straight away and expanded as needed. PTFIX thus helps to ensure a flexible and cost-effective load and control current distribution. Simply unpack, connect and you're done!
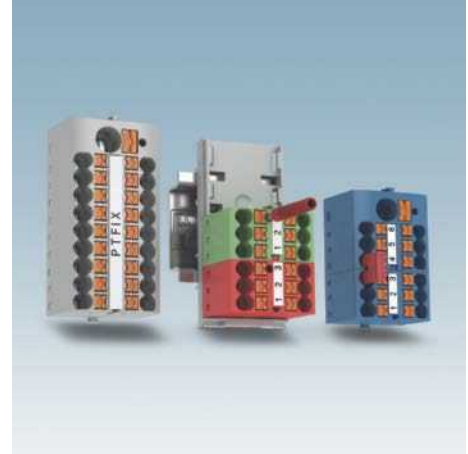
Push-in Technology [P]
Designed by PHOENIX CONTACT

Your advantages

☑ Time advantage up to 80%, thanks to assembly-ready blocks without manual bridging

☑ Flexible use, thanks to DIN rail, direct or adhesive mounting

☑ Time-saving conductor connection, thanks to tool-free Push-in direct connection technology

☑ Save up to 50% more space on the DIN rail, thanks to transverse installation

☑ Clear wiring, thanks to eleven color variants

Main features

• Push-in connection
• Voltage: 500 V
• Current: 24 A
• Variants in 1.5 mm² and 2.5 mm²
• Power blocks in 2.5 mm² with additional 6 mm² terminal point
• Number of terminal points: 6, 12 and 18
• Can be bridged and aligned with standard plug-in bridges
• Testing option for all common test probes

Description	Basic block	Distribution block				Accessory flange
Mounting type	For self-assembly	NS 15	NS 35	NS 35 (transverse)	Self-adhesive	Direct mounting
Type	PTFIX 18X2,5 GY	PTFIX 6/ 18X2,5-NS15A GY	PTFIX 6/ 18X2,5-NS35A GY	PTFIX 6/ 18X2,5-NS35 GY	PTFIX 6/ 18X2,5-G GY	PTFIX-F
Order No.	3273308	3274210	3273242	3273110	3273504	3274060

i Web code: #1301

Space-saving micro terminal blocks with Push-in connection

The MP 1,5 micro terminal blocks with Push-in connection technology accommodate the increasing miniaturization of machine, switchgear and control cabinet design. You receive compact potential distribution blocks specifically for building installation.
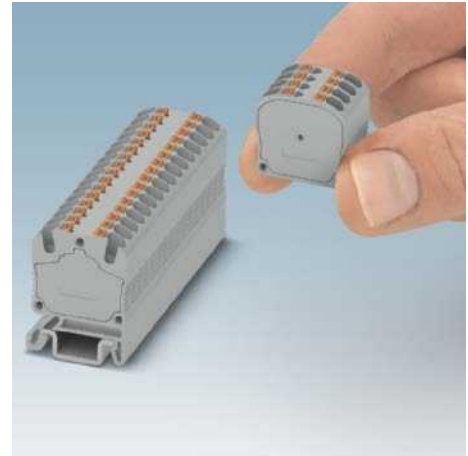
Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Space-saving, thanks to the compact design

☑ Potential distribution blocks that do not need a DIN rail for building installation

☑ Convenient test options, thanks to test openings at every terminal point

☑ Clear arrangement, thanks to marked terminal points

Main features

• Push-in connection
• Voltage: 500 V
• Current: 17.5 A
• Cross sections up to 1.5 mm²
• MPI … variants in accordance with EN 60998-2-2 for building installation
• Dimensions:
  Width: 4.2 mm
  Length: 21 mm
  Height on NS 15: 27.2 mm

Description	Feed-through terminal block	Distribution block			
Mounting type	NS 15	-	-	-	-
Terminal points	2	2	4	6	8
Type	MP 1,5	MPI 1,5	MPI 4X1,5	MPI 6X1,5	MPI 8X1,5
Order No.	3248150	3248490	3248491	3248492	3248493

ⓘ **Web code:** #1302

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Terminal blocks

Hybrid potential collective terminal blocks with Push-in connection and 35 mm² screw connection

The compact potential collective terminal block offers you a wide variety of application possibilities. 35 mm² feed-in using the tried-and-tested, maintenance-free screw connection, combined with tool-free tap wiring using quick and easy Push-in connection.
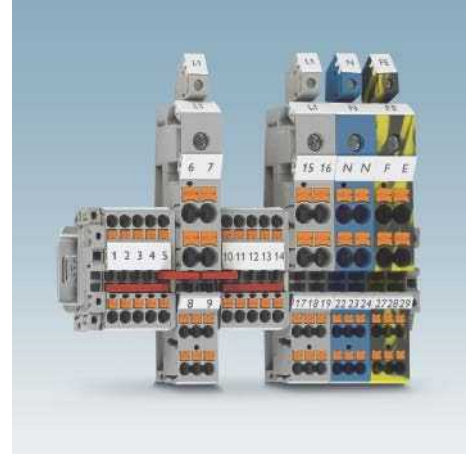
Push-in Technology[P]

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Your advantages

☑ Easy potential collection or distribution

☑ Compact, space-saving design

☑ Can be bridged with standard plug-in bridges

☑ Easy to test, thanks to 2.3 mm standard test point

☑ Large-surface marking options

Main features

• Screw connection
• Push-in connection
• Voltage: 1000 V (IEC)/600 V (UL)
• Total current up to 105 A
• Number of terminal points:
  1 x to 35 mm²
  4 x to 10 mm²
  6 x to 4 mm²

ℹ **Web code:** #1111				
Description	Potential collective terminal block			Tap-off terminal block
Color	Gray	Blue	Black/yellow	Gray
Cross section	35 mm²/6 mm²/2.5 mm²			4 mm²
Type	PTU 35/4X6/6X2,5	PTU 35/4X6/6X2,5 BU	PTU 35/4X6/6X2,5-FE	AKG 4-UT 35
Order No.	3214080	3214081	3214082	3047138

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Marshalling terminals and patchboards
Intuitive wiring with color code VDE 0815

The design of the marshalling terminal PTRV and marshalling patchboard PTMC provides you with the highest signal density during marshalling in automation applications. They now also come pre-assembled in various standardized color combinations, e.g. in accordance with DIN VDE 0815.
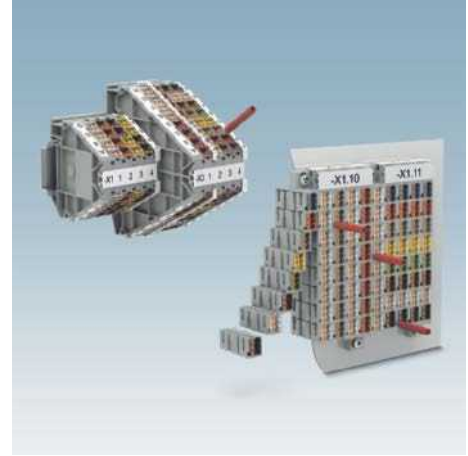
Push-in Technology
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Your advantages

☑ Intuitive, safe installation, thanks to color-coded assignment of conductors and terminal points

☑ Up to 20% increased signal density, thanks to compact design

☑ Convenient testing, thanks to freely accessible, centered test connections

☑ Large-surface, pitch-free marking for matrix labeling

☑ Reduction in logistics costs with uniform CLIPLINE complete accessories

Main features

• Push-in connection
• Voltages up to 500 V
• Current: 17.5 A
• Cross sections up to 2.5 mm²
• 2.3 mm test point centered between the connection points

ⓘ Web code: #1303	Marshalling terminals		Marshalling patchboard (19 in)		Marshalling patchboard
Description	Marshalling terminals		Marshalling patchboard (19 in)		Marshalling patchboard
Terminal points	32		128	192	144
Potentials	8		32		24
Type	PTRV 8/ VDE 0815	PTRV 8/ VDE 0815-WHBK	PTMC 1,5/32-2H VDE0815 19Z	PTMC 1,5/32-3 VDE0815 19Z	PTMC 1,5/24-3 VDE0815
Order No.	3270230	3270250	3270395	3270394	3270396

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Fuse terminal blocks with Push-in connection for different application areas

The new fuse terminal blocks offer you the right fuse holder for every application. Multi-level terminal blocks offer you high wiring density with low space requirements. Variants designed for potential explosive areas and disconnect and knife disconnect terminal blocks with the same shape complete the range.

Push-in Technology[p]

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Your advantages

☑ Easily accessible fuse-links can be replaced without hassle

☑ Simple potential distribution, thanks to continuous function shafts

☑ Convenient fuse testing, thanks to test points on both sides

☑ Quick identification of faulty fuses, thanks to LED status indicator

☑ Variants for use in the potentially explosive area of Ex-nA type of protection

Main features

• Push-in connection
• Voltages up to 500 V
• Currents up to 10 A

ⓘ Web code: #1304						
Description	**Automatic flat fuse terminal block**	**Lever-type fuse terminal block**	**Knife disconnect terminal block**	**Double-level fuse terminal block**	**Three-level fuse terminal block**	**Three-level knife disconnect block**
Fuse-link	Type C	6.3 x 32 mm	-	5 x 20 mm		-
Cross section	Up to 10 mm²			Up to 6 mm²		
Potentials	1			2	2+PE	
Protective conductor foot	-			-	Yes	
Type	PT 6-FSI/C-LED 24	PT 6-HESILED 24 (6,3X32)	PT 6-MT	PTTB 4-HESILED 24 (5X20)	PT 4-PE/L/HESI-LED 24 (5X20)	PT 4-PE/L/MT
Order No.	3212172	3211874	3212160	3211888	3002603	3002617

This web code gives you access to additional product versions on our website.

Terminal blocks

Current indicator terminals with Push-in connection
Clearly identify operating states

The new current indicator terminal blocks allow you to detect interruptions or line breaks during operation with certainty. The voltage drop is evaluated at a Zener diode in reverse direction and indicated by an LED. In addition, double-level terminal blocks with the same shape are available for soldering in components.

Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Space saving, thanks to the compact design

☑ Clear identification and reduced faulty wiring, thanks to circuit diagram printing

☑ LED for visualizing the operating state

☑ The same shape and able to be bridged for standard double-level terminal block

☑ Clear arrangement, thanks to marked terminal points

Main features
- Push-in connection
- Currents up to 100 mA
- Diode voltage: 2.4 V
- Cross section up to 4 mm²

	i Web code: #1305		
Description	Current indicator terminal	Component terminal block
Type	PTTB 2,5-ILA 100	PTTB 2,5-2BE
Order No.	3215042	3211480

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Pluggable terminal blocks with Push-in connection for applications up to 600 V in accordance with UL

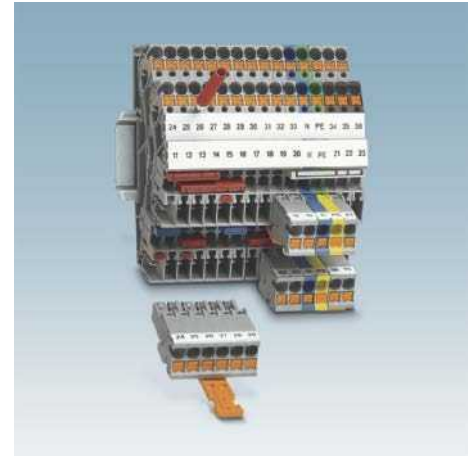Pluggable COMBI terminal blocks allow you to carry out mounting and startup with speed and flexibility. From the control box to the complete system, it is impossible to imagine today's applications without pluggable solutions. New plugs and terminal blocks are suited for applications up to 600 V in accordance with UL.

Push-in Technology[P]
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Your advantages

☑ Maximum safety, thanks to touch-proof design

☑ Protection against mismatching, thanks to individual coding options

☑ Comprehensive, optional snap-on accessories available

☑ Safe to use, thanks to powerful, vibration-proof plug-in contact

☑ Flexible, thanks to plugs for self-assembly

Main features

• Push-in connection
• Standardized COMBI plug-in zone
• Voltage: 800 V (IEC), 600 V (UL)
• Current: 24 A
• Cross sections up to 4 mm²
• Number of positions: 1 to 15

i Web code: #1306	Plugs	Plugs for self-assembly			Double-level terminal block	Protective conductor terminal
Description	Plugs	Plugs for self-assembly			Double-level terminal block	Protective conductor terminal
Number of positions	6	3			-	-
Plug component		Left	Middle	Right		
Color	Gray	Gray	Blue	Green-yellow	Gray	Green-yellow
Type	PP 2,5/6	PP 2,5/1-L	PP 2,5/1-M BU	PP 2,5/1-R GNYE	PTTBS 2,5/2P	PTTBS 2,5/ 2P-PE
Order No.	3211285	3211271	3211275	3211279	3211260	3211263

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Terminal blocks

Double-level terminal blocks with Push-in connection in a space-saving desk design

Terminal blocks with a desk design were developed for underfloor wiring systems. PTTBS double-level terminal blocks are now available for conductors up to 6 mm². Double function shafts on every level offer maximum flexibility for potential distribution.

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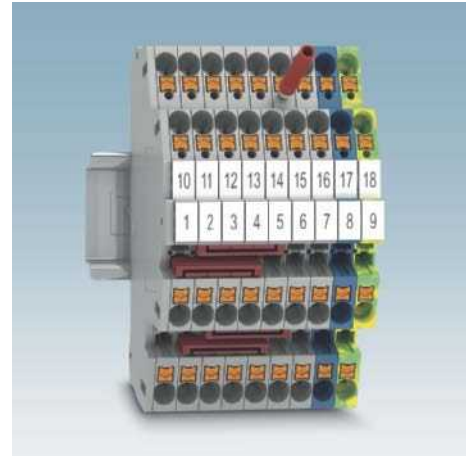
Your advantages

- ☑ Optimum conductor entry, thanks to compact and angled design
- ☑ Easy potential distribution using double function shaft
- ☑ Connect levels with flexibility with a vertical potential bridge
- ☑ Unique marking of every level, thanks to vertically offset marking grooves
- ☑ Testing possible in the function shaft and 2.3 mm test opening

Main features

- Push-in connection
- Voltage: 800 V
- Currents up to 28 A
- Cross sections up to 6 mm²

ⓘ **Web code:** #1307				
Description	**Feed-through terminal block**		**Potential distribution terminal**	**Protective conductor terminal**
Color	Gray	Blue	Gray	Green-yellow
Potentials	2		1	
Protective conductor foot	-		-	Yes
Type	PTTBS 4	PTTBS 4 BU	PTTBS 4-PV	PTTBS 4-PE
Order No.	3211832	3211838	3211848	3211841

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Double-level terminal blocks with Push-in connection for KNX bus wiring

The color-coded, double-level terminal blocks from the PTTBS 1,5/S family are just 3.5 mm wide and permit clear visual assignment of the terminal points to the wire colors. Your KNX installation is conveniently housed in the installation distributor and distinguished by the white base color of the load wiring.
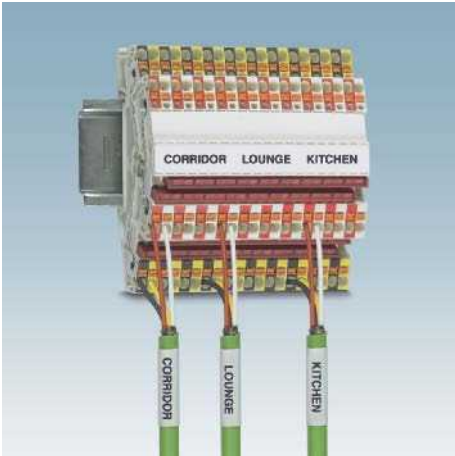
Push-in Technology^P
Designed by PHOENIX CONTACT

Your advantages

☑ Intuitive, safe installation, thanks to color-coded assignment of conductors and terminal points

☑ Easy potential marshalling, thanks to standardized plug-in bridges

☑ Time-saving conductor connection, thanks to tool-free direct connection technology

☑ Clear marking facilitates initial startup, maintenance and service

☑ Retrofitting possible without a problem

Main features

• Push-in connection
• Cross section up to 1.5 mm²
• Slim desk design
• Terminal block width: 3.5 mm
• Bridge shafts: 4
• Test connections
• Large-surface marking option

Web code: #1308	KNX installation terminal blocks		
Description			
Color coding	In pairs	Red above/ black below	White above/ yellow below
Type	PTTBS 1,5/S-KNX	PTTBS 1,5/S WH/U-BK/O-RD	PTTBS 1,5/S WH/U-YE/O-WH
Order No.	3214663	3214662	3214661

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Compact terminal blocks for building installation with Push-in connection for 16 mm² conductors

Wire your building installation in the tightest spaces easily and tool-free with the new PTI 16/S Push-in installation terminal blocks. They expand the product range to include conductors up to 16 mm² and have all features of the CLIPLINE complete terminal system.
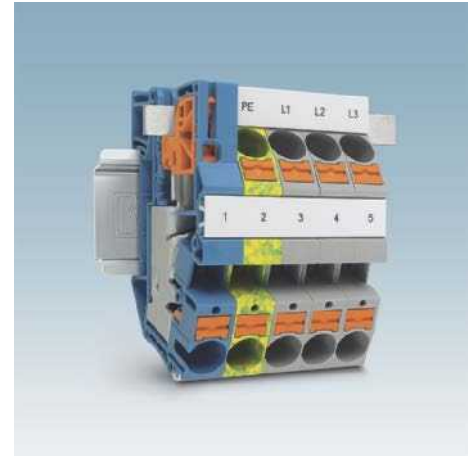
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Your advantages

- ☑ Compact, space-saving design for use in installation distributors

- ☑ Double function shaft for simple potential distribution

- ☑ Neutral conductor disconnection, thanks to screw-free, latching disconnect slides

- ☑ Testing possible in the function shaft and in the 2.3 mm test opening

- ☑ Unique marking of each terminal point

Main features

- • Push-in connection
- • Voltage: 500 V
- • Currents up to 76 A
- • Cross-sections up to 16 mm²
- • Terminal block width: 10.2 mm

ℹ Web code: #1110				
Description	Feed-through terminal block		Protective conductor terminal	Neutral conductor disconnect terminal block
Color	Gray	Blue	Green-yellow	Blue
Protective conductor foot	-		Yes	-
Disconnect slide	-		-	Yes
Type	PTI 16/S	PTI 16/S BU	PTI 16/S-PE	PTN 16/S
Order No.	3214029	3214023	3214024	3214025

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Wire bridges
for flexible potential distribution

The new wire bridges enhance the range of CLIPLINE complete system accessories. Terminal blocks of various widths with jumper shafts can be connected individually. The wire bridges provide you with maximum flexibility for all bridging tasks.

Your advantages

☑ Flexible potential distribution, thanks to individualized wire lengths

☑ Bridge terminal blocks of varying terminal widths with ease

☑ Easy, tool-free operation, thanks to plug-in contacts

Main features
- Current: 17.5 A
- Pluggable
- For terminal widths 5.2 mm and 6.2 mm

ⓘ **Web code:** #1309			
Description	**Wire bridge**		
Length	60 mm	110 mm	250 mm
Type	FBSW 2-5/60MM	FBSW 2-5/110MM	FBSW 2-5/250MM
Order No.	3030170	3030171	3030172

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Terminal blocks

Compact test plugs
for switchgears in energy technology

The innovative, modular FAME test disconnect system lets you conduct all measurement and test tasks in network protection technology for medium and high-voltage switchgears simply and safely. The plugs are especially well suited for test procedures in confined spaces, e.g. for double-door energy switchgears.

Your advantages

- ☑ Space-saving, thanks to compact design and offset test socket arrangement
- ☑ Maximum safety, thanks to leading and automatic transformer short circuit
- ☑ Easy and time saving, thanks to functional grouping of switching operations
- ☑ Safe operation, thanks to contact-proof design
- ☑ Large-surface marking options and easily identifiable switching states

Main features
- Voltage: 400 V
- Current: 24 A
- Snaps into test disconnect socket
- Test sockets: 4 mm, available in various colors
- Flexible configuration with standard plug-in bridges
- Number of positions: 4 to 14, additional options upon request

Description	Test plug for FAME 1			Test plug for FAME 3		
ℹ️ Web code: #1310						
Number of positions	4	6	12	4	6	12
Type	FTPC 3+1	FTPC 6+1	FTPC 12+1	FTPC-3/4S	FTPC-3/6S	FTPC-3/12S
Order No.	3069259	3069262	3069268	3069930	3069936	3069933

Panel feed-through terminal blocks with Push-in connection for energy technology

Connect current transformers and voltage transducers, such as mains protective devices, efficiently using the new panel feed-through terminal blocks from the PT 4-WE series. The terminal blocks are suitable for device panels with a sheet thickness of up to 2.5 mm. Thanks to the patented snap-on mechanism, the terminal block can be installed quickly and easily using a screwdriver.
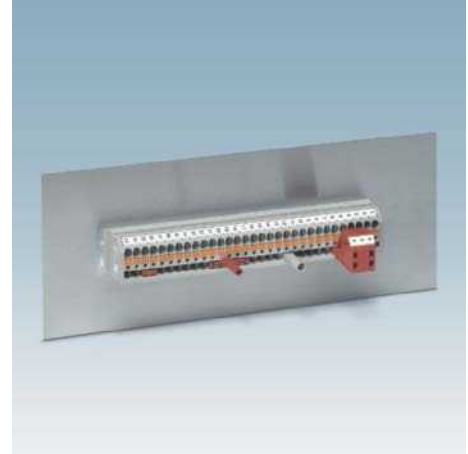
Push-in Technology^[P]
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Your advantages

☑ Easy connection of the conductors, thanks to fast Push-in spring connection

☑ Fast mounting in simple rectangular cutouts, thanks to the patented snap-on mechanism

☑ CLIPLINE complete accessories for easy bridging, testing and marking

☑ Highly flexible, thanks to alignable single terminal blocks

Main features

• Conductor cross sections: 0.2 mm² to 4 mm²
• Currents up to 30 A
• Short-circuit currents in accordance with EN 60255
• Voltage: 6 kV surge voltage
• Pitch: 5.2 mm
• 1 to 20-pos.
• Bridgeable

ℹ **Web code:** #1134			
Description	**Panel feed-through terminal block**	**Covering element right/left**	**Panel feed-through terminal block**
Design	Single terminal block	Cover	6-pos.
Designation	PT 4-WE	D-PT 4-WE	PT 4-WE/6
Order No.	3044900	3044902	3044911

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Electrical outlets for worldwide use

The new EO electrical outlets with different receptacle configurations are designed for international use in control cabinet and systems manufacturing. Additional functions like LED display, switches, fuses or circuit breakers expand the application possibilities.

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Your advantages

☑ Wide product range with over 150 variants

☑ All regional variants for worldwide use

☑ Space-saving double electrical outlets available

☑ Integrated shutter

☑ Flexible installation, thanks to DIN rail mounting and direct mounting on the service interface

Main features

• Receptacle configurations:
  D, CF, E, G, H, I, J, K, L, N, AB
• Additional functions: LED display, switch, fuse, circuit breaker
• Connection technology: Push-in and screw
• Colors: gray and green
• Connection cross sections up to 4 mm² (solid)
• Nominal currents up to 20 A
• Temperature: -20 °C … +60 °C

ℹ Web code: #1311						
Description	Single and double electrical outlets					
Plug variant	Type CF	Type AB	Type D	Type H	Type J	Type K
Function	Single electrical outlet, switch, LED	Double electrical outlet, circuit breaker	Single electrical outlet, fuse	Double electrical outlet, LED	Single electrical outlet	Single electrical outlet, LED
Color	Gray		Green		Gray	
Connection technology	Push-in		Screw		Push-in	
Type	EO-CF/PT/LED/S	EO-AB/PT/LED/DUO/V/GFI/15	EO-D/UT/F/GN	EO-H/UT/LED/DUO/GN	EO-J/PT	EO-K/PT/LED
Order No.	0804046	0804184	0804006	0804079	0804105	0804121

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Cable guiding system
Run conductors to the control cabinet door easily

The swivel arm of the CGS cable guiding system makes it easy and safe for you to run your conductors, cables and cable harnesses to the control cabinet door. The patent-pending swivel joint can be opened. This way you can quickly feed in or reposition pre-assembled cables tool-free as well.

Your advantages

☑ Install pre-assembled cable easily, thanks to a swivel joint you can open

☑ Subsequent wiring is easy, thanks to swivel joint openings that can be operated without tools

☑ Mechanical cable protection and bundling, thanks to protective covers that can be attached

☑ Quick and easy mounting, thanks to integrated flanges with strain relief

☑ Easily plan cable harnesses since the cable length is predefined through the swivel arm

Main features

- Cable entry opening: 42 mm
- Number of cables at 1.5 mm²: maximum 100 pieces
- Opening angle of the control cabinet door: maximum 180°
- Insulation material: PC
- Flammability rating in accordance with UL 94: V0

ⓘ **Web code:** #1312			
Description	**Cable bridge**		**Protective cover**
Swivel link	For opening	Closed	-
Type	CGSA 50	CGS 50	CGS-AH 50
Order No.	3071401	3071400	3071410

Feed-through plates and screw connections for non-assembled cables

Run non-assembled cables reliably and safely through the control cabinet panel. The new CES Multigates feed-through plates can be mounted on standard panel cut-outs of heavy-duty connectors. Different variants also round out the cable gland portfolio.

Your advantages

- ☑ Save space when feeding through non-assembled cables using membrane plates

- ☑ Feed-through plates fit on size B24 panel cutouts

- ☑ Complete range of metal and plastic cable glands

- ☑ Climate control, thanks to pressure compensation screw connections

- ☑ Reliable protection from ingress of dust and water

Main features of feed-through plates

- Flammability rating in accordance with UL 94: V0
- Temperature range: -40 °C … +90 °C

Main features of cable glands

- Metal and plastic screw connections for M12 to M63, Pg7 to Pg48 and NPT

	Description	Feed-through plate		Cable gland			Pressure compensation screw connect.
Material		TPE-SEBS		Polyamide, light gray	Brass, nickel-plated	Stainless steel	Polyamide, black
Cable feed-throughs		25	27	-			-
Thread		-		M16		M20	M12
Degree of protection		IP65		IP66/IP68	IP66/IP68/IP69K		IP67
Type		MH-25-MULTI-65-PV-BK	MH-27-MULTI-65-PV-BK	G-INS-M16-T68N-PNES-LG	G-INS-M16-T68N-NNES-S	G-INS-M20-M68N-SNES-S	G-INVEN-M12-M67N-PNES-BK
Order No.		1424582	1424583	1424470	1424526	1424543	1424535

Web code: #0603

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Plastic plug assembly frames for pre-assembled contact inserts

The plug assembly frames let you install pre-assembled contact inserts quickly and easily directly on the DIN rail in the control cabinet. The new plastic frames are especially light and also include plastic sleeve housings of the HEAVYCON B series.

Your advantages

☑ Direct connection on the DIN rail saves marshalling levels

☑ High level of stability, thanks to robust high-performance plastic

☑ Open cable room on the base frame simplifies installation of the inserts

☑ Only one base part for all variants with reduced size

☑ Convenient cable routing, thanks to support element

Main features

- Material: polycarbonate
- Standard coding function
- Interlocking using snapping hooks
- Compatible with HEAVCON EVO plastic housings
- For DIN rails NS 35/7,5

ⓘ Web code: #0600					
Description	Top frame				**Base frame**
For contact inserts in sizes	B6	B10	B16	B24	B6 … B24
Type	HC-CIF-B06-HFWL-PL-LG	HC-CIF-B10-HFWL-PL-LG	HC-CIF-B16-HFWL-PL-LG	HC-CIF-B24-HFWL-PL-LG	HC-CIF-B06-24-BFAFL-PL-LG
Order No.	1424334	1424335	1424336	1424337	1424338

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Connectors

Contact inserts for heavy-duty connectors with single and double Push-in connection

Push-in contact inserts can be installed quickly and easily. In the A series, you now also obtain Push-in inserts. The new modular TWIN inserts with fixed positions for B series offer you Push-in connection technology with double conductor connection for the first time. All HEAVYCON complete contact inserts are compatible with the market standard.

Push-in Technology[p]
Designed by PHOENIX CONTACT

Your advantages

☑ Complete range, thanks to the correct Push-in application for every size

☑ Easy, tool-free installation with Push-in connection

☑ Save installation space and marshalling level with bridgeable TWIN inserts

☑ Flexible combination with other connection technologies and housings

☑ Reliable connection of inserts with a fixed number of positions, thanks to coding with plastic profiles

Main features

• Push-in connection
• Material: polycarbonate
• Available in pin and socket versions

Description	A series contact inserts			B series TWIN contact inserts		
Design	Fixed number of positions			Fixed number of positions		Modular
Housing size	D7	D15/D25		B16	B24	B6 … B48
Rated current	16 A	16 A		10 A		
Rated voltage	230/400 V	250 V		500 V		
Pin type	HC-A 4-I-PT-M	HC-A 10-I-PT-M	HC-A 16-I-PT-M	HC-B16-I-TPT-M	HC-B24-I-TPT-M	HC-M-05L-TPT-M
Order No. for pin	1585278	1585359	1585375	1423019	1423021	1423961

Web code: #0655

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PHOENIX CONTACT **21**

Electroustic Ltd   www.electroustic.co.uk   +44 (0)1908 307200

Connectors

Housings for heavy-duty connectors in space-saving design

The new HEAVYCON STANDARD housings, in sizes D15, D25 and D50, protect your interfaces even with an extra thin design. The housings are made of high-quality corrosion-resistant aluminum and are suited for EMC applications as well, thanks to conductive seals.

Your advantages

- ☑ Maximum corrosion resistance, thanks to high-value die-cast aluminum
- ☑ Space savings, thanks to the narrow design
- ☑ Reliable EMC protection, thanks to conductive surface and seals
- ☑ Universally compatible with the industry standard
- ☑ Quick and easy installation and maintenance

Main features

- Sizes: D15, D25, D50
- Housing material: corrosion-resistant die-cast aluminum
- Sealing material: NBR
- Degree of protection: IP66, IP67, IP69K
- Temperature range: -40°C … +125°C
- For contact inserts of the series A10 and A16

Description	Sleeve housing, low	Panel mounting base	Sleeve housing, high	Box mounting base	Sleeve housing, high	Panel mounting base
Size	D15		D25		D50	
Locking	Single latching	Single latching	Single latching	Single latching	Double latching	Double latching
Cable outlet	Side	-	Top	2 x side	Side	-
Type	HC-STA-D15-HLFS-1STM20-ELC-AL	HC-STA-D15-BWS-EL-AL	HC-STA-D25-HHFS-1TTM25-ELC-AL	HC-STA-D25-SLWS-2SSM20-EL-AL	HC-STA-D50-HHFD-1STM25-EL-AL	HC-STA-D50-BWD-ELC-AL
Order No.	1424345	1424362	1424382	1424392	1424403	1424412

Web code: #0647

This web code gives you access to additional product versions on our website.

Heavy-duty connectors for railway applications in compact D7 size

HEAVYCON D7 housings enable signal and power transmission in an extremely compact design. The new D7 size HPR housings are optimized for railway applications. Robust, vibration-proof contact inserts with crimp connection in two and three position design complete the range.

Your advantages

☑ Signal and power transmission in confined spaces, thanks to the compact design

☑ Sealed tight even in extreme applications

☑ Vibration and shock-proof due to screw locking and crimp connection

☑ Reliable EMC protection

☑ Tested in accordance with IEC 61373, EN 50155

Main features

• Sizes: D7
• Housing material: corrosion-resistant die-cast zinc with powder coating
• Sealing material: NBR
• Degree of protection: IP68
• Temperature range: -40 °C … +125 °C
• Screw locking: stainless steel
• For square contact inserts (21 mm x 21 mm)

ⓘ Web code: #1109	Sleeve housing	Panel mounting base	Box mounting base	Protective cover	Contact insert	
Description	Sleeve housing	Panel mounting base	Box mounting base	Protective cover	Contact insert	
Design	Straight		-	With lanyard	Crimp connection 2-pos.	Crimp connection 3-pos.
Thread	M20	-	M20		-	
Current/voltage	-				40 A/400 V	
Type	HC-HPR-D07-HLWH-1TTM20-EM-BK	HC-HPR-D07-BFH-EMR-BK	HC-HPR-D07-SHFH-1SSM20-EMR-BK	HC-HPR-D07-BCSWH-EM-BK	HC-Q02-I-CT-M	HC-Q03-I-CT-M
Order No.	1424638	1424637	1424641	1424636	1419893	1419896

This web code gives you access to additional product versions on our website.

M12 connectors for assembly
Always the best connection technology

M12 connectors for assembly provide the best connection technology for every application. The new Push-in connectors simplify field installation of stranded conductors. Connectors with crimp connection as well as unshielded QUICKON versions complete the portfolio.

Push-in Technology[p]

Designed by PHOENIX CONTACT

Your advantages

☑ Always the best connection technology for your application in M12 design

☑ Simple, tool-free connection with Push-in connection technology

☑ Time savings of up to 80% with QUICKON fast connection technology (IDC)

☑ Extremely compact connectors with crimp connection for railway applications

Main features

• SPEEDCON fast locking system
• Shielded and unshielded versions

ℹ️ Web code: #0610				
Description	**PROFINET connectors**		**Signal connectors**	
Coding	X	D	A	
Connection technology	Crimp	Push-in	Push-in	QUICKON
Shielding	360° shielded housing		Unshielded	
Type	SACC-MSX-8CT SH SCO	SACC-MSD-4PT SH PN SCO	SACC-MS-5PT M SCO	SACC-MS-8QO-0,5 SCO
Order No.	1422844	1424682	1424649	1424433

This web code gives you access to additional product versions on our website.

Assembled M12 power cables in K and L codings

The innovative M12 power cabling offers maximum power in a compact design. Assembled K and L-coded cables expand the existing range with S and T-coding. They open up new AC and DC applications with 5-position end consumers.

Your advantages

☑ High power transmission in DC or AC applications up to 16 A and 630 V

☑ Saves space, thanks to the compact M12 design

☑ Protection against mismatching, thanks to coded pin connector patterns

☑ Reliable EMC protection, thanks to optional 360° shielding

Main features

- Cable quality: PUR or PVC
- Degree of protection: IP65, IP67
- 360° shielded connectors
- SPEEDCON fast locking system
- Standardized in accordance with IEC 61076-2-111
- Approval in accordance with UL 2237

ⓘ Web code: #1108	Cable with K-coded connector		Cable with L-coded connector	
Description	Cable with K-coded connector		Cable with L-coded connector	
Number of positions	5 (4+PE)		5 (4+FE)	4
Shielding	Shielded	Unshielded	Unshielded	
Conductor cross section	2.5 mm²		1.5 mm² / 2.5 mm²	
Current/voltage	16 A / 630 V AC		16 A / 63 V DC	
Type	SAC-5P-MSK/ 1,5-PUR PE SH SCO	SAC-5P- 1,5-PUR/FSK PE SCO	SAC-5P-MSL/ 1,5-280 FE SCO	SAC-4P- 1,5-105/FSL SCO
Order No.	1414867	1414770	1414883	1425033

This web code gives you access to additional product versions on our website.

Pre-assembled M12 device connectors for power supply

The new device connectors from the M12 POWER series in K, L, and M-coding feature an easy-to-install XL housing. They are suitable for front or rear mounting. The device connectors are pre-assembled with 20 cm litz wires ready for use.

Your advantages

☑ Easy-to-install, optimized housing contour with wrench size 19

☑ For compact devices: transmit high power in a confined space

☑ Pre-assembled with 0.2 m long litz wires for immediate use

☑ Molded on the cable side for optimum seal tightness

Main features

- K-coded: 4+PE, up to 630 V / 16 A AC
- L-coded: 4+FE, up to 63 V / 16 A DC
- M-coded: 5+PE, up to 630 V / 8 A AC
- Rear and front mounting

ℹ Web code: #1123 Description	M12 device connectors					
Coding	K		L		M	
Number of positions	4+PE		4+FE		5+PE	
Type of contact	Pin	Socket	Pin	Socket	Pin	Socket
Order No. Front mounting	1415291	1415292	1415295	1415296	1415300	1415301
Order No. Rear mounting	1415293	1415294	1415297	1415299	1415302	1415303

Versatile M12 device connectors for reflow soldering processes

M12 device connectors for transmitting power up to 630 V and 16 A directly to the PCB. They are now also available with K, L, and M-coding. One-piece versions for wave soldering processes and two-piece connectors for reflow soldering processes are available.

Your advantages

☑ Easy device integration, thanks to mechanical port screw connections

☑ Packaging available for automated pick and place assembly

☑ Easy PCB assembly: one-piece connectors for wave soldering

☑ Reduced assembly costs, thanks to two-piece device connectors for reflow soldering processes

Main features

- K-coded: 4+PE, up to 630 V / 16 A AC
- L-coded: 4+FE, up to 63 V / 16 A DC
- M-coded: 5+PE, up to 630 V / 8 A AC
- Rear and front screw mounting

i Web code: #1124	M12 device connectors					
Description	**M12 device connectors**					
Coding	K	K	L	L	M	M
Number of positions	4+PE	4+PE	4+FE	4+FE	5+PE	5+PE
Type of contact	Pin	Socket	Pin	Socket	Pin	Socket
Order No. one-piece, wave soldering, rear-mount	-	-	1415337	1415338	-	-
Order No. two-piece, THR contact carrier in tray	1420819	1420821	1420817	1420818	1420822	1420823
Order No. two-piece, THR contact carrier on reel	1420830	1420831	1420828	1420829	1420832	1420833

This web code gives you access to additional product versions on our website.

M12 T distributors for data transmission with PROFIBUS and CANopen®

The new T distributors for PROFIBUS have **360°** shielding and ensure safe data transmission. A T distributor for CANopen® completes the product range. All T distributors can be fixed with no rotation via two mounting holes.

Your advantages

☑ Reliable data transmission and distribution, thanks to 360° shielding

☑ High data rates with PROFIBUS distributors

☑ Secure fixing by means of two mounting holes

☑ M12 knurl can still be turned, even once mounted

☑ Fast installation with SPEEDCON fast locking system

Main features

• Degree of protection: IP65, 67
• Oil resistant
• 2 mounting holes
• SPEEDCON fast locking system

ℹ **Web code:** #0616	T distributor for **PROFIBUS**		T distributor for CANopen®
Description	T distributor for **PROFIBUS**		**T distributor for CANopen®**
Coding	B		A
Shielding	360° shielded housing		Unshielded
Transmission speed	12 Mbps		-
Rotatable/fixed knurl	3 / 0	2 / 1	3 / 0
Type	SAC-5PT-FB/2XMB PBDP SH	SAC-5PT-FB/MB-MBF PBDP SH	SAC-5PT-F/F-M VP
Order No.	1424711	1424713	1424712

Highly compact signal conditioners with new functions

The highly compact MINI Analog Pro signal conditioners offer the easiest installation and startup in a confined space. New input loop-powered disconnectors, signal duplicators and frequency transducers add more features for inter-ference-free signal transmission.

Push-in Technology[P]

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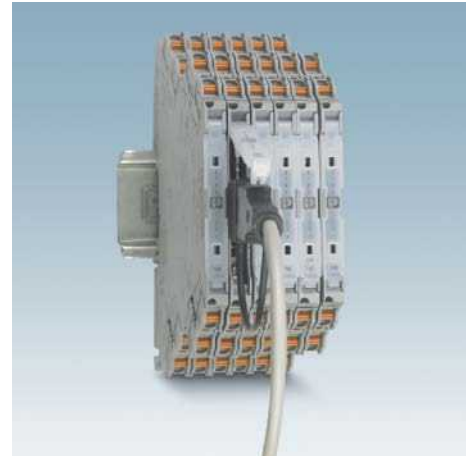
Your advantages

☑ Easy installation, thanks to easily accessible terminal points and pluggable connection terminal blocks

☑ Measure current signals during operation without disconnecting the current loops

☑ Versatile parameter configuration via DIP switch, software or app

☑ Easy to maintain: large marking areas, status LEDs and group error messaging

☑ Flexible wiring, thanks to Push-in or screw connection technology

Main features

• Overall width: 6.2 mm
• Front operation
• State-of-the-art switching technology
• Safe electrical isolation with 3 kV test voltage
• Supply voltage range: 9.6 V DC … 30 V DC
• Operating temperature: -40 °C … +70 °C
• Screw or Push-in connection

[i] Web code: #1313	2-way disconnector, input loop-powered		Universal signal duplicator	Frequency transducer
Description	2-way disconnector, input loop-powered		Universal signal duplicator	Frequency transducer
Number of channels	1	2	1	1
Input	I	2 x I	U, I	F
Output	I	2 x I	2 x U, I	U, I
Type	MINI MCR-2-I-I-ILP-PT	MINI MCR-2-2I-2I-ILP-PT	MINI MCR-2-UNI-UI-2UI-PT	MINI MCR-2-F-UI-PT
Order No.	2901995	2901997	2905028	2902058

This web code gives you access to additional product versions on our website.

Measurement and control technology

Highly compact signal conditioners with bus and network connection

The highly compact MINI Analog Pro signal conditioners offer the easiest installation and startup in a confined space. Integrate up to eight field signals in an industrial network with the new gateways for bus and network connection that save space and are interference-free.

Your advantages

- ☑ Network integration of signal conditioners in any combination by using compact gateways
- ☑ Interference-free signal transmission to the CPU, thanks to safe electrical isolation
- ☑ Reduces costs and saves space by omitting signal-specific input cards
- ☑ Fast, error-free signal bundling in one network cable
- ☑ Measure current signals during operation or take readings using the app

Main features

- Overall width for eight signals: 49.6 mm
- Safe electrical isolation with 3 kV test voltage
- Power supply via signal conditioner
- NFC interface
- S-PORT interface
- Operating temperature: -40 °C … +55 °C

ℹ️ **Web code:** #1314			
Description	**Modbus/RTU gateway**	**Modbus/TCP gateway**	**PROFIBUS gateway**
Type	MINI MCR-2-V8-MOD-RTU	MINI MCR-2-V8-MOD-TCP	MINI MCR-2-V8-PB-DP
Order No.	2905634	2905635	2905636

Highly compact signal conditioners
System adapter for efficient wiring

The highly compact MINI Analog Pro signal conditioners offer the easiest installation and startup in a confined space. The new system adapter lets you connect eight MINI Analog Pro signal conditioners in any combination to your controller quickly and error-free via Plug and Play.

Your advantages

☑ Quick, error-free 1:1 wiring by means of Plug and Play system cabling solution

☑ Easy to handle due to attachable adapter

☑ Space-saving, thanks to the compact design

☑ Measure current signals during operation without disconnecting the current loops

Main features

• Overall width for eight signals: 49.6 mm
• No power supply required
• Operating temperature: -40 °C … +70 °C

ℹ **Web code:** #1315	
Description	**System adapter for 1:1 cabling**
Type	MINI MCR-2-V8-FLK16
Order No.	2901993

Ex i signal conditioners with SIL for maximum explosion protection

MACX Analog Ex offers you maximum explosion protection up to Zone 0 and Zone 20. The new measuring transducer supply and input signal conditioner transmits supplied or active current signals into non-Ex areas using two electrically isolated outputs. One of the two outputs is HART transparent.

Push-in Technology^[P]
Designed by PHOENIX CONTACT

Your advantages

☑ Universally applicable up to use in Zone 0 and Zone 20, thanks to international approvals

☑ Safe and reliable function, thanks to consistent SIL certification

☑ Significant space saving with only 12.5 mm overall width for one and two-channel devices

☑ Interference-free signal transmission, thanks to a patented transmission concept

☑ Simple configuration via DIP switch, operator interface or software

Main features

• Suited for supplied or active 0/4 mA … 20 mA signals
• [Ex ia-]IIC/IIIC approval
• Can be used up to SIL 2 in accordance with IEC 61508
• Safe electrical isolation with 2.5 kV test voltage
• Supply via DIN rail connector
• Housing width: 12.5 mm
• Pluggable terminals with screw or Push-in connection

ℹ️ **Web code:** #1316		
Description	**Supply and input signal conditioners with 2 electrically isolated outputs**	
Input	I, HART transparent	
Output	2 x I, 1 x HART transparent	
Connection technology	Screw	Push-in
Type	MACX MCR-EX-SL-RPSSI-2I-1S	MACX MCR-EX-SL-RPSSI-2I-1S-SP
Order No.	2908855	2908856

Process indicators and field devices for recording, controlling and monitoring

Using the multi-functional process indicators of the Field Analog series, you can display, monitor as well as control analog and temperature signals using digital and analog outputs. Record and convert temperatures into analog standard signals with the head-mounted transducers directly on site.

Push-in Technology^P

Designed by PHOENIX CONTACT

Your advantages

☑ Simple configuration of process indicators using front keyboard or FDT/DTM software

☑ Everything at a glance: backlit display with bar graph and color that changes in case of error

☑ Can be used internationally, thanks to UL and CSA approvals

☑ Also for intrinsically safe circuits in the Ex area: versions with ATEX, CSA and FM approval

☑ Collect and convert temperatures on site using head-mounted transducers

Main features

• Variants for field and control cabinet installation
• Output loop-powered measuring transducer as head and DIN rail-mounted devices
• Process indicators with 5-point display
• HART-capable variants
• Standardized housing dimensions
• Pluggable connection terminal blocks
• Push-in connection

Description	Loop-powered temperature transducer		Process indicator for control cabinet installation, IP20		Process indicator for field installation, IP67	
Input	RTD, TC, HART		I, U, RTD, TC	I, HART	I, U, RTD, TC	I, HART
Output	I, HART		I, U, digital	I, HART	I, U, digital	I, HART
Type	FA MCR-HT-TS-I-OLP-PT	MACX MCR-TS-I-OLP-SP	FA MCR-D-TUI-UI-2REL-UP	FA MCR-DS-I-I-OLP	FA MCR-FD-TUI-UI-2REL-UP	FA MCR-FDS-I-I-OLP
Order No.	2908742	2908664	2907064	2908781	2907780	2908782
Type Ex i	-	-	FA MCR-EX-D-TUI-UI-2REL-UP	-	FA MCR-EX-FD-TUI-UI-2REL-UP	-
Order No. Ex i	-	-	2907216	-	2907781	-

Web code: #1317

This web code gives you access to additional product versions on our website.

The narrowest surge protection at 3.5 mm for MCR technology

TERMITRAB complete are the world's narrowest surge protective devices for measurement and control technology. With an overall width starting at just 3.5 mm, you can safely protect signals of MCR technology against destructive transients. Surge protection has never been this narrow.

Push-in Technology^P
Designed by PHOENIX CONTACT

Your advantages

- ☑ Minimal space requirements, thanks to the narrowest overall width, starting at just 3.5 mm
- ☑ Quick and easy installation with Push-in connection technology
- ☑ A product range for virtually every application of MCR technology

Main features

- Overall width: 3.5 mm
- Nominal voltage: 24 V DC
- Push-in connection
- For analog and digital signals

ℹ Web code: #1318	Surge protection for current loops and analog signals	Surge protections for digital signals and switch contacts
Description	**Surge protection for current loops and analog signals**	**Surge protections for digital signals and switch contacts**
Rated current	300 mA	
Type	TTC-3-1X2-24DC-PT	TTC-3-2X1-24DC-PT
Order No.	2907325	2907326

Pluggable surge protection at 6 mm for MCR technology

TERMITRAB complete offers the highest degree of flexibility for your application through the pluggable variant that has an overall width of just six millimeters. Corresponding items are available for virtually all interfaces and common voltage variants. The protective devices are available with Push-in or screw connection.

Push-in Technology℗
Designed by PHOENIX CONTACT

Your advantages

☑ Simple testing and documentation, thanks to pluggable protection modules

☑ Space saving, thanks to a narrow overall width of just 6 mm

☑ Safe disconnection and signaling in case of overload

☑ Variable connection technology

☑ High degree of flexibility, thanks to large variety of products

Main features

- Pluggable
- Overall width: 6 mm
- Nominal voltage: 24 V DC
- Mechanical status indicator on the device
- Signal option
- Push-in or screw connection
- Available with knife disconnection
- Plugs can be tested with CHECKMASTER 2

ℹ️ **Web code:** #1319				
Description	Surge protection for current loops and analog signals			
Rated current	600 mA (40 °C)			
Knife disconnection	Yes		No	
Connection technology	Push-in	Screw	Push-in	Screw
Type	TTC-6P-1X2-M-24DC-PT-I	TTC-6P-1X2-M-24DC-UT-I	TTC-6P-1X2-24DC-PT-I	TTC-6P-1X2-24DC-UT-I
Order No.	2906750	2906738	2906815	2906809

This web code gives you access to additional product versions on our website.

One-level surge protection at 6 mm for MCR technology

Now, even one-level surge protective devices are available with signaling and disconnection thanks to TERMITRAB complete. Thanks to an overall width of just six millimeters, you save space while protecting your zone transitions.

Push-in Technology [P]
Designed by PHOENIX CONTACT

Your advantages

☑ Space saving, thanks to a narrow overall width of just 6 mm

☑ Safe disconnection and signaling in case of overload

☑ Variable connection technology

☑ A product range for virtually every application of MCR technology

Main features

- One-level surge protection
- Overall width: 6 mm
- Nominal voltage: 24 V DC
- Mechanical status indicator on the device
- Remote signaling option
- Push-in or screw connection

[i] Web code: #1320						
Description	One-level surge protection					
Rated current	10 A				2 A	
Protective component	Suppressor diode		Varistor		Gas discharge tube	
Connection technology	Push-in	Screw	Push-in	Screw	Push-in	Screw
Type	TTC-6-TVSD-D-24DC-PT-I	TTC-6-TVSD-D-24DC-UT-I	TTC-6-MOV-D-24DC-PT-I	TTC-6-MOV-D-24DC-UT-I	TTC-6-GDT-C-24AC-PT-I	TTC-6-GDT-C-24AC-UT-I
Order No.	2906851	2906834	2906859	2906841	2906860	2906842

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Multi-level surge protection at 6 mm for MCR technology

TERMITRAB complete offers the right surge protective device for your MCR application based on the requirement. You have the choice between two different connection technologies and additional features such as a vertical disconnect knife or various voltage and switching variants.

Push-in Technology^P
Designed by PHOENIX CONTACT

Your advantages

☑ Space saving, thanks to a narrow overall width of just 6 mm

☑ Safe disconnection and signaling in case of overload

☑ Variable connection technology

☑ Highest degree of flexibility, thanks to large variety of products

☑ A product range for virtually every application of MCR technology

Main features
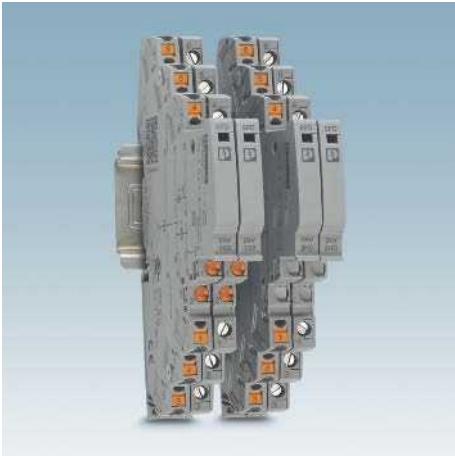
• Overall width: 6 mm
• Nominal voltage: 24 V DC
• Mechanical status indicator on the device
• Remote signaling option
• Push-in or screw connection
• Available with knife disconnection
• Various switching possibilities

	Surge protection for current loops and analog signals		Surge protections for digital signals and switch contacts	
ⓘ Web code: #1321				
Description	Surge protection for current loops and analog signals		Surge protections for digital signals and switch contacts	
Rated current	600 mA (40 °C)			
Connection technology	Push-in	Screw	Push-in	Screw
Type	TTC-6-1X2-M-24DC-PT-I	TTC-6-1X2-M-24DC-UT-I	TTC-6-2X1-M-24DC-PT-I	TTC-6-2X1-M-24DC-UT-I
Order No.	2906726	2906713	2906729	2906716

Multi-level surge protection at 6 mm
for applications in Ex areas in MCR technology

TERMITRAB complete provides narrow surge protective devices even for potentially explosive applications for the intrinsic safety type of protection. You have the choice between different voltage and switching variants as well as one-piece and pluggable protective devices.

Your advantages

☑   Can be used in intrinsically safe signal circuits

☑   Space saving, thanks to a narrow overall width of just 6 mm

☑   Safe disconnection and signaling in case of overload

☑   A product range for virtually every application of MCR technology

Main features

• Approvals in accordance with ATEX and IEC Ex
• Overall width: 6 mm
• Nominal voltage: 24 V DC
• Mechanical status indicator on the device
• Screw connection
• With knife disconnection
• Various switching possibilities

i Web code: #1322		
Description	Surge protection for current loops and analog signals in the Ex area	
Rated current	350 mA	
Pluggable	No	Yes
Type	TTC-6-1x2-M-EX-24DC-UT-I	TTC-6P-1x2-M-EX-24DC-UT-I
Order No.	2906820	2906824

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Remote signaling sets for visual monitoring MCR surge protection

Using optional remote signaling modules for TERMITRAB complete, up to 40 protective devices are monitored visually. Add further protective devices for monitoring easily without any additional wiring expense. Integration into existing remote signaling concepts can be done in a snap.

Push-in Technology^P
Designed by PHOENIX CONTACT

Your advantages

☑ Space saving, thanks to a narrow overall width of just 6 mm

☑ No programming effort, thanks to visual monitoring of the protective devices

☑ Simple retrofitting into existing remote signaling concepts

☑ Remote signaling can be integrated without interfering with the installation

☑ Variable connection technology

Main features

• Floating remote indication contact
• Visually monitor up to 40 items with the status indicator on the device
• Overall width: 6 mm
• Nominal voltage: 24 V DC
• Status indicator on the device
• Push-in or screw connection

ⓘ Web code: #1323		
Description	Remote signaling set	
Nominal current	30 mA	
Connection technology	Push-in	Screw
Type	TTC-6-FMRS-PT	TTC-6-FMRS-UT
Order No.	2907811	2907810

Surge protection for 230/400 V grids in industrial applications free of leakage current

The new VALVETRAB-SEC is the narrowest type 2 surge protective device free of leakage current in the world. Its compact design and high output make it an excellent protection option with minimum space requirements. This allows you to easily use the protective device in main, sub and small distribution panels.

Safe Energy Control Technology[◊]
Designed by PHOENIX CONTACT

Your advantages

☑ Long service life of the protective device and electric installation, thanks to SEC technology

☑ Space-saving installation, thanks to compact design and fuse-free use up to 200 A with stub wiring

☑ Easy replacement during servicing, thanks to protective devices which all feature a pluggable design

☑ High system availability, thanks to high-performance protective circuit

☑ No mismatching of plugs, thanks to mechanical coding

Main features

• Versions free of leakage current
• Maximum continuous voltage U_C: 350 V AC
• Short-circuit withstand capability I_{SCCR}: 50 kA
• Voltage protection level U_P: ≤ 1.5 kV
• Floating remote indication contact
• Visual mechanical status indicator
• Plugs can be tested with CHECKMASTER 2
• Screw connection

ⓘ Web code: #1324			
Description	Type 2 surge protective device		
Network type	Single-phase TN-S/TT	3-phase TN-C	3-phase TN-S/TT
Nominal voltage U_N	240 V AC	240 V AC/415 V AC	
Discharge current I_n	10 kA (L-N)/20 kA (N-PE)	10 kA	10 kA (L-N)/20 kA (N-PE)
Type	VAL-SEC-T2-1S-350VF-FM	VAL-SEC-T2-3C-350VF-FM	VAL-SEC-T2-3S-350VF-FM
Order No.	2909592	2909591	2909590

Surge protection for 230/400 V grids in systems with more stringent safety requirements

The powerful VALVETRAB-SEC is the narrowest type 2 surge protective device in the world with increased discharge capacity. This allows you to use the protective device in main, sub and small distribution panels. It meets the high requirements of DIN VDE 0100-443:2016-10 and DIN VDE 0100-534:2016-10 for use on the supply point of electrical systems.

Safe Energy Control Technology[◊]
Designed by PHOENIX CONTACT

Your advantages

☑ Long service life of the protective device and electric installation, thanks to SEC technology

☑ Space-saving installation, thanks to compact design and fuse-free use up to 315 A with stub wiring

☑ Easy replacement during servicing, thanks to protective devices which all feature a pluggable design

☑ High system availability, thanks to high-performance protective circuit

☑ No mismatching of plugs, thanks to mechanical coding

Main features

• Discharge capacity in the N/PE path: 40 kA (8/20 μs)
• Maximum continuous voltage U_C: 350 V AC
• Short-circuit withstand capability I_{SCCR}: 50 kA
• Voltage protection level U_P: ≤ 1.5 kV
• Floating remote indication contact
• Visual mechanical status indicator
• Plugs can be tested with CHECKMASTER 2
• Screw connection

	Type 2 surge protective device	Type 2 surge protective device with remote indication contact
[i] **Web code:** #1325		
Description	**Type 2 surge protective device**	**Type 2 surge protective device with remote indication contact**
Network type	3-phase TN-S/TT	
Nominal voltage U_N	240 V AC/415 V AC	
Discharge current I_n	20 kA (L-N)/40 kA (N-PE)	
Type	VAL-SEC-T2-3S-350/40	VAL-SEC-T2-3S-350/40-FM
Order No.	2909637	2909635

Surge protection for DC current sources with linear operating characteristics

The new VALVETRAB-SEC DC is ideally suited for protecting linear DC power sources. With just twelve millimeters per channel, the type 2 surge protective device is extremely compact and has a versatile range of application. The powerful disconnect device offers the maximum protection for all standard DC applications.

Safe Energy Control Technology⌷

Designed by PHOENIX CONTACT

Your advantages

☑ Long service life of the protective device and electric installation, thanks to SEC technology

☑ Space-saving installation, thanks to the compact design

☑ Easy replacement during servicing, thanks to protective devices which all feature a pluggable design

☑ High system availability, thanks to high-performance protective circuit

☑ No mismatching of plugs, thanks to mechanical coding

Main features

• Fuse-free use up to 200 A
• Nominal discharge current I_n: 20 kA
• Floating remote indication contact
• Visual mechanical status indicator
• Plugs can be tested with CHECKMASTER 2
• Screw connection

ⓘ Web code: #1326				
Description	**Type 2 surge protective device**			
Nominal voltage U_N	48 V DC … 60 V DC	100 V DC … 120 V DC	200 V DC … 220 V DC	350 V DC … 400 V DC
Max. continuous voltage U_C	75 V DC	150 V DC	250 V DC	450 V DC
Short withstand I_{SCCR}	6 kA	6 kA	6 kA	6 kA
Voltage protection level U_P	≤ 0.5 kV	≤ 0.85 kV	≤ 1.5 kV	≤ 1.5 kV
Type	VAL-SEC-T2-2+0-48DC-FM	VAL-SEC-T2-2+0-120DC-FM	VAL-SEC-T2-2+0-220DC-FM	VAL-SEC-T2-2+0-380DC-FM
Order No.	2907865	2907874	2907875	2907876

Surge protection for photovoltaic systems
Protect three MPP trackers with one device

The new VALVETRAB MS-CN type 2 surge protective device is designed for isolated and grounded DC voltage systems up to 1170 V DC. It can protect three MPP trackers at the same time using separate positive inputs and one common negative input. This enables space and cost-saving installation in the inverter.

Your advantages

☑ Protection for three separate MPP trackers in the inverter

☑ High short-circuit withstand capability enables use in large open-space systems

☑ Easy replacement during servicing, thanks to protective devices which all feature a pluggable design

☑ High system availability, thanks to high-performance protective circuit

Main features

- Highest continuous voltage U_{CPV}: 1170 V DC
- Immunity to short-circuiting I_{SCPV}: 2000 A
- Maximum discharge surge current I_{max}: 40 kA
- Application height up to 4000 m
- Floating remote indication contact
- Visual mechanical status indicator
- Plugs can be tested with CHECKMASTER 2
- Screw connection

	Complete module	Base element
ℹ️ **Web code:** #1327		
Description	**Complete module**	**Base element**
Voltage protection level U_p	≤ 3.8 kV	-
Type	VAL-MS-CN 1000DC-PV/4+V-FM	VAL-MS 4+V/BE/FM
Order No.	2907820	2908725

Surge protection for power supplies for use in rackmount systems

Phoenix Contact has developed the first pluggable surge protective devices for use in standard rackmount housings. Based on the VALVETRAB product range, these products feature an elegant new mounting position in order to optimize surge protection for rackmount applications.
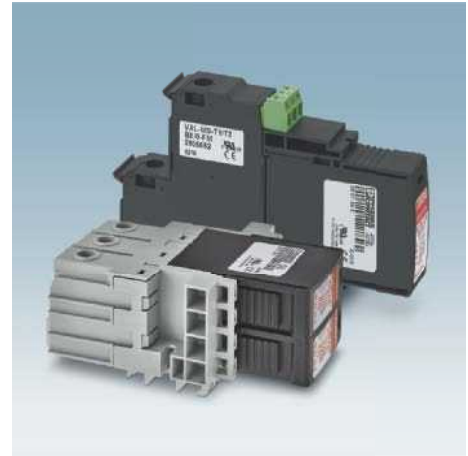
Your advantages

☑ Switch out the plug without removing the cover or turning off the power supply

☑ Status indicator enables quick visual inspections

☑ Electrically isolated, potential-free contacts monitor the state of all plugs

☑ New wiring configuration expands performance capabilities

☑ Space-saving, thanks to high concentration of protective devices

Main features

- Highest continuous voltage U_C: 75 V AC/100 V DC
- Short-circuit withstand capability I_{SCCR}: 25 kA
- Voltage protection level U_P: ≤ 0.5 kV
- Floating remote indication contact
- Visual mechanical status indicator
- Plugs can be tested with CHECKMASTER 2
- Screw connection

Description	Complete module without remote indication contact	Complete module with remote indication contact		
Network type	Single-phase	Single-phase	2-phase TN-S/TT	
Nominal voltage U_N	60 V DC/-48 V DC	60 V DC/-48 V DC	60 V AC/-48 V DC	
Discharge current I_n	12.5 kA	12.5 kA		
Type	VAL-MS-T1/T2 48/12.5/O	VAL-MS-T1/T2 48/12.5/O-FM	VAL-MS-T1/T2 48/12.5/2+0/1U/FM	VAL-MS-T1/T2 48/12.5/1+1/1U/FM
Order No.	2906281	2906282	2907042	2909629

Web code: #1328

Surge protection and interference suppression filters

Surge protection for 230 V grids for space-saving PCB installation

The new PRINTRAB series enables powerful type 2 surge protection even in the tightest spaces. Installed directly on the PCB, it offers comprehensive protection for single-phase applications in extra-small devices. 4G and new 5G communication systems are just one of many application areas.
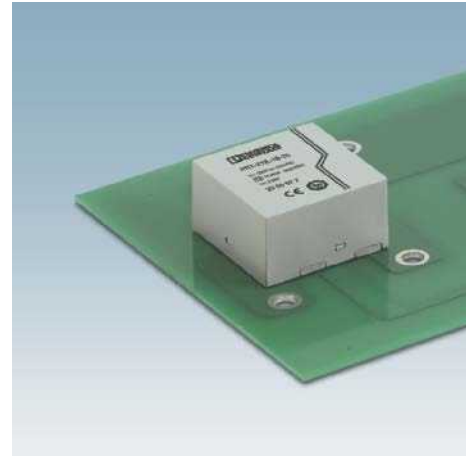
Your advantages

☑ Minimal space requirements due to tiny base area

☑ Low height matching standard PCB components

☑ Remote signaling and secure mechanical disconnection in case of overload

☑ Symmetrical circuit tolerates switching the phase and neutral conductor

Main features

• Can be soldered directly to the PCB
• Nominal voltage U_N:
  220 V AC or 230 V AC
• Short-circuit withstand capability I_{SCCR}:
  1 kA
• Voltage protection level U_P: ≤ 1.5 kV
• Available with remote indication contact or visual status indicator

	Type 2 surge protective device with remote indication contact	Type 2 surge protective device with visual status indicator
ℹ️ **Web code:** #1329		
Description	**Type 2 surge protective device with remote indication contact**	**Type 2 surge protective device with visual status indicator**
Network type	Single-phase TN-S/TT	
Max. continuous voltage U_c	320 V AC	350 V AC
Discharge current I_n	20 kA	5 kA
Dimensions W x H x D	38.4 mm x 41 mm x 18.8 mm	24 mm x 25 mm x 16 mm
Type	PRT-1S-350/20/R	PRT-1S-350/5S
Order No.	2905977	2908551

PHOENIX CONTACT **45**

New adapter for testing surge protection plugs

The new adapter for the CHECKMASTER 2 expands the testing possibilities for your pluggable surge protective device. You are now also able to test the protective devices of the TERMITRAB complete and PLUGTRAB PT 4-PE and PLT-SEC 3S product ranges with the CHECKMASTER 2 and log results in compliance with applicable standards.

Your advantages

☑ Easy replacement of the test adapters, thanks to the quick change system

☑ Test adapter can be replaced during operation

☑ Connect the test-adapter error-free, thanks to hardware coding

☑ Correct insertion of the test object, thanks to visual support

☑ High degree of investment security, thanks to increased testing options

Main features

• High quality and safety standard
• Standard-compliant logging in accordance with IEC 62305
• Optional: robust transport case for up to four test adapters

ℹ Web code: #1330		
Description	**Test adapter for TERMITRAB complete**	**Test adapter for PLUGTRAB PT 4-PE / PLT-SEC 3S**
Type	CM 2-PA-TTC	CM 2-PA-PT4/PLT3S
Order No.	2908707	2907019

Multi-channel electronic circuit breakers
Compact and individually adjustable

The new electronic CBMC circuit breakers combine compact design and the ability to be adjusted individually. For you, this means that you can easily and flexibly adjust currents, save space, and reliably protect all applications with just one device. Additional variants with IO-Link for integration into your controller will be available starting in mid 2017.

Push-in Technology[P]

Designed by PHOENIX CONTACT

Your advantages

☑ Easy device replacement, thanks to compact design and options for individual adjustments

☑ Circuits can be adjusted tool-free via single-button operation

☑ Can be ordered preconfigured – protection that is perfectly matched to your system

☑ Ideal protection for NEC Class 2 circuits, thanks to internal output fuse

☑ Complete process monitoring and control, thanks to IO-Link interface

Main features

• Four independent channels
• Nominal current adjustable in 1 A increments
• Floating remote indication contact
• Individual marking options
• Electronic protection of overload and short-circuit currents
• Rated voltage: 24 V DC
• Push-in connection
• IO-Link interface

[i] Web code: #1297			Device circuit breakers, can be order preconfigured	
Description	**Device circuit breakers**		**Device circuit breakers, can be order preconfigured**	
Nominal current	1 … 4 A	1 … 10 A	1 … 4 A	1 … 10 A
Rated current I$_N$	Max. 16 A DC	Max. 40 A DC	Max. 16 A DC	Max. 40 A DC
Operating temperature	-20 °C … +60 °C		-20 °C … +60 °C	
Type	CBMC E4 24DC/1-4A NO	CBMC E4 24DC/1-10A NO	CBMC E4 24DC/1-4A NO-C	CBMC E4 24DC/1-10A NO-C
Order No.	2906031	2906032	2908713	2908716

Power supplies with standard functionality
New variants with robust design

Ensure reliable supply for your consumers with the robust power supply of the TRIO POWER range even in unfavorable ambient conditions. Thanks to optimized EMC properties, the TRIO POWER is now suited for use on the bridge of a ship.

Push-in Technology[P]
Designed by PHOENIX CONTACT

Your advantages

☑ Saves space in the control cabinet, thanks to the narrow design

☑ Reliable starting of heavy loads with dynamic boost

☑ High system availability, thanks to the robust design

☑ Quick and easy installation, thanks to Push-in connection

☑ Can be used on the bridge of a ship in accordance with EN 60945

Main features

• Dynamic boost supplies 1.5 times the nominal current for 5 s
• High shock and vibration resistance, and high electric strength
• LED signaling and DC OK relay contact
• Optimized EMC properties for supplying sensitive loads

Web code: #1331

Description	3-phase power supply	1-phase power supply			Power supply for the ship's bridge	
Input voltage	400 … 500 V AC	100 … 240 V AC			100 … 240 V AC	
Output voltage	24 V DC	12 V DC	48 V DC	48 V DC	24 V DC	
Output current / dyn. boost	40 A / 60 A	10 A / 15 A	5 A / 7.5 A	10 A / 15 A	5 A / 7.5 A	10 A / 15 A
Dimensions W x H x D [mm]	110 x 130 x 160	35 x 130 x 115	42 x 130 x 160	68 x 130 x 160	35 x 130 x 115	42 x 130 x 160
Type	TRIO-PS-2G/ 3AC/24DC/40	TRIO-PS-2G/ 1AC/12DC/10	TRIO-PS-2G/ 1AC/48DC/5	TRIO-PS-2G/ 1AC/48DC/10	TRIO-PS-2G/1AC/ 24DC/5/B+D	TRIO-PS-2G/1AC/ 24DC/10/B+D
Order No.	2903156	2903158	2903159	2903160	2903144	2903145

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Online AC UPS for the DIN rail with pure sine curve

Supply AC loads reliably with the new UPS of the QUINT range for DIN rails. Due to the online topology, the AC UPS delivers a pure sine curve in the grid and battery operation. Combine the online UPS with various UPS-BAT energy storage.

IQ TECHNOLOGY

Your advantages

☑ Smooth transition due to online topology

☑ Pure sine curve in grid and battery operation

☑ USB interface for connecting with industrial PCs, for example

☑ Startup from energy storage possible, even without power supply input

☑ Can be switched in parallel for redundancy and increased performance

Main features

- Online topology VFI-SS-111
- Pure sine curve at the output
- Can be switched in parallel
- Comprehensive signaling
- Temperature range: -25 °C … +60 °C
- Integrated USB interface
- Apparent power: 1 kVA

ℹ Web code: #1332	
Description	**Online AC UPS**
Nominal input voltage	120 V AC … 230 V DC
Nominal output voltage	120 V AC … 230 V DC
Apparent / real power	1000 VA / 900 W
Dimensions W x H x D	290 mm x 130 mm x 125 mm
Type	QUINT4-UPS/1AC/1AC/1KVA
Order No.	2320283

Buffer modules
for failures lasting several seconds

Bridge over seconds-long failures with the new buffer modules from the QUINT range for DIN rails. The QUINT BUFFER combines an electronic switch-over unit and maintenance-free, capacitor-based energy storage in the same housing.

Your advantages

☑ Space saving, thanks to compact design

☑ Maintenance-free due to electrolytic capacitors

☑ Thanks to smooth start-up, can also be used with power supplies in the low power range

Main features

• Electrolytic capacitors
• Comprehensive signaling
• Temperature range: -40 °C … +70 °C
• Fixed and variable activation threshold

ℹ **Web code:** #1333		
Description	**Buffer module 20 A**	**Buffer module 40 A**
Nominal input voltage	24 V DC	
Nominal output voltage	24 V DC	
Output current / stat. boost	20 A / 25 A	40 A / 45 A
Dimensions W x H x D	56 mm x 130 mm x 125 mm	72 mm x 130 mm x 125 mm
Type	QUINT4-BUFFER/24DC/20	QUINT4-BUFFER/24DC/40
Order No.	2907913	2908283

Buffer modules
with double layer capacitors

The new, maintenance-free QUINT CAP buffer module is ideal for cyclical failures that last up to 30 seconds. It combines an electronic switch-over unit and maintenance-free, capacitor-based energy storage in the same housing. The USB interface makes it convenient to shut down your PC.

Your advantages

☑ Convenient shutdown of PCs

☑ Maintenance-free with long service life

☑ Space saving, thanks to compact design

☑ Long buffer time due to high memory capacity

☑ Lockable USB interface for connecting to industrial PCs

Main features

• Double layer capacitors
• 5 or 10 A for 30 s
• Integrated USB interface
• Life expectancy (20 °C): > 20 years
• Comprehensive signaling
• Temperature range: -40 °C … +60 °C
• Loading/unloading cycles (20 °C): > 500,000

ⓘ Web code: #1334	Buffer module 5 A	Buffer module 10 A
Description	**Buffer module 5 A**	**Buffer module 10 A**
Nominal input voltage	24 V DC	
Nominal output voltage	24 V DC	
Output current / stat. boost	5 A / 6.25 A	10 A / 12.5 A
Dimensions W x H x D	94 mm x 130 mm x 125 mm	118 mm x 130 mm x 125 mm
Type	QUINT4-CAP/24DC/5/4KJ	QUINT4-CAP/24DC/10/8KJ
Order No.	2320539	2320571

Active redundancy modules for superior system availability

Increase your system availability with QUINT range of active redundancy modules. Use the new SINGLE ORING modules for decoupling and running the cable to the load separately. In combination with the new QUINT POWER supply, the redundant system is monitored continuously.

Your advantages

☑ Consistent redundancy up to the load

☑ Constant monitoring of input voltage and decoupling section

☑ Save energy by decoupling with MOSFET

☑ Protection against surge voltages of over 30 V DC at the output (plus variants)

Main features

- Isolated cable routing
- Preventive function monitoring
- Active decoupling with MOSFET
- Additional temperature range: -40 °C … +70 °C
- Conductor cross section up to 16 mm²
- Over Voltage Protection (plus variant)
- Input/output voltage drop: 0.1 V DC

ℹ Web code: #1335	Active redundancy module	Active redundancy module, plus variant
Description	Active redundancy module	Active redundancy module, plus variant
Nominal input voltage	12 V DC … 24 V DC	
Output current	40 A	
Over Voltage Protection	No	Yes
Dimensions W x H x D	32 mm x 130 mm x 125 mm	
Type	QUINT4-S-ORING/12-24DC/1X40	QUINT4-S-ORING/12-24DC/1X40/+
Order No.	2907752	2907753

AC charging technology sets for private and commercial use

The new charging technology sets provide you with a combination of all required basic components for installing private or commercial charging points. The tested wiring plans allow for simple and independent installation.

Your advantages

☑ Convenient ordering with just one order number

☑ Safe connection due to preselected, coordinated components

☑ High flexibility, thanks to extensive configuration options

☑ Can be networked using standardized communication interfaces

☑ Stand-alone structure according to tested wiring diagram

Main features

• Components in accordance with the IEC 62196-2 and IEC 61851-1 standards
• Type 2 charging station structure with one or two charging points
• Charging points can be used by means of an infrastructure socket outlet or alternatively through the use of a fixed charging cable
• Charging power up to 2 x 22 kW

ℹ Web code: #1336				
Description	AC charging technology set for private use		AC charging technology set for commercial use	
Design	With AC charging cable	With AC infrastructure socket outlet	With AC charging cable	With AC infrastructure socket outlet
Charging controller	Basic AC charging controller, preconfigured		Advanced AC charging controller	
Charging power	3.7 kW	11 kW	22 kW	
Supply voltage	230 V	400 V	400 V	
Type	EV-SET-T2AC-BAS-RCM1-20AC5ME	EV-SET-T2AC-BAS-RCM1-20ASE12	EV-SET-T2AC-ADV-RCM2-32AC5MES	EV-SET-T2AC-ADV-RCM2-32ASE12
Order No.	1628077	1628080	1628081	1628082

AC vehicle connectors with individualized logo

The C line of AC vehicle connectors has been developed in accordance with the requirements of the automotive industry. They feature high-quality materials and convenient handling. In addition to gray-black, there is now also a solid black option. We can produce vehicle connectors customized with your logo upon request.

Your advantages

☑ Vehicle connectors customized with your own logo

☑ Modern design, thanks to the use of robust, high-quality materials

☑ Optimal feel, thanks to the use of soft components

☑ Convenient handling, thanks to low insertion and withdrawal force

☑ Water tightness prevents ingress of water through the cable

Main features

• IP degree of protection with safety flap: IP54
• Rated current: up to 32 A
• Standard item with Phoenix Contact logo, with customized logo upon request

ⓘ Web code: #1337	AC vehicle connector, type 1	AC vehicle connector, type 2	AC vehicle connector, GB/T
Description	AC vehicle connector, type 1	AC vehicle connector, type 2	AC vehicle connector, GB/T
Standard	IEC 62196 / SAE J1172	IEC 62196	GB/T 20234
Max. rated voltage	250 V	480 V	250 V
Max. rated current	32 A, 1-phase	32 A, 3-phase	32 A, 1-phase
Type	EV-T1G3K-1AC32A-5,0M6,0ESBK11	EV-T2G3PC-3AC32A-5,0M6,0ESBK11	EV-GBG3JK-1AC16A-5,0M2,5ESBK11
Order No.	1628126	1628125	1628380

AC infrastructure socket outlet
Fast and flexible mounting

The new Easy Mount AC infrastructure socket outlet with matching fixing frame and hinged cover is ideal for compact wall boxes as well as public charging stations. The hinged cover can be replaced quickly and conveniently from the outside without needing to open the charging station or wall box.

Your advantages

☑ The hinged cover can be replaced easily from the outside

☑ Customized hinged cover with your personal logo

☑ Weather protection, thanks to IP54 (with hinged cover)

☑ Hinged cover can be opened easily with the vehicle connector

☑ Secure locking by means of an actuator

Main features

• Suitable for rear mounting
• Low installation height and depth
• Drainage system with discharge nozzles
• Fixing frame and hinged cover can be screwed on the front
• Tamper-proof Torx screws
• Color: black

Description	Type 2 AC infrastructure socket outlet				Fixing frame	Hinged cover
Max. rated voltage	480 V				-	-
Max. rated current 3-phase	20 A		32 A		-	-
Locking voltage of actuator	12 V	24 V	12 V	24 V	-	-
Type	EV-T2M3SE12-3AC20A-0,7M2,5E14	EV-T2M3SE24-3AC20A-0,7M2,5E14	EV-T2M3SE12-3AC32A-0,7M6,0E14	EV-T2M3SE24-3AC32A-0,7M6,0E14	EV-T2SF-EM	EV-T2SC-EM
Order No.	1627985	1627986	1627693	1627987	1627637	1627635

Web code: #1338

AC charging controllers
for harsh environments and compact applications

AC charging controllers of the EV Charge Control Basic range offer you a compact, cost-effective control solution for simple charging points. Brand new variants include a version with coated PCB for harsh environments and a version with pluggable MSTB connection technology for space-saving, quick installation in charging station housings.
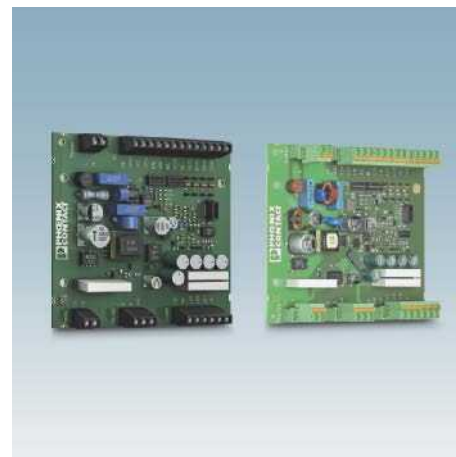
Your advantages

☑ Suited for harsh environments, thanks to coated PCB

☑ Fast installation in confined spaces by using MSTB connection technology

☑ Integration of all required controller functions

☑ Release of the infrastructure plug in the event of power supply failure

☑ Quick installation, thanks to special connection technology

Main features

• Charging in accordance with IEC 61851
• RS-485 interface for Modbus RTU (Slave)
• Supply voltage: 110 V AC … 240 V AC
• Communication via CP and PP
• Four digital outputs, four digital inputs
• PCB version

ℹ Web code: #1339				
Description	**AC charging controller with MSTB connection technology**		**AC charging controller with coated PCB**	
Charging case	B	C	B	C
Type	EV-CC-AC1-M3-CBC-SER-PCB-MSTB	EV-CC-AC1-M3-CC-SER-PCB-MSTB	EV-CC-AC1-M3-CC-SER-PCB-XC	EV-CC-AC1-M3-CC-SER-PCB-XC
Order No.	1627353	1627367	1628393	1628394

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AC charging controllers
for the North American market

AC charging controllers of the EV Charge Control Basic range offer you a compact, cost-effective control solution for simple charging points. The new NAR variant is specifically designed for the North American market. With integrated circuit breakers, residual current detection and UL certification, it meets all standards requirements.
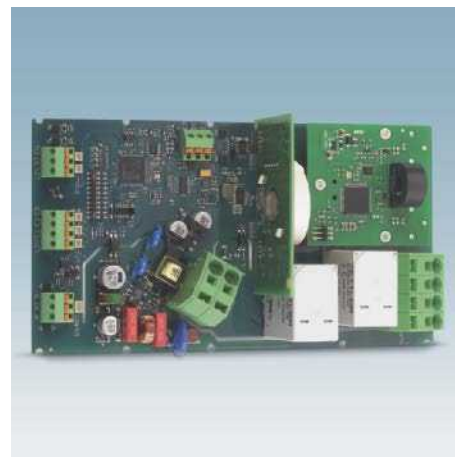
Your advantages

☑ All functions bundled on a single PCB

☑ Low certification effort, thanks to existing UL approval

☑ High availability of the charging station, thanks to integrated residual current monitoring

☑ Simple integration into management systems due to standardized interfaces

Main features

- Level 2 charging in accordance with SAE J1772
- Control in accordance with UL 2594
- Residual current monitoring in accordance with UL 2231
- Supply voltage: 110 V … 240 V, 50 Hz/60 Hz
- Configurable charging current: 6 A … 40 A
- Three digital outputs, two digital inputs
- RS-485 interface, Modbus/RTU
- Available as PCB and DIN rail device

ℹ️ **Web code:** #1340		
Description	**AC charging controller, PCB version**	**AC charging controller, DIN rail device**
Type	EV-CC-AC1-L2-NAR-SER-PCB	EV-CC-AC1-L2-NAR-SER-HS
Order No.	1623656	1627215

Box and panel PCs
for entry-level to high-end applications

Execute modern operating concepts with the reliable box and panel PCs from the Valueline range. The product range has been expanded to include performance classes for entry-level and high-end applications. The industrial PCs feature the newest Intel® processors, comprehensive functions and an attractive design.

Your advantages

☑ State-of-the-art operating concepts, thanks to multitouch support

☑ Attractive industrial design to upgrade your system

☑ Robust and sturdy, thanks to glass front suitable for industrial use

☑ Easy to maintain, thanks to easily accessible components

☑ Flexible extension via optional PCI or PCIe slot

Main features

• Display sizes: 7"/9"/12.1"/15.6"/18.5"/ 21.5"
• Processor: Intel® Atom™ E3845 or Core™ i7 6822EQ
• Up to 2 x SATA-HDD/-SSD (RAID 0,1)
• Up to 2 x DisplayPort video output
• Optional: PCI/PCIe slot

	Web code: #1341			
Description	**Box PC**		**Panel PC**	
Display	None		15.6" (1366 x 768 px), 18.5" (1366 x 768 px) 21.5" (1920 x 1080 px)	
Processor	Intel® Atom™ E3845 1.91 GHz	Intel® Core™ i7 6822EQ 2.0 GHz	Intel® Atom™ E3845 1.91 GHz	Intel® Core™ i7 6822EQ 2.0 GHz
Type	VL2 BPC 1000	VL2 BPC 9000	VL2 PPC 1000	VL2 PPC 9000
Order No.	2403046	2400499	2403047	2400500

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HMIs for Visu+ software with PCAP multitouch display

The HMIs for the visualization software Visu+ enable optimal mapping of your systems and processes. The new devices feature a new design and projective-capacitive (PCAP) displays with multitouch function and gesture control. Thanks to robust surfaces and a diverse range of display sizes, you can plan your systems with even more flexibility.

Your advantages

☑ Robust and sturdy, thanks to glass front suitable for industrial use

☑ Integrated Visu+ visualization software

☑ Fast response and display refresh, thanks to powerful processor

☑ Flexible connection to third-party systems by using various drivers

☑ Mobile system access with the Visu+ mobile app

Main features

- PCAP technology with multitouch function
- Processor: ARM® Cortex®-A8, 1 GHz
- C1D2 certification
- Software: Windows® Embedded Compact 7, VISU+ RT, AX OPC server
- Interfaces: 2 x USB 2.0, 1 x Ethernet 10/100 Mbps, optional: RS-232, RS-485, 2 x CAN
- Mass storage: 1 GB Flash
- Temperature range: 0°C … +50°C

	Web code: #1342				
Description	**Touch panel 7"**	**Touch panel 9"**	**Touch panel 12"**	**Touch panel 15.6"**	**Touch panel 18.5"**
Resolution	800 x 480 px	800 x 480 px	1280 x 800 px	1280 x 800 px	1366 x 768 px
Type	TP 3070W/P	TP 3090W/P	TP 3120W/P	TP 3156W/P	TP 3185W/P
Order No.	2403459	2403460	2403461	2403462	2403862

HMIs for outdoor applications with more power and a robust touch display

The HMIs for outdoor applications with new processor generation and glass-film-glass touch screens offer power and robustness for demanding applications. Operate and monitor your system in any environment, thanks to the C1D2 certification for extreme application conditions.

Your advantages

☑ Display can be read in direct sunlight

☑ Resistant to UV and IR radiation

☑ Weatherproof, thanks to IP67 degree of protection

☑ Resistant to environmental influences, such as salt spray, termites and chemicals

☑ Can be operated when wearing work gloves

Main features

• Degree of protection: IP67
• Processor: ARM® Cortex®-A8, 1 GHz
• C1D2 certification
• Software: Windows® Embedded Compact 7, VISU+ RT, AX OPC server
• Display formats: 4:3 and 16:9
• Interfaces: 2 x USB 2.0, 1 x Ethernet 10/100 Mbps, optional: RS-232, RS-485, 2 x CAN
• Mass storage: 1 GB Flash
• Expanded temperature range

i Web code: #1343

Description	Touch panel 4.3"	Touch panel 5.7"	Touch panel 7"	Touch panel 12"
Resolution	480 x 272 px	640 x 480 px	800 x 480 px	800 x 600 px
Ambient temperature	-20°C … +70°C	-20°C … +70°C	-32°C … +70°C	-30°C … +70°C
Type	TP 3043W/WT	TP 3057V/WT	TP 3070W/WT	TP 30121S/WT
Order No.	2404286	2403464	2403465	2403466

HMIs for maritime applications with new display sizes and functions

The powerful HMIs from the TPM 3000 series are designed for demanding applications onboard ships. New display sizes and a wide range of functions provide you with user-friendly and reliable operation, monitoring and alerting while at sea.

Your advantages

☑ Light-absorbing front panels

☑ Dimmable backlight

☑ Certified compass safe distance in accordance with DIN EN 60945

☑ Acoustic warning from integrated horn

☑ Flexible communication, even with third-party systems

Main features

• Degree of protection: IP65
• Certifications: ABS, BV, DNV-GL, LR, RINA, EN 60945
• Processor: ARM® Cortex®-A8, 1 GHz
• Interfaces: 2 x USB 2.0, 1 x Ethernet 10/100 Mbps, optional: RS-232, RS-485, 2 x CAN
• Mass storage: 1 GB Flash
• Expanded temperature range: -20 °C … +60 °C
• Floating output

ℹ Web code: #1344

Description	Touch panel 4.3"	Touch panel 5.7"	Touch panel 7"	Touch panel 10.4"	Touch panel 12"	Touch panel 15"
Resolution	480 x 272 px	640 x 480 px	800 x 480 px	800 x 600 px	1280 x 800 px	1024 x 768 px
Type	TPM 3043	TPM 3057	TPM 3070	TPM 3105	TPM 3120	TPM 3150
Order No.	2404516	2404517	2404518	2404520	2404522	2404524

This web code gives you access to additional product versions on our website.

PHOENIX CONTACT 61

LED tower lighting
Maintenance-free tower and shaft illumination

Illuminate towers and shafts reliably and efficiently with the new LED lights. The light is designed for continuous operation on work spaces or ladders. Thanks to pre-assembled cabling and pluggable connection technology, installation is quick and easy.

Your advantages

☑ Time-saving installation, thanks to preassembled cabling

☑ No electrician required, thanks to pluggable connection technology

☑ Lights have long service life for maintenance-free illumination

Main features
• LED technology
• Degree of protection: IP67
• Color temperature: 5000 K
• UL and ENEC approval
• QPD fast connection
• Service life: min. 50,000 h

ⓘ Web code: #1345				
Description	**LED light, wide beam**		**LED light, focused beam (above/below)**	
Suited for series connection	No	Yes	No	Yes
Type	PLD T/1AC/AS/1CON	PLD T/1AC/AS/2CON	PLD T/1AC/UD/1CON	PLD T/1AC/UD/2CON
Order No.	2402991	2402992	2403121	2403122

Controller solution for usage data acquisition
Measure energy data efficiently

The EMlog software from Phoenix Contact provides an efficient solution for recording energy data relating to heat, cold, air and electricity when used in conjunction with the ILC 191 ME/AN modular Inline controller. This allows you to keep an eye on your resources and manage the consumption levels of your machines and systems.

Your advantages

☑   Easy startup without programming knowledge

☑   Easy parameterization, thanks to web-based interface

☑   Direct parameterization of predefined sensors

☑   Existing configurations can be reused

Main features
Connection of the following expansion modules and measuring devices:
- 24 digital and 8 analog signals
- 10 EMpro energy measuring devices or devices with Modbus interface
- 10 power measurement terminals
- 30 M-Bus counters

ⓘ Web code: #1346		
Description	**Solution for usage data acquisition**	**Suitable Inline controller**
Type	SD FLASH 2GB EMLOG	ILC 191 ME/AN
Order No.	2403484	2700074

Voltage transducers
for outputting analog standard signals

MACX MCR voltage transducers can be used to measure DC and AC voltages in various signal ranges and convert them into standard analog signals. Eight precisely graded measuring ranges guarantee optimal measuring accuracy.

Push-in Technology[P]

Designed by PHOENIX CONTACT

Your advantages

☑ Optimal measuring accuracy, thanks to eight precisely graded voltage measuring ranges

☑ Simple measuring range selection via zero/span or automatic teach-in configuration

☑ High operational reliability, thanks to 3-way electrical isolation

☑ Simple installation due to pluggable connection technology

Main features

• Zero/span adjustment: ±20%
• Screw or Push-in connection
• Safe electrical isolation with 3.3 kV test voltage between input and output
• Operating temperature: -25 °C … +60 °C

ℹ Web code: #1347	Voltage transducer, DC		Voltage transducer, AC	
Description	Voltage transducer, DC		Voltage transducer, AC	
Measuring range	Bipolar: 0 … 24/36/54/80/120/170/250/ 370/550 V DC		0 … 24/36/54/80/120/170/250/ 370/550 V DC	
Output signal	-10 V … 10 V/-20 mA … 20 mA		0 V … 10 V/0 mA … 20 mA	
Connection technology	Screw	Push-in	Screw	Push-in
Type	MACX MCR-VDC	MACX MCR-VDC-PT	MACX MCR-VAC	MACX MCR-VAC-PT
Order No.	2906242	2906243	2906239	2906244

Current transducers
for outputting analog standard signals

MCR current transducers can be used to measure direct and alternating currents of any waveform. Programmable upper and lower limits enable optimum mapping of the measuring range.

Your advantages

☑ Suited for all waveforms, thanks to true r.m.s value measurement

☑ Quick basic configuration via DIP switches

☑ Advanced configuration and diagnostic options via software

☑ Optimum mapping of the measuring range, thanks to programmable upper and lower limits

☑ High operational reliability, thanks to 3-way electrical isolation

Main features

• Measuring principles:
  True r.m.s. value for AC and DC without sign recognition
  Arithmetic mean value for DC with sign recognition
• Through connection,
  Diameter: 10.5 mm
• Safe electrical isolation with
  4 kV test voltage
• Operating temperature: -20 °C … +60 °C

i Web code: #1348	
Description	**Current transducer, AC/DC**
Measuring range	0 A … 100 A
Output signal	0 mA … 20 mA / 0 V … 10 V
Connection technology	Screw
Type	MCR-S-20-100-UI-DCI
Order No.	2908798

Compact monitoring relays
for monitoring the temperature of motor windings

The EMD-BL range is the economical solution for countless monitoring tasks, especially in building installation and series production. Protect motors from overload reliably with the new thermistor monitoring relay.

Push-in Technology[P]
Designed by PHOENIX CONTACT

Your advantages

☑ Especially space-saving, thanks to a compact housing in the installation design

☑ Quickly wired without tools, thanks to Push-in connection technology

☑ Clear diagnostics with status LEDs that are easy to see

☑ Perfect for series production: price-optimized solution for multiple monitoring functions

Main features

- For temperature sensors in accordance with DIN 44081 and DIN 44082
- Maximum 6 PTCs
- Switch output: 1 floating changeover contact
- Maximum switching voltage in accordance with IEC 60947-5-1: 5 A/250 V AC
- Short circuit monitoring for thermistor circuit
- Screw or Push-in connection

i **Web code:** #1349		
Description	**Monitoring relay for monitoring the temperature of motor windings**	
Connection technology	Screw	Push-in
Type	EMD-BL-PTC	EMD-BL-PTC-PT
Order No.	2906252	2906253

Compact time relays
for specifying impulse and pause times

ETD-BL time relays are the compact and economical alter-
native for the PLC: they are easy to configure and quick to
wire. Set pulse and pause times between 50 milliseconds
and 100 hours with the new impulse encoder.

Push-in Technology[P]

Designed by PHOENIX CONTACT

Your advantages

☑ Exact time sequences that can be set with precision

☑ Simple operation: adjustment via rotary switch on the front side

☑ Especially space-saving, thanks to a compact housing
   in the installation design

☑ Quickly wired without tools, thanks to Push-in connection
   technology

☑ Clear diagnostics with status LEDs that are easy to see

Main features

• Time setting range: 50 ms … 100 h
• 7 time end ranges
• Switch output: 1 floating changeover
  contact
• Maximum switching voltage in accordance
  with IEC 60664-1: 250 V AC
• Screw or Push-in connection

ℹ️ **Web code:** #1350		
Description	Impulse encoder	
Connection technology	Screw	Push-in
Type	ETD-BL-2T-I-230	ETD-BL-2T-I-230-PT
Order No.	2907713	2907714

Industrial relay system with screw connection for reliably switching loads

You can execute all of your standard relay applications using the RIFLINE complete industrial relay system. Benefit from high availability, thanks to pluggable relays and special function modules. The entire RIFLINE complete portfolio is now available with screw connection in addition to Push-in connection technology.
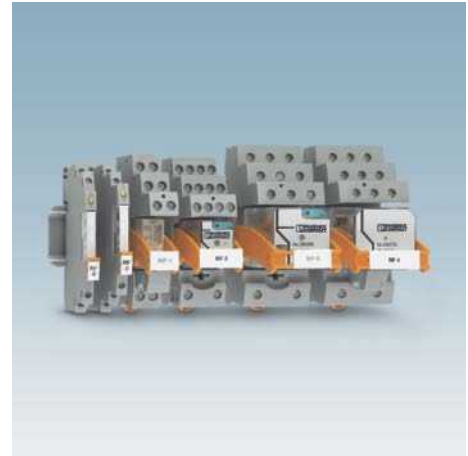
Your advantages

☑ Simple operation, thanks to state-of-the-art wiring and potential distribution concept

☑ Easy startup, thanks to pre-assembled relay modules

☑ Individual marking options, thanks to marking accessories

☑ High degree of flexibility, thanks to manually operated relays

☑ High machine and system availability, thanks to reliable load switching

Main features

• Pre-assembled complete modules consist of a basic terminal block and pluggable relay
• Screw connection technology
• Input voltage: 24 V DC or 230 V AC
• Integrated status LED
• Versatile accessories from the terminal block range
• Can be bridged with uniform plug-in bridge
• Screw connection

	Description		Relay module, RIF 1	Relay module, RIF 2	Relay module, RIF 3	Relay module, RIF 4
Web code: #1351	**Relay module, RIF 0**		**Relay module, RIF 1**	**Relay module, RIF 2**	**Relay module, RIF 3**	**Relay module, RIF 4**
Max. current	6 A		2 x 8 A	4 x 6 A	3 x 8.5 A	3 x 10 A
Output contacts	1 N/O contact	1 PDT contact	2 PDT contacts	4 PDT contacts	3 PDT contacts	3 PDT contacts
Manual operation	No		Yes			No
Type	RIF-0-RSC-24DC/1	RIF-0-RSC-24DC/21	RIF-1-RSC-LDP-24DC/2x21MS	RIF-2-RSC-LDP-24DC/4x21	RIF-3-RSC-LDP-24DC/3x21	RIF-4-RSC-LDP-24DC/3x21
Order No.	2903366	2903374	2905660	2903320	2903300	2903288

This web code gives you access to additional product versions on our website.

Electroustic Ltd   www.electroustic.co.uk   +44 (0)1908 307200

Coupling relay module with force-guided contacts

You can implement all of your standard relay applications using the RIFLINE complete industrial relay system. The new force-guided coupling relay module ensures reliable signal exchange with a response function between two systems.

Push-in Technology[P]

Designed by PHOENIX CONTACT

Your advantages

☑ Highest reliability with force-guided contacts in accordance with EN 50205

☑ Simple operation, thanks to state-of-the-art wiring and potential distribution concept

☑ Reliable system for high machine and system availability

☑ Complete range covering the whole spectrum of standard applications

Main features

• Input voltage: 24 V DC
• Contact type: two changeover contacts
• Nominal load: 250 V AC / 6 A
• Pluggable relay
• Overall width: 16 mm
• Contact material: AgNi
• Ambient temperature range (operating): -25 °C … +50 °C
• Push-in connection

[i] Web code: #1352	Complete module	Single relays
Description	**Complete module**	**Single relays**
Input circuitry	LED and freewheeling diode	-
Approval	cULus listed for industrial control equipment	cULus recognized 508
Type	RIF-1-RPT-LDP-24DC/2x21/FG	REL-SR-24DC/2x21/FG
Order No.	2908215	2908777

Highly-compact relay modules with lockable manual operation

The PLC-INTERFACE relay system acts as the high-performance interface between the controller and system I/O devices. The new electromechanical relay with manual operation is particularly suited for maintenance and commissioning as it can be operated manually.

Push-in Technology[P]
Designed by PHOENIX CONTACT
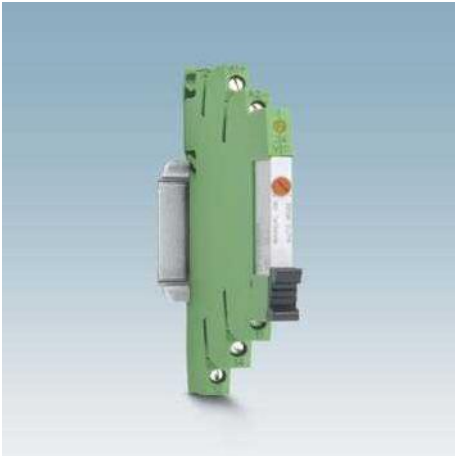
Your advantages

☑ Space-saving, thanks to 6.2 mm narrow design

☑ Time-saving potential distribution, thanks to plug-in bridge

☑ Protection against operating error due to manual operation that is lockable via screwdriver

☑ Quick and error-free connection to the controller via system cabling

Main features

- Contact nominal load: 250 V AC / 6 A
- Relay degree of protection: RTII
- Pluggable relay
- Rotary actuator
- Operating functions:
  AUTO MODE: Relay is operated via on/off signal from the controlling signal source
  MANUAL ON: Relay is operated manually with mechanical activation
- Screw or Push-in connection

Description	Complete module			Single relays		
Input voltage	24 V DC		230 V AC	12 V DC	24 V DC	60 V DC
Type	PLC-RPT-24DC/21/MS	PLC-RPT-24DC/1/MS/ACT	PLC-RPT-230UC/1AU/MS/SEN	REL-MR-12DC/21/MS	REL-MR-24DC/21/MS	REL-MR-60DC/21/MS
Order No.	2909667	2909677	2909680	2909641	2909642	2909643

Web code: #1353

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Electroustic Ltd   www.electroustic.co.uk   +44 (0)1908 307200

Highly-compact relay modules
for switching loads in potentially explosive areas

The PLC-INTERFACE relay system acts as the high-performance interface between the controller and system I/O devices. New variants allow you to isolate and switch signals safely in the potentially explosive areas of Zone 2.

Push-in Technology℗
Designed by PHOENIX CONTACT
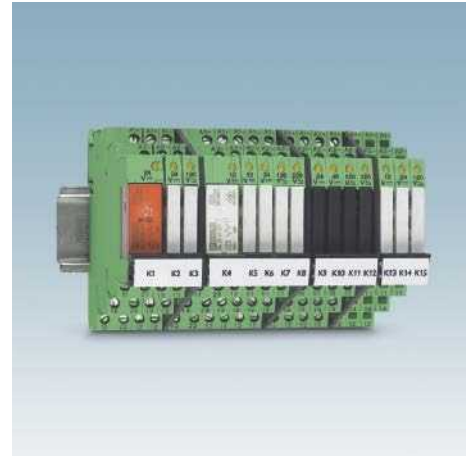
Your advantages

☑ Applicable in potentially explosive areas of Zone 2

☑ Approval in accordance with IECEx, ATEX and Class 1 Zone 2

☑ Time-saving potential distribution, thanks to plug-in bridge

☑ Efficient connection to system cabling using V8 adapter

☑ Fulfills requirements of the corrosive gas test ISA G3 and of EN 60068-2-60

Main features

• SPDT and DPDT with 6 A continuous current and HC variants for up to 10 A switching current
• Pluggable relay
• Various input voltages (12/24 V AC/DC, 120/230 V AC/DC)
• Maximum switching voltage: 250 V AC/DC
• Screw or Push-in connection

ℹ **Web code:** #1354				
Description	**Complete module, 6.2 mm**		**Complete module, 14 mm**	
Contact current	< 3 A	< 6 A	< 2 x 6 A	< 10 A
Switching voltage	< 48 V DC	< 250 V AC/DC	< 250 V AC/DC	
Input voltage	24 V DC	24 V DC	24 V DC	
Approvals	Class I Zone 2	IECEx, ATEX, Class I Zone 2	IECEx, ATEX, Class I Zone 2	
Type	PLC-OSC-24DC/ 24DC/2/C1D2	PLC-RSC-24DC/ 21/EX	PLC-RSC-24DC/ 21-21/EX	PLC-RSC-24DC/ 21/HC/EX
Order No.	5603260	2909524	2909509	2909519

This web code gives you access to additional product versions on our website.

PHOENIX CONTACT **71**

Functional safety

Highly compact safety relays
with new functions for machine building

PSRmini are the narrowest safety relays available on the
market. They offer you proven safety with force-guided
contacts. The new safety relay features wide range input
and elevator approval. A contact extension with up to five
enabling paths is also available.

Relay Technology[P]
Designed by PHOENIX CONTACT

Your advantages

☑ Space-saving, thanks to highly compact design

☑ Maximum safety and availability, thanks to forced-guided contacts

☑ Wide range of applications, thanks to compatibility with a variety
  of signal generators

☑ Approvals for all global markets

Main features

• Overall width: 17.5 mm and 22.5 mm
• Up to PL e in accordance with ISO 13849
• Up to SILCL 3 in accordance
  with IEC 62061
• UL and cUL
• Wide range input:
  24 V … 230 V AC/DC
• Elevator approval in accordance
  with new standard EN 81-20

	Safety relay with wide range input		Safety relay with elevator approval		Contact extension	
Description						
Overall width	22.5 mm		22.5 mm		17.5 mm	
Number of enabling paths	3		3		5	
Connection technology	Screw	Spring-cage	Screw	Spring-cage	Screw	Spring-cage
Type	PSR-MC32	PSR-MC32	PSR-MC37	PSR-MC37	PSR-MC82	PSR-MC82
Order No.	2700524	2700525	2702411	2702412	2702382	2702383

Web code: #1355

Highly compact, safe coupling relays with new functions for the process industry

PSRmini are the narrowest safety relays available on the market. They offer you proven safety with force-guided contacts. The new coupling relays for safe deactivation are now available with wide range input. In addition, they are now compatible with even more systems.

Relay Technology[P]

Designed by PHOENIX CONTACT

Your advantages

- ☑ Space-saving, thanks to highly compact design
- ☑ Quick and easy proof test, thanks to force-guided contacts
- ☑ Active error response via the wiring between digital output and coupling relay
- ☑ Wide application range, thanks to compatibility with safe systems
- ☑ Successfully tested for use in harsh environments

Main features

- Overall width: 6.8 mm and 17.5 mm
- Up to SIL 3 in accordance with IEC 61508 / IEC 61511 / IEC 50156
- UL and cUL
- Use in corrosive atmospheres possible
- Expanded approval package for the process industry
- Wide range input: 24 V … 230 V AC/DC

ℹ️ Web code: #1356			
Description	**Coupling relay**	**Coupling relay with wide range input**	
Overall width	6.8 mm	17.5 mm	
Number of enabling paths	1	2	
Connection technology	Screw	Screw	Spring-cage
Type	PSR-PS22	PSR-PC32	PSR-PC32
Order No.	2702524	2700581	2700582

Control solution for functional safety
Integrate safe I/Os easily

Integrate safe I/Os quickly and easily into your machine with the Easy Safe safety solution in combination with ILC 151 ETH or AXC 1050 controllers. All necessary configuration settings and initializations for integrating SafetyBridge I/Os into your standard applications are performed automatically.

SafetyBridge Technology

Designed by PHOENIX CONTACT

Your advantages

☑ Programming via free Safeconf software

☑ Simple, web-based configuration and commissioning

☑ Communication via Modbus and PROFINET (pro version)

☑ Stay informed at all times, thanks to notifications via e-mail (pro version)

Main features

• Graphical interface
• Programming using drag-and-drop
• License key and application program
• License key for additional function block libraries

ℹ Web code: #1357	Safety solution for Inline	Safety solution for Inline, pro version	Safety solution for Axioline, pro version	Suitable Inline controller	Suitable Axiocontrol controller
Description	Safety solution for Inline	Safety solution for Inline, pro version	Safety solution for Axioline, pro version	Suitable Inline controller	Suitable Axiocontrol controller
Type	SD FLASH 2GB EASY SAFE BASIC	SD FLASH 2GB EASY SAFE PRO	SD FLASH 2GB AXC EASY SAFE PRO	ILC 151 ETH	AXC 1050
Order No.	2403297	2403298	2403730	2700974	2700988

Functional safety

Safe Inline I/O terminal
with the function of two safety relays

Deactivate connected standard output terminals safely with
the safe Inline ECO Safe I/O terminal. The output terminals
are mounted to the right of the safe I/O terminal. When a
sensor is activated, e.g. emergency stop, the actuator volt-
age supply for the output terminals is switched off.

Your advantages

☑ Simple expansion, thanks to safe I/O terminals,
each with two two-channel sensor circuits

☑ More flexibility, thanks to cascadable switch-off
of segment circuits

☑ Reduce downtimes, thanks to diagnostic and status messages
in the controller

☑ Reduced wiring effort, thanks to the enable principle

Main features

• Up to SILCL 3 in accordance
with IEC 62061
• Up to PL e in accordance
with ISO 13849
• UL and cUL
• Loads up to 6 A

ℹ️ **Web code:** #1358	
Description	**Safe I/O terminal**
Type	IB IL SAFE 2-ECO
Order No.	2702446

I/O systems

Inline bus coupler
for EtherCAT® and CANopen®

Inline is the flexible all-rounder for use in control cabinets.
Two new bus couplers for EtherCAT® and CANopen®
expand the product range. Both feature a compact design.
The bus coupler for CANopen® is designed as an
XC variant and can be used in adverse ambient conditions.

Your advantages

☑ Compact station structure, thanks to 40 mm housing width

☑ Increased system safety, thanks to programmable modes
for actions in case of error (CANopen®)

☑ Far-reaching potential applications, thanks to extended
temperature range (CANopen®)

☑ Decentralized safety solution with SafetyBridge technology
in EtherCAT® networks

Main features
- Up to 63 additional Inline devices
  can be connected
- Up to 16 PCP devices can be connected
- Automatic detection of the
  transmission speed in the local bus
  (500 kbps or 2 Mbps)

	Bus coupler for EtherCAT®	Bus coupler for CANopen®
ℹ️ **Web code:** #1359		
Description	Bus coupler for EtherCAT®	Bus coupler for CANopen®
Temperature range	-25 °C … +55 °C	-40 °C … +70 °C
Type	IL EC BK-PAC	IL CO BK-XC-PAC
Order No.	2702507	2702635

Inline I/O terminals, each with its own function
Automation without parameterization

Inline is simple, flexible and reliable. The new Inline ECO I/O terminals allow you to solve automation tasks easily and economically. Following the motto, "one terminal, one function," you will always find the right function for your application. No special terminal parameterization is required.

Your advantages

☑ Reduced startup costs, thanks to easy integration without parameterization

☑ More flexibility, thanks to ability to be combined with Inline standard I/Os

☑ Saves space in the control cabinet, thanks to 12.2 mm housing width

Main features

• Temperature range: 0 °C … +55 °C
• No parameterization required
• Vibration resistance: 5g in accordance with EN 60068-2-6
• Shock resistance: 25g in accordance with EN 60068-2-27

	I/O terminal for analog input	I/O terminal for analog output	I/O terminal for temperature recording		I/O terminal for serial communication
Description	I/O terminal for analog input	I/O terminal for analog output	I/O terminal for temperature recording		I/O terminal for serial communication
I/O functionality	4 inputs, 4 mA … 20 mA	4 outputs, 0 V … 10 V	4 inputs for temperature sensors	4 inputs for temperature sensors, UTH	RS-485 interface
Connection technology	Spring-cage connection, 2-wire				Spring-cage connection
Type	IB IL AI 4/ I/4-20-ECO	IB IL AO 4/ U/0-10-ECO	IB IL RTD 4/ PT100-ECO	IB IL UTH 4/ J-ECO	IB IL RS 485-ECO
Order No.	2702495	2702498	2702499	2702502	2702141

Web code: #1360

This web code gives you access to additional product versions on our website.

PHOENIX CONTACT **77**

Axioline F bus coupler for EtherNet/IP™ and PROFINET

Axioline F is the fast, robust and easy I/O system for all common networks. The product range has been expanded to include three new bus couplers. The range can be customized even further to match your machine and system concepts as a result. Benefit from the advantages of the EtherNet/IP™ and PROFINET networks.

Push-in Technology^[P]
Designed by PHOENIX CONTACT

Your advantages

- ☑ Shortened response times, thanks to insignificant runtimes in the bus coupler
- ☑ Can be used in redundant EtherNet/IP™ networks, thanks to the DLR function
- ☑ Data transmission in real time from the I/O level up to the controller
- ☑ PROFINET fiber optic variant for longer stretches in environments prone to interference
- ☑ Easy configuration using web-based management

Main features

- Service interface
- Runtimes around 0 µs
- Up to 63 further Axioline F devices can be connected
- Firmware can be upgraded
- Vibration resistance: 5g in accordance with EN 60068-2-6
- Shock resistance: 30g in accordance with EN 60068-2-27
- Temperature range: -25 °C … +60 °C

ℹ Web code: #1361			
Description	**Bus coupler for EtherNet/P™**	**Bus coupler for PROFINET**	
Connection technology	2 x RJ45 socket	2 x RJ45 socket	2 x SC-RJ socket
Type	AXL F BK EIP EF	AXL F BK PN TPS	AXL F BK PN SCRJ
Order No.	2702782	2403869	2400165

Axioline F I/O modules
for path measurement and energy applications

Axioline F is the fast, exceptionally robust I/O system with high signal density. Two new input modules for use in energy applications in accordance with IEC 61850 and a function module for evaluating magnetostrictive position sensors are being added to the product range.

Push-in Technology[P]
Designed by PHOENIX CONTACT

Your advantages

☑ Automatic parameter upload simplifies sensor exchange (impulse module)

☑ Numerous application possibilities, thanks to extended temperature range (impulse module)

☑ Usable in energy applications, thanks to compliance with the IEC 61850-3 standard (input modules)

☑ Easy mounting and startup, thanks to Push-in connection

Main features

• Vibration resistance: 5g in accordance with IEC 60068-2-6

• Shock resistance: 30g in accordance with IEC 60068-2-27

• Noise emission: Class B in accordance with EN 55022

• Noise immunity: 8 kV air discharge in accordance with IEC 61000-4-2

• Push-in connection

[i] Web code: #1362	I/O impulse module	I/O input module for IEC 61850	
Description	**I/O impulse module**	**I/O input module for IEC 61850**	
I/O functionality	2 digital impulse interfaces for evaluating magnetostrictive position sensors with start/stop function	8 digital inputs, 24 V DC	8 digital inputs, 48 V DC / 60 V DC
Ambient temperature	-40 °C … +70 °C	-25 °C … +60 °C	
Overall width	35 mm	54 mm	
Type	AXL F IMPULSE2 XC 1H	AXL F DI8/2 24DC 1F	AXL F DI8/2 48/60DC 1F
Order No.	2702655	2702783	2702654

Control solution for the energy industry
Simple automation with IEC 61850

You can now use the robust AXC 1050 Axiocontrol controller for applications in the energy industry as well. Using the license on the SD card, you can activate the communication protocol and develop interfaces compliant with IEC 61850 within a short period of time. You also receive the license for further function block libraries with the Applic A expansion.

Your advantages

☑ Direct use of the IEC 61850 data model

☑ Flexible due to freely programmable control functionality

☑ Concurrent communication with Modbus/TCP and PROFINET

Main features

- Communication according to MMS and GOOSE protocol
- Automatic time stamping

i **Web code:** #1363				
Description	**IEC 61850 solution**	**IEC 61850 solution with Applic A license**	**Suitable Axiocontrol controller**	
Ambient temperature	-	-	-25 °C … +60 °C	-40 °C … +70 °C
Type	SD FLASH 2GB 61850	SD FLASH 2GB APPLIC A 61850	AXC 1050	AXC 1050 XC
Order No.	2400435	2400436	2700988	2701295

Controller for building infrastructure
IoT-based networking of complex structures

Automate different subsections in building infrastructure, data centers and distributed properties with the ILC 2050 BI Inline controller. The integrated Niagara Framework enables IoT-based automation through the standardization of different data types.

Your advantages

☑ Reduced start-up costs, thanks to various protocols

☑ Standardized integration of sensors and actuators

☑ Simple programming via drag-and-drop

☑ Web-based maintenance, monitoring and programming, independent of location

☑ Function can be expanded with the Inline I/O portfolio

Main features

• Integrated safety functions
• Various license models
• Supported protocols: BACnet IP, BACnet MS/TP, KNX IP, SNMP, M-Bus, DALI, Modbus

ℹ **Web code:** #1364	
Description	**Inline controller for building infrastructure**
Type	ILC 2050 BI
Order No.	2403160

Use the abovementioned web code to find different licenses for Framework, maintenance and supervisor.

Programmable logic relay system
Process analog values while saving space

Implement small automation tasks easily and precisely
with the PLC logic programmable logic relay system.
At just 6 mm, the new analog modules allow you to pro-
cess analog input and output signals in the tightest spaces.
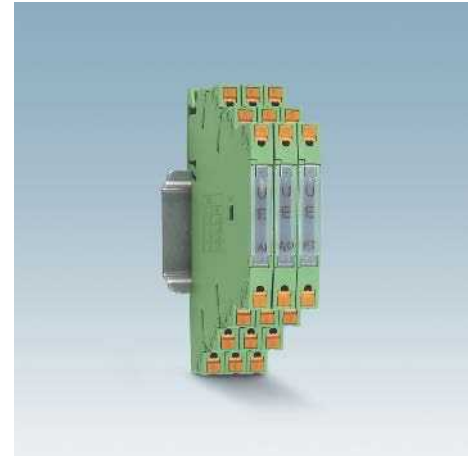
Push-in Technology[P]

Designed by PHOENIX CONTACT

Your advantages

☑ Tailor-made configuration: define each channel individually
as an input or output

☑ Error signaling via diagnostic LED

☑ Convenient installation, thanks to plug-in bridges
and Push-in connection

Main features

• Processing of analog standard signals
(0 V … 10 V, 2 V … 10 V, 0 mA … 20 mA,
4 mA … 20 mA)

• Temperature measurement:
-50 °C … +200 °C
(via Pt 100 and Pt 1000 sensors)

• Input and output signals can be configured
via DIP switch

• Screw or Push-in connection

ℹ Web code: #1365						
Description	Analog input module		Analog input module for temperature measurement		Analog output module	
Connection technology	Screw	Push-in	Screw	Push-in	Screw	Push-in
Type	PLC-ASC-UI-IN	PLC-APT-UI-IN	PLC-ASC-PT100-IN	PLC-APT-PT100-IN	PLC-ASC-UI-OUT	PLC-APT-UI-OUT
Order No.	2906916	2906917	2906918	2906919	2906920	2906921

Controllers

Programmable logic relay system with expanded functions

Implement small automation tasks easily and precisely with the PLC logic programmable logic relay system. Integrate analog modules in diverse applications with the new logic modules. You can access process data quickly and wirelessly via the app.

Push-in Technology[P]

Designed by PHOENIX CONTACT

Your advantages

☑ Individual assembly of the channels with analog and digital I/O extension modules

☑ Space and cost-saving, thanks to compact design

☑ Convenient operation and wireless access to process data via app

☑ Easy implementation of projects, thanks to intuitive Logic+ software

☑ Wireless communication with optional Bluetooth adapter

Main features

• Analog value processing
• Web visualization
• Automatic adjustment to daylight savings time
• App for iOS and Android
• Screw or Push-in connection

	Description	Stand-alone module		Expanded basic module	
ℹ Web code: #1366	**Connection technology**	Push-in	Screw	Push-in	Screw
	Type	PLC-V8C/PT-24DC/SAM2	PLC-V8C/SC-24DC/SAM2	PLC-V8C/PT-24DC/BM2	PLC-V8C/SC-24DC/BM2
	Order No.	2907443	2907445	2907446	2907447

Front adapter for SIMATIC® S7-1500 for quick and error-free wiring

Using the new front adapter, wire interface modules quickly and easily with the SIMATIC® S7-1500 controller. The front adapter uses the proven Plug and Play concept of system cabling.

Push-in Technology^P

Designed by PHOENIX CONTACT

Your advantages

☑ Ability to easily attach to the module, thanks to the professional housing design

☑ Fast start-up, thanks to Plug and Play concept

☑ Error-free wiring, thanks to pre-assembled system cables

☑ Flexible signal patching by using byte-oriented transmission (4 x 8 channels)

Main features

• Can be attached with the I/O module
• Pre-wiring position can be used
• Can be coded
• Shield connection option for analog I/O cards
• Optional termination board with S7-1500-specific marking available
• Optional potential bridge and voltage supply on the adapter
• Screw or Push-in connection

Web code: #1367						
Description	Front adapter for digital I/O cards				Front adapter for analog I/O cards	
Number of positions	4 x FLK 14		1 x FLK 50		4 x FLK 14	1 x FLK 50
Voltage supply on the adapter	Yes				No	
Connection technology for voltage supply	Screw	Push-in	Screw	Push-in	-	
Type	FLKM 4X14-PA/ SC/DIO/S7-1500	FLKM 4X14-PA/ PT/DIO/S7-1500	FLKM 50-PA/ SC/DIO/S7-1500	FLKM 50-PA/ PT/DIO/S7-1500	FLKM 4X14-PA/ AN/S7-1500	FLKM 50-PA/ AN/S7-1500
Order No.	2907381	2907382	2907383	2907384	2907385	2907386

Termination boards for SIMATIC® S7-1500 for connection to analog I/O cards

Connect automation components simply, quickly and error-free with the VARIOFACE system cabling. The new termination boards for the SIMATIC® S7-1500 controller ensure reliable signal transmission.

Push-in Technology[P]

Designed by PHOENIX CONTACT

Your advantages

☑ Plug and Play: quick wiring, thanks to pluggable components

☑ Error-free wiring, thanks to pre-assembled system cables

☑ Clear signal assignment, thanks to controller-specific connection marking

☑ Vibration resistant up to 5g

Main features

- Optional: 2 additional neutral potential levels for e.g. shared ground
- 1:1 map of the I/O card (S7-1500)
- Professional housing design
- Metal base for simple assembly
- Screw or Push-in connection

	Termination board, marking 1-20		Termination board, marking 1-40			
Description	Termination board, marking 1-20		Termination board, marking 1-40			
Number of positions	2 x FLK 14		1 x FLK 50			
Additional potential levels	P1, P2		-		P1, P2	
Connection technology for voltage supply	Screw	Push-in	Screw	Push-in	Screw	Push-in
Type	VIP-3/SC/ 2FLK14/AN/2P/ S7-1500A	VIP-3/PT/ 2FLK14/AN/ 2P/S7-1500A	VIP-3/SC/ FLK50/AN/ S7-1500	VIP-3/PT/ FLK50/AN/ S7-1500	VIP-3/SC/ FLK50/AN/2P/ S7-1500	VIP-3/PT/ FLK50/AN/2P/ S7-1500
Order No.	2908464	2908465	2908495	2908496	2908497	2908499

Web code: #1368

Halogen-free front adapter for SIMATIC® S7-300 / ET 200M

Connect signal and performance cards easily, quickly and error-free with VARIOFACE system cabling. The new front adapters for the SIMATIC® S7-300 / ET 200M can be used in sensitive areas where demands for safety are high.

Your advantages

- ☑ Can be used in sensitive areas, thanks to halogen-free materials
- ☑ Maximum flexibility, thanks to universal applications
- ☑ Quick wiring on the control side, thanks to Plug and Play
- ☑ Comprehensive marking options, thanks to marking accessories
- ☑ Easy orientation, thanks to numerically marked wires

Main features

- Halogen-free in accordance with IEC 60754-1
- Flame-retardant in accordance with IEC 60332-3-22
- Universal 1:1 connection, 250 V AC/DC, 6 A
- Can be screwed and snapped in with the I/O module
- Lengths: 0.5 m … 10 m
- Open cable end
- Connection using terminal blocks from the CLIPLINE complete range

	Front adapter, 20-pos.	Front adapter, 40-pos.
ℹ️ **Web code:** #1369		
Description	Front adapter, 20-pos.	Front adapter, 40-pos.
Type	VIP-PA-PWR/20XOE/HF/…M/S7	VIP-PA-PWR/40XOE/HF/…M/S7
Order No.	2908915	2908908

Hybrid motor starters for networking with IO-Link

Switch and reverse motors quickly and reliably with the CONTACTRON hybrid motor starter. The new linkable variants enable continuous communication between the field and controller levels so that process data can be transferred easily.

CONTACTRON
HYBRID
TECHNOLOGY

Your advantages

- ☑ IO-Link interface for direct connection and transmission of process data
- ☑ Flexible use in central control cabinet and in decentralized control boxes
- ☑ Increased system availability, thanks to service intervals based on process data
- ☑ Low-wear switching using hybrid technology
- ☑ Compact design saves space in the application

Main features

- Interface: IO-Link Class A
- LED display
- Emergency stop in accordance with PL e via enable inputs
- Devices are connected directly to the I/O-Link master module
- Push-in connection

	ℹ️ **Web code:** #1370	IO-Link direct starter		IO-Link reversing starter	
Description		IO-Link direct starter		IO-Link reversing starter	
Current		3 A	9 A	3 A	9 A
Type		ELR H3-IES-PT/ 500AC-3-IOL	ELR H3-IES-PT/ 500AC-9-IOL	ELR H5-IES-PT/ 500AC-3-IOL	ELR H5-IES-PT/ 500AC-9-IOL
Order No.		2908671	2908672	2908669	2908670

Fieldbus components and systems

Compact fieldbus barriers
for PROFIBUS PA and FOUNDATION Fieldbus

The compact eight and twelve-channel fieldbus barriers
for PROFIBUS PA and FOUNDATION Fieldbus are suited
for Ex Zone 1 installation. They are light, robust and
feature simple, space-saving installation. Intelligent circuitry
minimizes contact bounce for high signal quality.

Your advantages

☑ Low switch-on current, thanks to gradual activation

☑ Increased system availability, thanks to short circuit detection
for each channel

☑ Save space in the control cabinet, thanks to single-sided
connection concept

☑ Channels isolated in groups of four ensure signal safety

☑ Low weight – perfect for offshore applications

Main features

• Approvals: ATEX Zone 1, IECEx Zone 1,
Class I, Division 2
• Full capacity: 420 mA for 12 channels
• Temperature range: -40 °C … +80 °C
• Screw connection
• Fulfills FISCO requirements
• Vibration: 2g
• Shock: 15g

ℹ️ Web code: #1371	Barriers, 12-channel	Barriers, 8-channel
Description	**Barriers, 12-channel**	**Barriers, 8-channel**
Type	FB-12SP ISO	FB-8SP ISO
Weight	1050 g	970 g
Dimensions W x H x D	280 mm x 143 mm x 55 mm	
Order No.	2316312	2316311

Fieldbus distributor boxes for PROFIBUS PA and FOUNDATION Fieldbus

The compact six and twelve-channel distributor boxes for PROFIBUS PA and FOUNDATION Fieldbus can be ordered with optional preinstalled screw connections, filler plugs and climate protection. They are available with the option of surge protection for the trunk line.

Your advantages

☑ Can be used worldwide, thanks to global Ex approval

☑ Short delivery time, as product is kept as stock item

☑ Quick installation, thanks to easily removable cover

☑ Option to lock using padlock

☑ Lower installation expense, thanks to integrated fasteners and grounding connections

Main features

• Opening angle: 135°
• System approvals: ATEX Zone 2, IECEx Zone 2, Class I, Division 2
• Material: 316L stainless steel
• Temperature range: -40°C … +70°C
• Protection class: IP66
• One-piece seal
• Screw connection

ℹ Web code: #1372				
Description	**Distributor box, 6-channel**		**Distributor box, 12-channel**	
Dimensions W x H x D	254 mm x 254 mm x 127 mm		305 mm x 356 mm x 127 mm	
Surge protection	No	Yes	No	Yes
Type	FB1-S1-6SP-T-0-10-00	FB1-S1-6SP-S-0-10-00	FB2-S1-12SP-T-0-16-0	FB2-S1-12SP-S-0-16-0
Order No.	2316420	2316446	2316417	2316433

WLAN solution for machine building
Stable wireless reception, quickly implemented

The new WLAN 1100 wireless module makes it easy to install a fast and stable WLAN network on your machines. Featuring integrated antennas and extreme robustness, the space-saving WLAN module has been planned out in every detail for machine building applications.

Your advantages

☑ Inexpensive complete solution with integrated antennas and wireless module in one single device

☑ Fast and reliable communication, thanks to powerful antenna technology

☑ Installing the module directly on machines, mobile vehicles or control cabinets saves space in the control cabinet

☑ Fast and easy connection, thanks to single-hole mounting

☑ Extremely robust housing, shockproof in accordance with IK08

Main features

• WLAN access point and client
• IEEE 802.11 a / b / g / n
• Frequency band: 2.4 GHz and 5 GHz
• Two integrated antennas with MiMo technology
• Power supply: 24 V DC
• Degree of protection: IP54 above, IP20 below

			Adapter for applications in the field
ⓘ **Web code:** #1373			
Description	WLAN module		Adapter for applications in the field
Approval	Europe	USA, Canada	Worldwide
Type	FL WLAN 1100	FL WLAN 1101	FL M32 ADAPTER
Order No.	2702534	2702538	2702544

Managed Switches for machine building
Stabilize networks easily

Managed Switches 2000 and 2100 for machine building combine the simplicity of an unmanaged switch with the intelligence of a managed switch for the first time. They improve the stability and robustness of machine networks, thanks to a perfectly coordinated range of functions.

Your advantages

☑ Stabilize the network in unmanaged mode without the time and expense of configuration

☑ Simple and versatile configuration options

☑ Localization and correction of network errors, thanks to extensive diagnostic functions

☑ Network protection from unnecessary data traffic, thanks to a multicast filter

Main features

• Loop protection via RSTP
• HTTPS/SNMPv3
• Port-based DHCP server
• Configuration memory (SD card)
• Link Layer Discovery Protocol (LLDP)
• IGMP snooping/querier
• Support of PROFINET and EtherNet/IP™

ℹ️ Web code: #1374	Managed Switches for Fast Ethernet transmission		Managed Switches for gigabit transmission	
Description	Managed Switches for Fast Ethernet transmission		Managed Switches for gigabit transmission	
Ports	5 x RJ45	8 x RJ45	5 x RJ45	8 x RJ45
Transmission speed	10/100 Mbps		10/100/1000 Mbps	
Dimensions W x H x D	45 mm x 130 mm x 115 mm			
Type	FL SWITCH 2005	FL SWITCH 2008	FL SWITCH 2105	FL SWITCH 2108
Order No.	2702323	2702324	2702665	2702666

Industrial communication technology

Managed Switches
for easy automation applications

Managed Switches from the 2200 and 2300 series offer the ideal range of functions, variant types and approvals for easy automation applications. Even in harsh conditions, such as those in maritime areas or process technology, networks can be implemented with cable lengths up to 80 kilometers.

Your advantages

☑ Simple and versatile configuration options

☑ Integration in PROFINET and EtherNet/IP™ networks, thanks to LLDP and a multicast filter

☑ Versatile use, thanks to approvals for maritime applications and the process industry

☑ Flexible network structure, thanks to various connection technologies and combo ports

☑ Network monitoring by means of diagnostic functions and digital alarm output

Main features

• Media Redundancy Protocol (MRP) in accordance with IEC 62439
• Expanded temperature range: -40 °C … +70 °C
• Redundant power supply
• IGMP snooping/querier
• HTTPS/SNMPv3
• Port/Pool-based DHCP server, DHCP option 82

					Managed Switches for gigabit transmission	
Description	Managed Switches for Fast Ethernet transmission				Managed Switches for gigabit transmission	
Ports	8 x RJ45	6 x RJ45, 2 x FX multimode	6 x RJ45, 2 x FX single-mode	4 x RJ45, 2 x 100 Mbps combo, 2 x SFX	8 x RJ45	4 x RJ45, 2 x gigabit combo, 2 x SFP
Transmission speed	10/100 Mbps				10/100/1000 Mbps	
Type	FL SWITCH 2208	FL SWITCH 2206-2FX	FL SWITCH 2206-2FX SM	FL SWITCH 2204-2TC-2SFX	FL SWITCH 2308	FL SWITCH 2304-2GC-2SFP
Order No.	2702327	2702330	2702331	2702334	2702652	2702653

Web code: #1375

This web code gives you access to additional product versions on our website.

NAT switch
for maritime applications

NAT switches combine the functions of a NAT router and those of a switch in just one device. This way, you can integrate lone machines with the same IP addresses into higher-level networks. New variants now have maritime approvals.

Your advantages

☑ Integration of machines with the same IP address range, thanks to NAT functionality

☑ Integrate multiple devices under a single IP address, thanks to virtual NAT

☑ One device for NAT routing and switching saves space and cost

☑ Easy startup and quick device replacement, thanks to replaceable configuration memory

Main features

• Approvals: GL, DNV, ABS, BV
• 1:1 NAT and virtual NAT
• 7 LAN ports with 100 Mbps
• PROFINET Conformance Class A
• Configuration via web server or SNMP
• Virtual Local Area Network (VLAN)
• RSTP redundancy

ℹ️ **Web code:** #1376		
Description	**NAT switch**	
Dimensions W x H x D	57 mm x 133 mm x 130 mm	
Type	FL NAT SMN 8TX-M	
Order No.	2702443	

Power over Ethernet splitter
Separates power and data

Thanks to the new PoE splitter, you can connect end devices without PoE interfaces, such as WLAN or Bluetooth access points, controllers and I/O stations, to a PoE interface easily. The splitter separates data and power locally and provides a 24 V DC voltage.

Your advantages

- ☑ Can be used in flat control cabinets, thanks to outbound ports facing above and below
- ☑ Can be used in distant stations, thanks to the expanded temperature range
- ☑ Versatile use, thanks to gigabit transmission of PoE and PoE+

Main features

- Transmission speed: 10/100/1000 Mbps
- Expanded temperature range: -40°C ... +70°C
- Output power up to 21 W
- Compliant with IEEE 802.3af/at
- Degree of protection: IP20
- Robust metal housing

ℹ️ **Web code:** #1377	
Description	**PoE splitter**
Dimensions W x H x D	40 mm x 100 mm x 109 mm
Type	FL PD 1001 T GT
Order No.	2891042

Serial device servers and gateways
Transmit serial protocols via Ethernet

You can integrate any serial protocol into your Ethernet network using the new serial device servers and gateways. Serial data can either be transmitted transparently over Ethernet or converted to Modbus/TCP or EtherNet/IP™ with the gateways.

Your advantages

☑ Secure network communication, thanks to 256-bit AES encryption

☑ Simple configuration via web-based management

☑ Powerful diagnostics options for the ports

☑ Each port can be used universally – either as RS-232, RS-485 or RS-422

Main features

• Up to 4 serial ports per device
• Up to 2 Ethernet ports per device
• Virtual COM port redirector software included with delivery
• Extended temperature range: -40°C … +70°C

ℹ️ Web code: #1378				
Description	**Serial device server and gateways**			
Interfaces	1 x Ethernet, 1 x RS-232/422/485	1 x Ethernet, 2 x RS-232/422/485	2 x Ethernet, 2 x RS-232/422/485	2 x Ethernet, 4 x RS-232/422/485
Type	GW … 1E/1DB9	GW … 1E/2DB9	GW … 2E/2DB9	GW … 2E/4DB9
Order No. for device server (transparent protocol)	2702758	2702760	2702761	2702763
Order No. for gateways – Modbus – RAW to Modbus/TCP – RAW to EtherNet/IP™**	2702764 2702768 2702772	2702765 2702769 2702773	2702766 2702770 2702774	2702767 2702771 2702776

Network management software for startup and monitoring

Easily put Phoenix Contact managed switches, WLAN components and security appliances into operation using the new network management software FL Network Manager Basic. You can also monitor these network components and keep your firmware up to date.

Your advantages

☑ Update firmware on multiple devices quickly and easily

☑ IP address planning for conveniently rolling out IP addresses

☑ Overview of all network components, thanks to the network scan, even for unknown IP addresses

☑ Intuitive user interface

Main features
- Monitoring of network component accessibility
- Integrated TFTP, DHCP/BOOTP server
- IP address assignment via DCP, BOOTP, DHCP
- Simple firmware update
- Convenient saving and loading of configuration files

i **Web code:** #1379	
Description	**Network management software**
Type	FL NETWORK MANAGER BASIC
Order No.	2702889

High-speed mobile routers for infrastructure applications

The TC Router product range facilitates powerful high-speed data connection over mobile 4G LTE networks. The new routers are now also specifically designed for the US market and without VPN as variants for price-sensitive applications.

Your advantages

☑ Strong performance, thanks to 4G LTE data links

☑ Wide range of possible applications, thanks to the extended temperature range

☑ Fast configuration with new startup wizard

☑ Easy integration via two Ethernet connections

☑ Convenient operation right on the front of the device

Main features

• Expanded temperature range: -40 °C … +70 °C
• 4G LTE connections up to 150 Mbps
• Energy-saving mode
• Pluggable configuration memory
• High level of security due to integrated firewall
• 2 digital inputs, 1 digital output

ℹ️ Web code: #1381				
Description	**4G mobile router for Verizon Wireless**	**4G mobile router for AT&T**	**3G mobile router**	**4G mobile router**
VPN	3 IPsec tunnel, 3 OpenVPN tunnel		-	
Type	TC ROUTER 3002T-4G VZW	TC ROUTER 3002T-4G ATT	TC ROUTER 2002T-3G	TC ROUTER 2002T-4G
Order No.	2702532	2702533	2702531	2702530

Compact signaling system now also communicates via app

Use the TC Mobile I/O signaling system to monitor sensor signals via the mobile network and switch relays remotely. Thanks to new firmware, the system is now able to communicate with you via smartphone app as well. The system is even more powerful, thanks to additional features such as switching by call or scalable analog inputs.

Your advantages

☑ Less downtime, thanks to automatic alerting via SMS and e-mail

☑ Lower communication costs, thanks to event-controlled alerts

☑ SMS alert in the event of power failure

☑ Available as AC and DC variants with an expanded voltage range

Main features

- DIN rail or wall mounting
- 4 digital inputs
- 4 relay outputs
- Temperature range: -25 °C … +70 °C
- Reporting trail for guaranteed information transfer
- Remote commands for device configuration
- Configuration via web browser

	Web code: #1380	
Description	**Compact signaling system with DC power supply**	**Compact signaling system with AC power supply**
Supply voltage	10 … 60 V DC	93 … 250 V AC
Analog inputs	2 (0/4 … 20 mA, 0 … 60 V DC)	-
Type	TC MOBILE I/O X200	TC MOBILE I/O X200 AC
Order No.	2903805	2903806

Wireless multiplexer for wireless signal transmission

The new Wireless MUX mobile set transmits 16 digital and two analog signals bidirectionally so that it can replace a 40-wire signal cable. The new products feature a state-of-the-art hardware platform, meaning that the analog channels have a higher level of accuracy and wireless technology based on Bluetooth 4.0.

Your advantages

☑ Simple startup – no configuration or adjustments necessary

☑ High number of channels in compact housing

☑ Low energy requirement

☑ Quick connection establishment and signal transmission

☑ Interference-free operation parallel with WLAN and Bluetooth

Main features

• License free 2.4 GHz ISM frequency band
• Worldwide use
• Wireless path diagnostics via LED bar graph
• Reach up to 200 m with omnidirectional antennas, up to 400 m with directional antennas if view is unobstructed
• Approvals: CE, FCC, UL 508

	Web code: #1382		
Description	**Wireless set including OMNI omnidirectional antennas**	**Wireless set without antennas**
Type	ILB BT ADIO MUX-OMNI	ILB BT ADIO MUX
Order No.	2884208	2702875

Security routers
with high-speed mobile network interface

Security routers protect your industrial networks against IT attacks. The new security router enables high-speed data connection over mobile 4G LTE networks. This makes it ideal for infrastructure applications and remote machine maintenance.

Your advantages

☑ High performance, thanks to 4G LTE data connections

☑ Easy configuration via central management tool

☑ Easy integration, thanks to integrated Ethernet switch

☑ Automatic time synchronization via GPS

☑ Startup, updates and device replacement quick and easy via SD card

Main features

• 4G LTE connections up to 150 Mbps
• Support for 3G and 2G networks
• 2 SIM card slots for backup of mobile network provider
• Stateful inspection firewall
• Slot for SD memory card
• Metal housing

	Security router with WAN and mobile network interface	Security router with mobile network interface
ⓘ Web code: #1383		
Description	Security router with WAN and mobile network interface	Security router with mobile network interface
Type	TC MGUARD RS4000 4G VPN	TC MGUARD RS2000 4G VPN
Order No.	2903586	2903588

Secure remote maintenance of machines
Scalable with mGuard Secure Cloud

The new TC Cloud Clients connect your machines
to the mGuard Secure Cloud securely over the Internet.
The clients form an inexpensive basis for scalable remote
machine maintenance. You can choose between user
networks and global 4G LTE networks for cloud
communication.

Your advantages

☑ Cost-effective entry into cloud-based remote maintenance

☑ Simple startup due to configuration assistants in the cloud

☑ Convenient operation right on the front of the device

☑ Flexible communication with the cloud via operator
or 4G LTE networks

☑ Intuitive operation of web interface

Main features

• High security, thanks to
VPN communication
• Pluggable configuration memory
• Worldwide use
• Connection for key switch
• Temperature range: 0 °C … +60 °C

	Cloud client with WAN interface	Cloud client with mobile network interface		
Description	**Cloud client with WAN interface**	**Cloud client with mobile network interface**		
External network	Operator network	4G LTE	4G LTE Verizon US	4G LTE AT&T US
Type	TC CLOUD CLIENT 1002-TX/TX	TC CLOUD CLIENT 1002-4G	TC CLOUD CLIENT 1002-4G VZW	TC CLOUD CLIENT 1002-4G ATT
Order No.	2702885	2702886	2702887	2702888

ℹ **Web code:** #1384

Professional cloud solutions for industry
Utilize cloud services efficiently

Network your production systems securely across different locations with the Proficloud. Use the virtual system coupler to connect two PROFINET networks to each other. The software development kit (SDK) enables free programming of individual cloud services.

Your advantages

☑   Connection of two PROFINET networks over the Proficloud

☑   Expansion of the PROFINET network to include individual cloud services

☑   Option for free programming in Java using the SDK

Main features

• 2 Universally Unique Identifiers (UUIDs) for connecting 2 PROFINET networks
• SDK for programming in Java

ℹ Web code: #1385	Virtual system coupler for connecting 2 PROFINET networks	Software development kit for Java
Description	**Virtual system coupler for connecting 2 PROFINET networks**	**Software development kit for Java**
Type	CLOUD SERVICE/SYSTEMCOUPLER	CLOUD SDK4J
Order No.	2404449	2404475

Services

Consultation and support
for cyber security and industrial Ethernet

We support you during the evaluation and design of integrated security measures for the sustained protection of your information. We also offer professional support for designing and implementing secure industrial Ethernet networks, from network analysis to configuration and commissioning.

Your advantages

- ☑ Individual degree of protection determined professionally
- ☑ Integrated, comprehensive protection concepts
- ☑ Ideal system availability and security, thanks to professionally planned network
- ☑ Save time, as Phoenix Contact takes over planning, configuration and startup
- ☑ Approaches for training and raising awareness among your employees for quick response in case of failure

Main features

- Consultation
- Analysis and inspection
- Design
- Seminars and training courses
- Presentations
- Industry-specific expertise
- Our own center of expertise for cyber security

Description	Cyber security services regardless of the product			Design and implementation of secure industrial Ethernet networks		
Services	Actual analysis	Principles and awareness	Individualized safety level	Consultation and network planning	Startup and configuration	Product and project-specific training courses
Type	ICS SECURITY ANALYSIS	ICS SECURITY INSPECTION	ICS SECURITY CONCEPT	FL NETWORK SERVICE	FL NETWORK INTEGRATION	FL NETWORK TRAINING
Order No.	9076654	9076723	9076725	2702890	2702892	2702891

Find additional services on our website under Service and Support.

In dialog with customers and partners worldwide

Phoenix Contact is a globally present, Germany-based market leader. Our group is synonym for future-oriented components, systems, and solutions in the fields of electrical engineering, electronics, and automation. A global network across more than 100 countries, and 14,500 employees ensure a close proximity to our customers, which we believe is particularly important.

The wide variety of our innovative products makes it easy for our customers to find future-oriented solutions for different applications and industries. We especially focus on the fields of energy, infrastructure, process and factory automation.
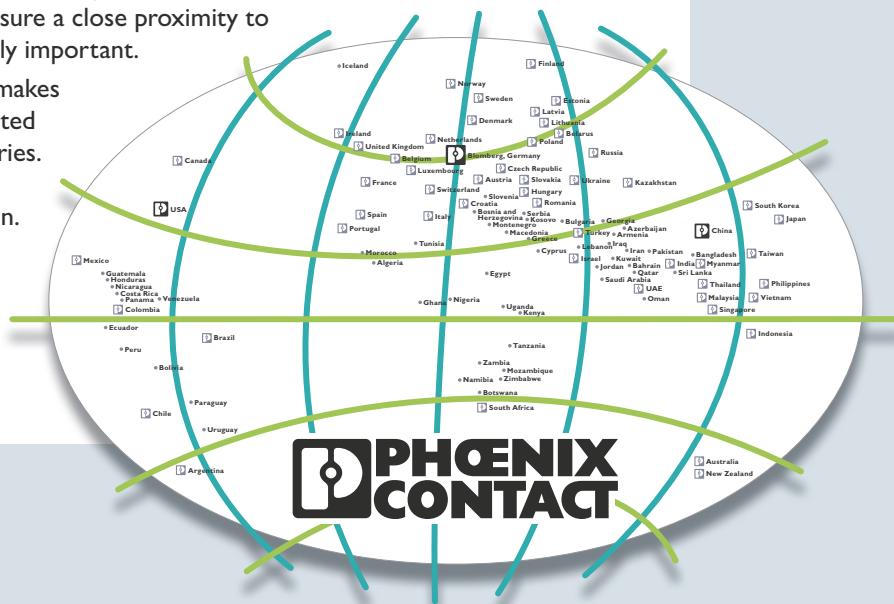
You will find our complete product range at:

phoenixcontact.com

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