

New products 2021

Connection and automation technology

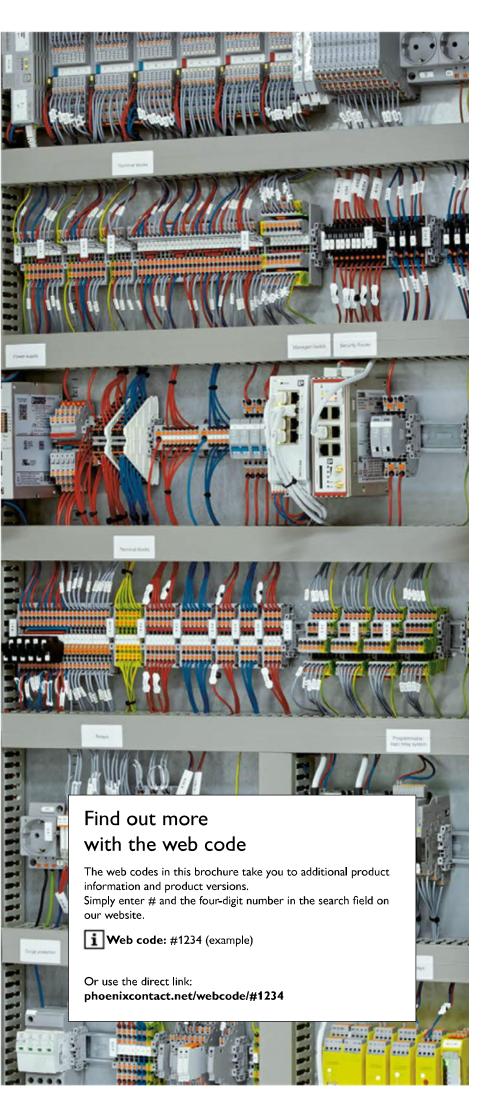




New products 2021 Innovative products for your industrial systems

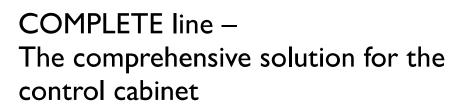
As a leading manufacturer of connection technology and automation components, we are always working to turn the growing demands of your applications and markets into new innovations. Use our products to increase the efficiency, availability, and safety of your industrial systems. Discover the advantages of our versatile new products for yourself.





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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.

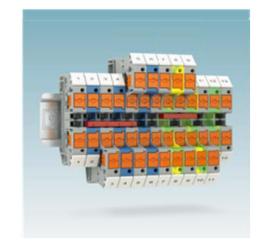


The new standard for the control cabinet

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 mm². 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.

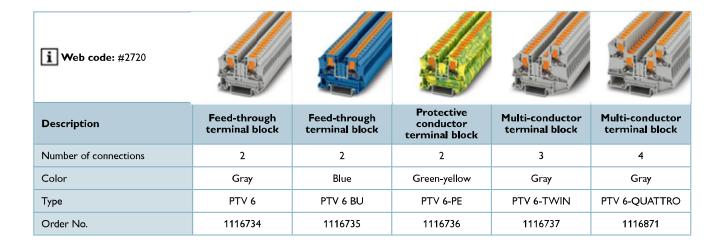


Push-in Technology Designed by Phoenix Contact

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

- Push-in connection on the side
- Voltage: 1,000 V
- Current: 41 A
- Nominal cross-section: 6 mm²
- Connectable conductor cross-sections: 0.5 mm² ... 10 mm²
- Double function shaft
- Testing option with test points
- PE versions



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.



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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

- Push-in connection on the side
- Voltage: 1,000 V
- Current: 30 A
- Nominal cross-section: 6 mm²
- · Connectable conductor cross-sections: $0.5 \text{ mm}^2 \dots 6 \text{ mm}^2$
- · Single function shaft
- Compact size

i Web code: #2721			0	
Description	Test disconnect terminal block	Test disconnect terminal block	Cover	Insulation plate
Overall width	8.2 mm	8.2 mm	0.5 mm	0.5 mm
Test sockets	Optional	Integrated	-	-
Туре	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.

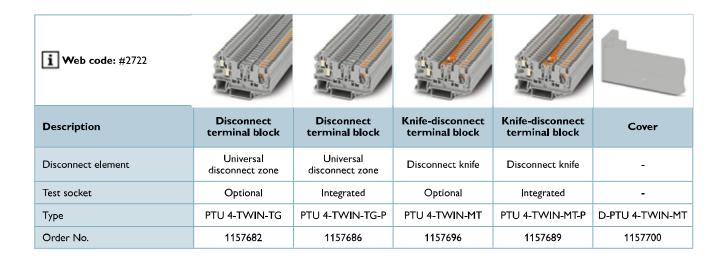


Push-in Technology Designed by Phoenix Contact

Your advantages

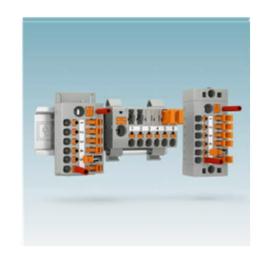
- Push-in connection on the internal control cabinet side and a universal screw connection on the end customer side
- The compact design and front connection allow wiring in a confined space
- Easy testing with 4 mm test plugs
- Quick and easy separation of signals and installation of fuses and components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

- Push-in connection technology
- Screw connection technology
- Voltage: 400 V
- Current: 20 A
- Nominal cross-section: 4 mm²
- Connectable conductor cross-sections: 0.2 mm²...6 mm²
- Integrated 4 mm test socket



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).



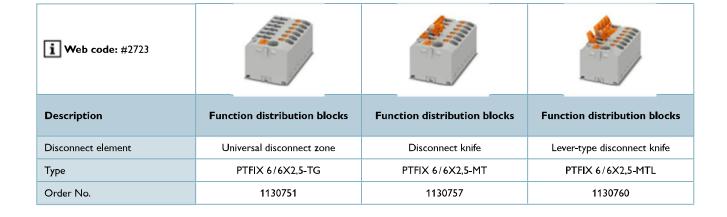
Push-in Technology[™]

Designed by Phoenix Contact

Your advantages

- Quick and easy separation of signals and installation of fuses and
- 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

- Push-in connection
- Voltage: 400 V
- · Current: 20 A
- Nominal cross-section: 2.5 mm²
- · Connectable conductor cross-sections: 0.14 mm² ... 4 mm²
- Test point for all common test probes



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

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

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

Distributor boxes with QUICKON connection Easy connection without connectors

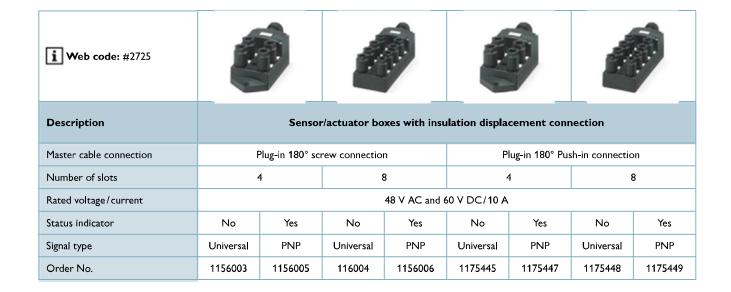
Distributor boxes with QUICKON insulation displacement connection allow the effortless and clear cabling of sensors and actuators without connectors. Connect the open cable ends of your sensors directly and without having to strip them.



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
- Increased machine availability with simple diagnostics

- QUICKON IDC connection
- Conductor cross section 5-pos.: 0.14 mm² ... 0.5 mm²
- Conductor cross section 4-pos.: 0.14 mm² ... 0.75 mm²
- Slot assignment: Doubled
- Degree of protection: IP65, IP67



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
- 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

- · Push-pull internal and external locking
- · Standardized in accordance with IEC 61076-2-010
- A-coded
- Conductor cross-section: 0.34 mm²
- · Degree of protection: IP65, IP67, IP68
- PUR, halogen-free, black

i Web code: #2679	8	8.	
Description	M12 push-pull connectors		
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	
Туре	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

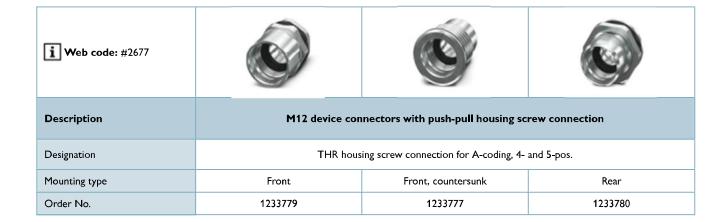
M12 device connectors with push-pull internal locking allow secure and tool-free device connection. The countersunk M12 push-pull flush-type female connector sits flush with the housing and can be aligned more closely. This saves installation space and allows for compact housing designs.



Your advantages

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

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



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

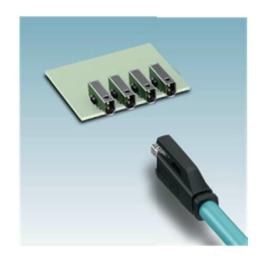
- Transmission standard: 10BASE-T1 to 1000BASE-T1
- Data rates of up to 1 Gbps (up to 600 MHz)
- Power over Data Line (PoDL) up to 60 W
- Range of up to 1,000 m
- 360° shielded device connectors for front and rear mounting
- Cable structure: 1 x 2 x AWG 22/7
- Degree of protection: IP67

i Web code: #2670			5		
Description	SPE M8 female THR 180°	SPE M8 female SMD 180°	SPE M8 female THR 90°	SPE-M8 patch cable, 2 m	SPE-M8 patch cable, 2 m
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")			-
Housing screw connection, rear mounting	1412505			-	-
Туре	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	121752 4

*) 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

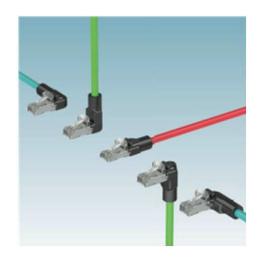
- Future-proof: Standardized connectors in accordance with IEC 63171-2 (IP20)
- Compact: SPE PCB connectors allow higher packing density
- Efficient: PCB connectors for SMD, THR, and wave soldering processes for automated processing
- Variable: PCB connectors in straight and angled versions as well as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

- 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

i Web code: #2671		10		
Description	SPE female, 180°	SPE female, 90°	SPE female, 90° LED	SPE patch cable
Contact type	Male			Female
Soldering process	THR and wave soldering			-
LED		-	Yes	-
Туре	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_A

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_A
- 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

- Data transmission of up to 10 Gbps in accordance with CAT5 and CAT6A
- 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

i Web code: #2675	8	1	1	33
Description	INDUSTRIAL patch cables for PROFINET			
Design	Straight/straight	Straight/down	Straight/up	Straight/straight
Number of positions	4	4	4	8
Transmission		100 Mbps		
Cable type and length	Configurable			
Туре	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_A

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_A
- 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
- Universal approval for the global market allows diverse use

- Data transmission of up to 10 Gbps in accordance with CAT5 and CAT6_A
- · LSZH sheath
- Lengths from 0.3 m ... 25 m
- · Cable shielding
- Locking clip protection
- Approvals: CE, EAC, DNV GL, cULus

i Web code: #2676				
Description	BUILDING patch cable, CAT5		BUILDING pate	ch cable, CAT6 _A
Design	Straight/straight			
Number of positions		8	3	
Transmission	1 G	ibps	10 (Gbps
Cable length	2 m	5 m	2 m	5 m
Туре	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

- 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: $0.5~\text{mm}^2\dots2.5~\text{mm}^2$
- Degree of protection: IP67, IP68
- Shock resistance: IK07



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
- Easy mounting on panel-mount bases of sizes B16 and B24
- Reliable connection: Secure seal and strain relief

- · 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

i Web code: #2727			
Description	HC-CES adapter sleeve		
Connection size	B16	B24	
Cable entry size	B10	B16	
Number of cable seals in the cable entry system	Max. 6	Max. 8	
Туре	HC-STA-B16/B10-CESFD-PL-BK	HC-STA-B24/B16-CESFD-PL-BK	
Order No.	1252470	1252472	

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.

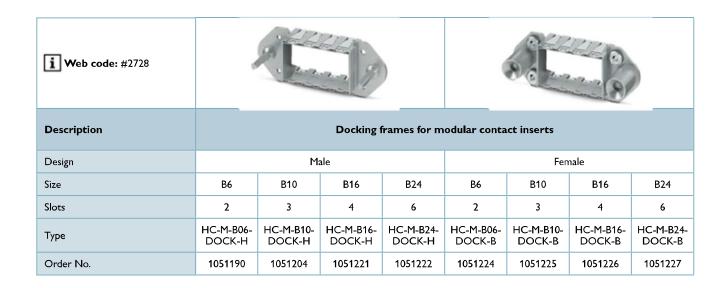


COMPLETE line

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

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



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.





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

- 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

i Web code: #2729		
Description	Engineering software	
Туре	clipx ENGINEER	
Order No.	12722 4 1	

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
- 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

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

i Web code: #2730	AK		DEFECTIVE STATE OF THE STATE OF	
Description	Workstation		Soft	ware
Туре	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
- Process reliability thanks to pressure lock and automatic cross-section adjustment

- · For insulated and non-insulated ferrules in accordance with DIN 46228 parts 1 and 4
- · Conductor cross-sections from 0.14 mm²...6 mm² and for TWIN ferrules up to $2 \times 4 \text{ mm}^2$
- · Automatic cross-section adjustment



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.



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

- · Suitable for crimping rotated male and female contacts
- Conductor cross sections from $0.34 \text{ mm}^2 \dots 4 \text{ mm}^2$
- · Setting in 0.01 mm steps with digital display
- · Electronic wear monitoring with recalibration function

i Web code: #2732	r	1231
Description	Crimping tools	Locator
Туре	CRIMPFOX-TC MP-6	CRIMPFOX-TC MP/LOC-1
Order No.	1202888	1142829

The space-saving universal tool Flexibility with crimp insert changeover

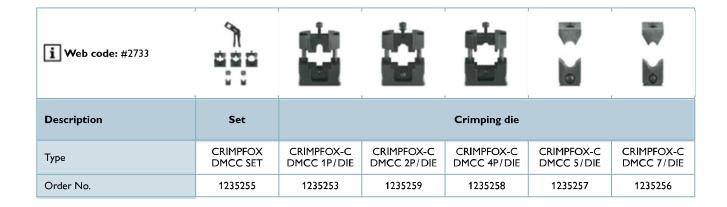
The space-saving universal CRIMPFOX-C D tool with parallel crimping process for shielded DMCC 0,5 PCB connectors with 2.54 mm pitch. The combination of various dies and crimp insert versions allows reliable EMC shielding when crimping Ethernet cables.



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

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



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

- 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

i Web code: #2741		The state of the s		American State of the State of	
Description	T1+T2 combined lightning current and surge arrester and surge arrester 12.5 kA discharge capacity T1+T2 combined lightning curre and surge arrester 7.5 kA discharge capacity		e arrester	Remote signaling module	
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			-	
Туре	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-PTV 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.



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



- Push-in connection technology
- Two terminal points per position
- Through-wiring in the remote signaling
- Maximum conductor cross-section: 10 mm²
- Test point
- · Overall width: 4 HP

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

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.



Designed by Phoenix Contact

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



- 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

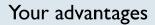
i Web code: #2740				
Description	Protection for analog and digital telecommunications interfaces			
Nominal voltage	24 V DC 24 V DC			
Rated current	600 mA	600 mA		
Connection technology	Push-in Screw			
Туре	TTC-6-1×2-TELE-PT	TTC-6-1x2-TELE-UT		
Order No.	1077106	1077107		

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

Designed by Phoenix Contact



- 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













Description	Surge protective devices for signal circuits				Terminal block	
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 ² 4 mm ²		
Туре	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

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

i Web code: #2739		
Description	Test adapter for CLIXTRAB	
Туре	CM 2-PA-CLT	
Order No.	1183360	

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.





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



- Supply voltage: 12 V DC ... 24 V DC
- Group message, reset, warning at I >80%
- PROFINET communication
- Push-in connections: 16 mm²
- Test point per connection
- Total current monitoring ≤45 A
- · Power display with nominal current locking

i Web code: #2734			
Description	With status output and reset input	With PROFINET communication interface	
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 × 132.4 × 111.3	24.8 × 132.4 × 111.3	
Туре	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.

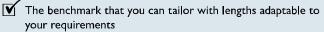


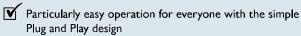
- · Basic and extension busbars
- · Various lengths

Main features

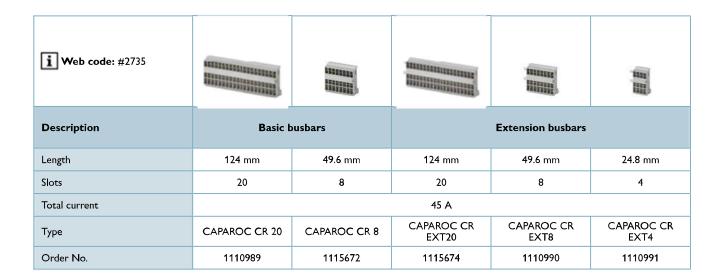
- · Reserve slots can be planned right at
- · Integrated positive and negative distribution
- Total current of up to 45 A
- Hot-swap capability (maintenance without interruption)

Your advantages





Exceptionally easy design-in with universal busbars up to 45 A



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.



Designed by Phoenix Contact

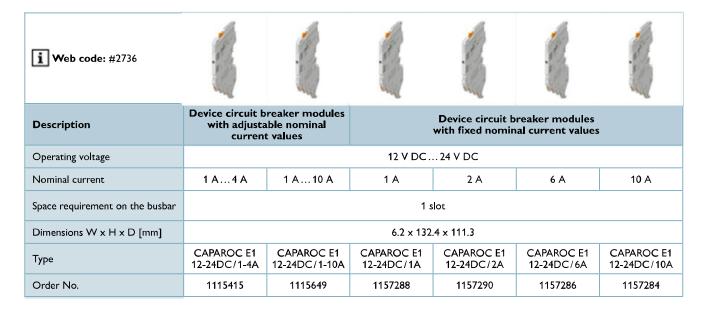
NEC Class 2

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



- Push-in connections: 4 mm²
- 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



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[™]

Designed by Phoenix Contact

NEC Class 2

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

- Push-in connections: 4 mm²
- 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

i Web code: #2737			
Description	4-channel device circuit breaker modules, adjustable		
Operating voltage	12 V DC 24 V DC		
Nominal current	1 A4 A 1 A10 A		
Space requirement on the busbar	2 slots		
Dimensions W x H x D [mm]	12.4 x 132.4 x 111.3		
Туре	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

Designed by Phoenix Contact

NEC Class 2

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



- Push-in connections: 4 mm²
- · 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

i W eb code: #2787				
Description	2-channel device circuit breaker modules, adjustable			
Operating voltage	12 V DC 24 V DC			
Nominal current	1 A4 A 2 A10 A			
Space requirement on the busbar	2 slots			
Dimensions W x H x D [mm]	12.4 x 132.4 x 111.3			
Туре	CAPAROC E2 12-24DC/1-4A CAPAROC E2 12-24DC/2-10			
Order No.	1115655	1110984		

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.



COMPLETE line

Push-in Technology[™]

Designed by Phoenix Contact

NEC Class 2

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

- Push-in connections: 4 mm²
- 4-way 0 V potential distribution
- · Overall width: 6 mm
- Prevention of wiring errors with blue
- Test points at each connection

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

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.





- 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 ≥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



- Static boost of up to 125% for a sustained
- 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: $-40^{\circ}C...+70^{\circ}C$

i Web code: #2743		17223	
Description	1-phase power supplies 100 V AC 240 V AC		3-phase power supply 3 x 400 V AC 500 V AC
Output voltage	110 V DC135 V DC 48 V DC56 V DC		48 V DC 56 V DC
Output current	4 A	20 A	20 A
Static boost Dynamic boost SFB Technology	5 A 22.5 A 6 A (5 s) 30 A (5 s) 24 A (15 ms) 105 A (15 ms)		22.5 A 30 A (5 s) 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
Туре	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.



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
- 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

- 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



Power supplies with basic functionality Compact housing and high power density

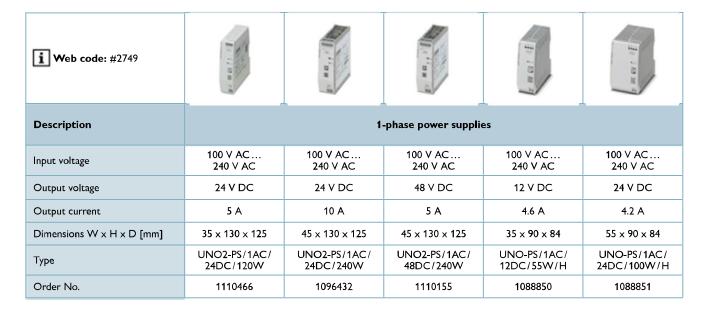
The new UNO POWER generation of power supplies feature active function monitoring, a DC OK LED, and the relay contact. The high power density means that these power supplies are the perfect solution, especially in compact control boxes.



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°C
- Easy output voltage system diagnostics with the floating switch contact and DC OK LED
- Alignable without minimum clearance to neighboring modules

- Adjustable output voltage: 24 V DC ... 28 V DC
- LED signaling and DC OK relay contact
- High power density: 500 W/dm3
- Efficiency up to 94.6%
- High MTBF: >500,000 h
- Wide temperature range: -25°C ... +70°C
- H versions: Satisfy the EN 60335 standard



Power supplies with IP67 degree of protection Robust for supply in the field

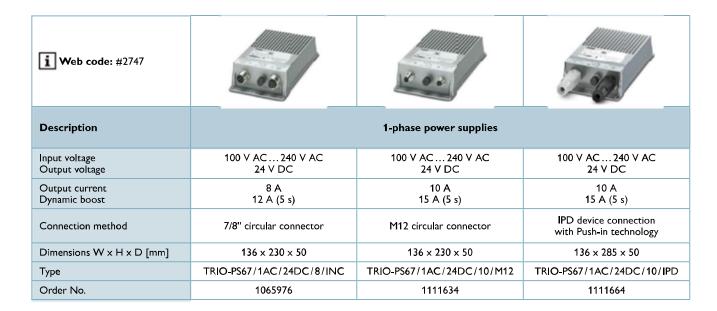
The robust TRIO POWER IP67 power supplies are water- and dust-tight. They have been developed specially for applications in the field, outside of the control cabinet, and are equipped with M12, 7/8", or IPD device connections. This increases their installation flexibility.



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,
- Reliable startup of high loads with dynamic boost
- Improved diagnostic options in the field with DC OK LED and

- 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



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

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
- High system availability due to the robust design
- Quick and easy installation with Push-in connection

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

i Web code: #2748			
Description	DC/DC converter		
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 × 130 × 120		
Туре	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.



COMPLETE line

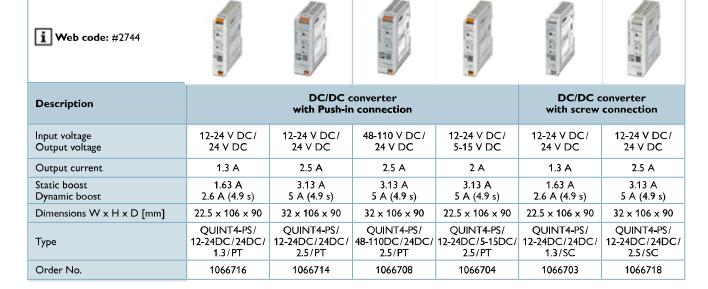
Push-in Technology

Designed by Phoenix Contact

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
- Compact, slim-line design saves space in the control cabinet

- 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



DC/DC converters with maximum functionality Powerful with SFB Technology

The new OUINT 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.



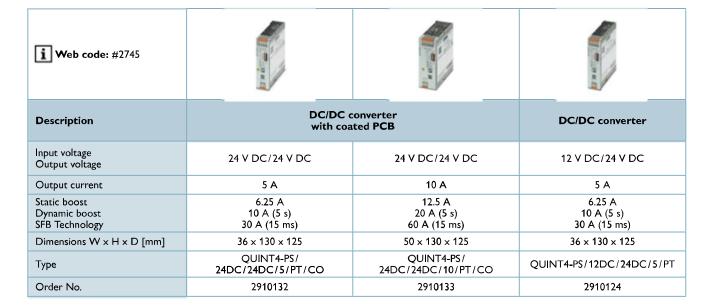


SFB Technology Designed by Phoenix Contact

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

- 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



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.



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



- · 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

i Web code: #2746	: 1			
Description	QUINT CAP with communication interface			
Input voltage Output voltage	24 V DC 24 V DC			
Output current Static boost	20 A 20 A 20 A 25 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			
Туре	QUINT4-CAP/ QUINT4-CAP/ QUINT4-CAP/ 24DC/20/16KJ/USB 24DC/20/16KJ/PN 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.





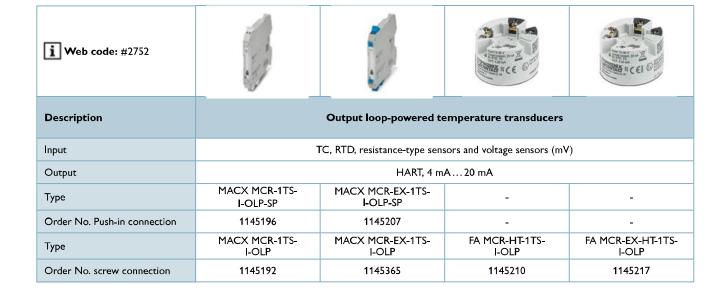
Your advantages

- 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



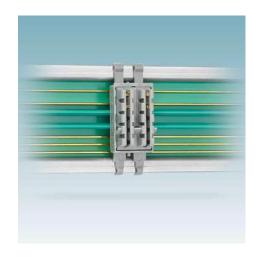


- HART® communication
- · Output loop-powered
- · Universal input for RTD, TC, resistance-type sensors and voltage sensors (mV)
- · Installation in connecting head, form B (DIN EN 50446)
- Installation in control cabinets (DIN rail housing)



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

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

i Web code: #2753	
Description	Power Rail adapter
Input	9.9 V DC30 V DC
Number of positions	2
Туре	ME 6,2 TBUS-PR-ADAPTER
Order No.	1136500

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.







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

- · 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)

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

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.



Designed by Phoenix Contact

Your advantages

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



- · Very narrow relay module for relays with 4 force-guided contacts
- · Integrated status LED and freewheeling
- 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

i Web code: #2755					
Description	Forc	Force-guided coupling relay			
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			
Туре	RIF-RPT-LDP- 24DC/2X2/2X1/AU/F	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.



Designed by Phoenix Contact

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



- 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 5×20 mm glass fuses can be used

i Web code: #2756				
Description	PLC fuse adapter with failure indicator	PLC fuse adapter with failure indicator	PLC fuse adapter without failure indicator	
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	
Туре	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.



COMPLETE line

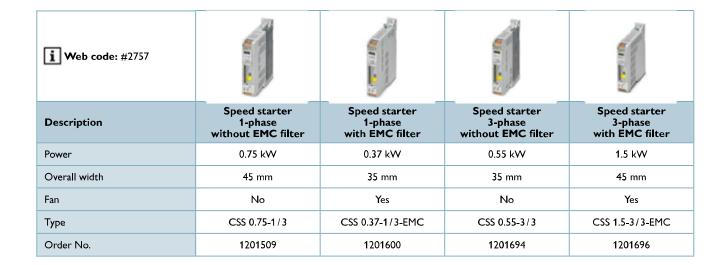
Push-in Technology[™]

Designed by Phoenix Contact

Your advantages

- Quick installation and commissioning with easy wiring and intuitive operation concept
- Safe shutdown thanks to the integrated Safe Torque Off (STO)
- 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

- · 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



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



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



- 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

i Web code: #2758					
Description		oof hybrid motor Link connection		oof hybrid motor FS 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
Туре	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 Proficioud 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

- 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





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

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

i Web code: #2760		
Description	IO-Link communication module	
Diameter	70 mm	
Height	66 mm	
Ambient temperature (operation)	-20°C +50°C	
Туре	PSD-S IOL SL	
Order No.	1191993	

IPCs with stainless steel housings Optimized for hygiene applications

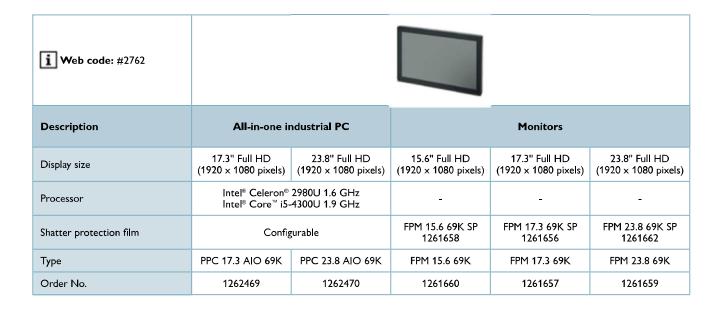
The new hygiene IPCs feature an all-round closed stainless-steel housing without screws or sharp edges. The high performance and reliable panel PCs and monitors are optimized for machine and system operation in hygiene applications in the pharmaceuticals, foodstuffs, beverage, and chemicals industries.



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

- 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)



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.

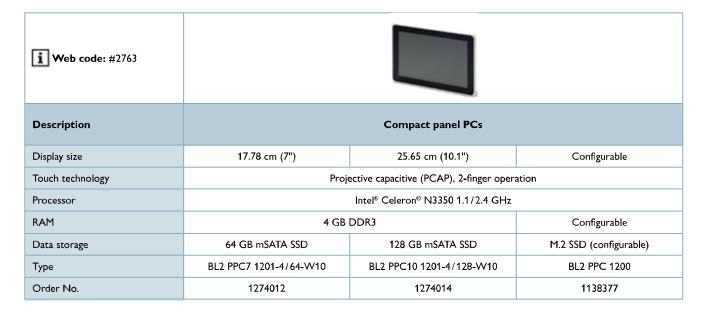


COMPLETE line

Your advantages

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

- · 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



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.





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

- · 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
- Operating temperature range: -20°C ... +60°C

i W eb code: #2764	= 1== 3	= I and is	
Description	Compact box PCs		
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		
Туре	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

- 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

i Web code: #2765			0 000===00	
Description	All-in-one industrial PC			utton module 5 operating panels
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,	
Display size	15.6", 18.5", or	15.6", 18.5", or 21.5" (Full HD)		ring or pushbuttons
Туре	BL2 PPC AIO65 2000	BL2 PPC AIO65 7000	BL2 AIO65 9 PB BOX BL2 AIO65 11 PB	
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.



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

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

i Web code: #2766				
Description	Touch panels with Visu+			
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			
Туре	TP 6070-WVPS TP 6101-WXPS TP 6121-WXPS			
Order No.	1189629	1190417	1190420	

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.



COMPLETE line

PLCnext Technology Design and by Phoen ix Contact

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

- · 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

i 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			
Туре	EPC 1502	EPC 1522		
Order No.	1185416 1185423			

PLC extension for PLCnext Control Add PROFIsafe 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 PROFIsafe networks.





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



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

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

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.



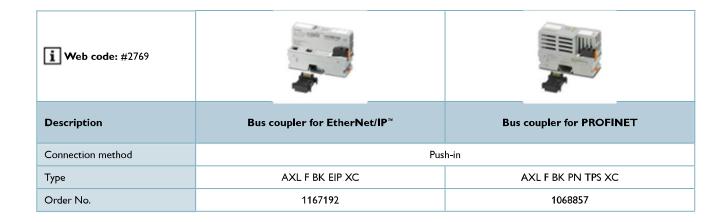
EtherNet/IP



Your advantages

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

- 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



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

- · 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

i Web code: #2790	
Description	Accessories set
Туре	AXL E ATEX PROTECTION SET
Order No.	1182217

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

- 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

i Web code: #2770	The state of the s				
Description	I/O module				
I/O functionality	Temperature measurement	DALI master			
Ambient temperature (operation)	0°C+55°C	-25°C +55°C			
Туре	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 mm²
- Reduced installation time for signal lines with Push-in Technology
- Allows a wide range of applications and easy startup thanks to reduced parameterization effort

- 8 or 16 alternating terminal points on $15 \text{ mm} \times 62 \text{ mm}$ for up to 1.5 mm^2 conductor cross-section with ferrule
- System-independent interface
- Up to 6 A I/O supply
- · Diagnostics and status indicators
- · Integrated release mechanism

i Web code: #2768		100000000000000000000000000000000000000	The second secon		Discourage of the Control of the Con	
Description		I/O modules				
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					
Туре	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.













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



- 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

i Web code: #2772	AND THE PROPERTY OF THE PROPER	Mose	
Description	Input module	Output module	
Safe inputs	8	-	
Safe outputs	- 4		
Connection method	Push-in	Push-in	
Protocol	SafetyBridge Technology	SafetyBridge Technology	
Туре	AXL SE SSDI8/3 AXL SE SSDO4/2 2A		
Order No.	1190012	1190017	

Safety switches Safe emergency switch-off/emergency stop

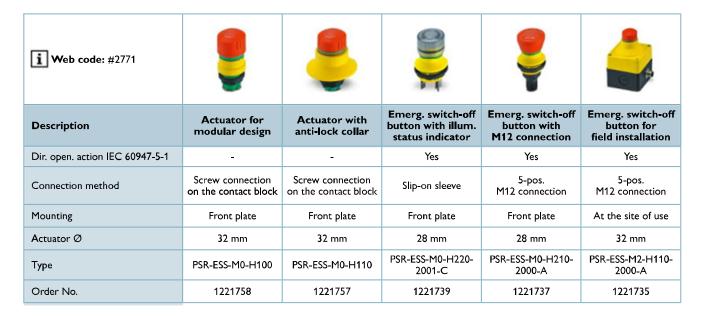
The TÜV-certified emergency stop switches from Phoenix Contact immediately switch your machines over to a safe state in the event of an emergency. Our emergency switch-off switches can be installed on the operating panel of your system or directly at the place of use – even if the local conditions are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



Your advantages

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

- 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



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 Designed by Phoenix Contact



Your advantages

- Reduction of downtimes with maintenance- and wear-free
- 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

- · 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

i Web code: #2773	((0))	((0))	((0))	((12))	((0))	((0))
Description		c	Contactless power	r and data couple	r	

Description	Contactless power and data coupler					
Transmission	Power and data		Power		Data	
Coupling type	Base Remote		Base	Remote	Base	Remote
Туре	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
- Future-proof integration of almost all Bluetooth Low Energy sensors
- Your advantage: Reliable and long-term operation, even in industrial
- Connection of up to 8 sensors

- 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

i Web code: #2774		
Description	Bluetooth LE adapter	
Bluetooth standard	5.0	
Profile	GATT	
Temperature range	-40°C +70°C	
Туре	FL BLE 1300	
Order No.	1118418	

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 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

- 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

i Web code: #2775				
Description	Compact wireless module			
Region	Europe USA, Canada		Europe	USA, Canada
Operating modes	Access point, client, 2	2 virtual access points	Access point, client, 2 vi	rtual access points, mesh
Temperature range	0°C	+60°C	-40°C	. +60°C
Max. number of WLAN clients	10 clients		60 cl	ients
Туре	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.





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
- Supports all functions of the familiar FL SWITCH 2300 series



- 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**

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

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.





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
- Localization and correction of network errors thanks to extensive diagnostic functions
- Network protected against unnecessary data traffic with a multicast filter





- 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

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

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.

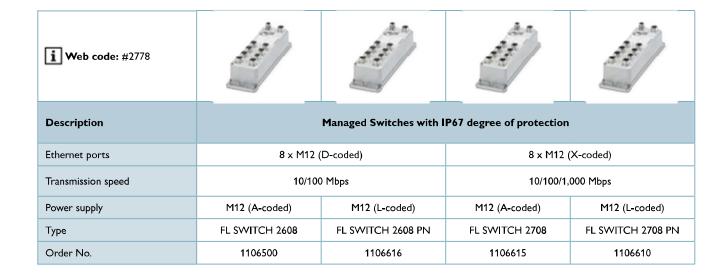




Your advantages

- 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

- 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



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

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

i Web code: #2779				
Description	Unmanaged Switches with	IP67 degree of protection		
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)		
Туре	FL SWITCH 1608	FL SWITCH 1708		
Order No.	1196227	1196228		

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.







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

- 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

i Web code: #2780							
Description	Unmanaged Switches with a narrow design				Unmanaged Gigabit Switches with a narrow design		
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	
Туре	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

- IP20 degree of protection
- Temperature range: $-10^{\circ}C...+60^{\circ}C$
- Reverse polarity protection
- Jumbo frames supported
- · Auto-crossing (MDI/MDI-X) and auto-negotiation

i W eb code: #2781		Sees, sees		
Description	Unmanaged Power over Ethernet Switches			
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			
Туре	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

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

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

i Web code: #2782				
Description	Cloud client with WAN interface	Cloud client with WLAN interface		
External network	Operator network via Ethernet	Operator network via Ethernet or WLAN		
Туре	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.



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

- 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

i Web code: #2783	12 12 2- 2 2 1				
Description	4G cellular router with WLAN interface				
Туре	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 ¹³ Designed by Phoenix Contact



- 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



CHARX connect[®] E-Mobility empowered by Phoenix Contact

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

Description	CCS type 1 DC charging cable			CCS type 1 repair kit	Cable handle	Passive cooling unit
Panel feed-through	Angled to the left/right	Straight	None	-	-	-
Order No.	1085642/ 108 9 931	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.



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



CHARX power[™] E-Mobility empowered by Phoenix Contact

- 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

i Web code: #2751	88:88
Description	DC power module
Туре	CHARX PS-M2/3AC/1000DC/30KW
Order No.	1232243

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.

Push-in Technology[™]

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



CHARX control [™] E-Mobility empowered by Phoenix Contact

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

i Web code: #2786











Description	Intelligent c	Charging controller with basic functions				
Application		Server/client/stand-alone				
ISO 15118	Yes	No				
4G/2G cellular communication	Yes	No				
Ethernet	Yes	No				
Туре	CHARX SEC-3150 CHARX SEC-3100 CHARX SEC-3050 CHARX SEC-3000				CHARX SEC-1000	
Order No.	1138965	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 $^{f D}$ 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

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



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[™] E-Mobility empowered by Phoenix Contact

Your advantages

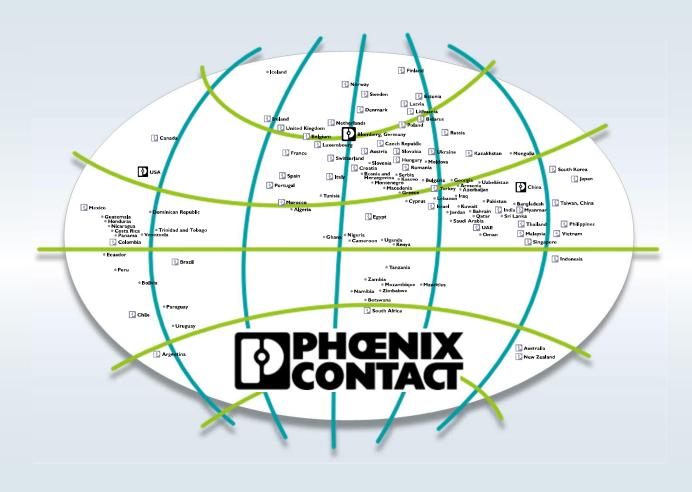
- Ultra-fast HPC charging with a temporary charging power of up to 500 kW
- Protected against overheating thanks to external temperature measuring
- Protected against jet water and sealed against dirt with high degrees of protection up to IP67, with additional IP6K6K and IP6K9K on the front
- Easy design-in 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)

i Web code: #2784				8		
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.	1271836	1162163	1271966	1162095	1271831	1271833
Max. charging power DC/AC (continuous)	12 kW	125 kW/12 kW	8 kW	125 kW/8 kW	8 kW	125 kW
Order No.	1271960	1194398	1271830	1270297	1271832	1271834

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

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