



# New products 2021

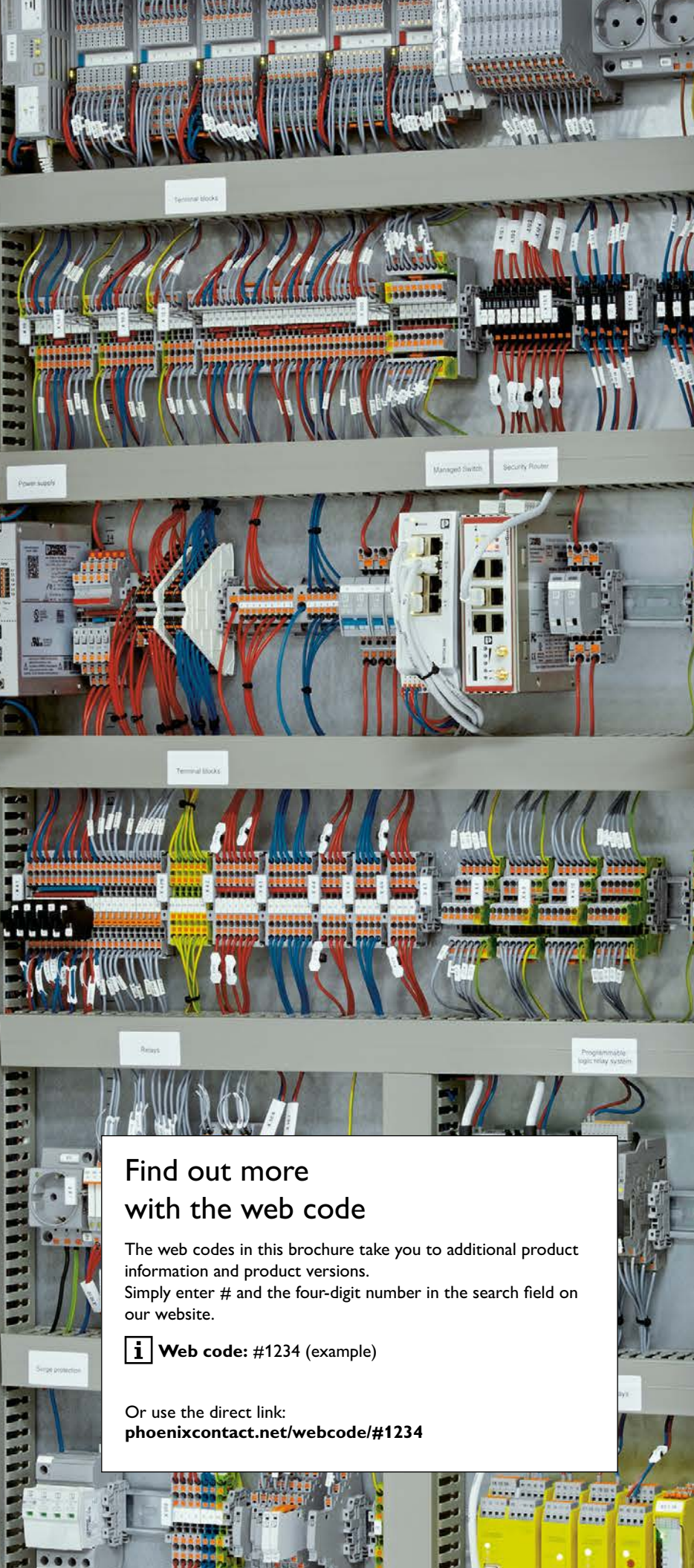
Connection and automation technology

# New products 2021

## 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. Use our products to increase the efficiency, availability, and safety of your industrial systems. Discover the advantages of our versatile new products for yourself.





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### Find out more with the web code

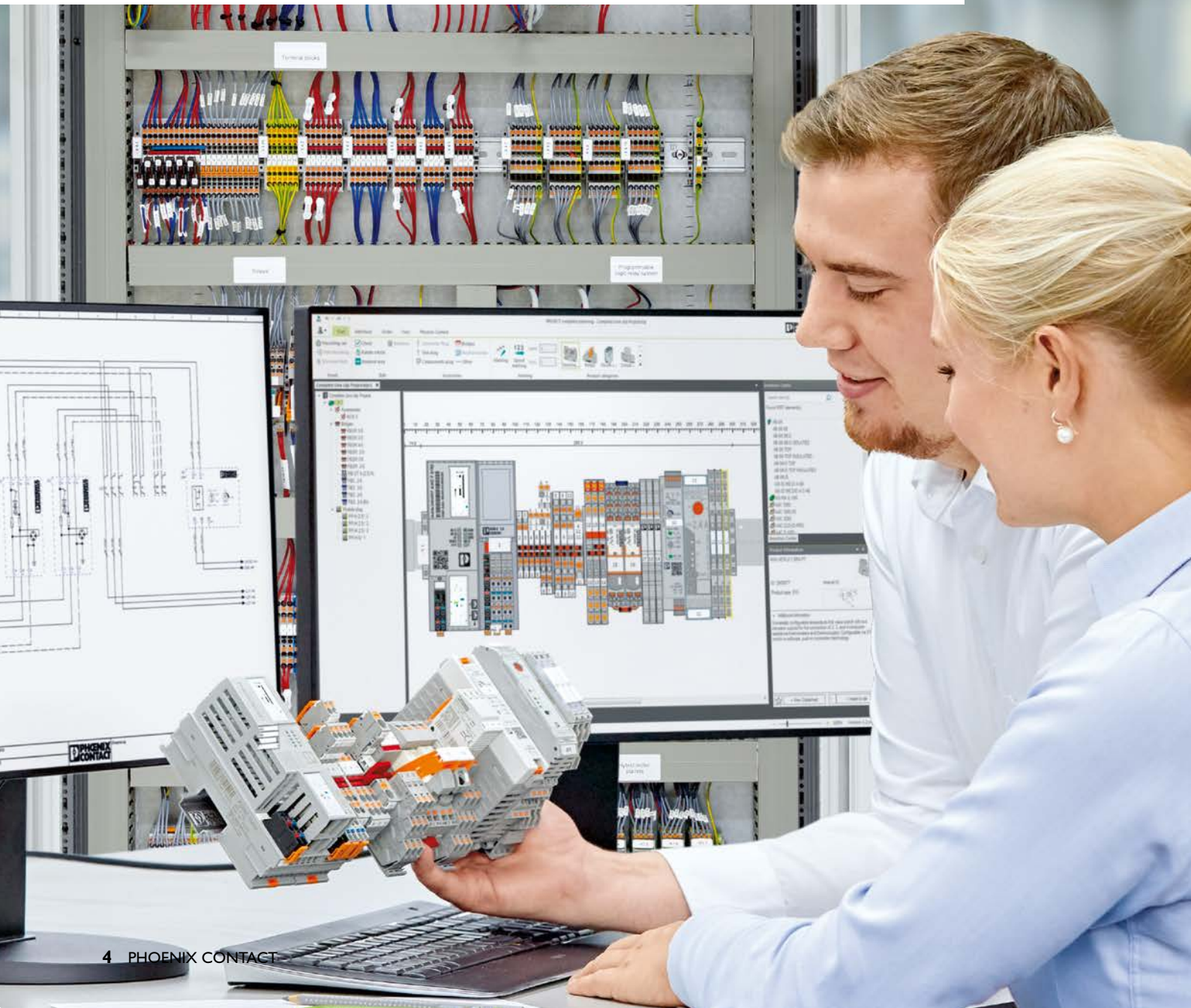
The web codes in this brochure take you to additional product information and product versions. Simply enter # and the four-digit number in the search field on our website.

**i** Web code: #1234 (example)

Or use the direct link:  
[phoenixcontact.net/webcode/#1234](https://phoenixcontact.net/webcode/#1234)

# COMPLETE line – The comprehensive solution for the control cabinet

To remain competitive, control cabinet manufacturers are having to develop new approaches. As part of a collaborative partnership, we provide comprehensive solutions which allow extensive deployment of digital data, optimization of processes, and time savings. The perfectly coordinated interaction between hardware and software components in the COMPLETE line system allows you to optimize your processes – from the project concept and implementation to the operation of your applications.



## Your advantages in detail:



### Comprehensive product portfolio for all applications

COMPLETE line provides a comprehensive portfolio of technologically leading products. From reliable power supply and a modern communication infrastructure to versatile signal processing and individual concepts for functional safety: COMPLETE line allows you to design all applications in the control cabinet with optimally coordinated products and accessories.



### Optimized handling with system

Optimize your control cabinet setup with the comprehensive COMPLETE line product portfolio. The uniform design and standardized accessories mean that you can install the products quickly and easily. The innovative Push-in connection technology enables fast, tool-free wiring of the entire application. Reduce installation, startup, and maintenance work to a minimum with COMPLETE line.



### Save time throughout the entire engineering process

Intuitive configuration, intelligent functions, and a customizable user interface: The PROJECT complete planning and marking software is the innovative solution for the easy planning of your terminal strips. From the transfer of data from electrical plans to delivery of your finished product, the software features individual and convenient process support.



### Tailor-made solutions for efficient production

From high quality hand tools right through to fully automated production solutions: With the clipx concept, COMPLETE line features scalable production solutions for conductor pretreatment, DIN rail assembly, and marking – tailored to your individual requirements and needs. Discover innovative systems for maximum efficiency in control cabinet manufacturing.



### Exploit potential with individual process consulting

Control cabinet manufacturing is characterized by a high proportion of process costs. It is therefore an ideal starting point for improving profitability in the production of machines and systems. In line with the individual specific circumstances, our experts work with you to develop a concept. Benefit from our experience of in-house machine building when it comes to creating individual and successful solutions.



### The new standard for the control cabinet

With more than 10,000 products, the COMPLETE line product portfolio features solutions for all functions in the control cabinet. The COMPLETE line logo identifies which of our new products belong to this portfolio.

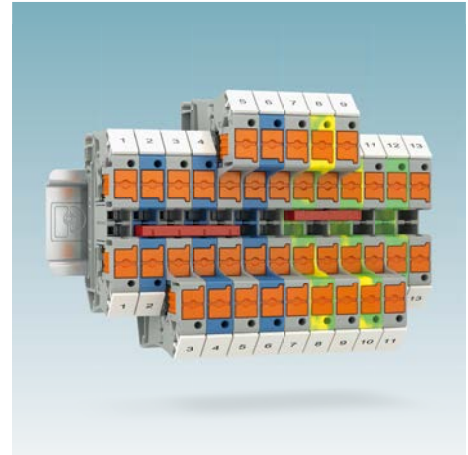
# Terminal blocks with lateral Push-in connection

## System modernization made easy

The PTV terminal block family has been extended to include versions with a cross-section of 6 mm<sup>2</sup>. Because the conductor feed is rotated through 90°, the terminal blocks are ideal for switching over to Push-in technology. You can utilize your existing control cabinet layouts with screw-terminal wiring and modernize your systems.

Push-in Technology<sup>®</sup>

Designed by Phoenix Contact









### Your advantages

- ✓ Control cabinet layouts with screw-terminal wiring can continue to be used for switching over to Push-in technology
- ✓ Clearly arranged wiring without bending radii
- ✓ Affixing and reading off the conductor and connection marking is simple
- ✓ Subsequent terminal point checks are not necessary (maintenance-free)
- ✓ Use of CLIPLINE complete standard accessories

### Main features

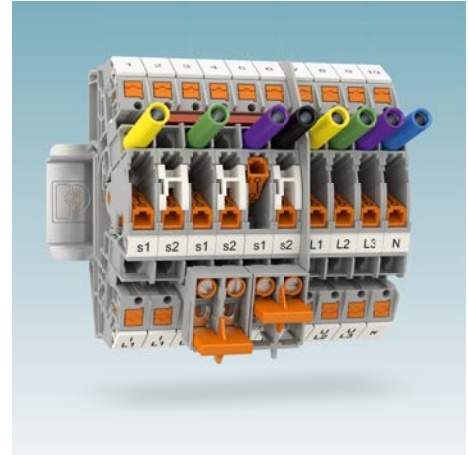
- Push-in connection on the side
- Voltage: 1,000 V
- Current: 41 A
- Nominal cross-section: 6 mm<sup>2</sup>
- Connectable conductor cross-sections: 0.5 mm<sup>2</sup> ... 10 mm<sup>2</sup>
- Double function shaft
- Testing option with test points
- PE versions

 Web code: #2720					
<b>Description</b>	<b>Feed-through terminal block</b>	<b>Feed-through terminal block</b>	<b>Protective conductor terminal block</b>	<b>Multi-conductor terminal block</b>	<b>Multi-conductor terminal block</b>
Number of connections	2	2	2	3	4
Color	Gray	Blue	Green-yellow	Gray	Gray
Type	PTV 6	PTV 6 BU	PTV 6-PE	PTV 6-TWIN	PTV 6-QUATTRO
Order No.	<a href="#">1116734</a>	<a href="#">1116735</a>	<a href="#">1116736</a>	<a href="#">1116737</a>	<a href="#">1116871</a>

# Measuring transducer terminal blocks with lateral Push-in

## Clear separation of signals

The PTVME 6/S... products are test disconnect terminal blocks with vertical Push-in connections. They can be used in all applications on the secondary wiring side of switching devices for transducers and signals. The lateral conductor connection simplifies system modernization.








Push-in Technology<sup>®</sup>  
Designed by Phoenix Contact

### Your advantages

- ✓ Increased safety with 1,000 V nominal voltage
- ✓ The compact design allows an overall width the same as screw terminal blocks
- ✓ Quick and easy actuation thanks to the screw-free disconnect slide
- ✓ Clearly visible and readily apparent switching state
- ✓ Use of CLIPLINE complete standard accessories

### Main features

- Push-in connection on the side
- Voltage: 1,000 V
- Current: 30 A
- Nominal cross-section: 6 mm<sup>2</sup>
- Connectable conductor cross-sections: 0.5 mm<sup>2</sup> ... 6 mm<sup>2</sup>
- Single function shaft
- Compact size

 Web code: #2721				
	<b>Test disconnect terminal block</b>	<b>Test disconnect terminal block</b>	<b>Cover</b>	<b>Insulation plate</b>
<b>Description</b>	<b>Test disconnect terminal block</b>	<b>Test disconnect terminal block</b>	<b>Cover</b>	<b>Insulation plate</b>
Overall width	8.2 mm	8.2 mm	0.5 mm	0.5 mm
Test sockets	Optional	Integrated	-	-
Type	PTVME 6/S	PTVME 6/S-P	D-PTVME 6/S	TS-PTVME 6/S
Order No.	1164788	1166809	1164789	1193381

# Multi-conductor hybrid disconnect terminal blocks

## Reliable separation of signals

The multi-conductor hybrid disconnect terminal blocks combine easy-to-use Push-in connection technology with classic screw connection technology. The 4 mm test socket and the individual disconnect zone allows signals to be separated reliably and tested easily and conveniently.



Push-in Technology<sup>®</sup>






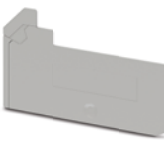
Designed by Phoenix Contact

### Your advantages

- ✓ Push-in connection on the internal control cabinet side and a universal screw connection on the end customer side
- ✓ The compact design and front connection allow wiring in a confined space
- ✓ Easy testing with 4 mm test plugs
- ✓ Quick and easy separation of signals and installation of fuses and components
- ✓ Use of CLIPLINE complete system accessories

### Main features

- Push-in connection technology
- Screw connection technology
- Voltage: 400 V
- Current: 20 A
- Nominal cross-section: 4 mm<sup>2</sup>
- Connectable conductor cross-sections: 0.2 mm<sup>2</sup> ... 6 mm<sup>2</sup>
- Integrated 4 mm test socket

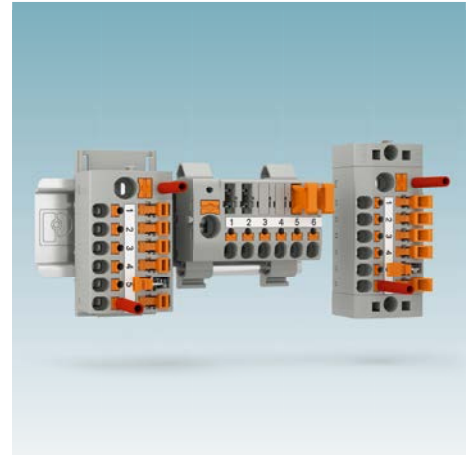
 Web code: #2722					
	<b>Description</b>	<b>Disconnect terminal block</b>	<b>Disconnect terminal block</b>	<b>Knife-disconnect terminal block</b>	<b>Knife-disconnect terminal block</b>
Disconnect element	Universal disconnect zone	Universal disconnect zone	Disconnect knife	Disconnect knife	-
Test socket	Optional	Integrated	Optional	Integrated	-
Type	PTU 4-TWIN-TG	PTU 4-TWIN-TG-P	PTU 4-TWIN-MT	PTU 4-TWIN-MT-P	D-PTU 4-TWIN-MT
Order No.	1157682	1157686	1157696	1157689	1157700



# Distribution blocks with integrated disconnect element

## Easy separation of signals

The PTFIX-function distribution blocks are the first distribution blocks with integrated function. The distribution blocks are available in the versions TG (for various disconnect, fuse, and component connectors), MT (integrated knife disconnection) and MTL (integrated lever-type knife disconnection).



Push-in Technology<sup>®</sup>




Designed by Phoenix Contact

### Your advantages

- ✓ Quick and easy separation of signals and installation of fuses and components
- ✓ Significant time savings with ready-to-assemble distribution blocks
- ✓ Considerable space savings with the compact and minimalist size of the test-disconnect terminal block
- ✓ Flexible mounting options for DIN rail and direct mounting thanks to various mounting adapters
- ✓ Use of CLIPLINE complete standard accessories

### Main features

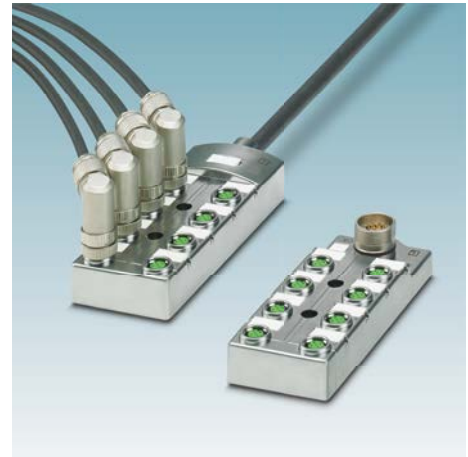
- Push-in connection
- Voltage: 400 V
- Current: 20 A
- Nominal cross-section: 2.5 mm<sup>2</sup>
- Connectable conductor cross-sections: 0.14 mm<sup>2</sup> ... 4 mm<sup>2</sup>
- Test point for all common test probes

<p><b>i</b> Web code: #2723</p>			
<p><b>Description</b></p>	<p><b>Function distribution blocks</b></p>	<p><b>Function distribution blocks</b></p>	<p><b>Function distribution blocks</b></p>
<p>Disconnect element</p>	<p>Universal disconnect zone</p>	<p>Disconnect knife</p>	<p>Lever-type disconnect knife</p>
<p>Type</p>	<p>PTFIX 6/6X2,5-TG</p>	<p>PTFIX 6/6X2,5-MT</p>	<p>PTFIX 6/6X2,5-MTL</p>
<p>Order No.</p>	<p>1130751</p>	<p>1130757</p>	<p>1130760</p>

# Shielded M12 distributor boxes

## Reliable signal transmission

Distributor boxes conveniently bundle several cables into one master cable for connection to the controller. The 360° shielded sensor/actuator boxes allow you to transmit signals reliably in EMC-critical applications.





### Your advantages

- ✓ Reliable signal transmission in environments subject to electromagnetic interference with reliable 360° shielding
- ✓ Robust thanks to molded housing and high degree of protection
- ✓ Flexible, distributed bundling of signals in one master cable
- ✓ Save space: Distributor box with double occupancy for two sensors in one slot

### Main features

- Connection method: M12 female
- Coding: A-standard
- Number of positions: 5
- Slot assignment: Doubled
- Degree of protection: IP65, IP67

<p><b>i</b> Web code: #2724</p>			
<p><b>Description</b></p>	<p><b>360° shielded sensor/actuator box</b></p>		
<p>Master cable connection</p>	<p>Shielded master cable</p>		<p>180° M23 plug-in connection</p>
<p>Cable length</p>	<p>5 m</p>	<p>10 m</p>	<p>-</p>
<p>Slots</p>	<p>8</p>		
<p>Rated voltage/current</p>	<p>48 V AC and 60 V DC / 12 A</p>		
<p>Type</p>	<p>SACB-8/16-5,0PUR P12 SH</p>	<p>SACB-8/16-10,0PUR P12 SH</p>	<p>SACB-8/16-M23 P12 SH</p>
<p>Order No.</p>	<p>1155993</p>	<p>1155995</p>	<p>1155996</p>

# Distributor boxes with QUICKON connection

## Easy connection without connectors

Distributor boxes with QUICKON insulation displacement connection allow the effortless and clear cabling of sensors and actuators without connectors. Connect the open cable ends of your sensors directly and without having to strip them.








### Your advantages

- ✓ Time saving assembly with insulation displacement connection
- ✓ Easy signal line connection without connectors
- ✓ Flexible master cable connection and easy box and cable replacement in the event of servicing with plug-in connector hood
- ✓ Safety in the field with molded housing and high degrees of protection of protection
- ✓ Increased machine availability with simple diagnostics

### Main features

- QUICKON IDC connection
- Conductor cross section 5-pos.: 0.14 mm<sup>2</sup> ... 0.5 mm<sup>2</sup>
- Conductor cross section 4-pos.: 0.14 mm<sup>2</sup> ... 0.75 mm<sup>2</sup>
- Slot assignment: Doubled
- Degree of protection: IP65, IP67

 Web code: #2725								
	<b>Sensor/actuator boxes with insulation displacement connection</b>							
<b>Description</b>	Plug-in 180° screw connection		Plug-in 180° Push-in connection					
Master cable connection	Plug-in 180° screw connection		Plug-in 180° Push-in connection					
Number of slots	4	8	4	8				
Rated voltage/current	48 V AC and 60 V DC / 10 A							
Status indicator	No	Yes	No	Yes	No	Yes	No	Yes
Signal type	Universal	PNP	Universal	PNP	Universal	PNP	Universal	PNP
Order No.	1156003	1156005	116004	1156006	1175445	1175447	1175448	1175449

# M12 push-pull connectors

## The new standard for factory automation

M12 push-pull connectors latch in by means of simple, direct insertion. The push-pull internal locking allows fast and secure connection, especially for applications in confined spaces and with high cabling density, such as in factory automation.






### Your advantages

- ✓ Plug and Produce: quick and reliable connection even in confined spaces
- ✓ Fast installation: Time savings of 80% during installation compared to screw connection
- ✓ Flying leads: Connectors with internal and external locking
- ✓ Highly future-proof: Standardized product range for worldwide availability

### Main features

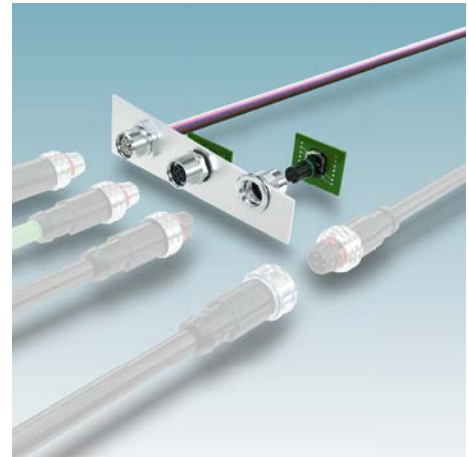
- Push-pull internal and external locking
- Standardized in accordance with IEC 61076-2-010
- A-coded
- Conductor cross-section: 0.34 mm<sup>2</sup>
- Degree of protection: IP65, IP67, IP68
- PUR, halogen-free, black

 Web code: #2679		
<b>Description</b>	<b>M12 push-pull connectors</b>	
Coding / number of positions	A-coded / 4-pos.	A-coded / 5-pos.
Design of head 1	Male connector; straight	
Design of head 2	Female connector; straight	Female connector; angled
Cable length	1.5 m	1.5 m
Type	SAC-4P-P12MS / 1,5-PUR / P12FS	SAC-5P-P12MS / 1,5-PUR / P12FR
Order No.	1224019	1224223

# M12 push-pull device connectors

## Easy and compact device connection

M12 device connectors with push-pull internal locking allow secure and tool-free device connection. The countersunk M12 push-pull flush-type female connector sits flush with the housing and can be aligned more closely. This saves installation space and allows for compact housing designs.







### Your advantages

- ✓ Plug and Produce: quick and reliable connection even in confined spaces
- ✓ Greater flexibility: One M12 device connection for screw and push-pull connectors
- ✓ Simple design-in: Countersunk M12 ports for compact device concepts
- ✓ Highly future-proof: Standardized product range for worldwide availability

### Main features

- Push-pull internal locking
- Standardized in accordance with IEC 61076-2-010
- THR housing screw connections
- Raised and countersunk versions
- A-coded
- Degree of protection: IP65, IP67
- Duo contour: Compatible with full-thread M12

 Web code: <a href="#">#2677</a>			
<b>Description</b>	<b>M12 device connectors with push-pull housing screw connection</b>		
Designation	THR housing screw connection for A-coding, 4- and 5-pos.		
Mounting type	Front	Front, countersunk	Rear
Order No.	<a href="#">1233779</a>	<a href="#">1233777</a>	<a href="#">1233780</a>

# M8 connectors for Single Pair Ethernet

## Ethernet finally goes the distance

Single Pair Ethernet implements consistent Ethernet communication in the Industrial Internet of Things. Compact and robust M8 device connectors and patch cables for SPE can be used for the space-saving and future-proof transmission of data and power from the OT level right through to the IT level.









### Your advantages

- ✓ Future-proof: Standardized connectors in accordance with IEC 63171-5 (IP67)
- ✓ Easily integrated: Male and female versions of established inductive sensors and flying leads
- ✓ Efficient: Device connectors for SMD, THR, and wave soldering processes allow automated processing
- ✓ Straightforward servicing: M8 connectors are compatible with IP20 connectors for SPE
- ✓ Safely shielded: Patch cables with Advanced Shielding Technology

### Main features

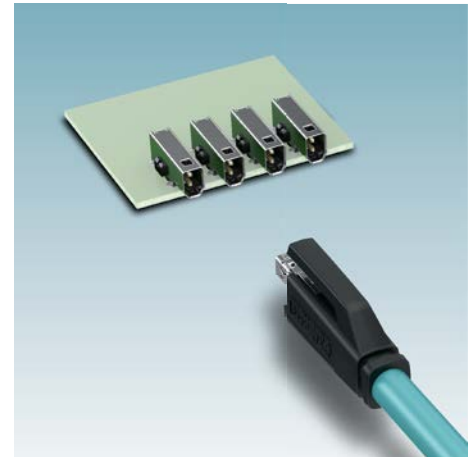
- Transmission standard: 10BASE-T1 to 1000BASE-T1
- Data rates of up to 1 Gbps (up to 600 MHz)
- Power over Data Line (PoDL) up to 60 W
- Range of up to 1,000 m
- 360° shielded device connectors for front and rear mounting
- Cable structure: 1 x 2 x AWG 22/7
- Degree of protection: IP67

 Web code: #2670					
	<b>SPE M8 female THR 180°</b>	<b>SPE M8 female SMD 180°</b>	<b>SPE M8 female THR 90°</b>	<b>SPE-M8 patch cable, 2 m</b>	<b>SPE-M8 patch cable, 2 m</b>
Contact type	Male	Male	Male	Female - female	Female - male
Soldering process	THR and wave	SMD	THR and wave	-	-
Housing screw connection, front mounting	1412502/(1412508 <sup>*)</sup>			-	-
Housing screw connection, rear mounting	1412505			-	-
Type	SPE-T1-M8MSM-180	SPE-T1-M8MSM-180-SMD	SPE-T1-M8MRM-90	SPE-T1-M8FSF/2,0-97B/M8FSF	SPE-T1-M8MSM/2,0-97B/M8FSF
Order No.	1163793	1215777	1163795	1217530	1217524

<sup>\*)</sup> Nut for housing screw connection

# IP20 connectors for Single Pair Ethernet Ethernet finally goes the distance

IP20 PCB connectors and patch cables for Single Pair Ethernet are ideal for efficient data transmission in factory and building automation. Optimized for many applications, this cabling is therefore the basis for future-proof networking from the sensor to the cloud.



## Your advantages

- ✓ Future-proof: Standardized connectors in accordance with IEC 63171-2 (IP20)
- ✓ Compact: SPE PCB connectors allow higher packing density
- ✓ Efficient: PCB connectors for SMD, THR, and wave soldering processes for automated processing
- ✓ Variable: PCB connectors in straight and angled versions as well as patch cables in various lengths
- ✓ Compatible with M8 connectors for Single Pair Ethernet

## Main features

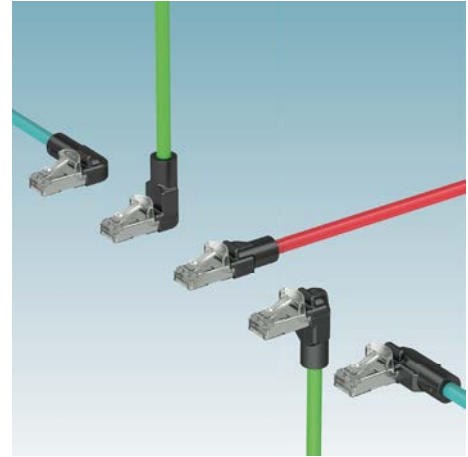
- Transmission standard: 10BASE-T1 to 1000BASE-T1
- Data rates of up to 1 Gbps (up to 600 MHz)
- Power over Data Line (PoDL) up to 60 W
- Range of up to 1,000 m
- 360° shielding concept
- Cable structure: 1 x 2 x AWG 22/7
- Cable lengths: 1 m ... 5 m
- Degree of protection: IP20

 Web code: #2671				
<b>Description</b>	<b>SPE female, 180°</b>	<b>SPE female, 90°</b>	<b>SPE female, 90° LED</b>	<b>SPE patch cable</b>
Contact type	Male			Female
Soldering process	THR and wave soldering			-
LED	-		Yes	-
Type	SPE-T1-STSM-180	SPE-T1-STRM-90	SPE-T1-STRM-90-LED	SPE-T1-CCP-SF/... / AWG22/CCP/SF
Order No.	1163798	1163797	1215778	1183807 (1 m) 1183808 (2 m) 1183810 (3 m) 1183811 (5 m)

# Industrial RJ45 patch cables

## Reliable data transmission in accordance with CAT6<sub>A</sub>

The molded patch cables of the RJ45 INDUSTRIAL series transmit data rates of up to 10 Gbps in Ethernet and PROFINET environments. Thanks to their robust design and high vibration resistance, they allow complex cabling solutions in industrial applications.








### Your advantages

- ✓ Ideal for demanding Ethernet applications with up to 10 Gbps data transmission in accordance with CAT6<sub>A</sub>
- ✓ Robust design thanks to high-quality molding and protected locking clip
- ✓ Universal approval for the global market allows diverse use
- ✓ A wide range of possible applications with five cable outlet directions
- ✓ Broad cable portfolio for a wide range of industrial applications

### Main features

- Data transmission of up to 10 Gbps in accordance with CAT5 and CAT6<sub>A</sub>
- PROFINET and Ethernet versions
- Cable versions for drag chain and robot applications
- Standard items in 0.3 m ... 5 m as well as configurable cable length up to 80 m
- Increased vibration resistance
- Five cable outlet directions
- Approvals: CE, cULus, EAC

 Web code: #2675				
	<b>INDUSTRIAL patch cables for PROFINET</b>			
<b>Description</b>				
Design	Straight/straight	Straight/down	Straight/up	Straight/straight
Number of positions	4	4	4	8
Transmission	100 Mbps			1 Gbps ... 10 Gbps
Cable type and length	Configurable			
Type	NBC-R4ACS-R4ACS-PN4/.../...	NBC-R4ACS-R4ACB-PN4/.../...	NBC-R4ACS-R4ACT-PN4/.../...	NBC-R4ACS-R4ACS-IE8/.../...
Order No.	1247656	1247629	1247660	1247639



# RJ45 patch cables for building applications

## Reliable data transmission in accordance with CAT6<sub>A</sub>

The patch cables of the RJ45 BUILDING series are particularly suitable for future-proof cabling solutions in building automation. With data transmission rates of up to 10 Gbps and worldwide approvals, the shielded patch cables can be optimally used in building applications.








### Your advantages

- ✓ Ideal for demanding Ethernet applications with up to 10 Gbps data transmission in accordance with CAT6<sub>A</sub>
- ✓ Ideal for building applications due to the use of cable sheath with Low Smoke Zero Halogen (LSZH) material class
- ✓ Reliable even after several insertion cycles due to the protected locking clip
- ✓ Universal approval for the global market allows diverse use

### Main features

- Data transmission of up to 10 Gbps in accordance with CAT5 and CAT6<sub>A</sub>
- LSZH sheath
- Lengths from 0.3 m ... 25 m
- Cable shielding
- Locking clip protection
- Approvals: CE, EAC, DNV GL, cULus

 Web code: #2676				
	<b>BUILDING patch cable, CAT5</b>		<b>BUILDING patch cable, CAT6<sub>A</sub></b>	
Description	Straight / straight			
Design	Straight / straight			
Number of positions	8			
Transmission	1 Gbps		10 Gbps	
Cable length	2 m	5 m	2 m	5 m
Type	NBC-R4OC/2,0-BC5/R4OC	NBC-R4OC/5,0-BC5/R4OC	NBC-R4OC/2,0-BC6A/R4OC	NBC-R4OC/5,0-BC6A/R4OC
Order No.	1227562	1227564	1227580	1227583

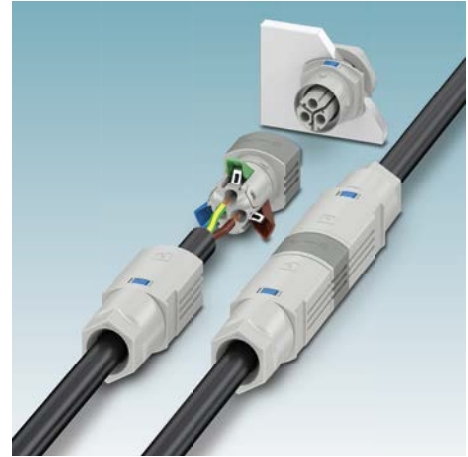
# IPD pluggable installation system

## Easy and tool-free power distribution

Thanks to Push-in Technology and fast-locking, the IPD pluggable installation system allows easy and time-saving power distribution in building and infrastructure equipment. The IPD system offers convenient working and reliable assembly, even in particularly difficult installation situations.

Push-in Technology 

Designed by Phoenix Contact







### Your advantages

- ✓ Connectors with Push-Lock and panel feed-throughs with Push-in connection allow easy, tool-free assembly
- ✓ Easy and reliable installation thanks to pluggable connection with fast-locking and mechanical coding to prevent mismatching
- ✓ Male and female versions for wire-to-wire connections
- ✓ Easy device replacement in the event of servicing thanks to pluggable components
- ✓ IP67 degree of protection for use outdoors and in wet areas

### Main features

- Field-side with Push-Lock connection
- Device-side with Push-in connection
- Fast-locking
- Voltage: 690 V
- Currents up to 16 A
- Conductor cross section: 0.5 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>
- Degree of protection: IP67, IP68
- Shock resistance: IK07

 Web code: #2726								
	<b>Panel feed-through</b>				<b>Connectors</b>			
<b>Description</b>								
Number of positions	3				3			
Connection / locking	Push-in				With fast-locking		Without fast-locking	
Thread	M20		M25		-			
Color	Black	Light gray	Black	Light gray	Black	Light gray	Black	Light gray
Order No. for male	1088679	1088687	1088681	1088688	1088664	1088672	1088662	1088671
Order No. for female	1088682	1088689	1088684	1088690	1088666	1088674	1088665	1088673

# Adapter sleeves for heavy-duty connectors

## Easy and pluggable cable entry

HC-CES adapter sleeves allow you to route a large number of conductors for signal, data, and power transmission into your control cabinet via just one pluggable interface without any difficulties. The adapters are a convenient alternative to connections with cable gland or corrugated pipe adapter.






### Your advantages

- ✓ Easy and time-saving connection of several different conductors in a single connection
- ✓ Tailored interface: Easy modular configuration of various transmission media in a single connection
- ✓ Greater flexibility: Conductors can easily be extended or replaced at a later date
- ✓ Easy mounting on panel-mount bases of sizes B16 and B24
- ✓ Reliable connection: Secure seal and strain relief

### Main features

- Adapter sleeve material: PA
- Color: Black
- Flammability rating: V0
- Degree of protection: IP54
- Integrated strain relief
- Sizes: B16 and B24
- For modular and fixed-position contact inserts

 Web code: <a href="#">#2727</a>		
<b>Description</b>	<b>HC-CES adapter sleeve</b>	
Connection size	B16	B24
Cable entry size	B10	B16
Number of cable seals in the cable entry system	Max. 6	Max. 8
Type	HC-STA-B16/B10-CESFD-PL-BK	HC-STA-B24/B16-CESFD-PL-BK
Order No.	<a href="#">1252470</a>	<a href="#">1252472</a>

# Docking frames for modular connections

## Reliable interface for blind plugging

HEAVYCON docking frames allow the blind and reliable contacting of connections in environments where the interfaces are not visible. The robust frames are fitted with modular contact inserts for transmitting signals, data, power, and compressed air.






COMPLETE line

### Your advantages

- ✓ Time-saving installation and maintenance of slide-in systems
- ✓ Automatic and blind plugging with floating plugs and leading guide pin
- ✓ Compact range of contact inserts for all applications
- ✓ Flexible interface allowing the combination of a wide range of transmission media in a single docking frame
- ✓ Easy contact insert assembly thanks to catch springs in the frame

### Main features

- Size: B6 ... B24
- Slots: 2 ... 6
- Material: Zinc die-cast
- Fixing: Catch springs
- Touch-proof

 Web code: #2728								
<b>Description</b>	<b>Docking frames for modular contact inserts</b>							
Design	Male				Female			
Size	B6	B10	B16	B24	B6	B10	B16	B24
Slots	2	3	4	6	2	3	4	6
Type	HC-M-B06-DOCK-H	HC-M-B10-DOCK-H	HC-M-B16-DOCK-H	HC-M-B24-DOCK-H	HC-M-B06-DOCK-B	HC-M-B10-DOCK-B	HC-M-B16-DOCK-B	HC-M-B24-DOCK-B
Order No.	1051190	1051204	1051221	1051222	1051224	1051225	1051226	1051227

# Engineering software

## Process support for control cabinet manufacturing

The clipx ENGINEER engineering software makes it possible to plan and procure terminal strips, assembled mounting plates, and junction boxes more efficiently than ever, and to seamlessly transfer the data to production. It integrates configurators and features numerous interfaces to CAE programs.



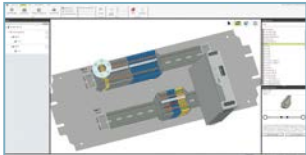
**COMPLETE line**

### Your advantages

- ✓ Maximum availability for your engineering process thanks to online and offline use
- ✓ Smart interfaces to Phoenix Contact applications for control cabinet manufacturing and in CAE programs
- ✓ Process support from initial planning stages to the finished control cabinet through the provision of digital data
- ✓ Simplified planning with automatic and comprehensive creation of terminal strips via intelligent engineering assistants

### Main features

- 3D planning
- Online/offline application
- Operating system-independent
- Terminal strip, assembled mounting plate, and junction box planning
- Smart interfaces to configurators and CAE systems
- Intelligent engineering assistants

<p><b>i</b> Web code: #2729</p>	
<p><b>Description</b></p>	<p><b>Engineering software</b></p>
<p>Type</p>	<p>clipx ENGINEER</p>
<p>Order No.</p>	<p>1272241</p>

# Software-supported conductor preparation

## Modular and flexible workstation design

The use of worker assistance systems increases productivity, improves process reliability, and guarantees a smooth production process. clipx WIRE assist from Phoenix Contact is a software-supported workstation with impressive ergonomics.







COMPLETE line

### Your advantages

- ✓ Workstation setups aligned to different areas of application and operating concepts through modular, individual arrangement of accessories
- ✓ High-level process reliability through software-supported conductor preparation with direct device control and easy transmission of data from CAE programs
- ✓ Efficiency and flexibility increases with mobile application options and optimum positioning of hand tools, automatic tools, and printing systems

### Main features

- Mobile use
- Height-adjustable workbench
- Compact workstation solution
- Customized configuration
- Direct device control
- Software-supported preparation process
- Easy transmission of CAE data

 Web code: #2730				
<b>Description</b>	<b>Workstation</b>		<b>Software</b>	
Type	AS-WORKBENCH-F 90 MA	AS-WORKBENCH-F 90 US MA	WIREASSIST SW1	WIREASSIST SW1.X DONGLE
Order No.	1193694	1194550	1197100	1197102

# Ergonomic crimping tools

## Comfortable and precise conductor preparation

The CRIMPFOX CENTRUS... NC allows a clear view into the crimping area and simplifies positioning the ferrules. The ergonomic design and balanced weight ensures it sits perfectly in your hand. The continuous automatic adjustment means it can be used for a wide range of applications and is also ideally suited for TWIN ferrules.



COMPLETE line

### Your advantages

- ✓ Clear view into the crimping area
- ✓ Ergonomic handle design ensures comfortable, fatigue-free handling
- ✓ With a particularly small handle width, the tool fits perfectly in your hand
- ✓ Process reliability thanks to pressure lock and automatic cross-section adjustment

### Main features

- For insulated and non-insulated ferrules in accordance with DIN 46228 parts 1 and 4
- Conductor cross-sections from 0.14 mm<sup>2</sup> ... 6 mm<sup>2</sup> and for TWIN ferrules up to 2 x 4 mm<sup>2</sup>
- Automatic cross-section adjustment

 Web code: #2731			
Description	Crimping tools		Accessories
Type	CRIMPFOX CENTRUS 6S-NC	CRIMPFOX CENTRUS 6H-NC	CRIMPFOX CENTRUS NC / U-HANDLE
Order No.	1202882	1202883	1202880

# The four-mandrel crimping tool

## Perfect crimping results for rotated contacts

The CRIMPFOX-TC MP-6 is suitable for crimping rotated HEAVYCON contacts of the series CK 1.6/CK 2.5/CK 4.0 and the SACC contacts. The multifunctional digital display allows simple and intuitive operation.






COMPLETE line

### Your advantages

- ✓ Safe and simple handling with digital display and positioning aid
- ✓ Rotating positioning aid ensures precise alignment of the contacts in the crimping area
- ✓ Basic setting testing with accompanying test pin
- ✓ Process reliability with pressure lock and setting lock

### Main features

- Suitable for crimping rotated male and female contacts
- Conductor cross sections from 0.34 mm<sup>2</sup> ... 4 mm<sup>2</sup>
- Setting in 0.01 mm steps with digital display
- Electronic wear monitoring with recalibration function

 Web code: #2732		
<b>Description</b>	<b>Crimping tools</b>	<b>Locator</b>
Type	CRIMPFOX-TC MP-6	CRIMPFOX-TC MP/LOC-1
Order No.	1202888	1142829



# The space-saving universal tool

## Flexibility with crimp insert changeover

The space-saving universal CRIMPFOX-C D tool with parallel crimping process for shielded DMCC 0,5 PCB connectors with 2.54 mm pitch. The combination of various dies and crimp insert versions allows reliable EMC shielding when crimping Ethernet cables.




COMPLETE line

### Your advantages

- ✓ Flexible use with quick and easy crimp insert changeover
- ✓ Processing of various PCB connectors with various numbers of positions and cable diameters with variable combination of the dies and crimp inserts
- ✓ Reliable EMC shielding with parallel crimping

### Main features

- Space-saving universal tool for data connector applications
- Tool-free crimp insert changeover
- Versatile in use with a large selection of crimping dies

 Web code: #2733						
Description	Set	Crimping die				
Type	CRIMPFOX DMCC SET	CRIMPFOX-C DMCC 1P/DIE	CRIMPFOX-C DMCC 2P/DIE	CRIMPFOX-C DMCC 4P/DIE	CRIMPFOX-C DMCC 5/DIE	CRIMPFOX-C DMCC 7/DIE
Order No.	1235255	1235253	1235259	1235258	1235257	1235256

# Combined lightning current and surge arresters for the meter panel

## More free space for tailored solutions

Install surge protection in accordance with normative requirements while retaining a high degree of flexibility. The minimal overall width of the FLT-SEC-ZP2 device leaves maximum space available for further components on the busbar.









### Your advantages

- ✓ Universal use: Fits into every meter cabinet, regardless of manufacturer thanks to a narrow overall width of just 27 mm
- ✓ Installation in the unmetered area with application rule VDE-AR-N 4100 compliance – confirmed through VDE approval
- ✓ Secure and tool-free mounting with universal locking on busbars with a thickness of 5 mm or 10 mm
- ✓ Integration into building technology systems with optional remote signaling module

### Main features

- T1 + T2 + T3 combined lightning current and surge arrester
- Overall width: 27 mm
- Mechanical status indicator
- Optional remote signaling capability
- Flexible width in the visible area of the cover

 Web code: #2741					
	<b>T1+T2 combined lightning current and surge arrester 12.5 kA discharge capacity</b>		<b>T1+T2 combined lightning current and surge arrester 7.5 kA discharge capacity</b>		<b>Remote signaling module</b>
Supply system configuration	TN-S/TT	TN-C	TN-S/TT	TN-C	-
Lightning impulse current	12.5 kA		7.5 kA		-
Nominal voltage	230 V AC / 400 V AC				-
Short-circuit current rating	25 kA				-
Type	FLT-SEC-ZP2-3S-255/12,5	FLT-SEC-ZP2-3C-255/12,5	FLT-SEC-ZP2-3S-255/7,5	FLT-SEC-ZP2-3C-255/7,5	FLT-SEC-ZP2 FM-MODULE
Order No.	1168943	1168946	1168940	1168942	1168947

# First type 2 Push-in surge protection Easy handling during installation

The VAL-MS PT is the first type 2 surge protective device with Push-in connection technology. Benefit from the advantages of this proven connection method for tool-free installation. Testing the recommended tightening torque is a thing of the past.

Push-in Technology<sup>®</sup>  
Designed by Phoenix Contact





COMPLETE line

## Your advantages

- ✓ Push-in connection technology for easy installation
- ✓ Time savings when wiring thanks to not having to check the recommended connection torque
- ✓ Savings on additional installation materials thanks to through-wiring
- ✓ Permanent protective device monitoring with optional remote indication contact with through-wiring

## Main features

- Push-in connection technology
- Two terminal points per position
- Through-wiring in the remote signaling system
- Maximum conductor cross-section: 10 mm<sup>2</sup>
- Test point
- Overall width: 4 HP

<p><b>i</b> Web code: #2789</p>		
<p><b>Description</b></p>	<p><b>Type 2 surge protective device with Push-in connection technology</b></p>	
<p>Nominal voltage</p>	<p>240/415 V AC (TN-S/TT)</p>	
<p>Maximum continuous voltage</p>	<p>275 V AC</p>	
<p>Voltage protection level</p>	<p>1.35 kV</p>	
<p>Remote indication contact</p>	<p>Yes</p>	<p>No</p>
<p>Type</p>	<p>VAL-MS 230/3+1 FM-PT</p>	<p>VAL-MS 230/3+1-PT</p>
<p>Order No.</p>	<p>1248960</p>	<p>1248961</p>

# Surge protection for VDSL

## In accordance with the demands on Super Vectoring

TERMITRAB complete TELE protects VDSL lines in telecommunications systems with transmission speeds of up to 300 Mbps against overvoltages. The products also respond safely in the event of overloads (power-cross) thanks to an integrated short-circuit mechanism and a current limiter.

Push-in Technology 

Designed by Phoenix Contact






COMPLETE line 

### Your advantages

- Ideal protection for high-speed VDSL applications up to 300 Mbps thanks to optimized protective circuit
- Space savings and cost savings through a narrow overall width of just 6.2 mm
- Safe response in the event of overload (power-cross) thanks to integrated short-circuit mechanism and current limiter
- Quick and tool-free installation of surge protective devices thanks to Push-in connection technology

### Main features

- Data applications up to 250 Mbps (G.fast 1,500 Mbps)
- Overall width: 6.2 mm
- Variable connection technology with Push-in or screw connection technology
- Integrated short-circuit mechanism and electronic current limiter

 Web code: <a href="#">#2740</a>		
<b>Description</b>	<b>Protection for analog and digital telecommunications interfaces</b>	
Nominal voltage	24 V DC	24 V DC
Rated current	600 mA	600 mA
Connection technology	Push-in	Screw
Type	TTC-6-1x2-TELE-PT	TTC-6-1x2-TELE-UT
Order No.	<a href="#">1077106</a>	<a href="#">1077107</a>

# Lightning protection for safety-relevant systems

## Satisfies the latest railway directives

The CLIXTRAB family was designed for use in safety-relevant applications. The combination of terminal block and surge protection plug provides safe and space-saving protection for your system. Comprehensive diagnostic and remote signaling options enable easy maintenance.

Push-in Technology<sup>®</sup>

Designed by Phoenix Contact






COMPLETE line

### Your advantages

- ✓ Easy installation thanks to Push-in terminal blocks with pluggable surge protection
- ✓ Superior system availability thanks to high-performance protective circuit with integrated overload protection
- ✓ Quick and easy diagnostics with optional remote signaling for integration into digital infrastructures
- ✓ Three become two – use just two terminal blocks to protect two signal paths in an overall width of 10.3 mm

### Main features

- Push-in terminal blocks with pluggable surge protection
- Status indicator
- Optional remote indication contact
- Coded plug
- Optional test plug for signal cable measuring
- Can be tested with CHECKMASTER 2
- Knife disconnection with optional switching lock

 Web code: #2738						
	<b>Surge protective devices for signal circuits</b>					
<b>Description</b>						
Application	Isolated signal circuits					Basic terminal block
Maximum continuous voltage	264 V AC	264 V AC	21 V AC	-	-	-
Nominal voltage	240 V AC	240 V AC	24 V DC	24 V DC	24 V DC	400 V AC
Conductor cross-section	-					0.14 mm <sup>2</sup> ... 4 mm <sup>2</sup>
Type	CLT-10P/2-VF-230V-I-P	CLT-20P/4-VF-230V-I-P	CLT-10P/2-2-12V-I-P	CLT-10P/2-2-24V-I-P	CLT-10P/2-2-60V-I-P	PT 2,5-MT-CLT
Order No.	1088564	1088567	1088569	1088570	1088573	1087698

# Test adapters for surge protection

## Standard-compliant testing and reporting

The new adapter for the CHECKMASTER 2 extends the testing options for your pluggable surge protective device. Now, you can also test the new CLIXTRAB range of protective devices using the CHECKMASTER 2 and document the results in accordance with standards.



### Your advantages

- ✓ Easy replacement of the test adapters with the quick change system
- ✓ Test adapter can be replaced during operation
- ✓ Connect the test adapter without errors thanks to hardware coding
- ✓ Correct insertion of the test object thanks to visual support
- ✓ High degree of investment security through increased testing options

### Main features

- High quality and safety standard
- Satisfies test requirements in accordance with IEC 62305-3
- Optional: Robust transport case for up to four test adapters

 Web code: <a href="#">#2739</a>	
<b>Description</b>	<b>Test adapter for CLIXTRAB</b>
Type	CM 2-PA-CLT
Order No.	<a href="#">1183360</a>

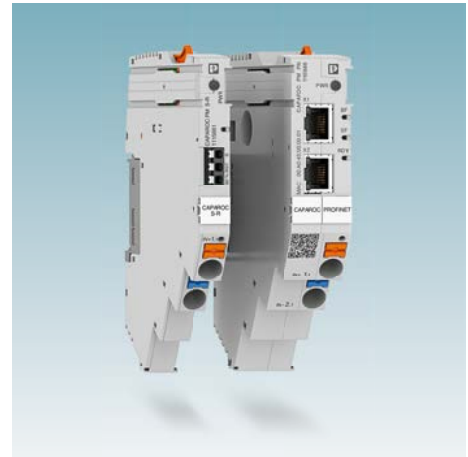
# CAPAROC power modules

## Reliable system supply

Ideal supply for your tailored CAPAROC device circuit breaker system via the power module that meets your requirements. We have the perfect product for your application, whether you need a communication interface or you simply want to use the standard functions.

Push-in Technology<sup>®</sup>

Designed by Phoenix Contact






COMPLETE line

### Your advantages

- ✓ The benchmark that you can tailor with the selection of single signals and resets right through to PROFINET communication
- ✓ Particularly easy operation for everyone with tool-free assembly, direct power supply to the busbar, and clear operating states
- ✓ Exceptionally easy design-in thanks to the comprehensive digital data packet and PROFINET function blocks

### Main features

- Supply voltage: 12 V DC ... 24 V DC
- Group message, reset, warning at I >80%
- PROFINET communication
- Push-in connections: 16 mm<sup>2</sup>
- Test point per connection
- Total current monitoring ≤45 A
- Power display with nominal current locking

 <b>Web code: #2734</b>		
<b>Description</b>	<b>With status output and reset input</b>	<b>With PROFINET communication interface</b>
Operating voltage	12 V DC ... 24 V DC	
Total current	45 A	
Space requirement on the busbar	2 slots	4 slots
Dimensions W x H x D [mm]	12.4 x 132.4 x 111.3	24.8 x 132.4 x 111.3
Type	CAPAROC PM S-R	CAPAROC PM PN
Order No.	1115661	1110986

# CAPAROC busbars

## Easy voltage distribution in the system

The busbars ensure reliable back-end supply of the total CAPAROC device circuit breaker system. The additional system modules are plugged on and supplied directly. The various lengths mean that they can be adapted ideally to every individual system.









COMPLETE line

### Your advantages

- ✓ The benchmark that you can tailor with lengths adaptable to your requirements
- ✓ Particularly easy operation for everyone with the simple Plug and Play design
- ✓ Exceptionally easy design-in with universal busbars up to 45 A

### Main features

- Basic and extension busbars
- Various lengths
- Reserve slots can be planned right at the start
- Integrated positive and negative distribution
- Total current of up to 45 A
- Hot-swap capability (maintenance without interruption)

 Web code: #2735					
	Basic busbars		Extension busbars		
Description					
Length	124 mm	49.6 mm	124 mm	49.6 mm	24.8 mm
Slots	20	8	20	8	4
Total current	45 A				
Type	CAPAROC CR 20	CAPAROC CR 8	CAPAROC CR EXT20	CAPAROC CR EXT8	CAPAROC CR EXT4
Order No.	1110989	1115672	1115674	1110990	1110991



# 1-channel CAPAROC circuit breaker modules

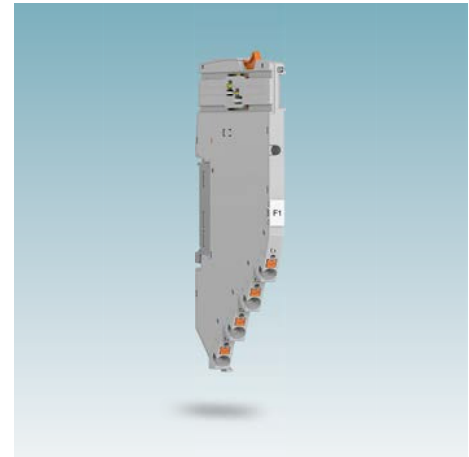
## Tailored protection in the individual system

The 1-channel circuit breaker modules are the narrowest in the CAPAROC system. They allow channel-specific design and are easy to operate using the LED button. Even with an overall width of just 6 mm, they also feature an integrated potential distributor with four connections.

### Push-in Technology<sup>®</sup>

Designed by Phoenix Contact

NEC Class 2  
acc. to UL 1310










COMPLETE line

### Your advantages

- ✓ The benchmark that you can tailor with channel-precise design with integrated potential distribution
- ✓ Particularly easy operation for everyone with tool-free assembly, installation without interruptions, and clear operating state
- ✓ Exceptionally easy design-in with the narrowest of space requirements and four protected outputs

### Main features

- Push-in connections: 4 mm<sup>2</sup>
- 4-way potential distribution
- 1 A ... 4 A with NEC Class 2
- Overall width: 6 mm
- Multi-level characteristic curve with intelligent load detection
- Fixed or adjustable nominal currents via single-button setting
- Multi-color status LEDs

 Web code: #2736						
	Device circuit breaker modules with adjustable nominal current values		Device circuit breaker modules with fixed nominal current values			
Operating voltage	12 V DC ... 24 V DC					
Nominal current	1 A ... 4 A	1 A ... 10 A	1 A	2 A	6 A	10 A
Space requirement on the busbar	1 slot					
Dimensions W x H x D [mm]	6.2 x 132.4 x 111.3					
Type	CAPAROC E1 12-24DC/1-4A	CAPAROC E1 12-24DC/1-10A	CAPAROC E1 12-24DC/1A	CAPAROC E1 12-24DC/2A	CAPAROC E1 12-24DC/6A	CAPAROC E1 12-24DC/10A
Order No.	1115415	1115649	1157288	1157290	1157286	1157284

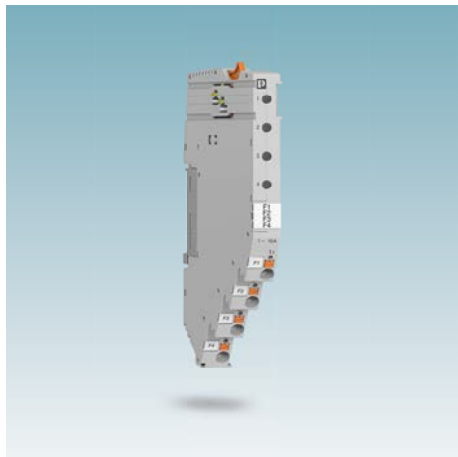
# 4-channel CAPAROC circuit breaker modules

## Multi-channel fuse protection in the system

The 4-channel device circuit breaker modules are the most compact in the CAPAROC system. With an overall width of just 3 mm per channel, they are ideal for protecting multiple channels. The modules are easy to operate and set using the LED buttons.

Push-in Technology<sup>®</sup>  
 Designed by Phoenix Contact

NEC Class 2  
 acc. to UL 1310






COMPLETE line

### Your advantages

- ✓ The benchmark that you can tailor with the individual combination of multi-channel protective modules
- ✓ Particularly easy operation for everyone with tool-free assembly, installation without interruptions, and clear operating state
- ✓ Exceptionally easy design-in with four separately fused channels with the narrowest of space requirements of just 3 mm per channel

### Main features

- Push-in connections: 4 mm<sup>2</sup>
- 1 A ... 4 A with NEC Class 2
- Overall width per channel: 3 mm
- Multi-level characteristic curve with intelligent load detection
- Adjustable nominal currents via single-button setting
- Multi-color status LEDs
- Additional channel marking

 Web code: #2737		
<b>Description</b>	<b>4-channel device circuit breaker modules, adjustable</b>	
Operating voltage	12 V DC ... 24 V DC	
Nominal current	1 A ... 4 A	1 A ... 10 A
Space requirement on the busbar	2 slots	
Dimensions W x H x D [mm]	12.4 x 132.4 x 111.3	
Type	CAPAROC E4 12-24DC/1-4A	CAPAROC E4 12-24DC/1-10A
Order No.	1115657	1115658

# 2-channel CAPAROC circuit breaker modules

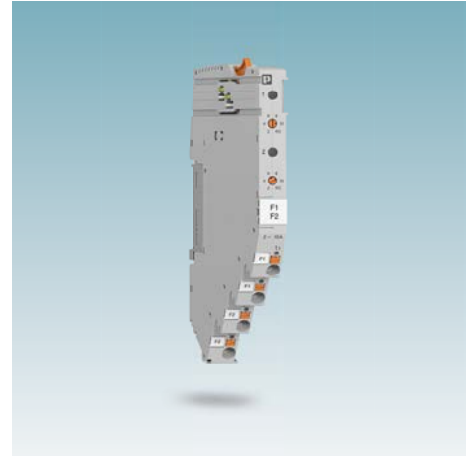
## Nominal current setting visible at all times

The 2-channel circuit breaker modules are the only protective modules in the CAPAROC system that allow you to easily read off the set nominal current at any time. Moreover, the active current limitation function ensures improved utilization of the upstream power supply.

Push-in Technology<sup>®</sup>

Designed by Phoenix Contact

NEC Class 2  
acc. to UL 1310





COMPLETE line

### Your advantages

- ✓ The benchmark that you can tailor with convenient nominal current level setting on the module
- ✓ Particularly easy operation for everyone with tool-free assembly, installation without interruptions, and clear operating state
- ✓ Exceptionally easy design-in allows the nominal current to be extended via PROFINET beyond the specified levels

### Main features

- Push-in connections: 4 mm<sup>2</sup>
- 2-way potential distribution
- Overall width per channel: 6 mm
- 1 A ... 4 A with NEC Class 2
- Multi-level characteristic curve with current limiting and intelligent load detection
- Read off and set nominal currents via rotary switch
- Multi-color status LEDs

<p><b>i</b> Web code: #2787</p>		
<p><b>Description</b></p>	<p>2-channel device circuit breaker modules, adjustable</p>	
<p>Operating voltage</p>	<p>12 V DC ... 24 V DC</p>	
<p>Nominal current</p>	<p>1 A ... 4 A</p>	<p>2 A ... 10 A</p>
<p>Space requirement on the busbar</p>	<p>2 slots</p>	
<p>Dimensions W x H x D [mm]</p>	<p>12.4 x 132.4 x 111.3</p>	
<p>Type</p>	<p>CAPAROC E2 12-24DC/1-4A</p>	<p>CAPAROC E2 12-24DC/2-10A</p>
<p>Order No.</p>	<p>1115655</p>	<p>1110984</p>

# CAPAROC potential distributor module

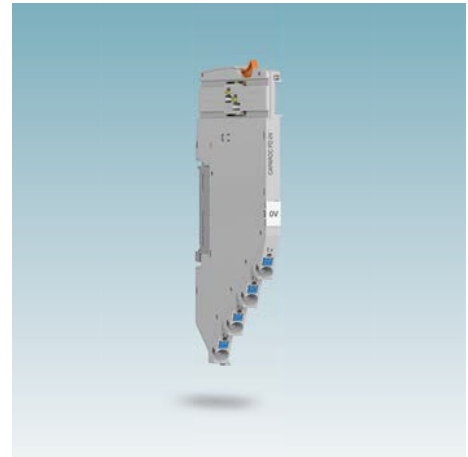
## Potential distribution in the system

The potential distributor modules allow the 0 V potential to be fed back directly via the CAPAROC system. A separate 0 V distribution is no longer necessary. The blue pushers also make it easier to identify the potentials clearly.

Push-in Technology<sup>®</sup>

Designed by Phoenix Contact

NEC Class 2  
acc. to UL 1310




COMPLETE line

### Your advantages

- ✓ The benchmark that you can tailor with direct pairwise integration into the system alongside the circuit breaker module
- ✓ Particularly easy operation for everyone with tool-free insertion without additional wiring effort
- ✓ Exceptionally easy design-in with color-coded pushers for clear identification of the potentials

### Main features

- Push-in connections: 4 mm<sup>2</sup>
- 4-way 0 V potential distribution
- Overall width: 6 mm
- Prevention of wiring errors with blue pushers
- Test points at each connection

<p><b>i</b> Web code: #2788</p>	
<p><b>Description</b></p>	<p>Potential distributor</p>
<p>Operating voltage</p>	<p>12 V DC ... 24 V DC</p>
<p>Space requirement on the busbar</p>	<p>1 slot</p>
<p>Dimensions W x H x D [mm]</p>	<p>6.2 x 132.4 x 111.3</p>
<p>Type</p>	<p>CAPAROC PD 0V</p>
<p>Order No.</p>	<p>1110987</p>

# Power supplies with maximum functionality

## Powerful with SFB Technology

The new voltage versions of the power supplies extend the QUINT POWER family. The 110 V DC power supply can be used for applications up to a voltage range of 135 V DC. It is therefore ideally suited to process and energy technology applications.

SFB Technology <sup>TM</sup>  
Designed by Phoenix Contact







COMPLETE line

### Your advantages

- ✓ Exceptionally powerful output side: Easy system expansion, reliable starting of difficult loads and tripping of miniature circuit breakers
- ✓ Very robust input side: High level of immunity through integrated gas discharge tube (up to 6 kV) and  $\geq 20$  ms mains failure buffer time
- ✓ Fully comprehensive signaling: Preventive function monitoring reports critical operating states before errors occur
- ✓ Available preconfigured: From a batch quantity of just 1

### Main features

- Static boost of up to 125% for a sustained period
- Dynamic boost of up to 200% for 5 s
- Selective Fuse Breaking (SFB) Technology: 6 times the nominal current for 15 ms
- Analog, digital, and relay contacts
- Integrated gas discharge tube
- Wide temperature range:  $-40^{\circ}\text{C} \dots +70^{\circ}\text{C}$

 Web code: #2743			
	<b>1-phase power supplies</b> <b>100 V AC ... 240 V AC</b>		<b>3-phase power supply</b> <b>3 x 400 V AC ... 500 V AC</b>
<b>Description</b>			
Output voltage	110 V DC ... 135 V DC	48 V DC ... 56 V DC	48 V DC ... 56 V DC
Output current	4 A	20 A	20 A
Static boost	5 A	22.5 A	22.5 A
Dynamic boost	6 A (5 s)	30 A (5 s)	30 A (5 s)
SFB Technology	24 A (15 ms)	105 A (15 ms)	105 A (15 ms)
Dimensions W x H x D [mm]	70 x 130 x 125	120 x 130 x 140	120 x 130 x 125
Type	QUINT4-PS/1AC/110DC/4	QUINT4-PS/1AC/48DC/20	QUINT4-PS/3AC/48DC/20
Order No.	2904613	2904612	2904627

# Power supplies for building automation

## Efficiency Level VI for the DIN rail

New specialists extend the STEP POWER family. The 12 V power supplies are ideal for e-mobility; the 3 A device is available for supplying single-board computers. The low-profile power supply with NEC Class 2 approval has been designed specially for the American market.








Push-in Technology<sup>®</sup>  
Designed by Phoenix Contact

### Your advantages

- ✓ Energy savings with the highest level of efficiency in no-load and part-load operation (Efficiency Level VI)
- ✓ Space savings in the control cabinet thanks to the narrow and low-profile designs combined with increased performance (up to 100%)
- ✓ Approval for household purposes (EN 60335) allows use in domestic applications for the first time
- ✓ Quick and easy commissioning with tool-free Push-in connection technology at a 45° angle with double terminal points

### Main features

- Power increase of up to 100%
- Conductor/PCB connection direction: 45°
- EN 60335 certification
- Overall width reduced by 1 HP
- Efficiency: >94%
- No-load losses: <0.1 W
- Flexible mounting on a DIN rail or flat surface
- Wide temperature range: -10°C ... +70°C

 <b>Web code: #2750</b>				
<b>Description</b>	<b>1-phase power supplies</b>			
Input voltage	100 V AC ... 240 V DC 110 V DC ... 250 V DC			
Output voltage	12 V DC	12 V DC	5 V DC	24 V DC
Output current	1.3 A	2.5 A	3 A	3.75 A
Dimensions W x H x D [mm]	18 x 90 x 55	36 x 90 x 55	18 x 90 x 55	72 x 90 x 43
Type	STEP3-PS/1AC/ 12DC/1.3/PT	STEP3-PS/1AC/ 12DC/2.5/PT	STEP3-PS/1AC/ 5DC/3/PT	STEP3-PS/1AC/ 24DC/3.75/PT/FL
Order No.	1170952	1170953	1170954	1088486

# Power supplies with basic functionality

## Compact housing and high power density

The new UNO POWER generation of power supplies feature active function monitoring, a DC OK LED, and the relay contact. The high power density means that these power supplies are the perfect solution, especially in compact control boxes.









### Your advantages

- ✓ Save space in the control cabinet thanks to the narrow overall width
- ✓ Save energy thanks to the high degree of efficiency
- ✓ Outdoor installation and reliable device startup at  $-40^{\circ}\text{C}$
- ✓ Easy output voltage system diagnostics with the floating switch contact and DC OK LED
- ✓ Alignable without minimum clearance to neighboring modules

### Main features

- Adjustable output voltage: 24 V DC ... 28 V DC
- LED signaling and DC OK relay contact
- High power density: 500 W/dm<sup>3</sup>
- Efficiency up to 94.6%
- High MTBF: >500,000 h
- Wide temperature range:  $-25^{\circ}\text{C}$  ...  $+70^{\circ}\text{C}$
- H versions: Satisfy the EN 60335 standard

 Web code: #2749					
	<b>1-phase power supplies</b>				
<b>Description</b>					
Input voltage	100 V AC ... 240 V AC	100 V AC ... 240 V AC	100 V AC ... 240 V AC	100 V AC ... 240 V AC	100 V AC ... 240 V AC
Output voltage	24 V DC	24 V DC	48 V DC	12 V DC	24 V DC
Output current	5 A	10 A	5 A	4.6 A	4.2 A
Dimensions W x H x D [mm]	35 x 130 x 125	45 x 130 x 125	45 x 130 x 125	35 x 90 x 84	55 x 90 x 84
Type	UNO2-PS/1AC/ 24DC/120W	UNO2-PS/1AC/ 24DC/240W	UNO2-PS/1AC/ 48DC/240W	UNO-PS/1AC/ 12DC/55W/H	UNO-PS/1AC/ 24DC/100W/H
Order No.	1110466	1096432	1110155	1088850	1088851

# Power supplies with IP67 degree of protection

## Robust for supply in the field

The robust TRIO POWER IP67 power supplies are water- and dust-tight. They have been developed specially for applications in the field, outside of the control cabinet, and are equipped with M12, 7/8", or IPD device connections. This increases their installation flexibility.







### Your advantages

- ✓ Direct installation at the load in the field reduces cable lengths and saves space in the control cabinet
- ✓ The robust aluminum housing ensures high system availability with resistance to extreme environmental conditions (temperature, dust, and water)
- ✓ Reliable startup of high loads with dynamic boost
- ✓ Improved diagnostic options in the field with DC OK LED and AC OK LED

### Main features

- IP67 degree of protection
- Dynamic boost supplies 1.5 times the nominal current for 5 s
- High resistance to shock and vibrations, and high electric strength
- Efficiency: >93%
- Wide temperature range: -25°C... +70°C
- Device connections: M12, 7/8", IPD

 Web code: #2747			
<b>Description</b>	<b>1-phase power supplies</b>		
Input voltage Output voltage	100 V AC... 240 V AC 24 V DC	100 V AC... 240 V AC 24 V DC	100 V AC... 240 V AC 24 V DC
Output current Dynamic boost	8 A 12 A (5 s)	10 A 15 A (5 s)	10 A 15 A (5 s)
Connection method	7/8" circular connector	M12 circular connector	IPD device connection with Push-in technology
Dimensions W x H x D [mm]	136 x 230 x 50	136 x 230 x 50	136 x 285 x 50
Type	TRIO-PS67/1AC/24DC/8/INC	TRIO-PS67/1AC/24DC/10/M12	TRIO-PS67/1AC/24DC/10/IPD
Order No.	1065976	1111634	1111664



# DC/DC converters with standard functionality

## Decentral supply of PV systems

The new DC/DC converter of the TRIO family supplies your system directly from the field. A reliable power supply is guaranteed, even without a central grid. With an input voltage of up to 1,500 V DC, it is ideally suited to photovoltaic systems and other applications.




Push-in Technology<sup>®</sup>  
Designed by Phoenix Contact

### Your advantages

- ✓ Suitable for use in all photovoltaic systems with high input voltage due to conformity with standards UL 62109 and UL 1741
- ✓ Direct and immediate supply of the string monitoring function within device connection boxes
- ✓ The innovative switching concept supports various grounding concepts
- ✓ High system availability due to the robust design
- ✓ Quick and easy installation with Push-in connection

### Main features

- Wide input voltage range: 450 V DC ... 1,650 V DC
- Direct field installation possible
- LED signaling
- Electrically robust through high electric strength
- Electrical safety up to 1,650 V DC with partial discharge message acknowledged
- Wide temperature range: -25°C ... +70°C

<p><b>i</b> Web code: #2748</p>	
<b>Description</b>	<b>DC/DC converter</b>
Input voltage	500 V DC ... 1,500 V DC
Output voltage	24 V DC
Output current	1.5 A
Dimensions W x H x D [mm]	48 x 130 x 120
Type	TRIO-PS-2G/1500DC/24DC/1.5
Order No.	1107892

# DC/DC converters with maximum functionality

## Powerful with boost function

The QUINT POWER range features DC/DC converters in the power range of up to 100 W for the first time. The choice between Push-in and screw connection is new to this performance class of the space-saving converters. Moreover, we are closing the product gap in the DC/DC converter range with our new 60 W devices.

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Designed by Phoenix Contact










COMPLETE line

### Your advantages

- ✓ Power reserves for easy system extension through static boost; high loads can be started through dynamic boost
- ✓ Preventive function monitoring indicates critical operating states before errors occur
- ✓ High efficiency and long service life with low power dissipation and low heating
- ✓ Compact, slim-line design saves space in the control cabinet

### Main features

- Power reserves:
  - Static boost: Up to 125% for a sustained period
  - Dynamic boost: Up to 200% for 4.9 s
- Configurable signaling of DC OK or selectable power thresholds
- Efficiency up to 94%
- Wide temperature range: -40°C ... +70°C

 Web code: #2744						
	DC/DC converter with Push-in connection			DC/DC converter with screw connection		
Description	12-24 V DC / 24 V DC	12-24 V DC / 24 V DC	48-110 V DC / 24 V DC	12-24 V DC / 5-15 V DC	12-24 V DC / 24 V DC	12-24 V DC / 24 V DC
Input voltage						
Output voltage						
Output current	1.3 A	2.5 A	2.5 A	2 A	1.3 A	2.5 A
Static boost	1.63 A	3.13 A	3.13 A	3.13 A	1.63 A	3.13 A
Dynamic boost	2.6 A (4.9 s)	5 A (4.9 s)	5 A (4.9 s)	5 A (4.9 s)	2.6 A (4.9 s)	5 A (4.9 s)
Dimensions W x H x D [mm]	22.5 x 106 x 90	32 x 106 x 90	32 x 106 x 90	22.5 x 106 x 90	22.5 x 106 x 90	32 x 106 x 90
Type	QUINT4-PS / 12-24DC / 24DC / 1.3 / PT	QUINT4-PS / 12-24DC / 24DC / 2.5 / PT	QUINT4-PS / 48-110DC / 24DC / 2.5 / PT	QUINT4-PS / 12-24DC / 5-15DC / 2.5 / PT	QUINT4-PS / 12-24DC / 24DC / 1.3 / SC	QUINT4-PS / 12-24DC / 24DC / 2.5 / SC
Order No.	1066716	1066714	1066708	1066704	1066703	1066718

# DC/DC converters with maximum functionality

## Powerful with SFB Technology

The new QUINT POWER DC/DC converters round out the product family. Along with an additional voltage level, there are two new DC/DC converters with protective coating. These devices can also be used at extreme ambient conditions in demanding applications.



COMPLETE line





SFB Technology <sup>TM</sup>  
Designed by Phoenix Contact

### Your advantages

- ✓ Exceptionally powerful output side: Easy system extension, reliable startup of high loads and tripping of miniature circuit breakers
- ✓ Fully comprehensive signaling: Preventive function monitoring reports critical operating states before errors occur
- ✓ High efficiency and long service life with low power dissipation and low heating
- ✓ Quick and easy startup with tool-free Push-in connection technology

### Main features

- Static boost of up to 125% for a sustained period
- Dynamic boost of up to 200% for 5 s
- Selective Fuse Breaking (SFB) Technology
- Analog, digital, and relay contacts
- Wide temperature range: -25°C ... +70°C  
Startup type tested: -40°C
- CO versions:  
Wide temperature range: -40°C ... +70°C  
Approvals: ATEX and IECEx

 Web code: #2745			
	<b>DC/DC converter with coated PCB</b>		<b>DC/DC converter</b>
<b>Description</b>			
Input voltage	24 V DC / 24 V DC		12 V DC / 24 V DC
Output voltage	24 V DC / 24 V DC		12 V DC / 24 V DC
Output current	5 A		5 A
Static boost	6.25 A		6.25 A
Dynamic boost	10 A (5 s)		10 A (5 s)
SFB Technology	30 A (15 ms)		30 A (15 ms)
Dimensions W x H x D [mm]	36 x 130 x 125		36 x 130 x 125
Type	QUINT4-PS/ 24DC/24DC/5/PT/CO		QUINT4-PS/12DC/24DC/5/PT
Type	QUINT4-PS/ 24DC/24DC/10/PT/CO		
Order No.	2910132		2910124
	2910133		

# Maintenance-free buffer modules Intelligent protection in the event of mains failures

The new QUINT CAP buffer modules with integrated interface can be integrated easily into industrial networks. The buffer modules bridge cyclic failures of up to several minutes and combine an electronic switchover unit and energy storage device in one housing.



COMPLETE line





Push-in Technology   
Designed by Phoenix Contact

## Your advantages

- ✓ Easy integration into industrial networks with freely selectable interface: PROFINET, EtherNet/IP™, and USB
- ✓ Long service life with maintenance-free double-layer capacitors
- ✓ Reliable startup of high loads with static boost
- ✓ Comprehensive signaling: Preventive function monitoring reports critical operating states before errors occur
- ✓ Extension of the buffer time with parallel connection of up to four devices

## Main features

- Overload protection
- Fast charging of up to 10 A
- Life expectancy (+20°C): ≥20 years
- Wide temperature range: -25°C ... +60°C
- Charge/discharge cycles (+20°C): ≥500,000
- Comprehensive signaling
- Installation altitude up to 4,000 m

 Web code: #2746			
<b>Description</b>	<b>QUINT CAP with communication interface</b>		
Input voltage Output voltage	24 V DC 24 V DC		
Output current Static boost	20 A 25 A	20 A 25 A	20 A 25 A
Interface	USB	PROFINET	EtherNet/IP™
Dimensions W x H x D [mm]	244 x 130 x 125	244 x 130 x 125	244 x 130 x 125
Type	QUINT4-CAP/ 24DC/20/16KJ/USB	QUINT4-CAP/ 24DC/20/16KJ/PN	QUINT4-CAP/ 24DC/20/16KJ/EIP
Order No.	1065635	1076860	1076861

# Process indicators and field devices

## Configurable temperature transmitters

The loop-powered temperature transmitters feature high reliability, precision, and long-term stability for all industries. Transmit RTD and TC signals as well as resistance and voltage signals with the aid of HART® communication and the 4 mA ... 20 mA output signal.



Push-in Technology<sup>®</sup>  
Designed by Phoenix Contact








COMPLETE line

### Your advantages

- ✓ Available in a DIN rail housing or a head-mounted transducer for applications in a control cabinet or in the field
- ✓ Freely configurable thanks to intuitive software
- ✓ Reliable operation thanks to sensor and device monitoring with diagnostic information in accordance with NAMUR 107
- ✓ Head-mounted transducers available with plug-on display
- ✓ Explosion protection equipment through to zone 0

### Main features

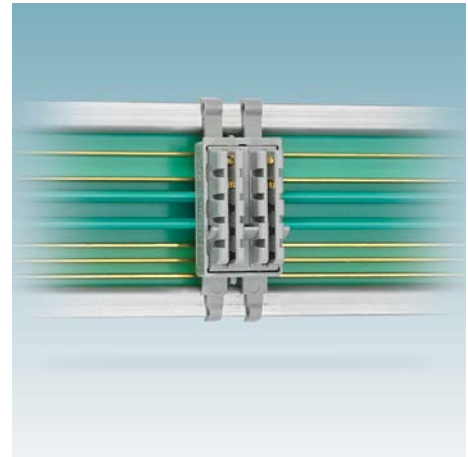
- HART® communication
- Output loop-powered
- Universal input for RTD, TC, resistance-type sensors and voltage sensors (mV)
- Installation in connecting head, form B (DIN EN 50446)
- Installation in control cabinets (DIN rail housing)

 Web code: #2752				
	<b>Output loop-powered temperature transducers</b>			
<b>Description</b>	TC, RTD, resistance-type sensors and voltage sensors (mV)			
Input	TC, RTD, resistance-type sensors and voltage sensors (mV)			
Output	HART, 4 mA ... 20 mA			
Type	MACX MCR-1TS-I-OLP-SP	MACX MCR-EX-1TS-I-OLP-SP	-	-
Order No. Push-in connection	1145196	1145207	-	-
Type	MACX MCR-1TS-I-OLP	MACX MCR-EX-1TS-I-OLP	FA MCR-HT-1TS-I-OLP	FA MCR-EX-HT-1TS-I-OLP
Order No. screw connection	1145192	1145365	1145210	1145217

# Adapter for supply bridging systems

## Easy adaptation to Power Rail

With the power rail adapter, you can bridge the power supply for MACX Analog, MINI Analog, and MINI Analog Pro signal conditioner product families using the K-series from Pepperl+Fuchs.




### Your advantages

- ✓ Allows the use of Phoenix Contact products as an alternative in existing installations with devices from the Pepperl+Fuchs K series
- ✓ Easy and reliable adaptation of the power supply
- ✓ Can be used with the MACX Analog, MINI Analog, and MINI Analog Pro product families

### Main features

- Secure contacting and mechanically coded
- Vibration-resistant
- Installation in Ex zone 2 (Ex ec) possible

<p><b>i</b> Web code: <a href="#">#2753</a></p>	
<b>Description</b>	<b>Power Rail adapter</b>
Input	9.9 V DC ... 30 V DC
Number of positions	2
Type	ME 6,2 TBUS-PR-ADAPTER
Order No.	<a href="#">1136500</a>

# Highly compact signal conditioners

## Modular bus and network connection

The easy-to-connect PROFINET gateway for MINI Analog Pro signal conditioners and measuring transducers allow you to integrate analog and digital measuring signals into superordinate control systems via PROFINET.




COMPLETE line

### Your advantages

- ✓ Easy integration of analog and digital measuring signals into PROFINET networks
- ✓ Signal conditioning for a wide range of signals via the MINI Analog Pro signal conditioner
- ✓ Simple snap-on mounting without additional power supply
- ✓ Integrated switch allows daisy-chain wiring via two PROFINET ports

### Main features

- Service points for measuring the analog 4 mA ... 20 mA signal without interrupting the process signals
- Certified by the PROFIBUS user organization
- PROFINET Conformity Class (CC-C)

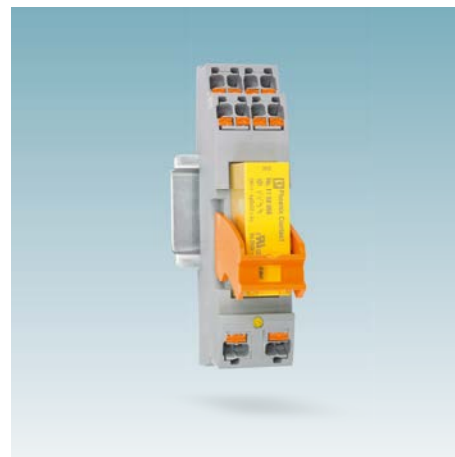
<p><b>i</b> Web code: #2754</p>	
<p><b>Description</b></p>	<p><b>Communication gateway with PROFINET interface</b></p>
<p>Input</p>	<p>Up to 8x analog and digital input signals</p>
<p>Output</p>	<p>PROFINET</p>
<p>Type</p>	<p>MINI MCR-2-V8-PN</p>
<p>Order No.</p>	<p>2905637</p>

# Force-guided coupling relay

## Safety through force-guided contacts

The force-guided coupling relays of the RIFLINE complete product family provide you with increased safety and are suitable for the use of up to four force-guided contacts.

Push-in Technology<sup>®</sup>  
Designed by Phoenix Contact






COMPLETE line

### Your advantages

- Increased safety with force-guided contacts in accordance with EN 50205
- Space-saving solution for relays with force-guided contacts
- CLIPLINE terminal block accessories can be used

### Main features

- Very narrow relay module for relays with 4 force-guided contacts
- Integrated status LED and freewheeling diode
- Switching currents up to 4 x 6 A
- Multiple contact arrangements: 2N/O + 2N/C, 3N/O + 1N/C
- Professional bridging of adjacent modules saves wiring time

 Web code: #2755		
<b>Description</b>	<b>Force-guided coupling relay</b>	
Input voltage	24 V DC	24 V DC
Maximum switching voltage	250 V AC / 300 V DC	250 V AC / 300 V DC
Contact type	2 N/C contacts 2 N/O contacts	1 N/C contact 3 N/O contacts
Type	RIF-RPT-LDP- 24DC /2X2/2X1 /AU/FG	RIF-RPT-LDP- 24DC /1X2/3X1 /AU/FG
Order No.	1148699	1148703



# Fuse adapters for relay modules

## Fuse protection without further space requirements

The fuse adapter for the PLC-INTERFACE relay system with an overall width of 6.2 mm allows channel-by-channel fusing without taking up additional space on the DIN rail. You can easily extend existing installations with this protective function.

Push-in Technology   
 Designed by Phoenix Contact







COMPLETE line 

### Your advantages

- Easy extension of existing installations with the PLC-INTERFACE relay system through simple snap-on mounting
- Special relay base versions not needed – the standard portfolio can be used
- No additional space needed on the DIN rail
- Easy access to the fuse

### Main features

- For output-circuit line protection
- For use with 6.2 mm PLC basic terminal blocks
- Failures signaled via red LED
- Replaceable fuse and relay
- Standard 5 x 20 mm glass fuses can be used

 Web code: #2756			
<b>Description</b>	<b>PLC fuse adapter with failure indicator</b>	<b>PLC fuse adapter with failure indicator</b>	<b>PLC fuse adapter without failure indicator</b>
Input	Basic terminal block nominal voltage	Basic terminal block nominal voltage	Basic terminal block nominal voltage
Output	12 V... 24 V, 6 A	120 V... 230 V, 6 A	0 V... 230 V, 6 A
Type	PLC-FA-I-5X20-12-24UC	PLC-FA-I-5X20-120-230UC	PLC-FA-5X20
Order No.	1186499	1186508	1186510

# Speed starter with intuitive operation

## Operate motors simply and safely

The speed starter, with particularly intuitive operation, is the new device class between motor starters and frequency converters. This compact solution provides all of the functions necessary for different speeds, soft start, and safe stopping with the Safe Torque Off (STO) function.

Push-in Technology<sup>®</sup>  
 Designed by Phoenix Contact








COMPLETE line

### Your advantages

- ✓ Quick installation and commissioning with easy wiring and intuitive operation concept
- ✓ Safe shutdown thanks to the integrated Safe Torque Off (STO) function
- ✓ Space savings in the control cabinet through the compact design with an overall width starting at just 35 mm
- ✓ Cost-effective solution with all functions necessary for different speeds and soft start

### Main features

- Starting and reversing motors
- Motor protection
- Safe shutdown with Safe Torque Off
- Soft motor start and shutdown
- Performance classes from 0.25 kW ... 1.5 kW

 Web code: #2757				
	Description	Speed starter 1-phase without EMC filter	Speed starter 1-phase with EMC filter	Speed starter 3-phase without EMC filter
Power	0.75 kW	0.37 kW	0.55 kW	1.5 kW
Overall width	45 mm	35 mm	35 mm	45 mm
Fan	No	Yes	No	Yes
Type	CSS 0.75-1/3	CSS 0.37-1/3-EMC	CSS 0.55-3/3	CSS 1.5-3/3-EMC
Order No.	1201509	1201600	1201694	1201696


# Network-capable hybrid motor starters

## System availability for your machines

The short-circuit-proof hybrid motor starters with network connection feature high-level functionality: Hybrid technology, safety integration, short-circuit-proof, as well as easy connection to IO-Links or common fieldbus systems. They are also easy to mount.



Push-in Technology   
Designed by Phoenix Contact

CONTACTRON Hybrid Technology   
Designed by Phoenix Contact

 IO-Link







COMPLETE line 

### Your advantages

- High functionality with a combination of hybrid technology, safety integration, short-circuit protection, and network-capability
- Space savings in the control cabinet with the compact design and an overall width of just 22.5 mm
- High system availability with integrated short-circuit protection
- Easy installation through wiring savings and flexible network connection

### Main features

- CONTACTRON hybrid technology
- Network-capable motor control with any fieldbus or IO-Link
- Integrated short-circuit protection
- Fully pluggable
- Can be mounted directly on the CrossPowerSystem power distribution system, and onto power busbars or DIN rails with an adapter

 Web code: #2758					
Description	Short-circuit-proof hybrid motor starter with IO-Link connection	Short-circuit-proof hybrid motor starter with IO-Link connection	Short-circuit-proof hybrid motor starter with IFS connection	Short-circuit-proof hybrid motor starter with IFS connection	Loop bridge
Network connection	IO-Link	-	Interface system (IFS)	-	-
Nominal current	3 A	9 A	3 A	9 A	-
Number of IFS motor starters that can be connected	-	-	-	-	16
Type	ELR H51-IES-24DC500AC-3-IOL	ELR H51-IES-24DC500AC-9-IOL	ELR H51-IES-24DC500AC-3-IFS	ELR H51-IES-24DC500AC-9-IFS	EM-CPS-BRIDGE-IFS-GY-16
Order No.	1151617	1151610	1151618	1151587	1191990

# Smart energy measuring devices and services

## Future-oriented energy management

Energy monitoring, management, analytics: The EMMA Proficloud Service and the IoT-capable EMpro energy measuring devices are empowering your energy management system of the future. Benefit from the numerous intuitive and flexible functions for monitoring, analyzing, and evaluating the energy and power data.





### Your advantages

- ✓ Improved data transparency with EMMA Cloud Service
- ✓ Increased convenience with automatic data transfer and storage of data from directly connected energy measuring devices
- ✓ Flexible use of data and easy remote access anywhere and anytime thanks to the cloud application
- ✓ Secure communication between the device and cloud via TLS encryption

### Main features

- Service@Proficloud together with energy measuring devices connected directly to the cloud
- Device management for a clear overview of the applications
- Targeted diagrams for visualizing the data for the energy manager
- Reporting functions

 <b>Web code: #2759</b>			
Description	Cloud Service Packet S	Cloud Service Packet M	Cloud Service Packet L
Monthly license	EEM-EMMA-PC-S-M	EEM-EMMA-PC-M-M	EEM-EMMA-PC-L-M
Order No.	1270198	1270199	1270202
Annual license	EEM-EMMA-PC-S-Y	EEM-EMMA-PC-M-Y	EEM-EMMA-PC-L-Y
Order No.	1270203	1270204	1270205

# IO-Link module for signal towers

## Communication down to the last meter

IO-Link is currently the fastest-growing communication standard in the field of industrial automation. Exchange data consistently with IO-Link – from the controller down to the lowest field level. You can now also integrate IO-Link devices into our signal towers.





### IO-Link

#### Your advantages

- Quick and easy installation
- Minimal time necessary for IO-Link integration
- Point-to-point communication
- Increased data availability

#### Main features

- IO-Link specification V1.1
- Type A port
- Operating voltage: 24 V DC
- IP65 degree of protection

 <b>Web code:</b> #2760	
<b>Description</b>	<b>IO-Link communication module</b>
Diameter	70 mm
Height	66 mm
Ambient temperature (operation)	-20°C ... +50°C
Type	PSD-S IOL SL
Order No.	<a href="#">1191993</a>

# IPCs with stainless steel housings Optimized for hygiene applications

The new hygiene IPCs feature an all-round closed stainless-steel housing without screws or sharp edges. The high performance and reliable panel PCs and monitors are optimized for machine and system operation in hygiene applications in the pharmaceuticals, foodstuffs, beverage, and chemicals industries.





## Your advantages

- ✓ Robust and high-performance under extreme conditions
- ✓ Stable and resistant thanks to a closed stainless-steel housing
- ✓ Hygienic design with passive cooling
- ✓ Scalable processor performance depending on the application
- ✓ Easy mounting with boom or VESA adapter

## Main features

- 15.6", 17.3", and 23.8" full HD display
- Intel® Celeron® or Core™ i5
- PCAP multi-touch
- Closed stainless steel housing
- All-round IP69K protection
- Shatter protection film (optional)
- WLAN + Bluetooth (optional)

 Web code: #2762					
	All-in-one industrial PC		Monitors		
Description	All-in-one industrial PC		Monitors		
Display size	17.3" Full HD (1920 x 1080 pixels)	23.8" Full HD (1920 x 1080 pixels)	15.6" Full HD (1920 x 1080 pixels)	17.3" Full HD (1920 x 1080 pixels)	23.8" Full HD (1920 x 1080 pixels)
Processor	Intel® Celeron® 2980U 1.6 GHz Intel® Core™ i5-4300U 1.9 GHz		-	-	-
Shatter protection film	Configurable		FPM 15.6 69K SP <a href="#">1261658</a>	FPM 17.3 69K SP <a href="#">1261656</a>	FPM 23.8 69K SP <a href="#">1261662</a>
Type	PPC 17.3 AIO 69K	PPC 23.8 AIO 69K	FPM 15.6 69K	FPM 17.3 69K	FPM 23.8 69K
Order No.	<a href="#">1262469</a>	<a href="#">1262470</a>	<a href="#">1261660</a>	<a href="#">1261657</a>	<a href="#">1261659</a>

# Compact panel PCs

## Perfect for HMI applications

The configurable BL2 PPC 1200 computers are compact and cost-effective panel PCs with an Intel Celeron N3350 CPU. With a 7" or 10" display and PCAP Touch, they are the perfect platform for x86-based visualization applications, such as Visu+HMI.




COMPLETE line

### Your advantages

- Modern CPUs and chipsets allow the customer to build long-term solutions
- Perfect for demanding HMI applications
- Passive cooling and no moving parts
- Modern industrial design
- Robust metal housing

### Main features

- Compact design
- 7" and 10" display with PCAP Touch
- Intel® Celeron® N3350 processor
- mSATA SSD data storage
- Configuration options: WLAN, Windows 10 IoT
- Front installation or VESA mounting

<b>i</b> Web code: #2763			
<b>Description</b>	<b>Compact panel PCs</b>		
Display size	17.78 cm (7")	25.65 cm (10.1")	Configurable
Touch technology	Projective capacitive (PCAP), 2-finger operation		
Processor	Intel® Celeron® N3350 1.1/2.4 GHz		
RAM	4 GB DDR3		Configurable
Data storage	64 GB mSATA SSD	128 GB mSATA SSD	M.2 SSD (configurable)
Type	BL2 PPC7 1201-4/64-W10	BL2 PPC10 1201-4/128-W10	BL2 PPC 1200
Order No.	1274012	1274014	1138377

# Compact box PCs

## Ideal for IIoT applications

The box PCs of this series are now available in additional configurations. The form factor makes this system the ideal companion in small control cabinets and distributor boxes. The CPU delivers efficient performance for applications such as decentral data acquisition.






COMPLETE line

### Your advantages

- ✓ Compact design for installation in small cabinet housings
- ✓ Efficient performance with Intel® E3940 CPU
- ✓ High reliability with passive cooling and SSD mass storage
- ✓ Secure solutions with Trusted Platform Module (TPM)
- ✓ Ideal for use in FOG and EDGE applications

### Main features

- Fan-free system design
- Various mounting options
- Various system options to choose from: Windows® 10 IoT, WLAN, M.2 SSD, TPM, COM ports
- Dimensions: 99 mm x 92 mm x 46 mm or 63 mm
- Operating temperature range: -20°C ... +60°C

 Web code: #2764		
<b>Description</b>	<b>Compact box PCs</b>	
Processor	Intel® Atom™ E3940 1.6/1.8 GHz (quad-core)	
RAM	4 GB	8 GB
Data storage	64 GB eMMC	128 GB M.2 SSD
Operating system	Windows 10 IoT Enterprise LTSC 2019	
Type	BL2 BPC 1541S-4/64-W10	BL2 BPC 1541E-8/128-W10
Order No.	1272688	1272687



# All-in-one industrial PCs

## IP65 protection for use in the field

AIO65 is the new product family for all-around IP65-protected configurable industrial PCs with display sizes from 15.6" to 21.5" in Full HD, various performance classes and mounting options, as well as matching extension options (e.g., pushbutton module, signal tower).






### Your advantages

- ✓ All-around IP65 protection
- ✓ Attractive industrial design
- ✓ Scalable processor performance
- ✓ High reliability with passive cooling
- ✓ Pushbutton, switch, or emergency stop directly on the operator interface above the pushbutton module

### Main features

- 15.6"- 18.5", and 21.5" displays with Full HD resolution and PCAP Touch
- Intel® Pentium® N4200 or Core™ i5-7442EQ processor
- mSATA SSD data storage
- Windows® 10 IoT LTSC 2019
- Mounting on VESA, support arm, or stand
- Can be extended with pushbutton module and/or signal tower

 Web code: #2765				
<b>Description</b>	<b>All-in-one industrial PC</b>		<b>Extra pushbutton module for BL2 PPC AIO65 operating panels</b>	
Processor	Intel® Pentium® N4200 1.1/2.4 GHz	Intel® Core™ i5-7442EQ 2.1/2.9 GHz	Prepared for 9 or 11 x 22.5 mm holes for accommodating hardware pushbuttons, supplied without wiring or pushbuttons	
Display size	15.6", 18.5", or 21.5" (Full HD)			
Type	BL2 PPC AIO65 2000	BL2 PPC AIO65 7000	BL2 AIO65 9 PB BOX	BL2 AIO65 11 PB BOX
Order No.	1138366	1138367	1160210	1160209

# Touch panels with Visu+

## The next generation of HMI devices

The TP 6000 product family is a flexible platform for HMI applications with various display sizes. All panels have Visu+ Runtime preinstalled. Existing Visu+ projects can be used directly on the TP-6000 panels without any changes.





**COMPLETE line**

### Your advantages

- ✓ Robust industrial grade glass front
- ✓ Visu+ Runtime available in all devices
- ✓ Native communication drivers for direct communication with most PLC and device manufacturer products on the industrial market
- ✓ Powerful quad-core processor for rapid response and refresh times
- ✓ Remote data access via Visu+ Mobile and HTML5 web client

### Main features

- ARM® Cortex® A9 1.2 GHz quad-core CPU
- Windows Embedded Compact 7
- PCAP multi-touch

 <b>Web code: #2766</b>			
<b>Description</b>	<b>Touch panels with Visu+</b>		
Display	17.79 cm (7")	25.9 cm (10.1")	30.73 cm (12.1")
Touch technology	Projective capacitive (PCAP), 2-point	Projective capacitive (PCAP), 5-point	
Processor	ARM® Cortex® A9 1.2 GHz (quad-core)		
Interfaces	1 x (10/100/1,000 Mbps) RJ45, 2 x USB 2.0, 1 x COM (RS-232/422/485), 1 x micro SD		
Type	TP 6070-WVPS	TP 6101-WXPS	TP 6121-WXPS
Order No.	<a href="#">1189629</a>	<a href="#">1190417</a>	<a href="#">1190420</a>

# PLCnext Control for Edge computing

## Optimized usage of data from the field

The EPC 15xx controllers combine the robustness of a proven industrial PC platform with the open PLCnext Technology® ecosystem, thus providing the ability to develop intelligent IoT Edge solutions. This closes the gap between the OT and IT worlds.

PLCnext Technology <sup>®</sup>  
 Designed by Phoenix Contact






COMPLETE line

### Your advantages

- ✓ Compact IPC design in an all-metal housing and with passive cooling
- ✓ Easy integration into existing IT infrastructures and connectivity on the field level with PLCnext Technology
- ✓ Reduction of the development and provision time with preinstalled development tools such as Node-RED
- ✓ Simple and secure management via an integrated web-based management tool

### Main features

- Fan-free system design
- Powerful Intel® Celeron® processor
- Extended local data storage
- Linux operating system
- High-level languages supported
- Dimensions: 99 mm x 92 mm x 46 mm or 63 mm

 Web code: #2761		
Description	PLCnext Control Edge devices	
Processor	Intel® Celeron® N3350 (dual-core)	
On-board storage	32 GB eMMC	
Additional memory	None	128 GB M.2 SSD
TPM 2.0	Yes	Yes
Type	EPC 1502	EPC 1522
Order No.	1185416	1185423

# PLC extension for PLCnext Control

## Add PROFI-safe modular

Individual extension option for compatible, modular PLCnext Control devices. Through the left-alignable functionality, the PLCnext Control AXC F 2152 and AXC F 3152 devices can be extended with a safety-oriented SPLC for PROFI-safe networks.

PLCnext Technology <sup>TM</sup>  
 Designed by Phoenix Contact




COMPLETE line

### Your advantages

- ✓ Safety extension for PLCnext Technology applications
- ✓ Safety-relevant high performance small scale SPLC with full functionality for cost-intensive applications
- ✓ Rapid implementation of requirements with reloadable C functions
- ✓ Can be used in applications with the highest safety requirements in accordance with SIL 3/PL e

### Main features

- Reloadable C functions
- Up to 32 PROFI-safe devices
- CPU: 2 x Arm® Cortex® M4
- Simultaneous operation as F-host and F-device

<p><b>i</b> Web code: <a href="#">#2767</a></p>	
<p><b>Description</b></p>	<p><b>Left-alignable safety extension</b></p>
<p>Transmission speed</p>	<p>10/100/1,000 Mbps</p>
<p>Connection method</p>	<p>Push-in</p>
<p>Dimensions without bus socket (W)</p>	<p>45 mm</p>
<p>Ambient temperature</p>	<p>-25°C ... +60°C</p>
<p>Type</p>	<p>AXC F XT SPLC 1000</p>
<p>Order No.</p>	<p><a href="#">1159811</a></p>

# Axioline F I/O system

## Bus couplers for extreme conditions

In harsh environments, reliable communication is essential. Axioline F features a particularly robust mechanical design. The portfolio has been extended to include two new bus couplers for the PROFINET and EtherNet/IP™ protocols for use in extreme conditions.



COMPLETE line






### Your advantages

- ✓ Wide range of possible applications with the extended temperature range
- ✓ Coated printed circuit boards withstand even the toughest ambient conditions
- ✓ High immunity even in environments contaminated with strong electromagnetic fields

### Main features

- Extended temperature range: -40°C ... +70°C
- Permissible humidity (operation): 5% ... 95%
- Noise emission: Class B in accordance with EN 61000-6-3
- Noise immunity: 8 kV air discharge according to EN 61000-6-2
- Maximum altitude: 3,000 m above mean sea level without derating

 Web code: #2769		
<b>Description</b>	<b>Bus coupler for EtherNet/IP™</b>	<b>Bus coupler for PROFINET</b>
Connection method	Push-in	
Type	AXL F BK EIP XC	AXL F BK PN TPS XC
Order No.	1167192	1068857

# Axioline E-I/O system

## Accessories set for potentially explosive areas

The accessories set is for metal versions of the Axioline E PROFINET devices. In combination with the set, Axioline E PROFINET devices can be installed in zone 2 and zone 22 potentially explosive areas.




### Your advantages

- ✓ Easy and tailored mounting for metal versions of the Axioline E PROFINET devices
- ✓ Clear view of all diagnostics and status indicators on the Axioline E devices when installed
- ✓ All components necessary for installation are included in an accessories set

### Main features

- Installation in zone 2 and zone 22 in accordance with EN 60079-0:2012+A11:2013, EN 60079-15:2010, and EN 60079-31:2014
- Set contains a housing protection plate and fastening clips, as well as other components
- Material: Stainless steel

<p><b>i</b> Web code: #2790</p>	
<p><b>Description</b></p>	<p><b>Accessories set</b></p>
<p>Type</p>	<p>AXL E ATEX PROTECTION SET</p>
<p>Order No.</p>	<p>1182217</p>

# Inline I/O system

## I/O modules for building automation

The DALI-2 module is multi-master-capable, and therefore allows the easy integration of DALI sensors into a DALI lighting controller. The RTD module allows the connection of NTC temperature sensors. The two I/O modules can be integrated seamlessly into an Inline station for building automation.






### Your advantages

- ✓ DALI-2 master with integrated DALI bus supply
- ✓ DALI certification issued by the DALI Alliance ensures compatibility with a huge variety of DALI devices
- ✓ The RTD4/NTC-ECO terminal block allows up to 4 cost-effective NTC temperature sensors to be connected to one Inline station
- ✓ Easy connection of NTC temperature sensors with 2-conductor technology

### Main features

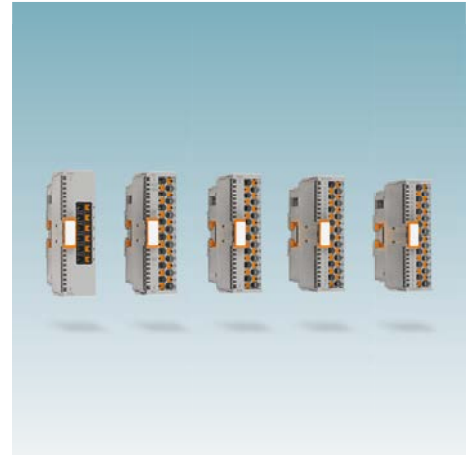
- DALI-2 module for controlling a DALI line with up to 64 lights and up to 64 sensors
- Electrical isolation of the DALI bus
- Guaranteed current carrying capacity of maximum 230 mA on the DALI bus
- RTD module for use on Inline controllers and bus couplers

 Web code: #2770		
<b>Description</b>	<b>I/O module</b>	
I/O functionality	Temperature measurement	DALI master
Ambient temperature (operation)	0°C ... +55°C	-25°C ... +55°C
Type	IB IL RTD 4/NTC-ECO	IB IL DALI MM-V2-PAC
Order No.	1185434	1199811

# Axioline Smart Elements

## New functions, greater flexibility

The portfolio of compact, system-independent Axioline Smart Elements has been extended by five new modules. Two digital, one analog, and one function module round out the range. This increases flexibility in your station design and extends your options.









**COMPLETE line**

### Your advantages

- ✓ Space savings in the installation without limiting the conductor cross-section of 1.5 mm<sup>2</sup>
- ✓ Reduced installation time for signal lines with Push-in Technology
- ✓ Allows a wide range of applications and easy startup thanks to reduced parameterization effort

### Main features

- 8 or 16 alternating terminal points on 15 mm x 62 mm for up to 1.5 mm<sup>2</sup> conductor cross-section with ferrule
- System-independent interface
- Up to 6 A I/O supply
- Diagnostics and status indicators
- Integrated release mechanism

 <b>Web code: #2768</b>					
<b>Description</b>	<b>I/O modules</b>				
I/O functionality	16 digital inputs, NPN logic	16 digital outputs, NPN logic	4 analog RTD inputs, Pt 1000	1 incremental encoder input	2 relay outputs
Connection method	Push-in				
Type	AXL SE DI16/1 NPN	AXL SE DO16/1 NPN	AXL SE RTD4 PT1000	AXL SE INC1 ASYM	AXL SE DOR2 W 230
Order No.	1105559	1105560	1182190	1182185	1105562



# Safe I/Os

## Network-independent safety solutions

The Axioline Smart Elements are compact, plug-in I/O modules for your individual automation projects. Our safe I/O modules with integrated SafetyBridge Technology allow the easy and network-independent realization of decentral safety solutions up to PL e and SIL 3.

SafetyBridge Technology<sup>®</sup>  
Designed by Phoenix Contact

Push-in Technology<sup>®</sup>  
Designed by PHOENIX CONTACT






COMPLETE line

### Your advantages

- ✓ Realize cost-effective safety solutions without additional safety controllers thanks to SafetyBridge Technology
- ✓ Maximum system availability thanks to real-time access to safety-relevant status and diagnostic information
- ✓ Easy configuration using the SAFECONF software
- ✓ Safe data transmission via wireless systems and to the cloud

### Main features

- Up to SIL 3 in accordance with EN 61508
- Up to SILCL 3 in accordance with EN 62061
- Up to Cat. 4/PL e in accordance with EN ISO 13849-1,
- 8 safe inputs with 1-channel assignment
- 4 safe inputs with 2-channel assignment
- 4 safe outputs with 1-channel assignment
- 2 safe outputs with 2-channel assignment

 Web code: #2772		
<b>Description</b>	<b>Input module</b>	<b>Output module</b>
Safe inputs	8	-
Safe outputs	-	4
Connection method	Push-in	Push-in
Protocol	SafetyBridge Technology	SafetyBridge Technology
Type	AXL SE SSDI8/3	AXL SE SSDO4/2 2A
Order No.	1190012	1190017

# Safety switches

## Safe emergency switch-off/emergency stop

The TÜV-certified emergency stop switches from Phoenix Contact immediately switch your machines over to a safe state in the event of an emergency. Our emergency switch-off switches can be installed on the operating panel of your system or directly at the place of use – even if the local conditions are extreme.









### Your advantages

- ✓ Increased occupational safety thanks to illuminated active/inactive status indicator
- ✓ Rapid on-site diagnostics with color-coded switching position indicator
- ✓ Protection against installation errors thanks to self-monitoring emergency stop contact module
- ✓ Modular system allows efficient solutions for individual applications

### Main features

- Suitable for applications in accordance with DIN ISO 13850 and EN 60204
- Direct opening action and foolproof in accordance with IEC 60947-5-1 and IEC 60947-5-5
- Twist release in accordance with DIN EN 60947-5-5
- Protection against dust and splash water in accordance with IP65/IP67/IP69K
- M12 connection optional

 Web code: #2771					
Description	Actuator for modular design	Actuator with anti-lock collar	Emerg. switch-off button with illum. status indicator	Emerg. switch-off button with M12 connection	Emerg. switch-off button for field installation
Dir. open. action IEC 60947-5-1	-	-	Yes	Yes	Yes
Connection method	Screw connection on the contact block	Screw connection on the contact block	Slip-on sleeve	5-pos. M12 connection	5-pos. M12 connection
Mounting	Front plate	Front plate	Front plate	Front plate	At the site of use
Actuator Ø	32 mm	32 mm	28 mm	28 mm	32 mm
Type	PSR-ESS-M0-H100	PSR-ESS-M0-H110	PSR-ESS-M0-H220-2001-C	PSR-ESS-M0-H210-2000-A	PSR-ESS-M2-H110-2000-A
Order No.	1221758	1221757	1221739	1221737	1221735

# NearFi couplers

## Contactless power and data transmission

The new NearFi couplers transmit power and real-time Ethernet data across an air gap without the need for contact. Therefore, connections subject to wear and slip rings in industrial applications can be replaced easily and costs caused by failures minimized.



NearFi Technology<sup>TM</sup>  
Designed by Phoenix Contact



### Your advantages

- ✓ Reduction of downtimes with maintenance- and wear-free transmission
- ✓ Protocol-independent, latency-free Ethernet real-time communication
- ✓ Suitable for time-critical applications, such as PROFINET
- ✓ Reliable and interference-free communication
- ✓ Plug and Play: As easy as a plug
- ✓ Rapid diagnostics with LEDs visible from all around

### Main features

- Contactless power transmission of up to 50 W (24 V/2 A)
- Data speed 100 Mbps (full duplex)
- Range approx. 10 mm
- Robust IP65 housing with M12 connection technology
- Can be used worldwide

 Web code: #2773						
	<b>Contactless power and data coupler</b>					
<b>Description</b>						
Transmission	Power and data		Power		Data	
Coupling type	Base	Remote	Base	Remote	Base	Remote
Type	NEARFI PD 2A ETH B	NEARFI PD 2A ETH R	NEARFI P 2A B	NEARFI P 2A R	NEARFI D ETH B	NEARFI D ETH R
Order No.	1234224	1234225	1234226	1234229	1234232	1234234

# Bluetooth Low Energy adapters Integrated industrial BLE sensors

The compact FL BLE 1300 wireless module with integrated antenna connects Bluetooth Low Energy sensor technology with Ethernet-capable controllers and computers. This allows access to sensor data from a machine control system, for example.




## Your advantages

- ✓ Reduction of downtimes with maintenance- and wear-free transmission
- ✓ Future-proof integration of almost all Bluetooth Low Energy sensors
- ✓ Your advantage: Reliable and long-term operation, even in industrial environments
- ✓ Connection of up to 8 sensors

## Main features

- Bluetooth Low Energy 5.0
- IP65 degree of protection
- Integrated antenna
- LEDs for diagnostics and status indicator
- Central and peripheral mode
- QUICKON M12 fast connection technology

<p><b>i</b> Web code: <a href="#">#2774</a></p>	
<b>Description</b>	<b>Bluetooth LE adapter</b>
Bluetooth standard	5.0
Profile	GATT
Temperature range	-40°C ... +70°C
Type	FL BLE 1300
Order No.	<a href="#">1118418</a>

# WLAN wireless module with external antennas

## Ideal for complex wireless tasks

The WLAN wireless modules make it easy to install a fast and stable WLAN network directly on your machines. The new versions are particularly compact and, with the external antenna connections, are ideally suited for wireless tasks in which flexible positioning of the antennas is necessary.



Push-in Technology<sup>®</sup>

Designed by Phoenix Contact





### Your advantages

- ✓ Easy and reliable creation of industrial WLAN networks
- ✓ Space-saving, flexible installation and universal mounting options with the compact design
- ✓ Fast roaming in cellular applications
- ✓ Easy control via the PLC with REST API
- ✓ Suitable for time-critical applications such as PROFINET or SafetyBridge

### Main features

- IP20 degree of protection
- 2 external antenna connections
- Two virtual WLAN interfaces
- MAC and IP filter
- IEEE 802.11 a,b,g,n (2.4 GHz and 5 GHz)
- Data rates of up to 300 Mbps

 Web code: #2775				
	<b>Compact wireless module</b>			
<b>Description</b>				
Region	Europe	USA, Canada	Europe	USA, Canada
Operating modes	Access point, client, 2 virtual access points		Access point, client, 2 virtual access points, mesh	
Temperature range	0°C ... +60°C		-40°C ... +60°C	
Max. number of WLAN clients	10 clients		60 clients	
Type	FL WLAN 1010	FL WLAN 1011	FL WLAN 2010	FL WLAN 2011
Order No.	2702899	2702900	1119246	1119248

# Managed Switches with real-time capability Enabling Time Sensitive Networking

The new FL Switch TSN 2300 devices are the first Phoenix Contact switches for Time Sensitive Networking (TSN). In addition to using them in classic applications, the innovative TSN technology also allows you to realize decentral and time-critical Ethernet networks.



COMPLETE line

Push-in Technology   
Designed by Phoenix Contact





## Your advantages

- Extensive options for setting up decentral and time-critical applications
- Improved performance, robustness, and availability of Ethernet networks
- PROFINET TSN profile supported
- User-friendly configuration of isochronous data traffic with innovative TSN function
- Supports all functions of the familiar FL SWITCH 2300 series

## Main features

- PROFINET version 2.4
- IEEE 802.1AS (precise time synchronization)
- Frame preemption
- Stream management via PROFINET
- Pluggable configuration memory (SD card)
- Connection of up to 16 Gigabit-capable Ethernet components

 Web code: <a href="#">#2776</a>	
Description	Managed TSN Switch
Ethernet ports	16 x RJ45
Transmission speed	10/100/1,000 Mbps
Dimensions W x H x D [mm]	85 x 130 x 115
Type	FL SWITCH TSN 2316
Order No.	<a href="#">1232304</a>

# Managed Switches with a low-profile design Suitable for any control cabinet

The series 2000 Managed Switches have been optimized for use in automation applications. With their low-profile design with the port output direction to the front, the new 2000F versions now allow Ethernet components to be networked even in control cabinets with a low installation depth.

Push-in Technology<sup>®</sup>

Designed by Phoenix Contact




COMPLETE line

## Your advantages

- ✓ Space saving design for low-profile control cabinets
- ✓ Network stabilization in Unmanaged Mode without the time and expense of configuration
- ✓ Simple and versatile configuration options (e.g., via micro SD card or mode button)
- ✓ Localization and correction of network errors thanks to extensive diagnostic functions
- ✓ Network protected against unnecessary data traffic with a multicast filter

## Main features

- Installation depth of 37 mm from the DIN rail
- Temperature range: 0°C ... +60°C
- Supply voltage: 18 V DC ... 32 V DC
- Loop protection via RSTP
- Syslog, SNMP, and CLI
- PROFINET (Conformance Class A) and EtherNet/IP™ basic functions

<p><b>i</b> Web code: #2777</p>	
<p><b>Description</b></p>	<p><b>Managed Switch for flat control cabinets</b></p>
<p>Ethernet ports</p>	<p>8 x RJ45</p>
<p>Transmission speed</p>	<p>10/100 Mbps</p>
<p>Dimensions W x H x D [mm]</p>	<p>75 x 105 x 43.5</p>
<p>Type</p>	<p>FL SWITCH 2008F</p>
<p>Order No.</p>	<p>1106707</p>

# Managed Switches with IP67 degree of protection

## Compact and robust for field installation

The series 2000 Managed Switches have been optimized for use in automation applications. With their high IP65/IP66/IP67 degrees of protection, robust M12 connections, and broad range of functions, the new 2600/2700 versions now allow Ethernet networks to be established directly in the field.








### Your advantages

- ✓ Robust metal housing
- ✓ Practically unlimited mounting options thanks to the narrow 60 mm design
- ✓ Flexible connection technology – suitable for classic M12 screw connection and innovative M12 push-pull technology
- ✓ Cost-effective and failsafe installation thanks to redundant power input/power output concept
- ✓ Wide range of configuration options, e.g., via mode button or micro SD card

### Main features

- IP65/IP66/IP67 degree of protection
- Temperature range: -40°C ... +70°C
- Supply voltage: 9 V DC ... 57 V DC
- M12 connection technology
- Preconfigured PROFINET versions (Conformance Class B)
- All features and functions of the FL SWITCH 2000 product family

 Web code: #2778				
	<b>Managed Switches with IP67 degree of protection</b>			
<b>Description</b>				
Ethernet ports	8 x M12 (D-coded)		8 x M12 (X-coded)	
Transmission speed	10/100 Mbps		10/100/1,000 Mbps	
Power supply	M12 (A-coded)	M12 (L-coded)	M12 (A-coded)	M12 (L-coded)
Type	FL SWITCH 2608	FL SWITCH 2608 PN	FL SWITCH 2708	FL SWITCH 2708 PN
Order No.	1106500	1106616	1106615	1106610



# Unmanaged Switches with IP67 degree of protection

## Compact and robust for field installation

The 1000 series Unmanaged Switches feature compact designs with gigabit-range transmission speeds and flexible installation options. The new 1608/1708 versions feature IP65/IP66/IP67 degrees of protection and robust M12 push-pull connection technology.






### Your advantages

- ✓ Flexible connection technology, suitable for classic M12 screw connection and innovative M12 push-pull technology
- ✓ Practically unlimited mounting options thanks to the narrow 60 mm design
- ✓ Robust metal housing
- ✓ PROFINET Conformance Class A for real-time data exchange

### Main features

- IP65/IP66/IP67 degree of protection
- Temperature range: -40°C... +70°C
- Supply voltage: 12 V DC... 57 V DC
- M12 connection technology

 Web code: #2779		
<b>Description</b>	<b>Unmanaged Switches with IP67 degree of protection</b>	
Ethernet ports	8 x M12 (D-coded)	8 x M12 (X-coded)
Transmission speed	10/100 Mbps	10/100/1,000 Mbps
Power supply	M12 (A-coded)	
Type	FL SWITCH 1608	FL SWITCH 1708
Order No.	<a href="#">1196227</a>	<a href="#">1196228</a>

# Unmanaged Switches with fiberglass connections

## Quick and flexible installation

The 1000 series Unmanaged Switches feature compact designs with gigabit-range transmission speeds and flexible installation options. Thanks to fiberglass connections and SFP availability, the new versions allow increased flexibility.



Push-in Technology<sup>®</sup>  
Designed by Phoenix Contact










COMPLETE line

### Your advantages

- ✓ High port density with the narrowest switch family
- ✓ Enhanced traffic prioritization for automation protocols
- ✓ PROFINET Conformance Class A for real-time data exchange
- ✓ Support of high-bandwidth applications thanks to versions with Gigabit RJ45 and dual-rate SFP connections

### Main features

- IP30 degree of protection
- Temperature range: -10°C ... +60°C
- AC or DC power supply
- Certified for use in potentially explosive environments (C1D2)
- Energy-efficient Ethernet
- Protection against polarity reversal

 Web code: #2780						
	Unmanaged Switches with a narrow design				Unmanaged Gigabit Switches with a narrow design	
Description						
Ethernet ports	4 x RJ45, 1 x SC	4 x RJ45, 1 x ST	4 x RJ45, 1 x SFP	5 x RJ45, 2 x SFP	4 x RJ45, 1 x SFP	5 x RJ45, 2 x SFP
Transmission speed	10/100 Mbps				10/100/1,000 Mbps	
Type	FL SWITCH 1004N-FX 1004N-FX SM	FL SWITCH 1004N-FX ST	FL SWITCH 1004N-SFX	FL SWITCH 1005N-2SFX	FL SWITCH 1104N-SFP	FL SWITCH 1105N-2SFP
Order No.	1084159 1085214	1085179	1085177	1085176	1085173	1085171

# Unmanaged Power over Ethernet switches Transmit data and power at the same time

Our PoE switches allow you to supply end devices with power and data at the same time via just one cable. Thanks to additional electrical isolation, the new versions also allow you to safely transmit power and signals via a single cable, even in larger applications.






## Your advantages

- ✓ Additional isolation for greater safety in SELV and PELV installations
- ✓ Multicast filter for blocking PTCP delay traffic for reliable communications in PROFINET networks
- ✓ PROFINET Conformance Class A
- ✓ Transmission speed of 10/100/1,000 Mbps on all RJ45 ports
- ✓ Wide input voltage range from 18 to 57 V DC for installation in 24 V and 48 V applications

## Main features

- IP20 degree of protection
- Temperature range: -10°C ... +60°C
- Reverse polarity protection
- Jumbo frames supported
- Auto-crossing (MDI/MDI-X) and auto-negotiation

 <b>Web code: #2781</b>		
<b>Description</b>	<b>Unmanaged Power over Ethernet Switches</b>	
Ethernet ports	5 x RJ45 (4 PoE)	8 x RJ45 (8 PoE)
PoE standard	802.3 af/at	
PoE: Maximum power per port	30 W	
PoE: Maximum power per switch	120 W	
Type	FL SWITCH 1001-4POE-GT	FL SWITCH 1000-8POE-GT
Order No.	1102077	1102079

# Secure remote maintenance for machines

## New clients for the mGuard Secure Remote Service

The cloud clients connect machines to the mGuard Secure Remote Service securely via the Internet and allow inexpensive and scalable remote maintenance. You can also route directly from the machine to the operator network via a dedicated WAN port or WLAN.

Push-in Technology<sup>®</sup>  
 Designed by Phoenix Contact






### Your advantages

- Simple firewall for allowing or blocking connections in the operator network
- Inexpensive entry into cloud-based remote maintenance
- Easy commissioning with configuration assistants in the cloud
- Convenient operation right on the front of the device
- Intuitive web interface operation

### Main features

- High security with VPN communication
- Pluggable configuration memory
- Can be used worldwide
- Connection for key switch
- Extended temperature range: -40°C ... +70°C

 Web code: #2782		
<b>Description</b>	<b>Cloud client with WAN interface</b>	<b>Cloud client with WLAN interface</b>
External network	Operator network via Ethernet	Operator network via Ethernet or WLAN
Type	CLOUD CLIENT 1101T-TX/TX	CLOUD CLIENT 2002T-WLAN
Order No.	1221706	1234360

# Cellular routers

## Ideal infrastructure applications

The TC Router product family allows robust data connections via mobile 4G networks (LTE). The new routers are now also available with WLAN for total flexibility when connecting to the LAN network.

Push-in Technology   
 Designed by Phoenix Contact





### Your advantages

- High performance thanks to 4G data connections
- Can be used in a wide range of applications through the extended temperature range
- Easy integration via two Ethernet connections or WLAN
- Convenient operation right on the front of the device

### Main features

- Extended temperature range: -40°C... +70°C
- 4G connections with 3G and 2G fallback
- WLAN access point for up to 10 devices
- Energy-saving mode
- Pluggable configuration memory
- High level of security with integrated firewall
- 4 digital inputs, 2 digital outputs

 Web code: #2783	
<b>Description</b>	<b>4G cellular router with WLAN interface</b>
Type	TC ROUTER 4102T-4G EU WLAN
Order No.	1234353

# CCS type 1 charging cables for High Power Charging Fast charging in North America with up to 500 kW

The CHARX connect DC charging cables with High Power Charging Technology are now also available for the North American CCS type 1 charging standard. With liquid-cooled charging connectors, they can charge e-vehicles in a just a few minutes. A comprehensive range of accessories round out the portfolio.

## High Power Charging Technology <sup>TM</sup>

Designed by Phoenix Contact










CHARX connect <sup>TM</sup>  
E-Mobility empowered by Phoenix Contact

### Your advantages

- ✓ Ultra-fast HPC charging with a charging power of up to 500 kW, efficient cooling, and safe temperature and leakage monitoring
- ✓ Fast and safe installation with optional panel feed-through
- ✓ Maintenance and environmentally friendly thanks to a replaceable mating face and semi-open cooling circuit based on a water-glycol mix
- ✓ Comfortable operation with flexible charging cable and rubberized handle components with innovative actuation lever

### Main features

- DC rated current: 500 A
- DC rated voltage: 1,000 V
- CAN bus interface and status output
- Temperature and leakage sensors
- Cooling medium: Water-glycol mix
- Degree of protection: IP54 (when plugged in)
- Cable length: 5 m (additional lengths on request)

 Web code: #2785						
	CCS type 1 DC charging cable			CCS type 1 repair kit	Cable handle	Passive cooling unit
Description	Angled to the left/right	Straight	None	-	-	-
Order No.	1085642/ 1089931	1085641	1085658	-	1091431	1237881
Order No. for frame	-	-	-	1085800	-	-
Order No. for frame, bit	-	-	-	1085801	-	-

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

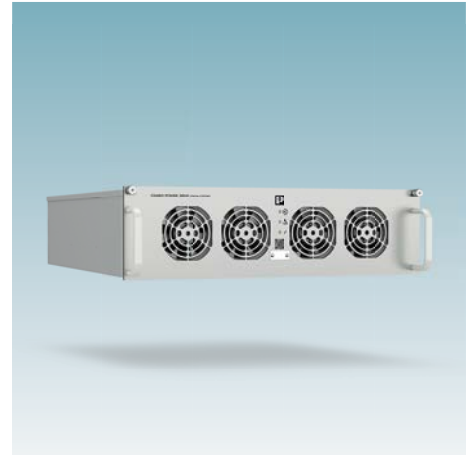
# Power electronics for DC charging stations

## Fast charging for today's demands

The high-efficiency CHARX power fast charging modules allow the efficient operation of your DC charging points for the fast charging of e-vehicles. The new 30 kW power module is ideally suited for setting up DC charging infrastructure right through to High Power Charging.

T-LOX Technology <sup>TM</sup>

Designed by Phoenix Contact



CHARX power <sup>TM</sup>


E-Mobility empowered by Phoenix Contact

### Your advantages

- ✓ Fast installation and servicing thanks to 19" standard dimensions as well as Push-Lock and T-LOX fast-connection technology
- ✓ Efficient, space-saving operation with a high level of efficiency, high power density, and innovative design
- ✓ Compliant with European safety and EMC standards
- ✓ Scalable charging power through the flexible connection of modules
- ✓ Flexible charging system setup thanks to galvanic isolation

### Main features

- AC input voltage: 360 V ... 480 V
- DC output current: 0 A ... 100 A
- DC output voltage: 150 V ... 1,000 V
- DC output power: 30 kW
- Efficiency: >95%
- CAN bus interface
- EMC standard: DIN EN 61851-21-2, Class B
- Dimensions W x H x D incl. connection terminal blocks:  
483 mm (19") x 134 mm (3 HU) x 550 mm

<p><b>i</b> Web code: #2751</p>	
<p><b>Description</b></p>	<p><b>DC power module</b></p>
<p>Type</p>	<p>CHARX PS-M2/3AC/1000DC/30KW</p>
<p>Order No.</p>	<p>1232243</p>

# Modular AC charging controllers

## Limitless charging infrastructure networking

CHARX control modular is the centerpiece of an intelligent and sustainable charging infrastructure on the path towards the All Electric Society. The scalable portfolio covers all AC charging applications, is issued with regular hardware and software updates, and is the platform for Smart Services.



**CHARX control**  
E-Mobility empowered by Phoenix Contact







Push-in Technology<sup>®</sup>  
Designed by Phoenix Contact

### Your advantages

- ✓ Full range of functions with a compact design
- ✓ Scale charging parks in any way thanks to the modular system architecture
- ✓ Fast installation and commissioning with Plug and Play capability, convenient configuration, and Push-in connection technology
- ✓ Intelligent and communicative through support for all common communication protocols
- ✓ Flexible realization of customer-specific software thanks to an open Linux platform based on PLCnext

### Main features

- V2G communication in accordance with ISO 15118
- 4G/2G cellular interface
- Cloud connection
- OCPP back-end connection
- Client-server function
- Scalable charging and load management
- Web-based management with dashboard
- Control modules alignable via DIN rail connector

 <b>Web code: #2786</b>					
	<b>Intelligent charging controller with open Linux operating system</b>				<b>Charging controller with basic functions</b>
<b>Description</b>					
Application	Server / client / stand-alone				Client / stand-alone
ISO 15118	Yes	No	Yes	No	No
4G/2G cellular communication	Yes	Yes	No	No	No
Ethernet	Yes	Yes	Yes	Yes	No
Type	CHARX SEC-3150	CHARX SEC-3100	CHARX SEC-3050	CHARX SEC-3000	CHARX SEC-1000
Order No.	1138965	1139012	1139018	1139022	1139034



# Surge protection for charging stations

## Safe charging without interruptions

The CHARX protect surge protective devices have been designed especially for use in charging stations and home chargers. They protect the power supply and the connected vehicle against dangerous overvoltages caused by lightning strikes and grid switching operations.








**CHARX protect**  
E-Mobility empowered by Phoenix Contact

### Your advantages

- ✓ Uninterrupted continuation of the charging process with a protected power supply
- ✓ Additional protection for the connected electric vehicle
- ✓ High system availability with high-performance protective circuit
- ✓ Easy insulation measurement and simple replacement during servicing thanks to uniform pluggable protective devices
- ✓ No mismatching of plugs thanks to mechanical coding

### Main features

- Total discharge current: 50 kA (10/350  $\mu$ s)
- Low voltage protection level:  $\leq 1.2$  kV
- Visual mechanical status indicator
- Remote signaling via floating changeover contact
- Pluggable protective modules
- Plugs can be tested with CHECKMASTER 2

 Web code: #2742				
	<b>Type 1+2 combined lightning current and surge arresters</b>		<b>Type 2 surge protective device</b>	
<b>Description</b>				
Nominal voltage	240 V AC / 415 V AC		240 V AC / 415 V AC	
Maximum continuous voltage	264 V AC		280 V AC	
Maximum discharge surge current	50 kA		40 kA	
Remote signaling	Yes	No	Yes	No
Type	VAL-EV-T1 / T2 264/12.5/3+1-R	VAL-EV-T1 / T2 264/12.5/3+1	VAL-EV-T2 280/3+1-R	VAL-EV-T2 280/3+1
Order No.	1180150	1180149	1180145	1180144

# Vehicle charging inlets for all applications From AC charging right through to HPC Charging

The universal CHARX connect vehicle charging inlets cover all common charging standards and performance classes and are suitable for all vehicle types. For the first time, the portfolio also includes AC charging inlets. Moreover, the temperature sensor technology, the IP protection class, and the connection technology have been optimized.



CHARX connect <sup>TM</sup>  
E-Mobility empowered by Phoenix Contact

## Your advantages

- ✓ Ultra-fast HPC charging with a temporary charging power of up to 500 kW
- ✓ Protected against overheating thanks to external temperature measuring
- ✓ Protected against jet water and sealed against dirt with high degrees of protection up to IP67, with additional IP6K6K and IP6K9K on the front
- ✓ Easy design-in with the AC and CCS charging inlets having identical dimensions and screw-on points
- ✓ Developed in accordance with the IATF 16949 automotive standard and conforming to IEC 62196, SAE J1772, and GB/T 20234

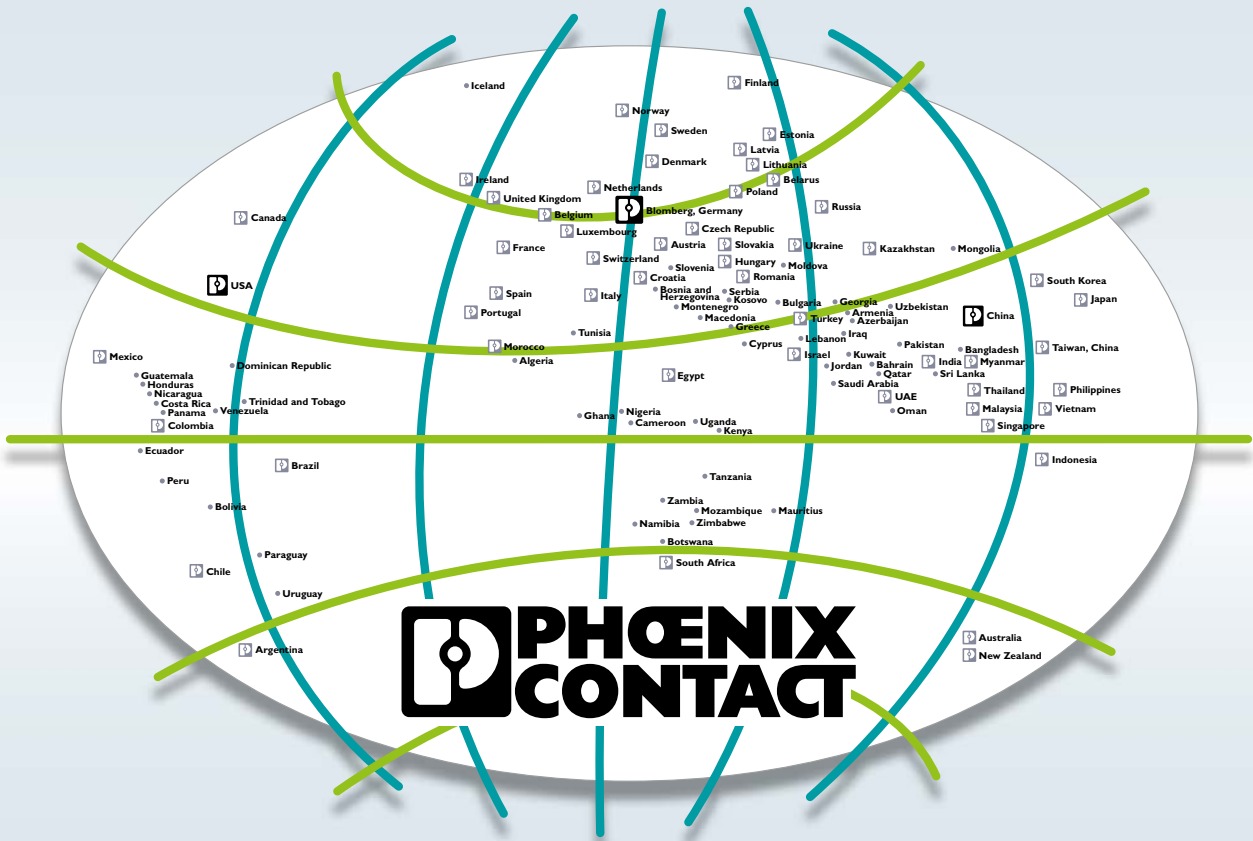
## Main features

- Charging standards: Type 1, CCS type 2, and GB/T
- DC rated current: 125 A ... 250 A
- DC rated voltage: 1,000 V
- AC rated current: 32 A ... 80 A
- AC rated voltage: 250 V ... 480 V
- Locking actuator voltage: 12 V or 24 V
- Degree of protection: IP55 or IP67 (not plugged in)
- Cable length: 2 m (additional lengths on request)

 Web code: #2784						
Description	AC type 1	CCS type 1	AC type 2	CCS type 2	AC GB/T	DC GB/T
Max. charging power DC/AC (continuous)	20 kW	250 kW/20 kW	26 kW	250 kW/26 kW	26 kW	250 kW
Order No.	<a href="#">1271836</a>	<a href="#">1162163</a>	<a href="#">1271966</a>	<a href="#">1162095</a>	<a href="#">1271831</a>	<a href="#">1271833</a>
Max. charging power DC/AC (continuous)	12 kW	125 kW/12 kW	8 kW	125 kW/8 kW	8 kW	125 kW
Order No.	<a href="#">1271960</a>	<a href="#">1194398</a>	<a href="#">1271830</a>	<a href="#">1270297</a>	<a href="#">1271832</a>	<a href="#">1271834</a>

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





## Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing future-oriented components, systems, and solutions in the fields of electrical engineering, electronics, and automation. With a global network reaching across more than 100 countries with over 17,600 employees, we maintain close relationships with our customers, something we believe is essential for our common success.

Our wide variety of innovative products makes it easy for our customers to implement the latest technology in a variety of applications and industries. We focus on developing the fields of energy, infrastructure, process, and factory automation.

You can find your local partner at  
[phoenixcontact.com](https://www.phoenixcontact.com)