



# NEW PRODUCTS

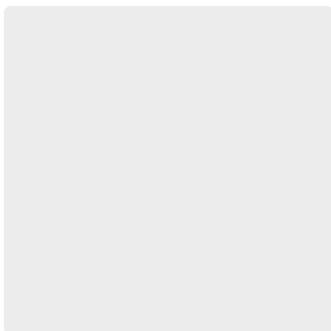
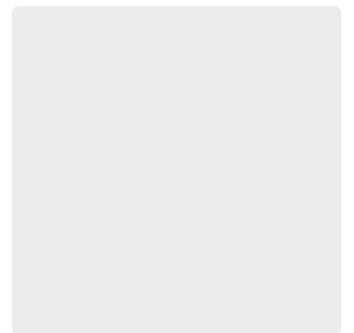
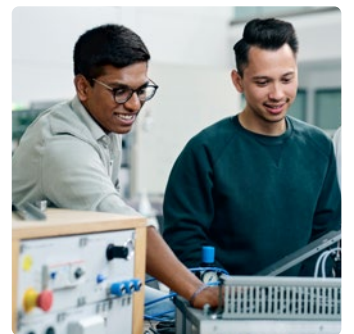
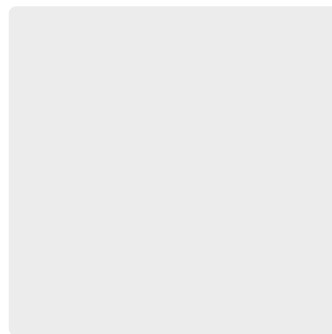
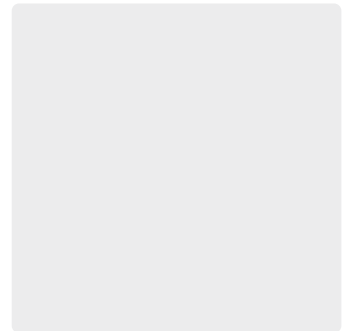
Issue 4/2025

# New products 2025

## Developed with passion

With innovative products and solutions, we are paving the way for you to reach a climate-neutral and sustainable world. We are passionate about inspiring you again this year with our range of new products.

You can filter our new products on the Internet: [phoenixcontact.com/new-products](https://phoenixcontact.com/new-products)

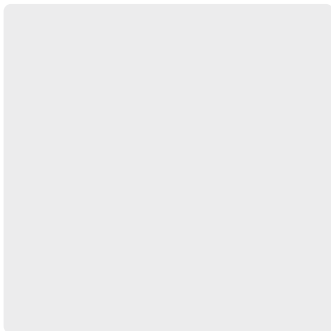




Industrial electricity prices and the energy transition: how do these go together? Phoenix Contact's new All Electric Society Factory shows how industry is actively shaping change and setting up sustainable production processes.



Find out more



## Contents

Supply, charge, and protect	6
Switch, measure, and monitor	49
Automate	69
Connect	104
Mark, assemble, and install	161

Interacting in the e-paper: Click on the buttons to access our website, the sample order, our videos, and 3D products.



Gain info



Order sample



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# Discover our highlights of the year

Our products for electrification, networking, and automation are needed to realize sector coupling, in which energy generated from renewable sources is used as required.

Our highlights are also available on the Internet: [phoenixcontact.com/highlights](https://phoenixcontact.com/highlights)



**CCS charging cables for up to 1,000 kW**

> Page 7



**Outdoor cellular routers**

> Page 73



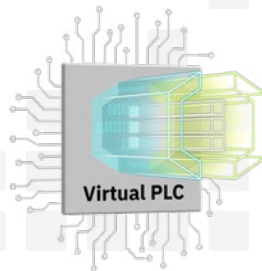
**Click-in module carrier frames for heavy-duty connectors**

> Page 127



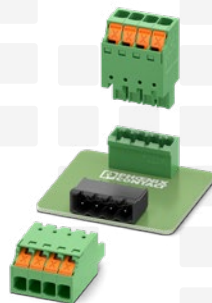
**NACS charging cables for DC charging up to 500 kW**

> Page 11



**Virtual PLCnext Control**

> Page 81



**PCB connectors with Push-X technology**

> Page 141



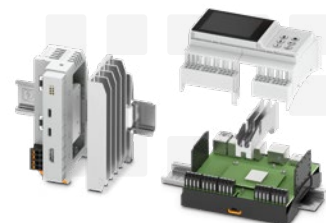
**High availability in the event of power failures**

> Page 29



**PLCnext Control for energy applications**

> Page 83



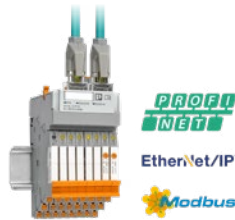
**Electronics housings with thermal simulation**

> Page 153



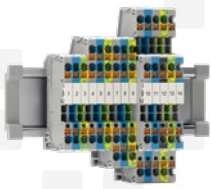
### Systemic device circuit breakers

> Page 35



### Network-capable remote relay system

> Page 51



### Terminal blocks with Push-X technology

> Page 105



### M17 hybrid connectors in accordance with the IEC standard

> Page 115



### Efficient UV inkjet printers

> Page 165



### Modular workstation systems

> Page 169

## Contents

Supply, charge, and protect	6
Switch, measure, and monitor	49
Automate	69
Connect	104
Mark, assemble, and install	161



*New cooling concept enables charging powers of up to 1,000 kW*



*Individual connection concept for your HPC charging station*



*Completely replaceable mating face for sustainable maintenance*

Supply, charge, and protect > Charging technology for e-mobility

## CCS charging cables for up to 1,000 kW

### High Power Charging with new cooling concept

The second-generation CHARX connect professional cooled HPC charging connectors transmit up to 1 MW in Boost Mode. With this huge amount of power, it is not just electric cars that can be charged in a matter of minutes. Utility vehicles with large batteries will also be quickly ready for use again.



#### Main features

- Charging standard: CCS type 2
- Charging current with active cooling: 1,000 A in Boost Mode, 800 A permanently
- Charging current with passive cooling: 800 A in Boost Mode, 600 A permanently
- Rated voltage: 1,000 V
- Cooling medium: water-glycol mix
- Temperature sensor technology: Pt 1000
- Four-wire measurement technology
- Degree of protection: IP67

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

High Power Charging Technology<sup>®</sup>  
Designed by Phoenix Contact

#### Your advantages

- ✓ Up to 1,000 kW of charging power with the new cooling concept – along with improved handling
- ✓ Customized connection concept on request – tailored to your HPC charging station
- ✓ Completely replaceable mating face for fast, cost-effective, and sustainable maintenance
- ✓ Reliable and cost-effective leak detection via insulation monitor
- ✓ Billing compliant with calibration laws through integrated four-wire measurement technology



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Web code #1631

# The new generation of CCS charging cables

## Robust, easy to maintain, and carefully considered

Our new generation of the proven CHARX connect standard CCS charging connectors covers the medium power range from 150 to 250 kW. In the new housing design, the product family offers many improvements in terms of robustness, safety, billing, and maintenance.



### Main features

- Charging standard: CCS type 2
- DC rated current: 150 A ... 250 A
- DC rated voltage: 1,000 V
- Conductor cross-section: 2 x 35 mm<sup>2</sup> ... 70 mm<sup>2</sup>
- Temperature sensors: 2 x Pt 1000
- Four-wire measurement technology
- Degree of protection: IP54 (when plugged in)
- Cable length: 4 m ... 10 m

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

### Your advantages

- ✓ Broad portfolio for all DC charging applications in the medium power range
- ✓ Particularly robust and durable connector design for high availability
- ✓ Prepared for four-wire measurement technology, enabling simple billing compliant with calibration laws
- ✓ High-level safety with two-chamber sealing system for the separation of DC+ and DC-
- ✓ Fast and cost-effective maintenance with exchangeable mating face including power contacts



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Web code #3517



# The new generation of GB/T DC charging cables

## Robust, durable, and adaptable

The new CHARX connect standard DC charging connectors in accordance with the Chinese GB/T standard cover performance classes 125 and 250 kW. They can be adapted to your needs and impress with their high-quality materials, reliable technology, and ergonomic handling.



### Main features

- Charging standard: GB/T
- DC rated current: 125 A ... 250 A
- DC rated voltage: 1,000 V
- Conductor cross-section: 2 x 35 mm<sup>2</sup> ... 70 mm<sup>2</sup>
- Temperature sensors: 2 x Pt 1000
- Degree of protection: IP54 (when plugged in)
- Cable length: 2 m ... 10 m
- CE certification

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

### Your advantages

- ✓ Robust and durable design for particularly high availability under harsh conditions
- ✓ Freely controllable LED strip for intuitive status display in your company colors
- ✓ Optional Boost Mode allows higher charging powers up to 500 kW for a short period
- ✓ Optional S1 switch for implementing customer-specific applications
- ✓ With custom housing color, customer logo, and alternative temperature sensor technology on request




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Web code #3518



The separate handle ensures comfortable handling



Robust touch protection with molded caps

UL 2251		SAE J3400
IEC 62196-3		IATF 16949
<b>100 % standard-compliant</b>		

Maximum quality and compatibility with 100% compliance with standards

Supply, charge, and protect > Charging technology for e-mobility

# NACS charging cables for DC charging up to 500 kW

## High Power Charging for North America

CHARX connect professional uncooled HPC charging connectors are now also available for the North American Charging Standard. The 100% standard-compliant charging cables transmit up to 500 kW in Boost Mode or 375 kW permanently and impress with their very high level of safety and ergonomics.



### Main features

- Charging current in Boost Mode: up to 500 A
- Permanent charging current: 200 A, 375 A
- Rated voltage: 1,000 V
- Cable length: 5 m, 6 m, 7 m, 25 ft.
- Temperature sensor technology: Pt 1000
- Four-wire measurement technology (for 375 A only)
- Degree of protection: IP67 (when plugged in)
- Certifications: UL 2251, SAE J3400, IEC 62196-3, IATF 16949

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

### Your advantages

- ✓ The separate ergonomic handle ensures comfortable handling and prevents heating of the handle surfaces
- ✓ Touch protection with molded caps and precise temperature sensors provide maximum safety
- ✓ Conformance with UL, SAE, IEC, and IATF standards ensures particularly high quality and compatibility
- ✓ Available on request with your logo, custom cable length, and assembled cable end



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# NACS charging cables for AC charging up to 80 A

## UL-certified and SAE-compliant

For the North American Charging Standard, we offer 100% standard-compliant charging cables that deliver maximum safety and proven industrial quality: The robust NACS charging connectors in the CHARX connect eco family are easy to handle and enable AC charging with up to 80 A.



### Main features

- Charging current: 50 A, 80 A
- Rated voltage: 500 V
- Conductor cross-section: 10 AWG, 6 AWG
- Cable length: 25 ft (additional lengths on request)
- Optional temperature sensor technology: NTC
- Degree of protection when plugged in: IP67
- Degree of protection: IP2XB touch protection
- Certifications / standards: UL 2251, SAE J3400, IATF 16949

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

### Your advantages

- ✓ Conformance with UL 2251, SAE J3400, and IATF 16949 ensures particularly high quality, safety, and compatibility
- ✓ IP2XB touch protection with molded caps provides maximum electrical safety
- ✓ Optional temperature sensor technology protects against overheating
- ✓ Ergonomic design facilitates handling
- ✓ Available on request with your logo, custom cable length, and assembled cable end



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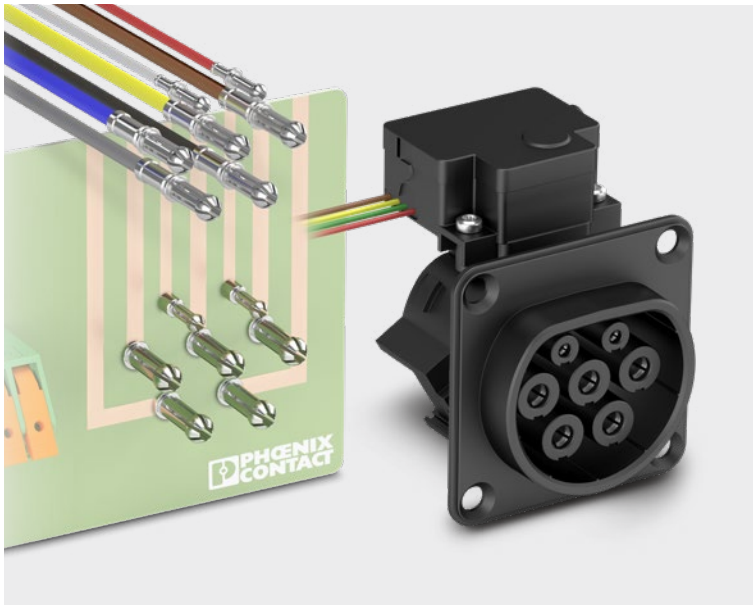


Gain more info:  
Web code #3615

# AC charging sockets with reduced overall depth

## For flexible and space-saving mounting

You can now install the new generation of CHARX connect modular type 2 charging sockets directly on the PCB of your charging station – and save a lot of space due to the reduced installation depth. You can also choose between three actuator positions.



### Main features

- Charging current: 20 A, 32 A
- Rated voltage: 250 V, 480 V
- Installation depth: 54 mm (without strain relief and actuator)
- Degree of protection: IP44 (when plugged in), IP54 (with protective cover)
- Actuator: 4-pos., 12 V, position at 4 / 8 / 12 o'clock
- Temperature sensors: PTC (optional)
- Cable length: 0.3 m, 0.7 m, 1.5 m

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

### Your advantages

- ✓ Space savings of up to 38% compared to the previous generation
- ✓ Individually configurable system – now also with a flexible actuator position
- ✓ Easy mounting – now also directly on the PCB or the traditional way using plug-in connecting cables
- ✓ Resistant to lateral forces, waterproof, and dirtproof due to molded contacts
- ✓ Compatible with all protective covers and shutters in the CHARX connect modular family



Gain more info:  
Web code #3828

# AC charging controllers now WLAN-capable

## Update increases connectivity and security

The AC charging controllers in the CHARX control modular family are the centerpiece of an intelligent and sustainable charging infrastructure. With software release 1.7, class 3000 becomes WLAN-capable and receives further features and improvements for greater convenience and security.



### Main features

- Software version: 1.7
- Use as a WLAN client or WLAN access point
- Required WLAN USB adapter: SparkLAN WUBT-239ACN(BT)
- OCPP 1.6J WSS connections
- Current value definition for load circuit via Modbus/TCP
- Various security patches
- Download of update file via the respective item page

**CHARX control** 

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### Your advantages

- ✔ WLAN support simplifies commissioning and enables wireless use of existing interfaces, such as OCPP
- ✔ OCPP 1.6J allows TLS-encrypted WebSocket connections to the backend
- ✔ Dynamic current value definition for the entire charging park enables convenient load management
- ✔ Improved cybersecurity minimizes the risk of unauthorized access to your charging stations



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Web code #3805

# AC charging controllers simplify calibration law

## Update shortens calibration law certification

The AC charging controllers in the CHARX control modular family are the centerpiece of an intelligent charging infrastructure. With software release 1.8, the calibration law concept has been fundamentally revised, which significantly shortens the certification process for your charging solution.



### Main features

- Software version: 1.8
- Supported OCMF-compatible MID energy meters: Iskra WM3M4C, Bauer BSM-WS36A, EMH iML e-moc, others on request
- No loss of calibration law certification with future updates
- Various security patches
- Download of update file via the item page

**CHARX control** 

E-Mobility empowered by Phoenix Contact

### Your advantages

- ✔ Several energy meters to choose from, so your calibration law solution can be designed flexibly
- ✔ No expensive recertification, as the calibration law certificate remains valid for future software updates
- ✔ Improved cybersecurity minimizes the risk of unauthorized access to your charging stations



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Web code #3829

# Vehicle charging controller for CCS charging

## The EVCC for all types of electric vehicles

CHARX control vehicle enables DC fast charging via CCS charging inlets. The controller handles high-level communication (TCP/IP) via Powerline (PLC) between the charging station and the electric vehicle and controls the LED display, cancel button, and HV contactors in addition to the CCS charging inlet.



### Main features

- DC charging communication in accordance with DIN 70121 and ISO 15118
- AC charging communication via VCU-controlled OBC
- Control of charging inlet, LED display, cancel button, and HV contactors
- E1 approval for road vehicles
- Cybersecurity in accordance with UNECE R155 and R156
- Functional safety up to ISO 26262 ASIL B

**CHARX control** <sup>12</sup>  
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### Your advantages

- ✓ Universal use for all electric vehicles with CCS charging inlet
- ✓ Fast setup, due to pre-parameterization for our CCS charging inlets
- ✓ Vehicle-to-grid-capable for bidirectional charging in accordance with ISO 15118-20
- ✓ Compliance with high safety standards of the automotive industry
- ✓ Immediately ready to operate, due to the short startup time of the operating system



Play video



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Web code #3721



# Protective covers for CCS charging inlets

## Optimum protection with smart features

The protective covers provide IPX5 protection for the contact area of our CHARX connect universal CCS charging inlets. This means that your electric utility vehicles are optimally equipped for demanding environmental conditions. A function button and an LED status display can be added as an option.



### Main features

- Charging standards: CCS type 1, CCS type 2
- Dimensions (W x H x D): 170.7 mm x 184.4 mm x 41.0 mm (without extras) or 61.1 mm (with extras)
- Degree of protection: IPX5 (when cover is closed)
- Connection of the LED display and button: 6-pos. MCON connector
- Control of the LED display: PWM
- UNECE R61 supported

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

### Your advantages

- ✓ Reliable protection of all signal and power contacts against jet water in accordance with IPX5
- ✓ Smart operation: the AC cover is opened automatically when the DC cover is opened
- ✓ Optional extras: charging status display with freely controllable RGB LED and button, such as for canceling charging
- ✓ Easy design-in due to identical screw-on points for CCS type 1 and CCS type 2
- ✓ Compatible with our CHARX control vehicle charging controller



Gain more info:  
Web code #3830

## Individually assembled CCS charging inlets

### The ready-to-install solution for electric vehicles

We are now offering for the first time the CHARX connect universal CCS type 2 charging inlets with assembled cable set. The ready-to-install charging inlets are available with common connectors from a single source, reducing your procurement and installation times as well as the overall costs.



#### Main features

- Charging standard: CCS type 2 (others on request)
- Cable length: 2 m (additional lengths on request)
- Connections: HVA 630 (AC), M8 cable lug (DC/PE), Cinch, or Econoseal (LV)
- Permanent DC charging cWurrent: 200 A, 250 A, 375 A
- DC charging current in Boost Mode: 500 A, 500 A, 700 A
- DC rated voltage: 1,000 V

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

#### Your advantages

- ✓ Time and cost savings with the ready-to-install solution
- ✓ Charging power, cable lengths and markings, and actuator voltage tailored to your requirements
- ✓ High Power Charging with up to 700 kW in Boost Mode
- ✓ Safe with precise temperature measurement and high IP protection
- ✓ Developed and produced in accordance with the IATF 16949 automotive standard

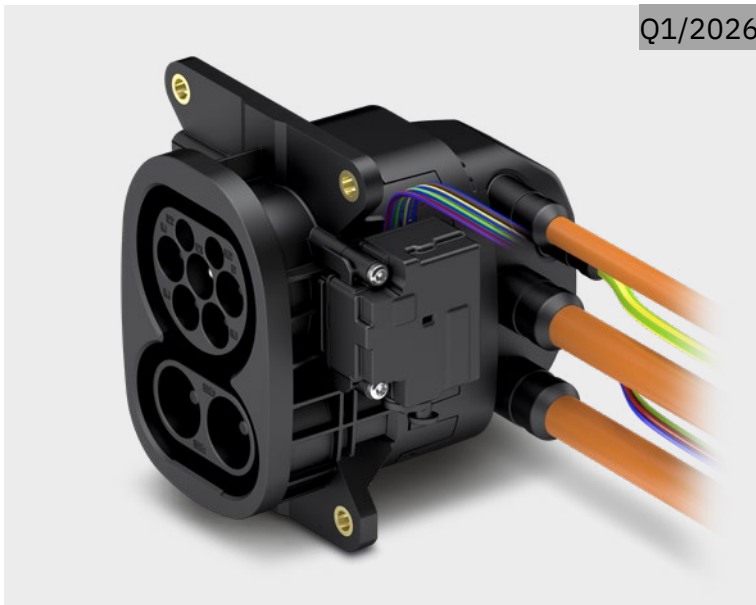


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Web code #3722

# CCS charging inlets with lateral cable outlet

## For space-saving mounting in the vehicle

The CHARX connect universal CCS type 2 charging inlets are now also available with a 90° cable outlet. This saves you valuable installation space in the electric vehicle. With the identical geometries, customers who switch to the 90° charging inlets do not have to alter the body cutout.



### Main features

- Charging standard: CCS type 2
- Cable outlet: 90° to the right (left version on request)
- Cable length: 2 m (additional lengths on request)
- Installation depth: 128.5 mm
- DC charging current in Boost Mode: up to 500 A
- Permanent DC charging current: 200 A, 250 A
- DC rated voltage: 1,000 V
- Actuator voltage: 12 V, 24 V

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

### Your advantages

- ✓ Space savings of over 50% in terms of the installation depth compared to our CCS charging inlets with straight cable outlet
- ✓ More convenient and clearer installation of the cable harness
- ✓ Temperature hotspots avoided due to the larger bending radius
- ✓ Easy to make the switch, as all CCS charging inlets have the same screw connection geometries
- ✓ IP6K6K / IP6K9K protection on the front withstands high-pressure and steam-jet cleaning



Gain more info:  
Web code #3831

# Power supplies for machine building

## Plug-and-play solution with device protection

The new 3-phase TRIO POWER power supplies with integrated multi-channel device protection feature a space-saving design, a robust and reliable supply, easy handling, smart diagnostics, and the IO-Link interface.



### Main features

- 8-channel device protection
- Prioritized load management
- Dynamic boost of up to 150% for 5 s
- Comprehensive signaling: collective signal contact, multicolor LED, and IO-Link interface
- Channels reset via remote reset

**Push-in Technology**  
Designed by Phoenix Contact

### Your advantages

- ✓ Supply and protection in one device due to the integrated multi-channel device protection
- ✓ Low installation costs due to 70% less wiring and installation effort
- ✓ Easy commissioning through intuitive manual operation or parameterization via IO-Link
- ✓ High availability due to prioritized load management with intelligent self-monitoring functionality
- ✓ Space-saving due to the low overall width, depth, and capability of being mounted side by side



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Web code #0497

# Power supplies for machine building

## Compact plug-and-play solution

The new power supplies with special voltages and NEC Class 2 output extend the portfolio of the TRIO POWER family. The devices impress with their space-saving design, robust and reliable supply, easy handling, and smart diagnostics.



### Main features

- Dynamic boost of up to 150% for 5 s
- Powerful output characteristic curve
- Collective signaling contact and multicolor LED
- Low overall depth of just 125 mm
- Wide temperature range: -25°C ... +70°C, startup type tested: -40°C

**Push-in Technology**  
Designed by Phoenix Contact

### Your advantages

- ✓ Space-saving due to the low overall width, low overall depth, and capability of being mounted directly side by side
- ✓ Robust and reliable due to dynamic boost with a powerful output characteristic curve for starting difficult loads
- ✓ Smart diagnostics with multicolor LED and collective relay contact for a clear status display
- ✓ Easy handling with Push-in connection technology, marking fields, stripping identification, and tamper-proof setting



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Web code #3789

## Power supply with basic functionality

### Low power with Push-in connection

The UNO POWER power supplies from 30 to 90 W feature high power density, efficiency, and the new Push-in connection. They are the ideal solution for industrial applications and are particularly suitable for compact control cabinets.



#### Main features

- Overall width of 35 mm with 90 W power
- AC input voltage: 100 V AC ... 277 V AC
- DC input voltage: 110 V DC ... 250 V DC
- Up to 95% efficiency
- Adjustable output voltage
- High MTBF: >500,000 h
- Wide temperature range: -25°C ... +70°C, startup type tested: -40°C

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

#### Your advantages

- ✓ Optimum supply of 1-phase systems
- ✓ Save space in the control cabinet with the narrow overall width
- ✓ Save energy with up to 95% efficiency
- ✓ Outdoor installation and reliable device startup at -40°C
- ✓ Easy handling with Push-in connection technology



Gain more info:  
Web code #3790

# Power supply with basic functionality

## Solution for charging infrastructure

The UNO POWER power supplies starting from 120 W stand out with their easy system diagnostics via DC OK LED and switching relay contact. The high power density makes UNO POWER the perfect solution for industrial applications with limited space.



### Main features

- Adjustable output voltage: 12 V DC ... 15 V DC
- LED signaling and DC OK relay contact
- Up to 94.4% efficiency
- High MTBF: >500,000 h
- Narrow overall width of 35 mm
- Wide temperature range: -25°C ... +70°C, startup type tested: -40°C

### Your advantages

- ✓ Optimum supply of 1-phase systems
- ✓ Save space in the control cabinet with the narrow overall width
- ✓ Save energy with high efficiency
- ✓ Outdoor installation and reliable device startup at -40°C
- ✓ Easy output voltage system diagnostics with the floating switch contact and DC OK LED



Gain more info:  
Web code #3791

# Power supply for building automation

## Bus power supply for KNX

The STEP POWER bus power supply for KNX has an active KNX choke. This guarantees complete communication even at full capacity. The color display shows all KNX system parameters and provides support during commissioning and diagnostics.



### Main features

- Easy diagnostics with the color display
- Reliable communication up to 1,900 mA
- Efficiency at nominal load of 230 V AC: >89.5% (incl. choke)
- Power dissipation at nominal load of 230 V AC: <1.0 W no load / <4.5 W nominal
- Input: 85 V AC ... 264 V AC and 90 V DC ... 275 V DC
- Temperature: -10°C ... +70°C

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

### Your advantages

- ✓ Easy analysis with integrated user interface – all relevant KNX system parameters at a glance
- ✓ History can be called up as a diagnostic function in the menu
- ✓ Active KNX choke provides greater efficiency and ensures reliable communication up to full capacity
- ✓ Space-saving due to the compact design
- ✓ Worldwide use with AC and DC wide range input



Gain more info:  
Web code #3538



# Power supplies for panel mounting

## Push-in connection for high powers

The TRIO POWER power supplies for panel mounting, with a power of up to 2.5 kW, now have Push-in connections. The devices with an output voltage of 24 or 48 V DC are characterized by their high power density and efficiency in a compact design.



### Main features

- Input 1 AC: 85 V AC ... 264 V AC  
Output DC: 24 V DC or 48 V DC
- Dynamic boost of up to 140% for 5 s
- Can be connected in series and in parallel
- As an option, can be used with CAN communication, remote control
- EMC Class B
- Auxiliary power supply: 5 V / 2 A
- Flexible panel mounting
- Intelligent fan control

**Push-in Technology** 

Designed by Phoenix Contact

### Your advantages

- ✓ Easy handling with Push-in connection technology
- ✓ High power density and high efficiency with a compact design
- ✓ Simple power increase through parallel connection and integrated O-ring diode as well as increase in output voltage through series connection
- ✓ Reliable supply with increased EMC requirements
- ✓ Comprehensive monitoring via LED signaling and CAN bus interface



Gain more info:  
Web code #3919

## Power supplies for panel mounting

### High power in compact housing

The new power supply for panel mounting from the TRIO POWER range supplies power of up to 2.5 kW. It is suitable for use in a variety of applications, including in machine building, in the robotics and semiconductor industry, and in battery storage systems.



#### Main features

- Input 1 AC: 85 V AC ... 264 V AC  
Output DC: 24 V DC
- Dynamic boost of up to 140% for 5 s
- Can be connected in series and in parallel
- As an option, can be used with CAN communication, remote control
- Intelligent fan control
- 2 auxiliary voltage supplies: 5 V / 2 A
- Flexible panel mounting

#### Your advantages

- ✓ High power density and high efficiency with a compact design
- ✓ Robust and reliable due to dynamic boost with a powerful output characteristic curve
- ✓ Comprehensive monitoring via LED signaling and CAN bus interface
- ✓ Easy power increase with parallel connection with integrated O-ring diode
- ✓ Increased output voltage with series connection



Gain more info:  
Web code #3666





*Easy handling*



*Save space in the control cabinet*



*Direct diagnostics with multicolor LEDs and signal contacts*

Supply, charge, and protect > Uninterruptible power supply (UPS)

## High availability in the event of power failures

### UPS with integrated power supply

Maximize your system availability in the event of power failure with the TRIO UPS. It combines signaling, diagnostics, connection to IPCs and PLCs, and a cold restart function in one compact housing. The dynamic boost makes it particularly reliable.



### Main features

- Battery status (SOH) can be read via LED
- Battery start via button on the front
- Intelligent charging behavior with external temperature sensor
- Optional communication via RS-485 or USB-C
- Dynamic boost: 150% overload capacity from power supply
- Dynamic battery boost: up to 400% from the battery

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

### Your advantages

- ✓ Direct diagnostics with multicolor LEDs and signal contacts for a clear status display
- ✓ Easy handling ensured by tool-free wiring with Push-in
- ✓ Robust and reliable due to dynamic boost and intelligent battery charging behavior
- ✓ Space-saving by combining a power supply and UPS in one housing
- ✓ Optional smart parameterization and monitoring via interface connection

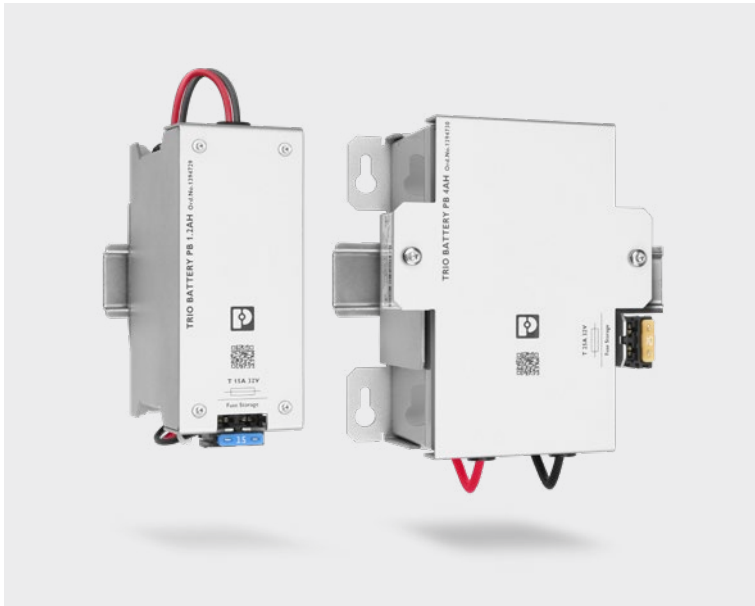


Gain more info:  
Web code #3770

## TRIO battery modules for TRIO UPS

### Battery modules for easy handling

The new TRIO battery modules are available in four capacities ranging from 1.2 to 12 Ah. The robust metal housing is equipped with cables and fuse holders for easy handling. The TRIO battery modules are the perfect addition to our TRIO UPS family.



### Main features

- Lead AGM (Absorbent Glass Mat) technology
- Temperature range: -20°C ... +50°C
- Service life at +20°C: 6 years
- Buffer times: 1 A/11 h or 40 A/8 min

### Your advantages

- ✓ Long buffer times under normal conditions
- ✓ Convenient wall or DIN rail mounting in the uniform design of the TRIO UPS modules
- ✓ Comprehensive approval package, compatible with TRIO UPS
- ✓ Easy handling with preassembled cables and fuse holders
- ✓ Immediate availability, all battery modules leave our warehouse fully charged



Gain more info:  
Web code #3539

# Lithium battery modules with IQ Technology

## Long service life and long buffer time

The battery modules extend the portfolio to 284 Wh and feature high power density in a lightweight design. For continuous monitoring and intelligent management, there is constant communication with the QUINT4 UPS.



### Main features

- Lithium iron phosphate technology
- Temperature range: -20°C ... +60°C
- Buffer time: 1 A for up to 27 hours or 40 A for up to 41 minutes, with a service life of 10 years
- 6 times cycling stability compared to lead AGM technology
- High energy density in a lightweight design

**IQ Technology**   
Designed by Phoenix Contact

### Your advantages

- ✓ Quick installation with automatic detection of the battery module and tool-free replacement during operation
- ✓ Intelligent battery management for continuous monitoring and high availability with the QUINT4 UPS
- ✓ Long service life due to optimum charging characteristics and cycling stability
- ✓ Compact solution up to 11 Ah on the DIN rail with a high energy density

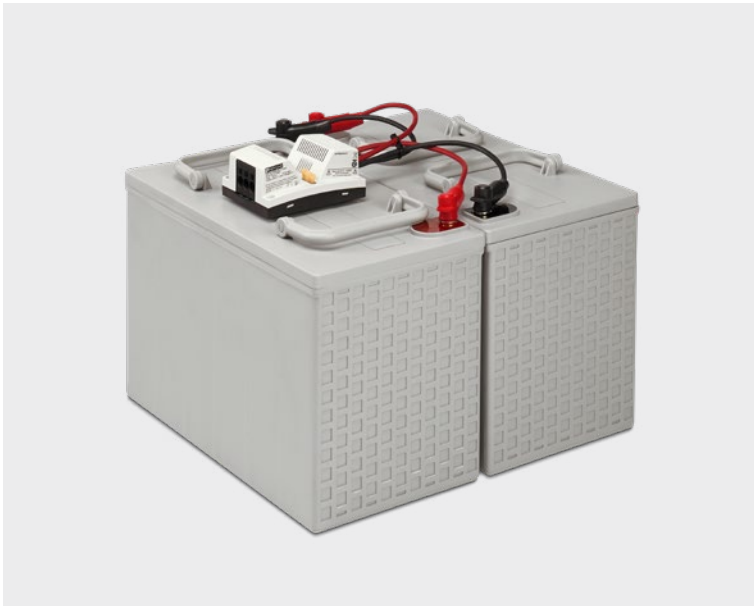


Gain more info:  
Web code #3794

# Lead battery module with IQ Technology

## For long buffer times

The new battery module has a capacity of 110 Ah. For continuous monitoring and intelligent management, there is constant communication with the QUINT UPS. The automatic detection of the battery enables quick installation.



### Main features

- Lead AGM (Absorbent Glass Mat) technology
- Temperature range: 0°C ... +50°C
- Service life at +20°C: 10 years
- Buffer times: 1 A/110 h or 40 A/130 min

**IQ Technology**   
Designed by Phoenix Contact

### Your advantages

- ✓ Quick installation with automatic detection of the battery module and tool-free replacement during operation
- ✓ Very high availability due to constant communication with the QUINT UPS for continuous monitoring and intelligent management
- ✓ Very long service life due to optimum charging characteristics
- ✓ Immediate availability, all battery modules leave our warehouse optimally charged



Gain more info:  
Web code #3541



## UPS with power supply and capacity

### Maintenance-free solution to prevent mains failures

The new TRIO CAP capacity module for DC loads combines a power supply, UPS, and maintenance-free energy storage unit with a long service life in one housing. Special supply situations, such as during load start-up or overloads, are reliably bridged with the boost function.



### Main features

- Dynamic boost: up to 150% for 5 s
- Capacity boost: up to 350% from the energy storage unit for 350 ms
- Fast charging up to 5 A
- Can be set to up to 28 V DC
- Interfaces: USB-C / RS-485
- Comprehensive signaling with multicolor LEDs and digital outputs
- Wide temperature range: -40°C ... +60°C

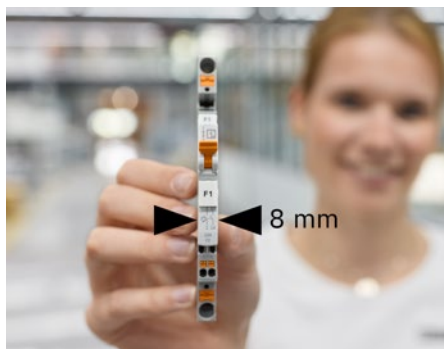
**Push-in Technology**<sup>®</sup>  
Designed by Phoenix Contact

### Your advantages

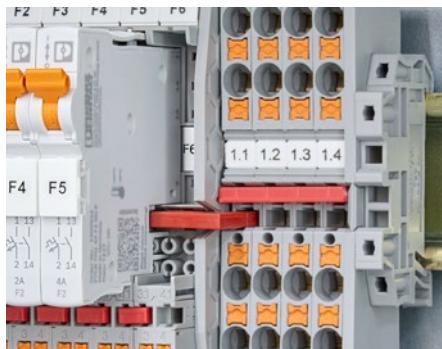
- ✓ Reliable maintenance-free use and long service life of up to 20 years
- ✓ Maximum system availability and cost optimization with a 3-in-1 solution
- ✓ Time-saving installation with Push-in connection and easy handling with clear setting options
- ✓ Boost function bridges peak loads and allows an optimum power reserve
- ✓ Simple configuration and direct diagnostics



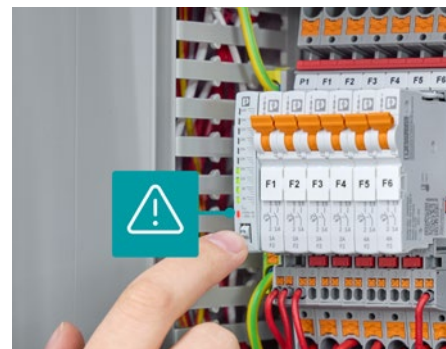
Gain more info:  
Web code #3920



65% space savings compared to conventional MCBs



Compatible with the CLIPLINE complete terminal block range



Status that can be viewed at any time and alignable current monitoring

Supply, charge, and protect > Device circuit breakers

## Systemic device circuit breakers

### Reliable protection, easy handling

With an overall width of 8 mm, the new PTCB TM product family creates more space in the control cabinet. It is also ideal for higher currents and can be bridged to the CLIPLINE complete range. Through electrical isolation and easy current monitoring, it provides reliable protection.



### Main features

- Reliable startup of loads with high startup currents
- Electrical isolation in the event of an error
- Reliable with a resilient design
- Large selection of rated current versions in increments from 0.5 to 16 A
- Protective plug with M1 or F2 characteristic curve
- Operating voltage: 10 V DC ... 56 V DC, 24 V AC ... 277 V AC

### Your advantages

- ✓ More space in the control cabinet: protection and signaling in an overall width of just 8 mm
- ✓ Simple application setup with the capability of bridging to the CLIPLINE complete terminal block range
- ✓ Transparency regarding utilization and status with practical current monitoring and remote signaling
- ✓ Easy handling from commissioning right through to maintenance due to clear functionality and switching state at all times



Gain more info:  
Web code #3933

# CAPAROC circuit breaker system

## Communication via Modbus/TCP

The individual modular system provides access to different applications via various communication interfaces. The new feed-in module with Modbus/TCP features a universal interface for integration into various systems.



### Main features

- Data exchange via system bus interface to QUINT POWER
- Modbus/TCP communication
- Easy integration into existing communication systems
- Up to 45 A total system current
- Supply voltage: 12 V DC ... 24 V DC



### Your advantages

- ✓ The customizable standard, thanks to a wide range of possible combinations of the future-proof modular system
- ✓ Easy operation through tool-free assembly, uninterrupted installation, and transparent operating state
- ✓ Strikingly simple design-in with extensive support from the selection up to digital services



Gain more info:  
Web code #3924

# CAPAROC circuit breaker system

## Communication via EtherCAT

The individual modular system provides access to different applications via various communication interfaces. The new EtherCAT® feed-in module opens up further application possibilities in which CAPAROC protects against overcurrent and short circuits.



### Main features

- Data exchange via system bus interface to QUINT POWER
- EtherCAT communication
- Easy integration into existing communication systems
- Up to 45 A total system current
- Supply voltage: 12 V DC ... 24 V DC



### Your advantages

- ✓ The customizable standard, thanks to a wide range of possible combinations of the future-proof modular system
- ✓ Easy operation through tool-free assembly, uninterrupted installation, and transparent operating state
- ✓ Strikingly simple design-in with extensive support from the selection up to digital services



Gain more info:  
Web code #3925

# CAPAROC circuit breaker system

## Sets for getting started quickly

The preassembled CAPAROC circuit breaker sets are quick to install. You can choose between simple status signals or an IO-Link interface for comprehensive diagnostics. They protect up to eight circuits against the effects of overloads and short circuits.



### Main features

- Supply voltage: 12 V DC ... 24 V DC
- IO-Link interface
- Group message, reset, warning at  $I > 80\%$
- Push-in connections: 16 mm<sup>2</sup> / protected output: 4 mm<sup>2</sup>
- 8 preassembled channels per system
- Total current monitoring  $\leq 45$  A
- Test pick-off per connection
- Power display with nominal current locking

### Your advantages

- ✓ The customizable standard with individual expansion options
- ✓ Particularly easy operation for everyone with preconfigured sets for direct use
- ✓ Protection of eight circuits without additional installation effort
- ✓ Evaluation options: from simple signals to comprehensive diagnostics with IO-Link



Gain more info:  
Web code #3832

## CAPAROC circuit breaker system

### Overcurrent protection for load currents of up to 20 A

CAPAROC impresses with an ever-increasing scope of functions. Now, you can connect up to four loads to the 1-channel circuit breakers, thereby protecting loads with nominal currents of up to 20 A. The modules enable selective protection in series for a decentral application.



#### Main features

- Incrementally adjustable and fixed nominal currents up to 20 A
- Coordinated, selective protection in series
- Potential distributor with up to four loads across 12.4 mm
- Startup of high loads with active current limitation
- Electronic interlock
- Push-in connection up to 4 mm<sup>2</sup>

#### Your advantages

- ✓ The customizable standard, with individual combinations of the future-proof modular system
- ✓ Easy operation for everyone through tool-free assembly, uninterrupted installation, and transparent operating state
- ✓ Protection and supply of particularly large loads with the extended nominal current range up to 20 A



Gain more info:  
Web code #3677

# CAPAROC circuit breaker system

## Communicating via EtherNet/IP™

The individual modular system provides access to different applications via various communication interfaces. The new feed-in module with EtherNet/IP™ interface enables the development of communicative solutions, in particular for the American market as well.



### Main features

- Data exchange via system bus interface to QUINT POWER
- EtherNet/IP™ communication
- Function blocks and add-on instruction for the Studio 5000 EtherNet/IP™ engineering tool
- Up to 45 A total system current
- Supply voltage: 12 V DC ... 24 V DC

EtherNet/IP™

### Your advantages

- ✓ The customizable standard, thanks to a wide range of possible combinations of the future-proof modular system
- ✓ Easy operation through tool-free assembly, uninterrupted installation, and transparent operating state
- ✓ Strikingly simple design-in with extensive support from the selection up to digital services



Gain more info:  
Web code #3420



# Surge protection for NEMA supply system configurations

## Easy and safe for high flexibility

As part of the Safe Protection Plus family, VAL-US-SPP features surge protective devices for all power supply systems in North America in accordance with the NEMA standard. These UL-listed SPDs provide robust protection with innovative installation and safety features and are easy to integrate.



### Main features

- “Open Type” UL Listed
- Miswiring and touch protection
- Low tightening torque
- Reinforced insulation between the main and auxiliary circuit
- Improved disconnection
- Pluggable protective devices

### Your advantages

- ✓ Easy integration into existing systems with UL Open Type Listed
- ✓ Suitable for all standard network configurations in accordance with NEMA
- ✓ Easy system status monitoring with an optical status indicator and remote indication contact
- ✓ Available throughout Europe and can be used throughout Europe thanks to CE conformity



Gain more info:  
Web code #3922

# New benchmark in surge protection

## Easy and safe installation and operation

High demands are placed on the availability of electrical systems. With the surge protective devices in the Safe Protection Plus product family, Phoenix Contact combines forward-thinking installation and safety features for very high system availability.



### Main features

- Miswiring protection
- Touch protection
- Low tightening torque of 3 Nm
- Reinforced insulation between the main and auxiliary circuit
- Use without backup fuses up to 315 A
- Versatile use at altitudes up to 5,000 m
- Wide range for AC and PV applications

### Your advantages

- ✓ Easy and safe installation with forward-thinking handling and safety features
- ✓ Reliable system protection with maximum performance and endurance
- ✓ Can be used in a wide range of applications due to the optimized design and broad portfolio
- ✓ Simple planning due to comprehensive digital data and selectors



Play video



Gain more info:  
Web code #3511

# New benchmark in surge protection

## Easy and safe for high flexibility

Benefit from a very high level of safety, easy installation, and maximum efficiency. Reliably protect your systems against surge voltages with VALVETRAB SPP. Single-position items with various voltage levels are now also available.



### Main features

- Miswiring protection
- Touch protection
- Low tightening torque of 3 Nm
- Reinforced insulation between the main and auxiliary circuit
- Use without backup fuses up to 315 A

### Your advantages

- ✓ Easy and safe installation with forward-thinking handling and safety features
- ✓ Reliable system protection with maximum performance and endurance
- ✓ Can be used in a wide range of applications due to the optimized design and broad portfolio
- ✓ Maximum flexibility when creating specific solutions thanks to single-position products
- ✓ Simple planning due to comprehensive digital data and selectors



Gain more info:  
Web code #3796

# String combiner boxes for photovoltaic systems

## Safe disconnection in the event of a fire

Fire protection organizations and insurers are increasingly recommending so-called fire department switches. To minimize the risks for emergency services and ensure safe firefighting, the aim is to automatically switch PV strings close to the PV panels to load-free in the event of an emergency.



### Main features

- Motorized switch disconnector
- Integrated surge protection (type T1/2)
- Protection of up to 12 MPP trackers
- Up to 2 strings per MPP tracker and 20 A per string
- Maintenance-free connection with SUNCLIX or Push-in connection technology
- Standard-compliant through the application of DIN EN 61439

### Your advantages

- ✓ “Automatic” disconnection of the PV strings close to the PV panels
- ✓ Fast installation and startup with preassembled string combiner boxes
- ✓ Space-saving installation with the compact design
- ✓ Simplified connection of the lightning protection potential balancing conductor with sufficient connection options
- ✓ Reduction of the installation effort by combining the PV strings

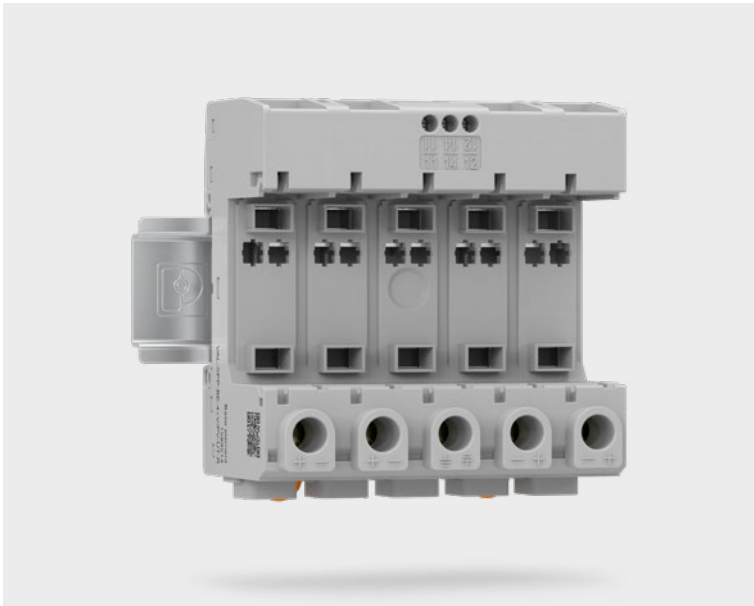


Gain more info:  
Web code #3833

## New benchmark in surge protection

### Base element for PV applications

The new VAL-SPP-BE-4+V... base element saves space in the control cabinet in PV applications with three MPP trackers. The base element is assembled with VAL-SPP-PV connectors of type 1 or type 2, can be used up to an altitude of 5,000 m, and offers easy and safe installation.



#### Main features

- Versatile use at altitudes up to 5,000 m
- Low tightening torque of 3 Nm
- Miswiring protection
- Double insulation
- Can be used for T1 and T2 applications
- 4+V circuit (Y circuit)

#### Your advantages

- ✓ Easy and safe installation with forward-thinking handling and safety features
- ✓ Space savings for inverters with three MPP trackers with the safe 4+V circuit
- ✓ Can be used up to an altitude of 5,000 m with the optimized design with improved air clearances and creepage distances
- ✓ Versatile in application, because it can be assembled with type 1 and type 2 VAL-SPP PV connectors



Gain more info:  
Web code #3679

## Lightning current arresters for DC grids

For industrial applications up to 1,000 V DC

DC grids offer numerous advantages over AC power grids and play an important role in the energy transition. The new VAL-MB-T1/T2-1000DC-2+V-R lightning current arrester reliably protects DC grids against damage caused by lightning currents and surge voltages.



### Main features

- Lightning current arresters, in accordance with type 1 / type 2
- Can be used in applications up to 1,100 V DC U<sub>c</sub>
- Extended insertion funnels
- Extended screw shafts
- Touch protection
- Integrated remote indication contact
- Can be used at altitudes up to 6,000 m

### Your advantages

- ✓ Safe operation of DC voltage supply systems with reliable protection against surge voltages lightning currents
- ✓ For use in unipolar, linear DC supply systems up to 1,000 V DC continuous voltage
- ✓ Space-saving installation with the compact design
- ✓ Excellent level of information provided by mechanical/visual status indicator and remote indication contact

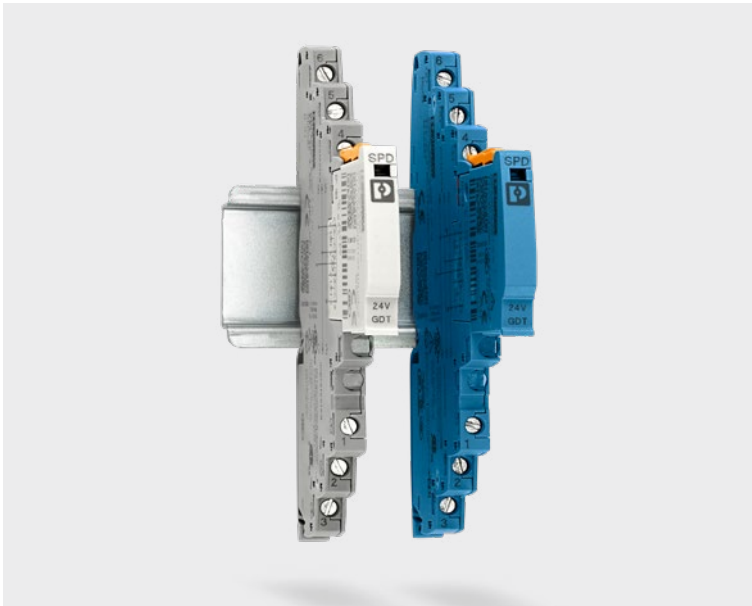


Gain more info:  
Web code #3680

# Surge protection for APL applications

## Safe operation of field devices

In the TERMITRAB complete surge protection portfolio, Phoenix Contact now also offers two product versions for Advanced Physical Layer applications. The circuit versions are specifically tailored to the APL application area.



### Main features

- Narrow overall width of just 6 mm
- Third terminal block level on the product
- Fulfillment of the APL application specification
- Integrated overload protection
- Use in explosion-protected areas

### Your advantages

- ✓ Space savings and cost savings due to the narrow overall width of just 6 mm
- ✓ Fulfillment of the APL application specification with the optimized protective circuit
- ✓ Easy integration of shielding with a third terminal block level on the product
- ✓ Continuous monitoring of protective devices, plus mechanical status indicator with optional remote signaling
- ✓ The signal is not influenced during maintenance work thanks to the impedance-neutral insertion and removal of plugs



Gain more info:  
Web code #3795

## Surge protection for 230 V signals

### High-level protection with a compact overall width

The new CLT-10P/2-MOV-230V-I-P pluggable surge protection provides reliable protection against surge voltages in 230 V signal applications. They are installed on two PT 2,5-...CLT type Push-in terminal blocks. Maintain safety and efficiency with one product.



#### Main features

- Easy installation
- High-performance protective circuit
- Integrated overload protection
- Optional remote signaling
- Narrow overall width
- Can be tested with CHECKMASTER 2

#### Your advantages

- ✓ Easy installation with Push-in terminal blocks with pluggable surge protection
- ✓ Very high system availability with high-performance protective circuit with integrated overload protection
- ✓ Quick and easy diagnostics with optional remote signaling for integration into digital infrastructures
- ✓ Future-proof – meets international standards and directives, such as IEC 61643-21



Gain more info:  
Web code #3681



# AC energy meters for billing purposes

## Record, communicate, and bill

EMpro AC energy meters with MID approval in accordance with 2014/32/EU enable cost center-specific energy data billing (submetering). They record all key parameters such as currents, voltages, power factors, powers, and energy values in all four quadrants.



### Main features

- Direct measurement up to 100 A AC (3-phase) / 45 A AC (1-phase)
- Measurement via current transformer: secondary 1 A / 5 A
- Accuracy class C (EN 50470-3)
- Operating temperature: -40°C ... +70°C
- Input voltage range: 100 V AC ... 277 V AC (phase / neutral conductor) / 173 V AC ... 480 V AC (phase / phase)

### Your advantages

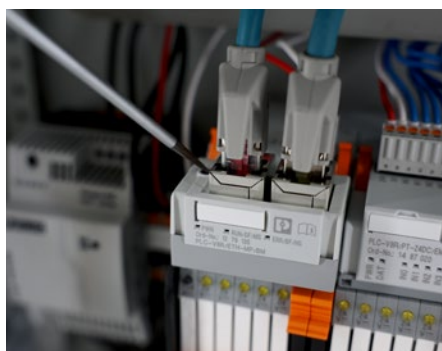
- ✓ Direct current measurement up to 100 A AC over the full temperature range of -40 to +70°C
- ✓ Compliance with accuracy class C in accordance with EN 50470-3 and 0.5 in accordance with IEC 62053-21
- ✓ Easy, intuitive operation and reading via the backlit LCD display
- ✓ Simple bus and network connection via Modbus/RTU or Modbus/TCP interface
- ✓ Modbus registers based on EMpro multifunctional energy measuring devices



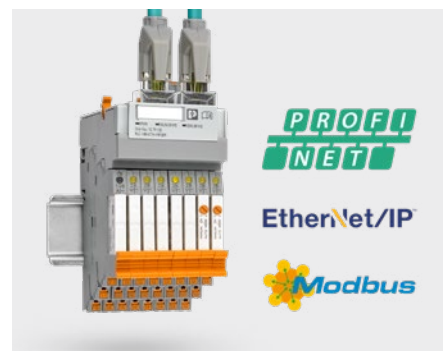
Gain more info:  
Web code #3727



*Flexible channel configuration in the decentral control box*



*Multi-protocol connection to the network module*



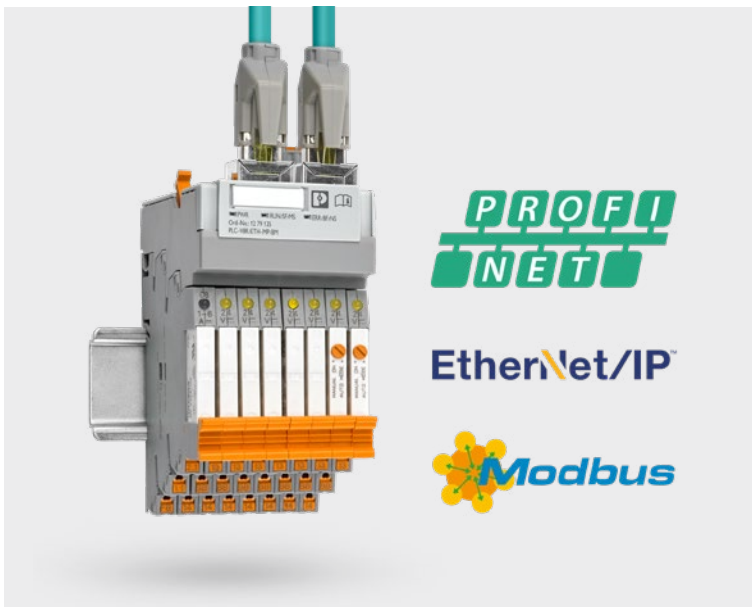
*Compatibility with established controller software*

Switch, measure, and monitor > Relays and solid-state relays

## Network-capable remote relay system

### Multi-protocol connection to the controller

The modular remote relay system with flexible channel assignment supports you in simple applications with up to 56 IO channels. Benefit from high flexibility and intuitive integration with compatibility with common control software.



### Main features

- Multi-protocol connection: PROFINET, EtherNet/IP, Modbus/TCP
- Simple integration into the control system software via device description files
- Compatible with PLC-INTERFACE relay and analog modules
- Temperature range: -40°C ... +60°C
- Maximum number of channels: up to 56 channels

### Your advantages

- ✓ Flexible channel configuration (DI, DO, AI, AO) and compact design for simple applications with small to medium numbers of channels in the decentral control box
- ✓ Multi-protocol connection with an innovative network module with high-performance chipset (PROFINET Class C and S2 redundancy)
- ✓ Intuitive and fast integration into the control level due to compatibility with established control software

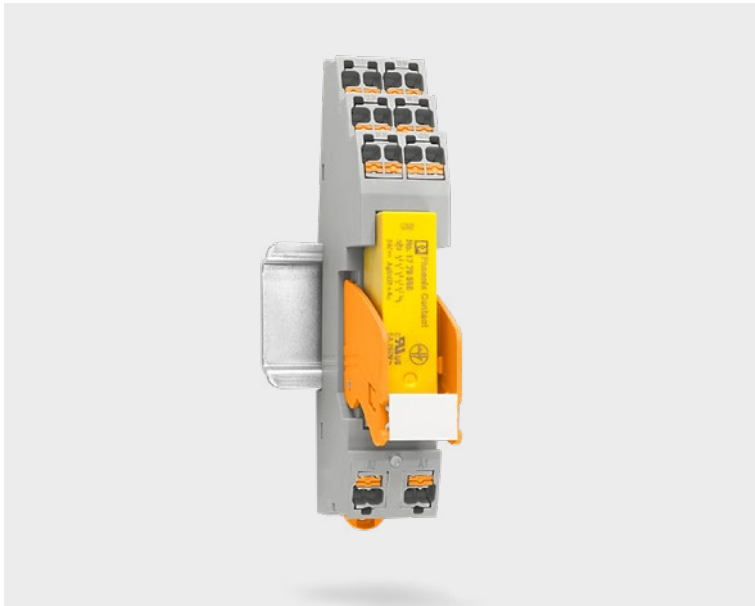


Gain more info:  
Web code #3932

## Highly compact force-guided relay modules

### Six-position with Push-in connection technology

The highly compact RIFLINE complete relay module switches reliably with six force-guided contacts and Push-in connection technology. Benefit from A2 potential distribution via plug-in bridges on the input side and reliable feedback in your application.



#### Main features

- Push-in connection technology
- Overall width of just 20.9 mm
- Relay module with 6-position, force-guided relay
- A2 potential distribution via plug-in bridges on the input side
- Reliable feedback

#### Your advantages

- ✓ Space-saving switching with a width of just 20.9 mm
- ✓ More force-guided contacts with the six-position relay
- ✓ Quick and easy cabling of the relay modules with Push-in connection technology
- ✓ Simple potential distribution with plug-in bridges on the input side

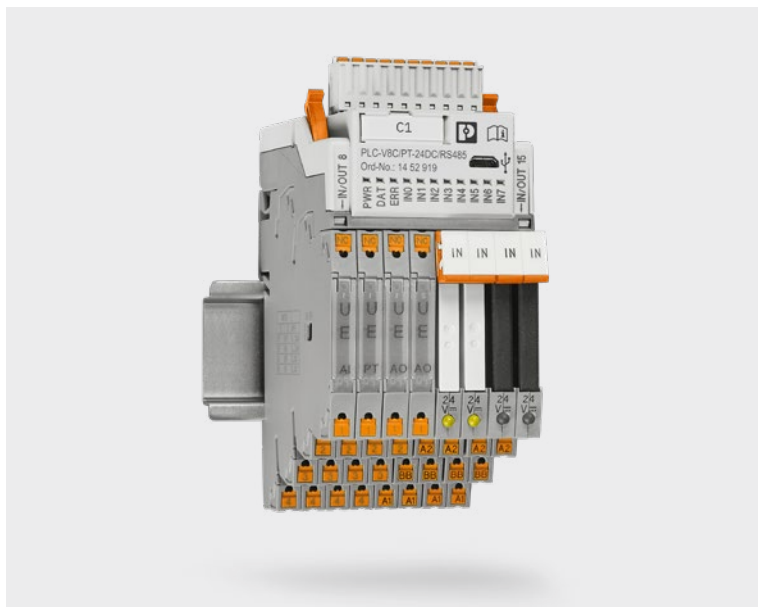


Gain more info:  
Web code #3911

# Highly compact, network-capable logic modules

## Fast Modbus/RTU connection

Networking via RS-485 Modbus/RTU makes it easy to integrate the smart PLC logic into higher-level controllers. Implement distributed remote I/O access to process data as well as to operating notifications and error messages from the PLC logic quickly and reliably.



### Main features

- Easy network configuration via web-based management (WBM)
- Scheduling and biasing
- Broadcast functionality
- Easy networking with Modbus/RTU via RS-485
- Distributed control functionality maintained even if communication fails
- Push-in connection technology

### Your advantages

- ✓ High availability with plug-in switching elements and distributed control functionality
- ✓ Optimum flexibility with customized combination as input or output with relay or analog modules per channel
- ✓ Easy implementation of projects with intuitive programming
- ✓ Fast networking with Modbus/RTU via RS-485



Gain more info:  
Web code #3320

## Relay modules – switching and fuse protection

### Highly compact circuit breaker

PLC-INTERFACE offers the innovative combination of a relay interface and electronic fuse (circuit breaker) in an overall width of just 6.2 mm, for more space in the control cabinet. The nominal current and shutdown behavior can be configured individually via DIP switches on the device.



#### Main features

- Configurable with DIP switch
- Circuit breaker with physical disconnection via relay
- Compatible with PLC-INTERFACE relay modules
- Easy function extension in existing systems
- Space-saving design with an overall width of 6.2 mm

#### Your advantages

- ✓ Space-saving installation in the control cabinet with the combination of relay interface and circuit breaker in an overall width of 6.2 mm
- ✓ Reduced wiring effort with comprehensive accessories, bridging options, and system cabling solutions
- ✓ Easy system integration and function extension of existing installations due to compatibility with PLC-INTERFACE relay modules



Gain more info:  
Web code #3519

## Relay modules – inverting signals

### Compact signal inversion (PNP/NPN)

The inverter module is a 6.2 mm wide solution for inverting PNP into NPN signals and vice versa. With this coupling element, you can benefit from all the advantages of the PLC-INTERFACE relay system to implement different types of circuit with Push-in and screw connection technology.



#### Main features

- Inverts the signals of ground switching NPN transistor outputs into positive switching PNP outputs, as well as signals from PNP into NPN switching signals
- Overall width: 6.2 mm
- Push-in or screw connection technology
- Operating temperature range up to +60°C
- Maximum transmission frequency: 15 kHz
- Bridging options

#### Your advantages

- ✓ Easy signal inversion (PNP/NPN and vice versa) for the DIN rail
- ✓ Space-saving control cabinet solution with a compact overall width of 6.2 mm
- ✓ Flexible connection with versions with Push-in and screw connection technology
- ✓ System compatibility with the PLC-INTERFACE relay system with bridging and marking options. Highly compact relay modules are part of the COMPLETE line system

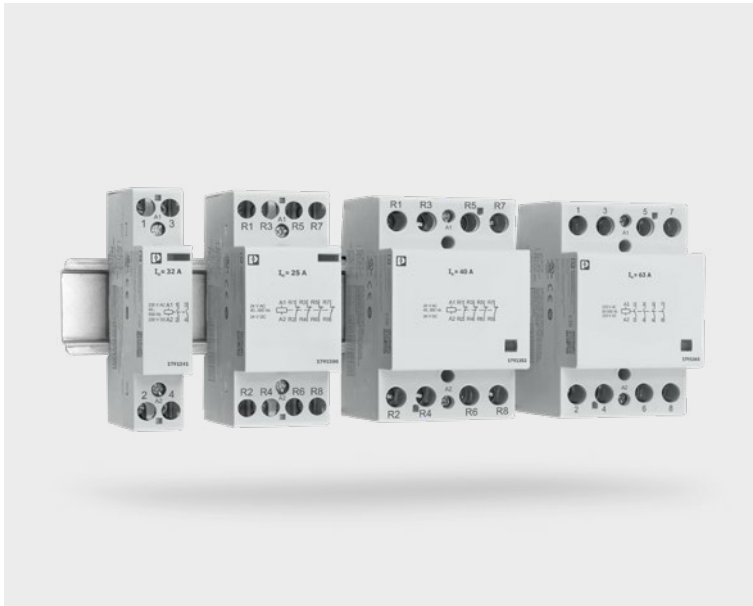


Gain more info:  
Web code #3520

# Installation contactors and installation relays

## Powerful, reliable, versatile

The versatile installation contactors and installation relays switch high load currents reliably and efficiently. Noise emissions from the coil are eliminated by the HUM-FREE input circuit, which also provides protection against overvoltage.



### Main features

- DIN rail-mounted device design for distribution boards
- Rated current: 16 A ... 63 A
- Nominal input voltage: 24 V and 230 V
- HUM-FREE input circuit
- Varistor for protection against overvoltages
- Electrical isolation (coil / contact)

### Your advantages

- ✓ Ideal for building automation with hum-free operation of the switching devices
- ✓ High flexibility with the ability to be used in various applications such as lighting, power distribution, and even AC charging stations
- ✓ Compact design saves space in the control cabinet
- ✓ Mastering switching tasks with the extensive selection of NC and NO contacts along with mono- and bi-stable versions



Gain more info:  
Web code #3909



## Three-phase solid-state contactors

### Fast, robust, and durable switching

Solid-state contactors switch different loads in industrial environments silently and wear-free. Benefit from high switching frequencies and load-free switching in zero crossing mode with a narrow width.



### Main features

- End-to-end product range
- Wear-free and quick switching
- Temperature range: -40°C ... +60°C
- Robust against shocks and vibrations
- Switching currents up to 30 A
- Superior system availability
- High operating voltage range of up to 660 V AC

### Your advantages

- ✓ Reduced overall width saves space in control cabinets
- ✓ Longer service life compared to electromechanical solutions due to wear-free semiconductor technology
- ✓ Optimum heat management with integrated heatsink



Gain more info:  
Web code #3910

## Multifunctional DC circuit breakers

### Protecting, monitoring, and switching DC loads

Protect, monitor, and switch high DC loads with the CONTACTRON ELR HDC multifunctional DC circuit breaker with hybrid technology. Benefit from intuitive parameterization, data logging, network capability, and sustainable efficiency increases with energy recovery.



#### Main features

- Overall width: 85 mm
- Operating current: 10 A ... 55 A
- Communication interfaces: IO-Link, DIO
- Operating voltage: 0 V ... 810 V
- Protection against overcurrent and overvoltage/undervoltage
- Intuitive configuration with clipx ENGINEER
- Integrated pre-charging for intermediate circuits
- All-position electrical isolation with relay



#### Your advantages

- ✓ Arc-free switching with hybrid technology with protection and monitoring functions in DC grids
- ✓ Space savings with an overall width of just 85 mm
- ✓ Avoidance of current peaks with integrated pre-charging function
- ✓ Optimum user-friendliness with intuitive parameterization with clipx ENGINEER and easy communication via IO-Link
- ✓ Sustainable increase in efficiency through energy recovery in DC grids



Play video

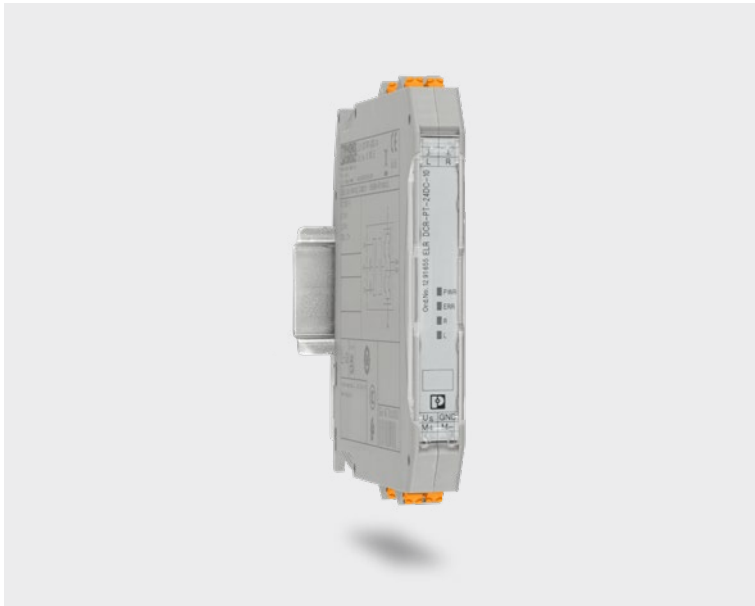


Gain more info:  
Web code #3651

## Motor starters – safe switching of DC motors

### Compact reversing load relays for DC motors

Reversing load relays enable the fast switching and braking of DC motors. An output protected against short circuits, surge voltages, and overloads ensures reliable operation. The internal locking circuit and load wiring minimize the wiring effort.



#### Main features

- Switching and reversing of DC motors up to 24 V DC/10 A
- Compact overall width: 12.5 mm
- Push-in connection technology
- Output protected against short circuits, surge voltages, and overloads
- Wear-free and quick switching

#### Your advantages

- ✓ High system availability through safe and fast switching with wear-free electronics
- ✓ Narrow design saves space in the control cabinet
- ✓ Easy wiring with integrated locking circuit and load wiring
- ✓ Reliable operation with short-circuit-, surge-, and overload-proof output
- ✓ Robust against shocks and vibrations



Gain more info:  
Web code #3521

# IFS PROFIsafe Gateway

## Safe network for your motor starters

The IFS PROFIsafe gateway enables the easy network integration of up to 15 motor starters. Switch the enable inputs of your motor starters safely: Save valuable I/Os in the control level and use the cost-effective solution for the interface level.



### Main features

- Integration of IFS devices in PROFIsafe
- Safe digital inputs and outputs
- Additional digital inputs and outputs
- Functional safety for individual and group shutdown in three-phase motors
- Cost-effective solution
- Overall width of just 45 mm

### Your advantages

- ✓ Safe shutdown of motor starters with safe outputs
- ✓ Space savings in the control cabinet due to the compact design that is just 45 mm wide
- ✓ Easy extension options with additional I/Os
- ✓ Fast configuration, condition monitoring, and diagnostics via automation software or clipx ENGINEER Device Parameterization Tool
- ✓ Save network addresses with the Interface system (IFS) bus connection



Gain more info:  
Web code #3522

# Termination Carrier for Siemens ET200SP HA

## Coupling to distributed I/O system

The Termination Carrier enables the error-free plug-and-play connection of various signal types to your Siemens SIMATIC ET200SP HA. The use of conventional DIN rail devices requires just one engineering design for DIN rail and system applications.



### Main features

- For MACX Analog Ex i NAMUR isolation switch amplifier
- For MACX Analog Ex i repeater power supply and input signal conditioner
- For MACX Analog Ex i output signal conditioner
- For PSR-MINI-SIL coupling relay

### Your advantages

- ✓ Fast signal connection to your Siemens SIMATIC ET200SP HA
- ✓ Space-saving due to the compact design
- ✓ High system availability with the robust housing with mechanically decoupled termination PCB
- ✓ Simple wiring with pluggable, coded cable sets and preassembled system cables
- ✓ Service-friendly due to hot-swap module replacement and easily accessible connection elements



Gain more info:  
Web code #3742

# Resistor network for proximity switches

## For line fault monitoring

The resistor network is used for line fault monitoring of floating contacts and proximity switches via isolation switch amplifiers or digital inputs in accordance with NAMUR IEC/EN 60947-5-6. Benefit from easy handling and the compact design.



### Main features

- Compact design: (W x H x D)  
35.1 mm x 14.2 mm x 14.2 mm
- Resistance values (parallel / series): 10 k $\Omega$  / 1 k $\Omega$ , 10 k $\Omega$  / 1.5 k $\Omega$ , 22 k $\Omega$  / 620  $\Omega$ , 22 k $\Omega$  / 680  $\Omega$
- IP20, with accessories up to IP67

### Your advantages

- ✓ Simple way of using floating contacts and proximity sensors to perform line fault monitoring
- ✓ Compatible with isolation amplifiers and digital input modules in accordance with NAMUR IEC/EN 60947-5-6
- ✓ Particularly space-saving: can be integrated into transmitter wiring spaces
- ✓ Simple wiring with convenient Push-in Technology



Gain more info:  
Web code #3729

# Current measuring transducers with web-based management

## Intuitive configuration and precise measurement

The ECM UC current measuring transducer saves you a lot of time with the intuitive device configuration via web-based management. The products detect AC, DC, and distorted currents from 0 to 100 mA up to 0 to 100 A with an accuracy of <0.5%.



### Main features

- Measurement of AC, DC, distorted currents
- Measuring ranges: 0 mA ... 100 mA to 0 A ... 125 A, max.
- Measurement accuracy: <0.5%
- Output signals: analog/digital
- Communication: Modbus/TCP, Modbus/RTU
- Max. altitude above msl: <4,000 m
- Ambient temperature, operation: -40°C ... 60°C
- Operating voltage: 9.6 V DC ... 30 V DC



### Your advantages

- ✓ Intuitive configuration and visualization of measured data via user-guided WBM
- ✓ Easy connection to the PC via standard USB-C cable without additional 24 V supply
- ✓ High measuring accuracy of <0.5% in the measuring ranges from 0 mA ... 100 mA to 0 A ... 100 A
- ✓ Digital further processing of measured data with Modbus/RTU and Modbus/TCP versions
- ✓ Reliable even at temperatures down to -40°C and installation altitudes of up to 4,000 m



Gain more info:  
Web code #3655

# Energy management software

## Acquire, store, and visualize locally

The Energy Management Service - On-Premises is the perfect solution for your local energy monitoring. Benefit from a system that can be ordered preconfigured with intuitive, flexible functions for the informative visualization and analysis of your energy data.



### Main features

- Different licenses for 5, 10, 20, 50, and 100 measuring devices
- Usable EPCs: EPC 1502, EPC 1522
- Chart types: pie chart, line chart, bar chart, Sankey chart
- Energy reports: tables, charts
- Media that can be depicted: electricity, gas, oil, water, compressed air, temperature, etc.

### Your advantages

- ✓ Local access to all energy data, without depending on external servers
- ✓ Flexible, scalable system without recurring costs
- ✓ Preconfigured complete system with automatic device detection and configuration wizard
- ✓ Transparent monitoring with dashboards and by creating energy reports
- ✓ Open system for your individual EnPIs and other forms of energy such as gas and water



Gain more info:  
Web code #3730



# Over-speed and zero-speed safety relays

## Safe motion monitoring

The PSR-MM20 safe over-speed and zero-speed safety relay is designed for motion monitoring. The PSR-MM20 detects the overspeed or zero speed of rotating parts in systems and machines.



### Main features

- Connection of two 3-wire PNP proximity switches
- Monitoring of parameterizable speed thresholds
- Flexible frequency setting up to 31.5 Hz (in 0.5 Hz increments) or up to 315 Hz (in 5 Hz increments)
- Analog output (0 - 10 V) for monitoring speed values
- 17.5 mm overall width

### Your advantages

- ✓ Safe motion monitoring up to Cat. 4/PL e in accordance with EN ISO 13849-1 and up to SIL 3 in accordance with EN IEC 62061
- ✓ Easy, software-free configuration directly on the device
- ✓ Compatible with 3-wire PNP proximity switches as well as Pulsotronic push-pull proximity switches, making it very easy to meet sensor signal requirements



Gain more info:  
Web code #3785

## Safety relays for the Ex area

### Monitoring signal generators in zone 0

The PSR-MC35 Ex i safety relay has intrinsically safe input contacts and is particularly suitable for monitoring single- or two-channel signal generators, such as emergency switching off switches or safety door switches, in potentially explosive environments.



#### Main features

- Certified in accordance with IECEx and ATEX
- 2 intrinsically safe inputs up to zone 0
- Suitable for installation in zone 2
- Overall width: 17.5 mm
- Automatic or manual, monitored start
- Push-in Technology

#### Your advantages

- ✓ Corrosion protection with additional conformal coating of the printed circuit board
- ✓ Highly reliable even in extended temperature ranges up to +60°C
- ✓ High-level safety even under extreme ambient conditions up to PL e or SIL 3
- ✓ Reduced wiring time with Push-in Technology
- ✓ Space savings with the compact overall width



Gain more info:  
Web code #3733

## Multifunctional safety relays

### Two protective functions in one device

With the PSRuni multifunctional safety relay, up to two safety functions can be monitored with just one device. The comprehensive coverage of common safety functions enables flexible configuration and adaptation to individual requirements.



### Main features

- Configuration directly on the device via rotary coding switches
- Coverage of common safety functions, such as emergency stop, light grid
- Monitoring of two independent circuits
- Overall width: 22.5 mm
- Push-in connection technology

### Your advantages

- ✓ Universal use by covering all common safety functions
- ✓ Flexible adaptation to individual requirements
- ✓ Space-saving and efficient monitoring of up to two safety functions in a single device
- ✓ Fast startup with easy configuration directly on the device
- ✓ Can be used in applications up to the highest safety level, SIL 3/PL e



Gain more info:  
Web code #3735

# Magnetic safety switches

## Safe condition acquisition

The PSR-MIS magnetic safety switches monitor movable safety equipment without contact.



### Main features

- 3 designs
- Safe series connection up to PL d

### Your advantages

- ✓ Proven magnetic switching principle for reliable condition monitoring
- ✓ Simple diagnostics with LED display directly on the sensor
- ✓ Various designs for flexible mounting on doors and hatches



Gain more info:  
Web code #3734

## Industrial Wi-Fi 6 modules

### The latest generation of WLAN clients

For high-performance and reliable wireless communication networks: the powerful WLAN 1120 and the compact IP20 version, the WLAN 1020, feature the latest WLAN technology Wi-Fi 6 (IEEE 802.11ax) and an innovative all-in-one device design.



#### Main features

- IEEE 802.11ax
- Backward-compatible with older WLAN standards, such as Wi-Fi 4
- WLAN client und software access point
- Net data throughput >600 Mbps



#### Your advantages

- ✓ Significant improvement in performance, reliability, and real time with Wi-Fi 6
- ✓ Quick change of WLAN cells through software optimization of the roaming function
- ✓ Future-proof, as prepared for Wi-Fi 6E (6 GHz band)
- ✓ Simplified mounting and installation with the all-in-one design
- ✓ More space in AGVs and mobile robots due to the compact design

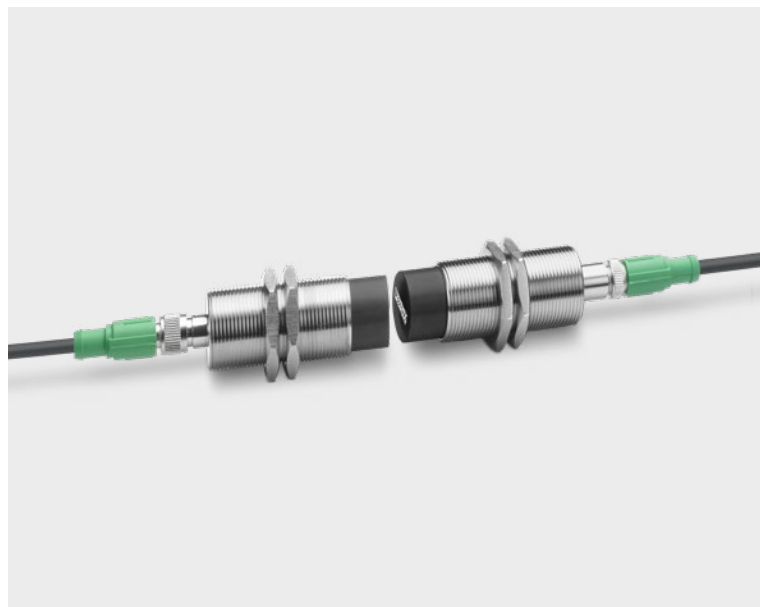


Gain more info:  
Web code #3513

## IO-Link couplers

### Contactless power and data transmission

IO-Link couplers enable the quick and easy contactless supply of IO-Link devices and their wear-free and maintenance-free connection to the control system. This helps to avoid unplanned and unforeseeable production stoppages as well as regular maintenance intervals.



#### Main features

- Bidirectional IO-Link transmission up to 230.4 kbps (COM3)
- Contactless power transmission up to 18 W (24 V DC / 0.75 A)
- Range of up to 7 mm
- Compact M30, IP68 stainless steel housing with M12 screw connection technology



#### Your advantages

- ✓ Contactless – no wear and no maintenance
- ✓ Universal – in addition to power, IO-Link data or two digital signals can also be transmitted
- ✓ Compact – round M30 design for space-saving mounting
- ✓ Flexible – a high degree of freedom when it comes to installation due to variable proximity options
- ✓ Plug-and-play – no configuration needed



Gain more info:  
Web code #3784

# Contactless power and data transmission

## Ethernet communication in the near-field range

NearFi couplers transmit power and real-time Ethernet data across an air gap. The new versions enable a greater range for data transmission (up to 100 mm) and more power during power transmission (up to 100 W for parallel connection).



### Main features

- Ethernet transmission: 100 Mbps, full duplex, latency-free, fast startup <450 ms
- Power transmission: 50 W, 24 V DC / 2 A
- Power increase to 100 W with parallel connection
- Transmission of 2 electrically isolated voltages (US / UA) with parallel connection
- All-round LED ring

**NearFi Technology**   
Designed by Phoenix Contact

### Your advantages

- ✓ Contactless – no wear and no maintenance
- ✓ Protocol-independent and latency-free Ethernet real-time communication
- ✓ Flexible – a high degree of freedom when it comes to installation due to flexible proximity options
- ✓ Plug-and-play – no configuration needed
- ✓ Reduced installation time with M12 push-pull fast-connection technology



Gain more info:  
Web code #3552



Worldwide coverage



Integrated antennas



**IEC 62443-compliant**

Secure: Certified in accordance with IEC 62433-4-2



## Outdoor cellular routers

### Universal cellular connection for worldwide use

Cellulink is a family of industrial outdoor cellular routers for connecting network-capable devices to the cellular network. The devices certified in accordance with IEC 62443-4-2 have integrated antennas and can be used worldwide.



#### Main features

- Integrated antennas
- Global cellular modules
- Cybersecurity: IEC 62443-4-2
- Variety of performance classes: 4G CAT1, 4G CAT4, 5G
- Outdoor housing: IP66 / IP67 / IP68, and IK10
- Mast, panel, and control cabinet mounting
- Dual SIM and provider fallback
- GNSS: positioning and time synchronization

#### Your advantages

- ✓ Cost and space savings through the integration of the antennas into the housing
- ✓ Time savings through faster installation with PoE and the elimination of antenna mounting
- ✓ High level of cybersecurity with certification in accordance with IEC 62443-4-1 and IEC 62443-4-2
- ✓ Worldwide use in 4G and 5G networks
- ✓ Configuration and firmware updates with web-based management, REST API, and device and update management

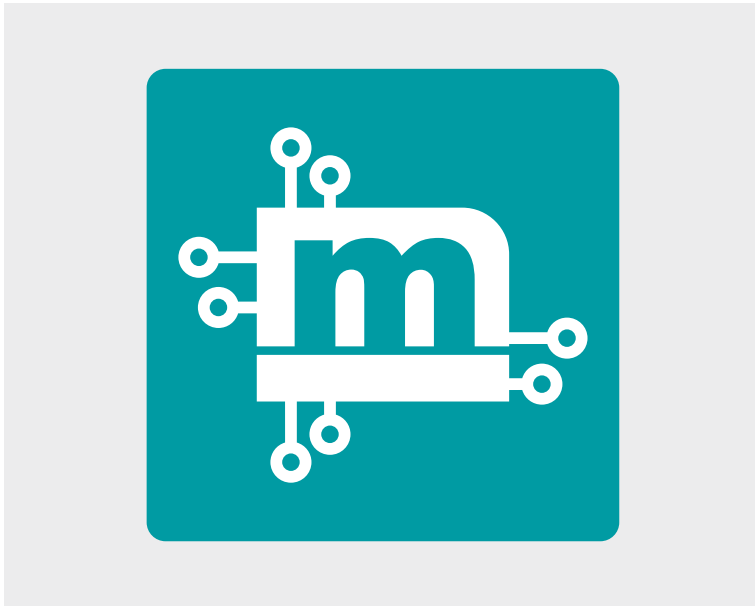


Gain more info:  
Web code #3767

# Cloud-based remote maintenance access

## mGuard Secure Cloud update

The mGuard Secure Cloud enables secure remote access to machines and systems. The new version 3.1 features an improved backend architecture and additional functions such as China VPN+ and support for additional router and cloud client devices.



### Main features

- Faster signal runtimes
- Layer 2 communication (e.g., for PROFINET name assignment)
- Free VPN clients for service workstations
- Migration tool from version 2 to 3
- 8 GB of data per month free of charge

### Your advantages

- ✓ Increased security through the use of end-to-end encrypted VPN protocols
- ✓ Global availability through intelligent server selection and meshed VPN gateways
- ✓ Future-proof, as IPv6 communication in the infrastructure is already prepared
- ✓ Reliable VPN connections to China with China VPN+



Gain more info:  
Web code #3826

# Ethernet-APL switch for the process industry

## Ethernet down to the field level

Ethernet-APL enables safe and efficient data transmission in the process industry. With the Ethernet-APL field switch, sensors are integrated into the Ethernet network via a two-wire Ethernet connection. Data from the field level is available immediately.



### Main features

- Data transmission via just one wire pair
- Use in explosion-protected areas is possible (zones 0, 1, and 2)
- Bridging of large distances: trunk lengths of up to 1,000 m, spurs up to 200 m
- Switch can also communicate with PROFIBUS PA devices
- High number of ports with a total of 24 APL ports

### Your advantages

- ✓ Direct access to sensor data from the field level
- ✓ Cabling effort is reduced, as no additional cabling is required
- ✓ Complexity is reduced, as subsystems or gateways are no longer needed
- ✓ Cost-effective system modernization through the use of existing fieldbus cabling

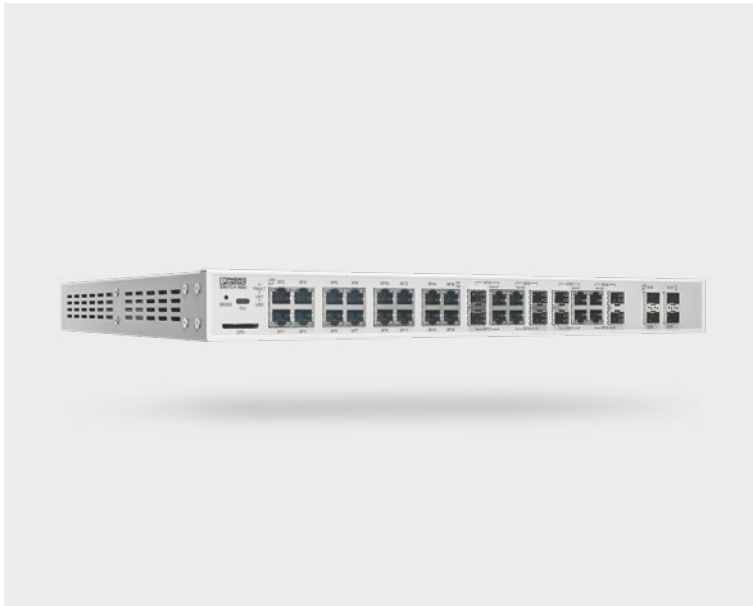


Gain more info:  
Web code #3616

## Managed switches in the 19" format

### High port density for convergent networks

The new FL SWITCH 5900 series offers high data performance, comprehensive security functions, and modern TSN mechanisms. The managed switches in 19" format with flexible port options are the forward-thinking solution for demanding industrial networks.



#### Main features

- 19" backbone switch with high port density and flexible port options
- TSN function set with precise time synchronization
- Comprehensive security functions
- Compatible with the well-established 2000 series managed switches
- Optional redundant power supply

#### Your advantages

- ✓ Robust, high-availability, and secure network solutions
- ✓ Extensive options for setting up time-critical applications
- ✓ Quick and easy startup
- ✓ Numerous versions for demanding requirements
- ✓ Fast and efficient data transmission

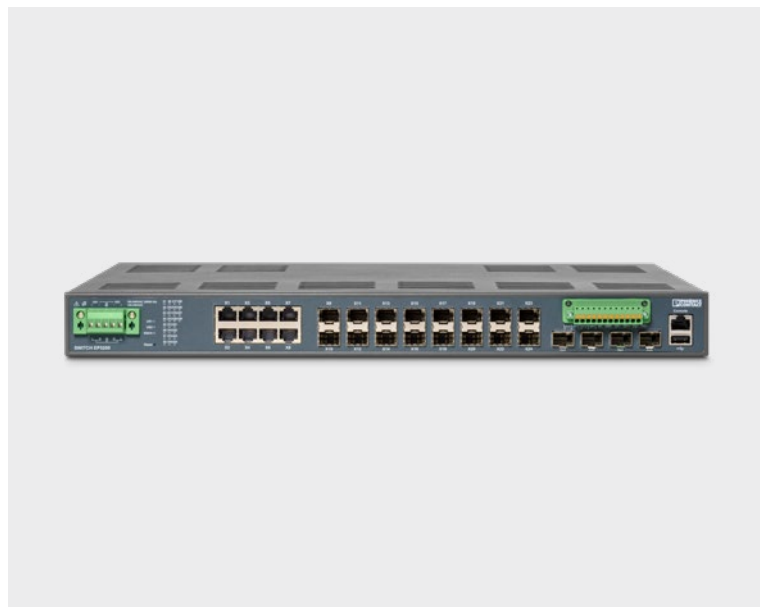


Gain more info:  
Web code #3783

## Robust managed switches

### Ideal for demanding environments

The Layer 2 switches in the Raptor portfolio provide reliable operation even under extreme ambient conditions. The Raptor portfolio meets the stringent requirements of the IEC 61850-3 and IEEE 1613 standards and is therefore ideal for applications in critical infrastructures.



#### Main features

- Powerful Layer 2 scope of functions
- High speed with Gigabit support
- Extended temperature range (-40°C ... +70°C)
- High port density

#### Your advantages

- ✓ Reliable use even under extreme ambient conditions with IEC 61850 and IEEE 1613 certification
- ✓ Flexible installation options with 19" rack or DIN rail mounting
- ✓ Variety of versions enables a wide range of possible applications



Gain more info:  
Web code #3732

## Unmanaged PoE switches

### PoE supply for field devices

The unmanaged Power over Ethernet (PoE) switches enable you to supply up to eight end devices with power and data via the same Ethernet cable. Select models also include SFP ports, which provide additional flexibility depending on the distance requirements.



### Main features

- Gigabit unmanaged switches with up to 8 PoE ports
- Compliant with IEEE 802.3 af / at / bt
- Power budget up to 240 W
- QoS (Quality of Service) prioritized messages
- Version available with high IP67 degree of protection

### Your advantages

- ✓ Prioritization of data traffic: increased network stability and system availability
- ✓ Flexible fields of application due to the variety of versions
- ✓ High performance for applications with high data throughput



Gain more info:  
Web code #3549

## DIN rail-mounted switches for building installation

### Easy and space-saving installation

Thanks to their easy and space-saving installation, the unmanaged switches in DIN rail-mount format can be integrated directly into the distribution cabinets of electrical installations. The robust and high-performance network components simplify building networking.



### Main features

- DIN rail-mount format
- Power over Ethernet (PoE) version with up to 30 W power per port
- Supports energy-efficient Ethernet
- Very high speed with Gigabit support

### Your advantages

- ✓ Minimal installation effort and space required due to the DIN rail-mount format
- ✓ Reduced cabling effort: attached devices are supplied directly via PoE
- ✓ Fast commissioning via plug-and-play
- ✓ Easy operation, as no configuration is required



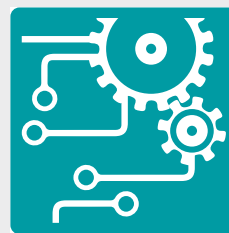
Gain more info:  
Web code #3550



*Hardware-independent controller for easy scaling*



*Open architecture based on PLCnext Technology*



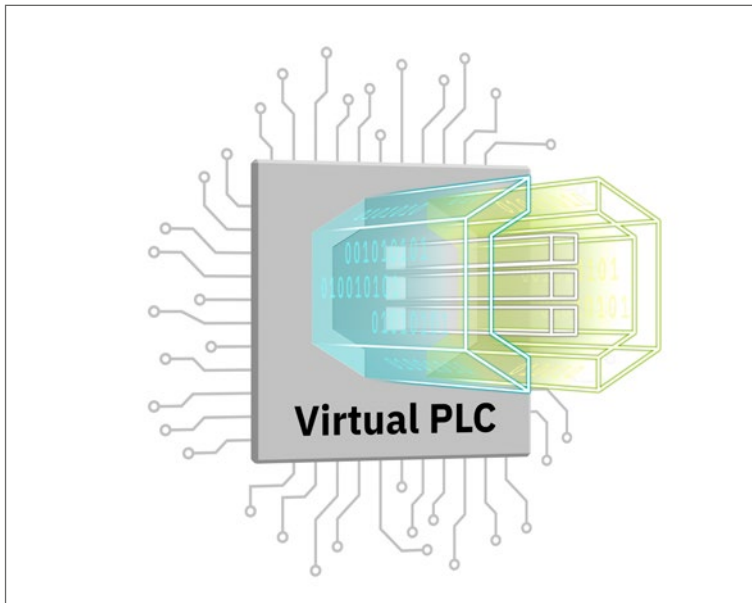
*Direct connection to IT systems, the cloud, and IIoT platforms*



# Virtual PLCnext Control

## Efficient and flexible control solutions

Virtual PLCnext Control offer greater scalability, flexibility, and cost efficiency in automation. As software in an OCI container, they enable seamless integration, combine OT and IT security, and increase the hardware independence of your control solution.



### Main features

- System architecture based on the open PLCnext Technology ecosystem
- Programming in accordance with IEC 61131-3 and high-level languages such as C++, C#, and Matlab
- PROFINET controller and/or device
- Configuration using web-based management
- Virtual PLCnext Control in OCI container

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

### Your advantages

- ✓ Software-based control system with open PLCnext Technology architecture
- ✓ Easy scaling and adaptation to new requirements without physical retrofitting
- ✓ Direct connection to IT systems, cloud services, and IIoT platforms for data-driven applications
- ✓ Minimizes investment costs as no special hardware is required
- ✓ Maximum cybersecurity with container-based technology



Gain more info:  
Web code #3764



*High reliability through the design in accordance with IEC 61850-3*



*Monitoring via integrated watchdog and live relay contact*



*Open, modular, and scalable with PLCnext Technology*

Automate > PLCs (controllers) und I/Os

# PLCnext Control for energy applications

## Controller for critical infrastructures

A scalable and secure control system based on PLCnext Technology: this controller has been specially developed for harsh environments in power generation and distribution. The system can be extended with smart software solutions and specially certified I/Os.



### Main features

- Extended temperature range: -40°C ... +70°C
- EMC requirements in accordance with IEC 61850 Class H
- Extended device monitoring with integrated watchdog and live relay contact
- 3 independent Ethernet interfaces
- IEC 60870-5-101 and IEC 60870-5-104 remote control protocols integrated

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

### Your advantages

- ✓ High-availability PLCnext Control for power generation and distribution
- ✓ Developed for extreme environmental conditions in accordance with IEC 61850-3
- ✓ Compact and modular I/O system for easy extension
- ✓ Cybersecurity in accordance with IEC 62351-3 and IEC 62443 (SL2)
- ✓ Easy function extension with apps from the PLCnext Store



Gain more info:  
Web code #3765

## Controllers for central building automation

### When reliability has a high priority

The ILC 2x50 BI product family has been extended with a more powerful performance class to realize complex projects with the requirements of the CRA. With up to 63 I/O extension modules, the building control system is ideal for automating primary systems or entire floors.



### Main features

- Quad-core processor with increased memory
- Extended safety functions
- Integrated four-port Ethernet switch
- Up to 63 I/O modules can be connected
- Engineering with Emalytics and the Niagara Framework®
- Integrated web server
- 2 USB-C connections

powered by  
**niagara**  
framework®

### Your advantages

- ✓ Future-proof with increased computing power
- ✓ Full security, because the Cyber Resilience Act (CRA) requirements are met
- ✓ IoT and building protocols can be integrated seamlessly
- ✓ Simple replacement of the ILC 2050 BI (-L) for retrofitting



Gain more info:  
Web code #3914

## Controller for room automation

### Large number of flexible I/O channels

The modular controller from the Catan product family in DIN rail-mount format can be used flexibly due to its multifunctional I/O channels. The various extension modules are networked via Single Pair Ethernet. The plug-in display provides support during commissioning and maintenance.



### Main features

- Compact DIN rail-mount design
- I/O channels optimized for room automation
- Integrated 3-port Ethernet switch
- Connection of up to 16 I/O modules via SPE
- Ethernet, RS-485, and USB-based multi-protocol support
- Engineering via Emyltycs and the Niagara framework

### Your advantages

- ✔ Space and cost savings thanks to highly flexible I/O configurability
- ✔ Commissioning and maintenance supported by the plug-in display for local operation
- ✔ High-performance extension bus also enables distributed installation
- ✔ Interfaces for IoT applications
- ✔ Cradle-to-cradle sustainability label considered in the design



Gain more info:  
Web code #3543

## Digital I/O module

### Input module for 48 V DC signals

The Axioline Smart Element is a digital input module for use in applications with 48 V DC signals. It can be operated in various networks by connecting to a PLCnext Control or bus coupler via a backplane.



#### Main features

- 8 digital inputs in accordance with EN 61131-2 type 1 and type 3 for 48 V DC inputs
- Nominal voltage: 48 V DC
- Nominal current: 2.4 mA
- Filter time: <1 ms
- Device rating plate stored

#### Your advantages

- ✓ Can be used in applications with 48 V DC signals
- ✓ Connection of sensors in floating two-conductor technology
- ✓ Compact device design saves space in the control cabinet
- ✓ Push-in connection technology for fast cabling



Gain more info:  
Web code #3610

## I/O modules with serial interface

### Versions with extended functionality

These Axioline Smart Elements enable the operation of standard I/O devices with serial interfaces on a bus system. At the same time, transmission speeds of up to 230,400 bps are possible on the serial interface. The Modbus/RTU protocol is also supported, among others.



### Main features

- One serial input and output channel
- RS-485 interface or RS-232 interface
- Number of data bits, stop bits, and parity can be set
- Various protocols supported
- Modbus/RTU client and server support
- 61 bytes of serial interface data can be transmitted per cycle

### Your advantages

- ✓ Fast retrieval of data transmitted via the serial interface
- ✓ Targeted filtering out of Modbus/RTU telegrams via adjustable address filter
- ✓ Optimum adaptation to the response time of Modbus/RTU servers
- ✓ Significant space savings in the control cabinet with the modularly combinable I/O system

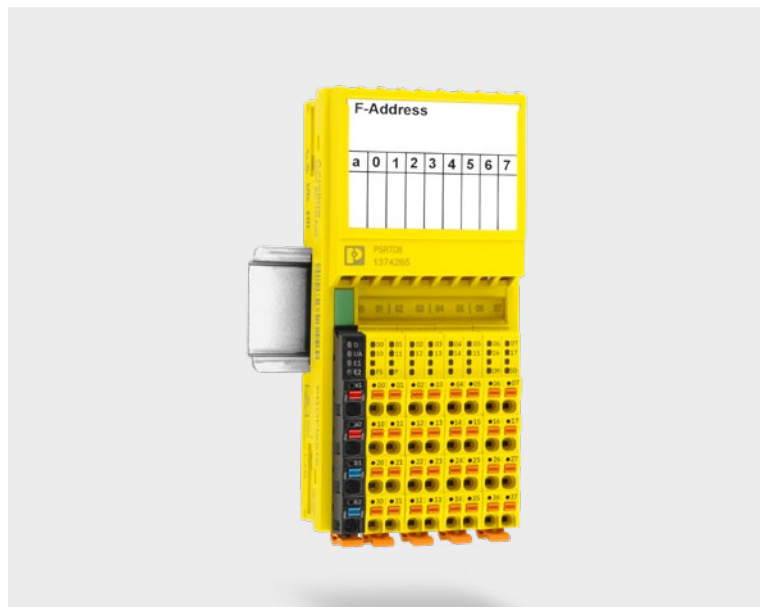


Gain more info:  
Web code #3656

## Analog safety I/O module

### Safe temperature measurement

The new AXL F PSRTD8 1F Axioline F safety module provides safe analog inputs for recording resistance temperature detectors. Up to eight sensors can be connected. In addition, easy and flexible use is possible for a variety of sensor types.



#### Main features

- Safe RTD-based temperature measurement
- Eight analog temperature inputs
- 2-, 3-, or 4-conductor connection technology
- Measurements from 0 ohms ... 5,000 ohms
- PROFIsafe 2.6
- Up to Cat. 4/Pl e in accordance with EN ISO 13849-1
- Up to SIL 3 in accordance with IEC 61508

#### Your advantages

- ✓ Flexible use through the integration of different sensor types (Pt, Ni, and KTY)
- ✓ Higher system availability with integrated diagnostic technology
- ✓ Simplified use of data with the standardized display of measured values
- ✓ Quick installation via Push-in Technology
- ✓ Manufacturer-independent use due to PROFIsafe system



Gain more info:  
Web code #3553



## I/O module for temperature measurement

### Connection of resistance temperature detectors

The module is designed for use in an Axioline F I/O station. It is used to acquire signals from resistance temperature detectors in potentially explosive areas, zone 0 and zone 1. The module supports all common platinum and nickel sensors.



#### Main features

- 8 analog input channels for connecting resistance temperature detectors (RTDs)
- Linear inputs up to 10 k $\Omega$
- Extended temperature range of -40°C ... +70°C
- Intrinsically safe inputs
- Connection of sensors in 2-, 3-, and 4-conductor technology

#### Your advantages

- ✓ Meets the requirements of any application involving the connection of all common RTDs and linear resistance inputs
- ✓ Application flexibility and greater sensor distances through the use of 2-, 3-, and 4-conductor technology
- ✓ High reliability due to an extended temperature range
- ✓ Connection to RTD sensors in zones 0 and 1



Gain more info:  
Web code #3609

## Passive analog input modules

### Direct connection of HART devices

The analog eight-channel HART input modules for the Axioline F remote I/O system are designed for connecting to four-conductor HART devices with a separate power supply. They are available in both intrinsically safe and non-intrinsically safe versions.



### Main features

- Cyclic analog and HART data
- Acyclic HART data
- Intrinsically safe and non-intrinsically safe inputs
- Extended temperature range

### Your advantages

- ✓ Simultaneous reception of analog and HART process data
- ✓ Easy diagnostics and configuration with DTM support
- ✓ Realization of hybrid process applications possible with intrinsically safe inputs



Gain more info:  
Web code #3331

## I/O module with two counter inputs

### Acquisition of pulse sequences

This Axioline F counter module acquires and processes fast pulse sequences from sensors. The I/O module has two counter channels. You can operate the module in four modes: event counting, frequency measurement, time measurement, speed measurement.



### Main features

- 2 counter inputs
- 32-bit counter (up and down)
- Maximum input frequency: 200 kHz
- Single or periodic counting

### Your advantages

- ✓ Control of two outputs per channel depending on comparative values
- ✓ Flexible control of the counting process via hardware gate or software gate
- ✓ Short installation times with Push-in connection technology
- ✓ Robust mechanical design for various applications



Gain more info:  
Web code #3545

# I/O modules for temperature measurement

## Connection of resistance temperature detectors

The new RTD modules have been designed for the high-availability Axioline P remote I/O system. They are used to acquire signals from resistance temperature detectors. The modules support all common platinum and nickel sensors.



### Main features

- 8 analog input channels for connecting resistance temperature detectors (RTDs)
- Linear inputs up to 10 k $\Omega$
- Extended temperature range of -40°C ... +70°C
- Hot-swap-capable I/O modules
- Intrinsically safe and non-intrinsically safe inputs
- Connection of sensors in 2-, 3-, and 4-conductor technology

### Your advantages

- ✓ Meets the requirements of any application involving the connection of all common RTDs and linear resistance inputs
- ✓ Application flexibility and greater sensor distances through the use of 2-, 3-, and 4-conductor technology
- ✓ High reliability and availability due to an extended temperature range and systemic hot-swap capability



Gain more info:  
Web code #3611

## Passive analog hot-swap input modules

### Direct connection of HART devices

The analog eight-channel HART input modules for the Axioline P remote I/O system with hot-swap capability are designed for connecting to four-conductor HART devices with a separate power supply. They are available in both intrinsically safe and non-intrinsically safe versions.



#### Main features

- Hot-swap-capable I/O modules
- Cyclic analog and HART data
- Acyclic HART data
- Intrinsically safe and non-intrinsically safe inputs
- Extended temperature range

#### Your advantages

- ✓ Simultaneous reception of analog and HART process data
- ✓ High system availability due to the Axioline P remote I/O system properties
- ✓ Realization of process applications possible with intrinsically safe inputs



Gain more info:  
Web code #3330

## IO-Link I/O box for field installation

### Connection of up to eight digital sensors

This Axioline E device can be connected to an IO-Link master via an IO-Link B port. You can thus acquire and output digital signals via IO-Link. An IO-Link master allows use within different networks.



### Main features

- Connection to an IO-Link master with M12 connector (A-coded, 4-pos.)
- Type A port
- IO-Link specification V1.1.3
- Connection of up to 8 inputs or 8 inputs/outputs with M12 connectors (A-coded, 5-pos.)
- IP65 / IP67 / IP69 degree of protection
- Single-channel diagnostics
- 30 mm overall width



### Your advantages

- ✓ Connection of sensors and actuators in the immediate vicinity of the process in confined spaces
- ✓ Powerful with minimal cabling effort
- ✓ Quick installation with M12 push-pull fast-connection technology
- ✓ Long service life and high system availability due to the robust design
- ✓ Optimum connectivity for future-proof automation



Gain more info:  
Web code #3723

## IO-Link I/O box for field installation

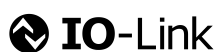
### Connection of up to eight digital sensors

You can connect this Axioline E device to an IO-Link master via an IO-Link B port. You can thus acquire and output digital signals via IO-Link. An IO-Link master allows use within different networks.



### Main features

- Connection to an IO-Link master with M12 connector (A-coded, 5-pos.)
- Type B port
- IO-Link specification V1.1.3
- Connection of up to 16 inputs/outputs with M12 connectors (A-coded, 5-pos.)
- Diagnostic and status indicators
- Single-channel diagnostics
- Degree of protection: IP65, IP67, IP69



### Your advantages

- ✓ Powerful with minimal cabling effort
- ✓ Quick installation with M12 push-pull fast-connection technology
- ✓ Long service life and high system availability due to the robust design
- ✓ Optimum connectivity for future-proof automation



Gain more info:  
Web code #3612

## IO-Link I/O box for field installation

### Connection of up to 16 digital sensors

You can connect this Axioline E device to an IO-Link master via an IO-Link A port. You can thus acquire and output digital signals via IO-Link. The IO-Link master allows use within different networks.



### Main features

- Type A port
- IO-Link specification V1.1.3
- Connection of up to 16 inputs with M12 connectors
- Diagnostic and status indicators
- IP65/IP67/IP69 degree of protection

### Your advantages

- ✓ Powerful with minimal cabling effort
- ✓ Quick installation with M12 push-pull fast-connection technology
- ✓ Long service life and high system availability due to the robust design
- ✓ Optimum connectivity for future-proof automation



Gain more info:  
Web code #3544



# Rugged web panels

## For demanding environments

The new Rugged WP 6000 series features robust web panels for demanding environments. With their extended temperature range, high impact strength, and readability in direct sunlight, they are ideal for rugged outdoor operating applications.



### Main features

- Extended temperature range: (-30°C ... +65°C)
- High impact strength (40g) and vibration resistance (5g)
- Displays readable in direct sunlight with UV and IR protection
- Responsive PCAP touch screen displays from 7 to 15.6"
- Integrated motion and ambient light sensor

### Your advantages

- ✓ Robust hardware for harsh environments with 3 mm thick glass, larger heatsink, and stronger housing
- ✓ Open and usable in any third-party system
- ✓ Can be operated with gloves and suitable for use in damp environments
- ✓ Ideal for any HTML5 or browser-based visualization



Gain more info:  
Web code #3912

## Compact panel PCs

### Use of state-of-the-art processor technology

VL3 PPCS is an extension of the VL3 panel PC portfolio. They combine the look, feel, and mechanical properties of the xP 6000 HMIs with the technology of the VL3 UPC, compact box PCs with Intel x6000 processors, and industry-leading extension options.



#### Main features

- Long-term available Atom® processors of the x6000 series generation (Elkhart Lake)
- Six fixed and one configurable item
- Flexible extension options for the second COM port, wireless LAN, Ethernet extension, and 4G / LTE cellular connection
- Ready for Windows 11

#### Your advantages

- ✓ Modern hardware platform that is scalable in terms of performance and storage space
- ✓ Scalable, state-of-the-art Elkhart Lake processor technology to provide optimum system performance in a single compact package
- ✓ The same haptics and mechanical properties as the xP 6000 HMIs
- ✓ Best connectivity options to enable communication of different networks and I/O devices simultaneously



Gain more info:  
Web code #3658

# Flat screen touch monitors

## For industry

VL3 FPM are flat screens and extend the VL3 panel PC portfolio. These monitors combine the look, feel, and mechanical properties of the VL3 PPC and xP 6000 HMIs and offer extended connection options compared to the BL FPM series monitors.



### Main features

- Large selection of display sizes
- Same look as the xP 6000 HMI panels and VL3 panel PCs
- Same mechanical properties as the xP 6000 HMI panels and VL3 panel PCs
- Flexible installation with or without control cabinet
- Extended connectivity options

### Your advantages

- ✓ Same appearance and same cutout dimensions as TP 6000/ WP 6000 HMIs and VL3 panel PCs
- ✓ Improved connection options, including 2 x USB output and optional VGA, DP, or HDMI signal
- ✓ Can be operated wearing gloves and suitable for humid ambient conditions



Gain more info:  
Web code #3724

# The new edge device

## Seamless IT/OT integration

The new edge device, VL3 UPC 2440 EDGE, offers unparalleled simplicity and openness for PLC controllers. Based on the VL3 box PC, it enables data to be processed and stored directly in the machine.



### Main features

- Ready-to-use edge device for secure collection and evaluation of local data
- Complete Ubuntu Pro Desktop operating system from Linux
- Easy connection to IT systems, cloud services, and IoT platforms
- Ideal for implementing artificial intelligence

### Your advantages

- ✓ Ubuntu Pro Desktop operating system that can be easily extended
- ✓ Real-time Profinet controller with PLCnext Technology
- ✓ High performance for data acquisition and analysis
- ✓ Container-based Virtual PLCnext Control for flexible and scalable solutions
- ✓ Easy data exchange between PLCnext Technology and Linux



Gain more info:  
Web code #3836

# LoRaWAN soil moisture sensor

## Collecting soil data

The LoRaWAN soil moisture sensor can be used to determine the current condition of the soil. In order to use the collected soil moisture, temperature, and conductivity data for environmental monitoring, the sensor communicates with the IoT platform via a LoRaWAN gateway.



### Main features

- Volumetric water content measured at a soil depth of 30 cm
- LoRaWAN device
- Battery life of up to 8 years
- IP67 degree of protection
- Measured value memory (6 measured values)

### Your advantages

- ✓ Easy to adapt to different soil types
- ✓ 100% maintenance-free
- ✓ Completely wireless and therefore freely positionable
- ✓ Easy integration into third-party systems using a JavaScript library
- ✓ Robust and impact-resistant housing allows the sensor to be hammered in using a rubber hammer



Gain more info:  
Web code #3659

# Intelligent light control

## LoRaWAN-based street lighting

The LPWAN LCU D4I ZHAGA EU light control is part of the Smart Lighting solution from Phoenix Contact. The LoRaWAN®-capable control device manages and controls lights and LED drivers within the lighting infrastructure of thoroughfares, parks, and plazas.



### Main features

- DALI D4I interface for controlling modern LED drivers
- LoRaWAN®-capable
- Zhaga Book 18 base
- Use of the public ISM band (in Europe: 868 MHz)
- Bidirectional, encrypted communication to the light
- Range of up to several kilometers



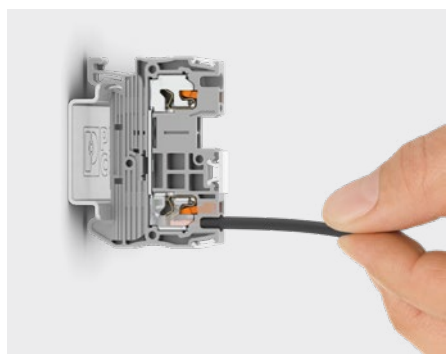
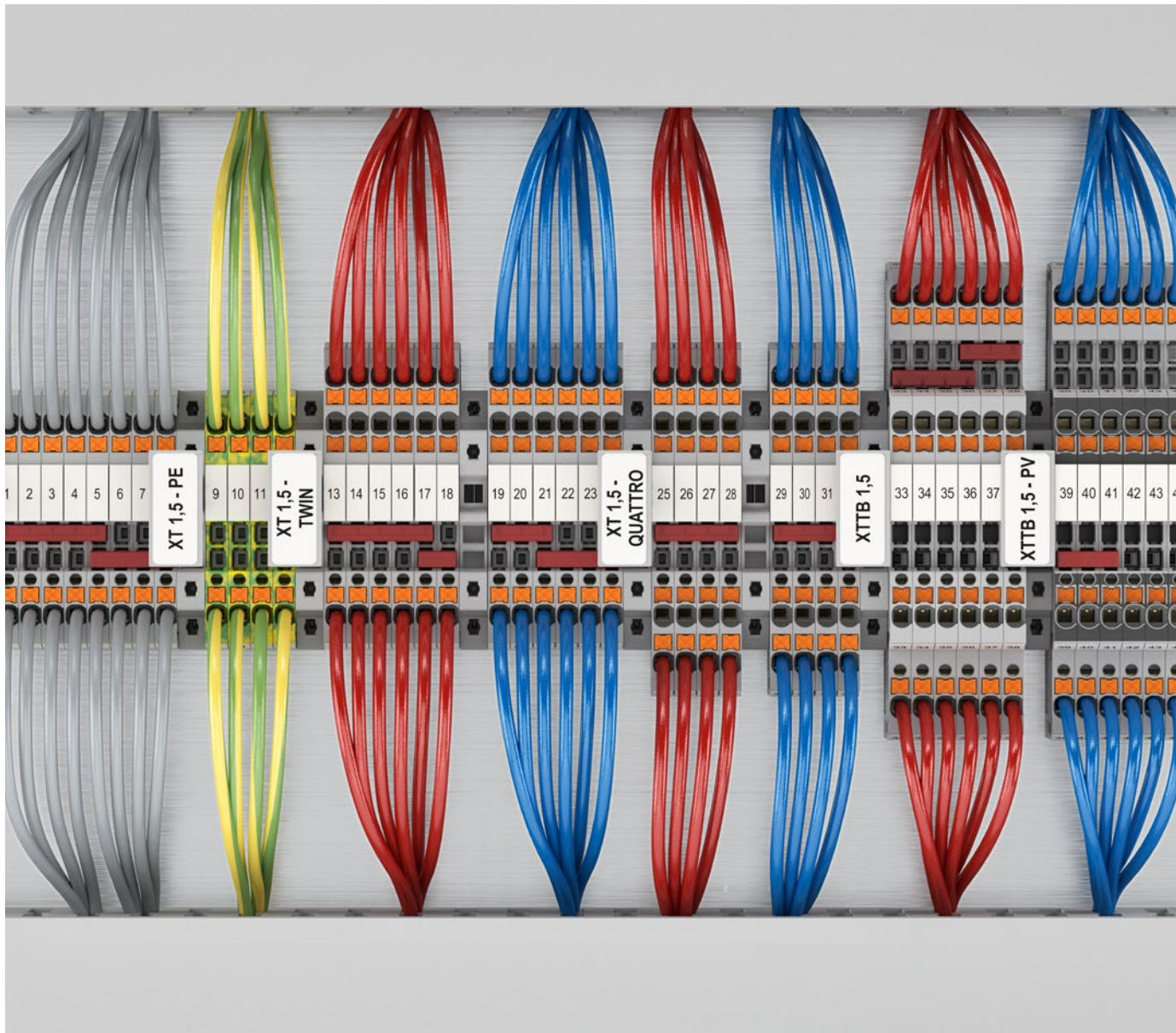
### Your advantages

- ✓ Improved energy efficiency with demand-oriented lighting
- ✓ Keep an eye on lighting points at all times with remote parameterization and diagnostics
- ✓ Intelligent light management via the grovez.io IoT platform
- ✓ Future-proof Smart Lighting solution – based on open interfaces and IoT systems
- ✓ Simple retrofitting of existing lighting infrastructure by extending the control technology

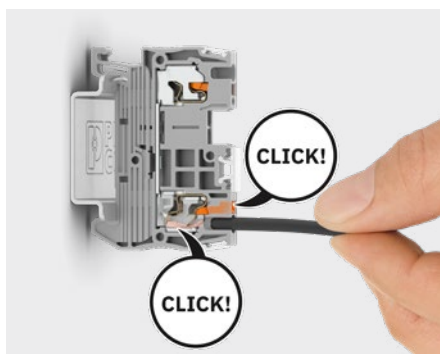


Gain more info:  
Web code #3564

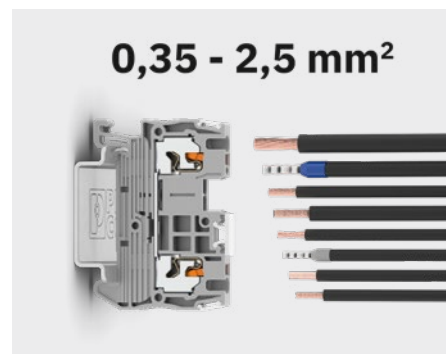




One-handed wiring with the pre-tensioned contact chamber



Clear identification of the conductor connection



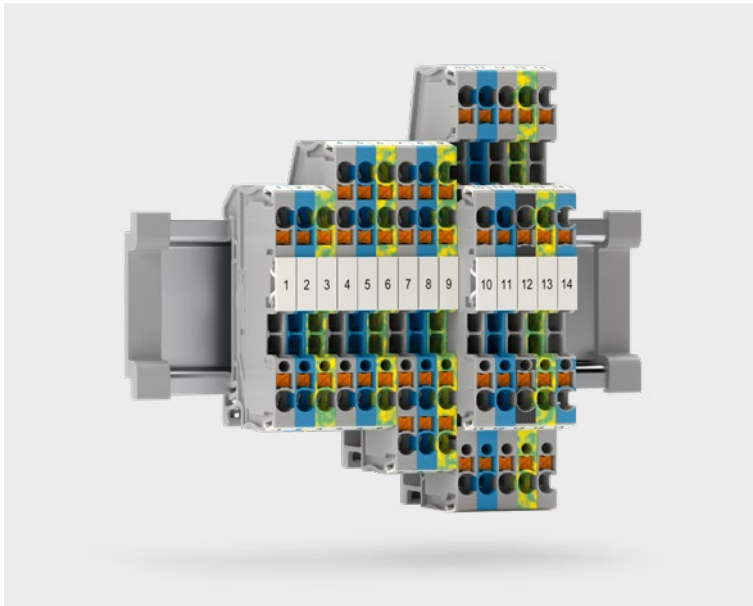
Wiring of all conductor types between 0.35 mm<sup>2</sup> and 2.5 mm<sup>2</sup>



# Terminal blocks with Push-X technology

## For conductor cross sections from 0.35 mm<sup>2</sup>

Discover the new Push-X terminal blocks with a nominal cross-section of 1.5 mm<sup>2</sup>. The terminal blocks enable the wiring of rigid and flexible conductors of between 0.35 and 2.5 mm<sup>2</sup>. Push-X technology allows tool-free installation, even without ferrules.



### Main features

- Push-X technology
- Nominal cross-section: 1.5 mm<sup>2</sup>
- Conductor cross-sections: 0.35 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>
- 22 AWG ... 14 AWG
- Nominal current: 17.5 A
- Nominal voltage: 500 V

**Push-X Technology** <sup>®</sup>

Designed by Phoenix Contact

### Your advantages

- ✓ Feather-light plugging and superior handling comfort with a factory-pretensioned contact spring
- ✓ Wiring of all conductor types, whether rigid or flexible with and without ferrules
- ✓ Clear identification of the conductor connection (visual and acoustic)
- ✓ Easy release of the conductors and pretensioning of the contact spring using the orange actuating push button
- ✓ Optimized for manual and automated wiring

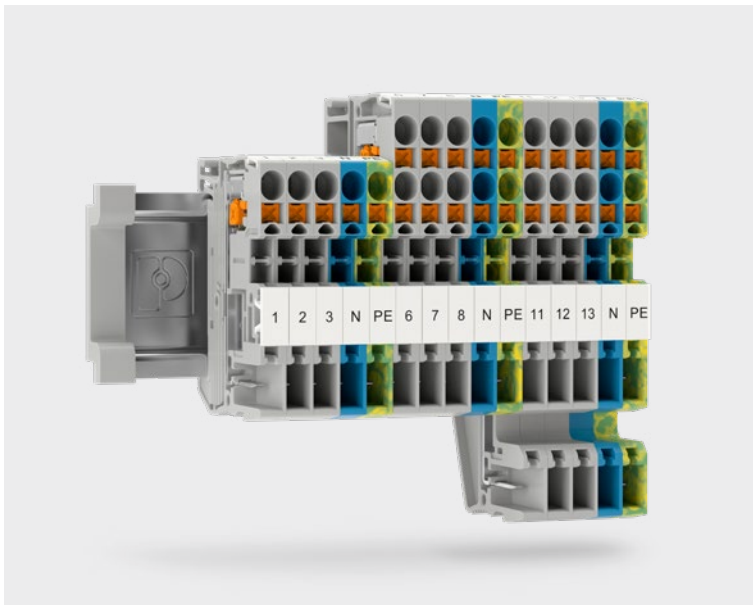


Gain more info:  
Web code #3091

# Plug-in terminal blocks with Push-X

## Easy connection with COMBI and Push-X

The plug-in terminal blocks with COMBI plug-in zone and Push-X connection revolutionize wiring. Increase efficiency through effortless wiring in the control cabinet with the Push-X connection and connect the field level with preassembled COMBI connectors.



### Main features

- Connection technology 1: Push-X connection
- Connection technology 2: COMBI plug-in zone
- Nominal cross-section: 2.5 mm<sup>2</sup>
- Conductor cross-sections: 0.5 mm<sup>2</sup> ... 4 mm<sup>2</sup>
- 20 AWG ... 12 AWG (calculated in accordance with IEC)
- Current: 24 A
- Voltage: 800 V

**Push-X Technology**   
Designed by Phoenix Contact

### Your advantages

- ✓ Highly convenient operation for all conductor types with the effortless and tool-free direct-connection technology
- ✓ Very fast connection of flexible conductors without ferrules
- ✓ Intuitive connection through visual and haptic feedback from the terminal point
- ✓ Fast conductor release with the locking mechanism in the terminal point
- ✓ Complete flexibility with configurable and standard COMBI connectors with up to 15 positions

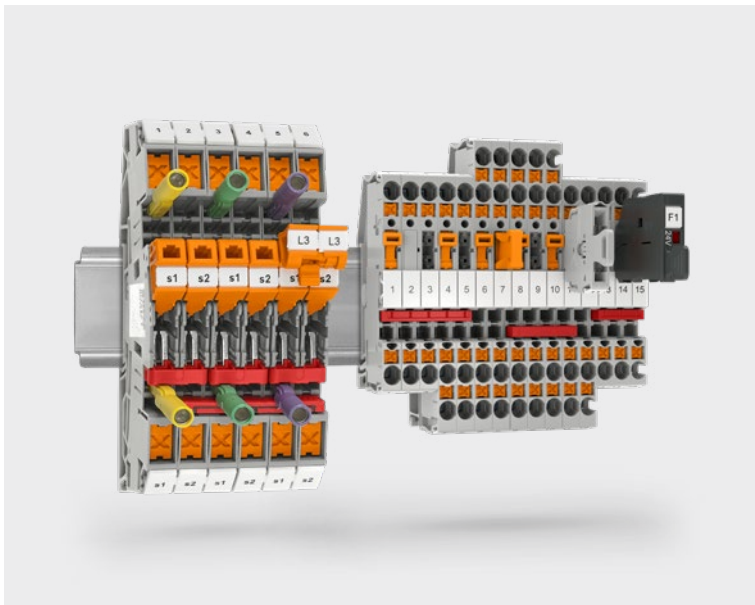


Gain more info:  
Web code #3786

# Function terminals with Push-X technology

## Disconnect signals quickly and safely

The Push-X function terminals also allow the tool-free wiring of flexible conductors. In addition, the integrated disconnect zones enable signals to be disconnected easily. The TG basic disconnect terminal blocks also offer the option of safely integrating function plugs.



### Main features

- Push-X technology
- Test-disconnect terminal blocks: 6 mm<sup>2</sup>
- Nominal current: 30 A
- Nominal voltage: 500 V
- Disconnect and knife-disconnect terminal blocks: 2.5 mm<sup>2</sup>
- Nominal current: 24 A
- Nominal voltage: 500 V

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

### Your advantages

- ✓ Highly convenient operation with the new tool-free Push-X technology
- ✓ Quick installation of all types of conductors with and without ferrule
- ✓ “Make before break” automatic leading current transformer short circuit for the test-disconnect terminal blocks
- ✓ Easy disconnection of signals and integration of various function plugs
- ✓ Significant cost savings with the uniform accessories of the CLIPLINE complete system



Gain more info:  
Web code #3091

# M12 distributor boxes with push-pull fast locking

## The new standard in automation technology

The new M12 push-pull distributor boxes feature a consistent, tool-free, and intuitive installation. Master cables and M12 connectors are connected conveniently and securely by direct connection. This ensures significant time savings and safe cabling.



### Main features

- Plug-in connector hood
- Master cable connection with Push-in Technology
- Push-pull fast locking in accordance with IEC 61076-2-010
- A-coded, 4 and 5-pos. versions, unshielded
- Connection cross-section: 0.14 mm<sup>2</sup> ... 1.5 mm<sup>2</sup>
- Degree of protection: IP65, IP67
- Temperature range: -25°C ... 80°C

### Your advantages

- ✓ Time-saving, tool-free mounting with plug-in connector hood with snap-in locking
- ✓ Easy connection of the master cable with Push-in Technology
- ✓ Fast, secure installation of connectors with push-pull fast locking
- ✓ More flexibility with M12 ports for classic screw connectors and push-pull connectors
- ✓ Clear assignment with marking labels on the cover and header



Gain more info:  
Web code #3652

## Eight-position M12 push-pull connectors

### Simple, fast signal cabling

M12 push-pull connectors enable fast and secure cabling even in confined spaces. They can be installed without tools – they can be simply plugging in. The A-coded, eight-position, preassembled signal cables extend the product range.



### Main features

- M12 push-pull internal and external locking
- 8-position, A-coded
- Shielded and unshielded versions
- Male and female connectors
- Advanced Shielding Technology
- PUR halogen-free cable
- Degree of protection: IP65, IP68

### Your advantages

- ✓ Quick and reliable connection even in confined spaces and increased cabling densities
- ✓ Time savings of 80% during installation compared to screw connection
- ✓ Connectors with internal and external locking enable flying leads
- ✓ Reliable shield connection with Advanced Shielding Technology
- ✓ Product range standardized in accordance with IEC 61076-2-010 offers a high degree of future-proofing



Gain more info:  
Web code #3662

# M12 PUSH-PULL network cables

## Easy, reliable data transmission

Pre-assembled M12 push-pull connectors for Ethernet applications offer simple, secure high-speed data transmission. The network cables feature a fast, tool-free installation and are completely shielded with Advanced Shielding Technology.



### Main features

- M12 push-pull internal and external locking
- 8-position, X-coded
- Ethernet CAT6<sub>A</sub>, 10 Gbps
- Male and female connector versions
- Straight and angled versions
- 360° shielding with Advanced Shielding Technology
- PUR halogen-free cable
- Degree of protection: IP65, IP67

### Your advantages

- ✓ Quick and reliable connection even in confined spaces and increased cabling densities
- ✓ Time savings of 80% during installation compared to screw connection
- ✓ Seamless communication with high-speed data transmission up to 10 Gbps
- ✓ Reliable shield connection with Advanced Shielding Technology
- ✓ Product range standardized in accordance with IEC 61076-2-010 offers a high degree of future-proofing



Gain more info:  
Web code #3661

# Angled M12 device connector for THR

## Increases efficiency in production

The 90° angled connector in M12 format is designed for automated production and enables efficient mounting processes. Thanks to its angled design, the new connector can be positioned flexibly on the PCB and can therefore also be used in confined spaces.



### Main features

- Angled design
- For reflow (THR) processing
- Voltages up to 250 V
- Currents up to 4 A
- Available in A and D codings
- 4-, 5-, and 8-pos.
- Unshielded version
- Inverse pin connector pattern

### Your advantages

- ✓ Suitable for pick-and-place: automated assembly on the PCB helps to increase efficiency in production
- ✓ Optimized design: shifted center of gravity, thereby “effortless” standing on the PCB without locking clips
- ✓ Flexible: easy positioning and alignment on the PCB even in confined spaces
- ✓ Modular: compatible with the available THR housings



Gain more info:  
Web code #3716

# M12 device connectors for soldering processes

## Future-proof in your application

The lead-free M12 connectors for wave soldering processes are RoHS II compliant without Exemption 6c. Due to their universal backward compatibility, you can smoothly integrate the connectors into your existing PCB layout.



### Main features

- Voltages up to 250 V
- Currents up to 4 A
- Available in A, B, and D codings
- 4 and 5-pos.
- Straight or angled design

### Your advantages

- ✓ Standard pin assignments and codings for signal and data transmission with a uniform design-in design
- ✓ Easy PCB mounting: two-piece connectors for wave soldering
- ✓ Secure assembly: locking clips for fixing onto the PCB
- ✓ Sustainable and future-proof: lead-free in accordance with RoHS II without Exemption 6c
- ✓ Worldwide availability through global distribution channels



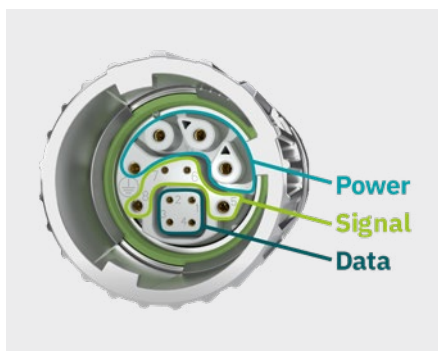
Gain more info:  
Web code #3565







Pin assignments based on the IEC 61076-2-117 standard



Compact devices, with a space-saving 3-in-1 solution



Time savings with fast and easy installation

# M17 hybrid connectors in accordance with the IEC standard

## 3-in-1 solution with the ONECLICK fast-locking system

The M17 PRO hybrid connector in accordance with the IEC 61076-2-117 standard features maximum compatibility and flexibility for a wide range of applications. The 3-in-1 solution with patented ONECLICK fast-locking system transmits data, signals, and power via just one connector.



### Main features

- Pin assignment based on IEC 61076-2-117
- Daisy chain-capable 3-in-1 solution
- Available in 50 V and 630 V versions
- Installation altitude up to 3,000 m
- Currents up to 16 A
- Connection cross-section of the power pins up to 1.5 mm<sup>2</sup>
- ONECLICK fast-locking system
- Degree of protection: IP66, IP68 (2 m / 24 h)

### Your advantages

- ✓ Maximum compatibility and flexibility with the first IEC-standardized M17 interface
- ✓ 3-in-1 solution for the transmission of data, signals, and power
- ✓ Maximum space savings with a reduced installed height compared to the standard M17
- ✓ Error-free mounting with the color and mechanical coding in the pin connector pattern
- ✓ 70% time savings during installation with the tool-free ONECLICK fast-locking system



Play video



Order sample



Gain more info:  
Web code #3898

# M23 hybrid PCB connectors

## Space-saving 3-in-1 solution

The new, space-saving M23 hybrid device connectors for wave soldering processes reliably transmit data, signals, and power. They feature improved EMC properties and reliability with short distances and the elimination of electrical transfer points.



### Main features

- Complete system comprising PCB, device, and field connectors as well as hybrid cables
- Hybrid pin connector pattern: 4+4+4+PE
- Voltages up to 630 V AC / 800 V DC
- Currents up to 30 A
- Data rates of up to 100 Mbit (CAT5)
- For wave soldering processes
- RoHS II compliant without exemption 6c
- UL approval: UL 2237 / PVVA

### Your advantages

- ✓ Reliable transmission of signals, data, and power in a single connector
- ✓ 80% faster mounting and 60% less installation space compared to litz wire assemblies
- ✓ Cost reduction due to the elimination of additional PCB connectors
- ✓ Reduction of PCB complexity and EMC risks
- ✓ Elimination of work steps containing high error potentials

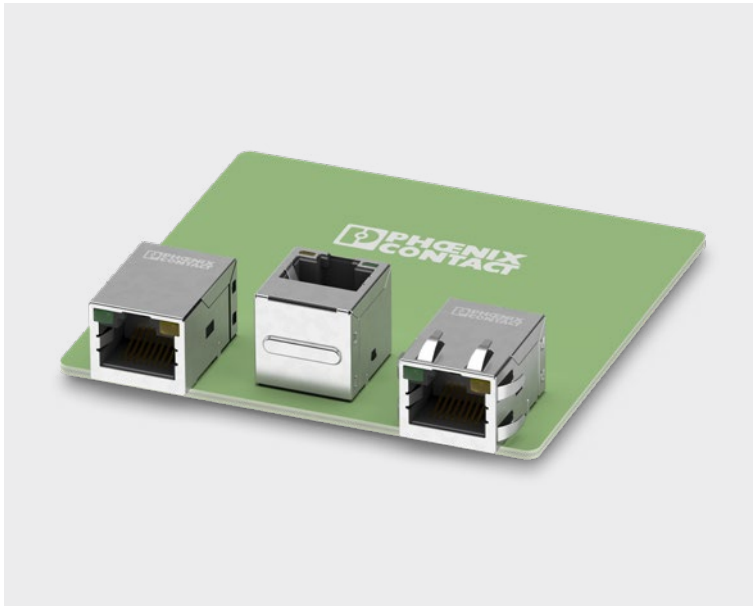


Gain more info:  
Web code #3907

## RJ45 magnetic jacks

### Suitable for THT wave soldering and THR soldering

The new RJ45 PCB connectors with integrated transformer are suitable for wave soldering (THT) and reflow (THR) processing. They extend the existing portfolio with filtered RJ45 versions in industrial design for applications up to 1 Gbps.



### Main features

- 90° and 180° single-port PCB connectors
- For wave soldering (THT) and reflow (THR) processing
- With LED and shield spring as an option
- Filtering versions for all common Ethernet applications
- Data rates up to 1 Gbps
- Robust industrial design

### Your advantages

- ✓ Simplified Ethernet design process due to integrated filtering
- ✓ Reduced PCB complexity and reduced EMC risks
- ✓ Automated processing due to reflow solderability
- ✓ Ideal version for any application due to wide range of products
- ✓ Equipped for demanding areas of application due to industrial design

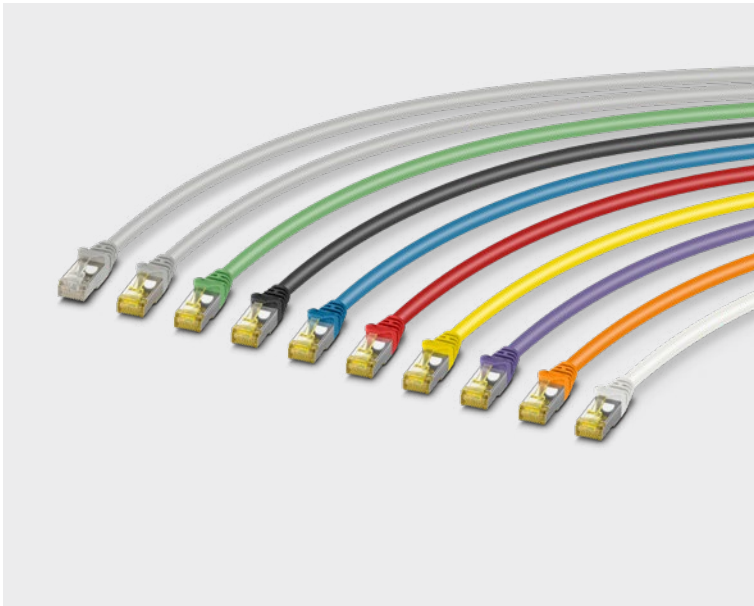


Gain more info:  
Web code #3710

## Color RJ45 patch cables

### For applications in the control cabinet

Phoenix Contact is extending its range with color patch cables for the RJ45 BUILDING series. The new cables available in eight colors – white, orange, yellow, red, violet, green, blue, and black – provide color alternatives for CAT6<sub>A</sub> applications.



#### Main features

- Colors: white, orange, yellow, red, violet, green, blue, and black
- Data transmission up to 10 Gbps (CAT6<sub>A</sub>)
- Lengths from 0.3 to 50 m
- Integrated locking clip protection

#### Ethernet

#### Your advantages

- ✓ Perfect for office, building, and protected industrial applications, such as in control cabinets
- ✓ Worldwide approval with CE, UL, WEEE, and EAC
- ✓ Secure connection and disconnection with reliable locking clip protection
- ✓ Future-proof high-speed data transmission with up to 10 Gbps (CAT6<sub>A</sub>)
- ✓ Ideal EMC properties due to 360° shielding

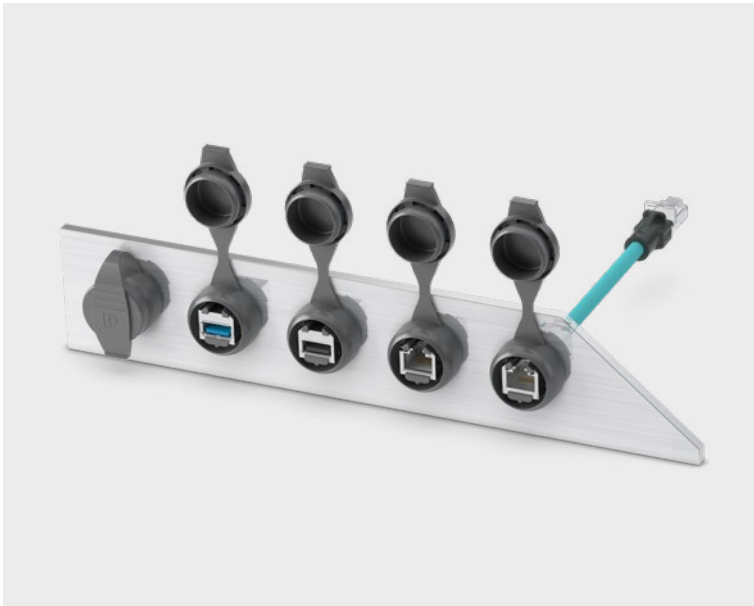


Gain more info:  
Web code #3772

# Data interface for control cabinets and devices

## Carry out service work conveniently

Our Data Service Interfaces (DSI) include various interfaces such as RJ45 and USB for the easy connection of additional electrical devices. These space-saving service interfaces significantly simplify maintenance work on control cabinets and other devices.



### Main features

- Coupling modules (USB type A 2.0, USB type A 3.0, RJ45 CAT6<sub>A</sub>) and cable connection modules (RJ45 CAT6<sub>A</sub>)
- IP65 / IP67 degree of protection (with closed protective cover)
- Panel thicknesses: 1 mm ... 5 mm
- Front mounting
- Ambient temperature (operation): -40°C ... +70°C
- UL approval
- Wall cut-out: Ø 22.5 mm

### Your advantages

- ✓ The higher IP protection class enables use in industrial environments
- ✓ Quick and easy update and maintenance work etc., on closed control cabinets and devices
- ✓ Space-saving installation with a standard wall cut-out of Ø 22.5 mm
- ✓ Short mounting time with the simple, tool-free assembly
- ✓ Can be customized with your own logo



Gain more info:  
Web code #3807

## S15 power circular connectors

### Powerful and compact

Size 15 circular connectors offer a compact and reliable power connection for asynchronous and three-phase motors up to 7.5 kW. The bayonet fast-locking system enables tool-free, time-saving installation. This prevents connection errors.



#### Main features

- Unshielded size 15 circular connectors
- Hybrid pin connector pattern: 3 power contacts up to 16 A, 2 signal contacts up to 10 A, PE
- Bayonet fast-locking system
- Conductor structure: 6 x 2.5 mm<sup>2</sup>
- PUR halogen-free cable
- Degree of protection: IP65, IP67
- Standardized in accordance with IEC 61076-2-116

#### Your advantages

- ✓ Save time through easy, tool-free installation with bayonet fast-locking system
- ✓ Significant space savings with power and signal contacts in a hybrid pin connector pattern
- ✓ Robust in harsh industrial environments due to bend and vibration protection
- ✓ UL approval and IEC standardization for worldwide use



Gain more info:  
Web code #3528



## Battery-pole connectors for residential storage

### Inverter connection protected against polarity reversal

The new connectors for residential storage applications are particularly suitable for use on battery inverters. DC connectors protected against polarity reversal prevent mismatching in common PV connection technology and short-circuiting of the battery poles.



#### Main features

- Rated current: up to 60 A
- Rated voltage: 1,500 V DC
- Conductor cross-section: 6 mm<sup>2</sup> ... 16 mm<sup>2</sup>
- Degree of protection: IP66 / IP68 (2 m / 2 h)
- Insertion cycles: 100

#### Your advantages

- ✓ Silver-plated contacts for connection technology with long-term stability
- ✓ No mismatching: battery connection protected against polarity reversal by mechanical coding
- ✓ Safe mounting: touch-proof battery poles, even when not plugged in
- ✓ Various colors: easier identification of battery poles



Gain more info:  
Web code #3712

# Battery-pole connectors

## Safe connections for energy storage systems

The BPC series connector that is protected against polarity reversal is ideal for use in energy storage units. Rotatable and featuring touch-proof contacts and mechanical coding, the single-position connector provides a particularly high level of flexibility and safety when connecting battery modules.



### Main features

- Rated current: up to 400 A
- Rated voltage: 1,500 V
- Conductor cross-section: 16 mm<sup>2</sup> ... 120 mm<sup>2</sup>
- Pollution degree 2
- Degree of protection: IP65/IP67
- >100 insertion cycles
- Mechanical and color coding
- Flammability rating V0 in accordance with UL 94

### Your advantages

- ✓ Error-free connection through mechanical and color coding
- ✓ Reliable installation due to the waterproof design and touch-proof contacts
- ✓ Consistent power transmission due to high shock and vibration resistance
- ✓ Flexibility as it can be rotated 360° and features various connection methods
- ✓ Compliance with all relevant energy storage standards: UL 4128, UL 1973, UL 9540



Gain more info:  
Web code #3687

# Pluggable power distributors up to 20 A

## Assembled for fast installation

The preassembled power distributor allows easy and time-saving installation with PRC 20 series connectors. The preconfigured distributor is available in 16 versions and can be easily installed via plug-and-play.



### Main features

- Rated voltage: 400 V AC / 500 V DC (IEC) (III/2)
- Rated current: 20 A
- Degree of protection: up to IP69
- Impact protection category: IK08 (-25°C)
- 2- to 5-pos.
- Coding: mechanical and color-coded
- Number of inputs: 1
- Number of outputs: 2

### Your advantages

- ✓ Low installation effort at the construction site with plug-and-play
- ✓ Fewer wiring errors due to 100% check during production
- ✓ Locking that can be released either manually or by using tools ensures greater flexibility on site
- ✓ Plug-and-forget with the use of tried-and-tested materials
- ✓ Safe use even under extreme ambient conditions



Gain more info:  
Web code #3711

## QPD STAS 3 installation connectors

### Easy blind and awning connection

The QPD STAK/STAS 3 installation connectors designed for assembly are specifically intended for the motor connection of blinds, window coverings, and awnings. The IDC connection enables installation in no time – without stripping or screwing.



#### Main features

- QUICKON fast-connection technology (IDC)
- 4-pos. (3-pos. + PE)
- Voltage: 400 V
- Current: 16 A
- Degree of protection: IP54
- Temperature range: -40°C ... +100°C

#### Your advantages

- ✓ Time savings of up to 80% for on-site connection
- ✓ Quick and easy assembly without special tools
- ✓ Highly reliable with robust and vibration-proof housings



Gain more info:  
Web code #3535

## Distributors for electrical installations

### Distribute power easily and tool-free

IPD distribution boards enable simple and safe power distribution in buildings or infrastructure facilities. Reliable and tool-free installation of 3- and 5-pos. connectors with conductor cross-sections up to 2.5 mm<sup>2</sup> is ensured by simply plugging them in.



#### Main features

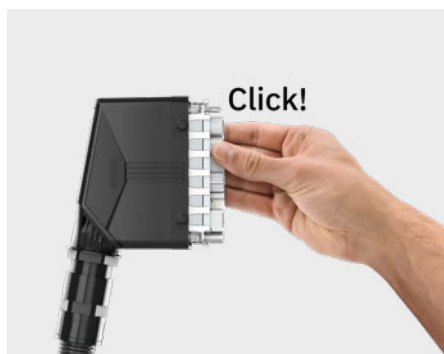
- H and Y distributors
- 3- and 5-pos. versions
- Bayonet fast-locking system
- Voltage: 500 V
- Currents up to 20 A
- Connector for conductor cross-section: 0.5 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>
- Degree of protection: IP66, IP68, IP69K

#### Your advantages

- ✓ Significant time savings through tool-free and plug-in connection
- ✓ Bayonet fast-locking system ensures easy mounting, even in particularly difficult installation situations
- ✓ Mechanical coding to prevent mismatching and ensure safe installation
- ✓ Reliable use outdoors and in wet areas due to the high degree of protection



Gain more info:  
Web code #3536



*Tool-free mounting with Click-in latching*



*Fast conductor connection with Push-in – even with PE contact*

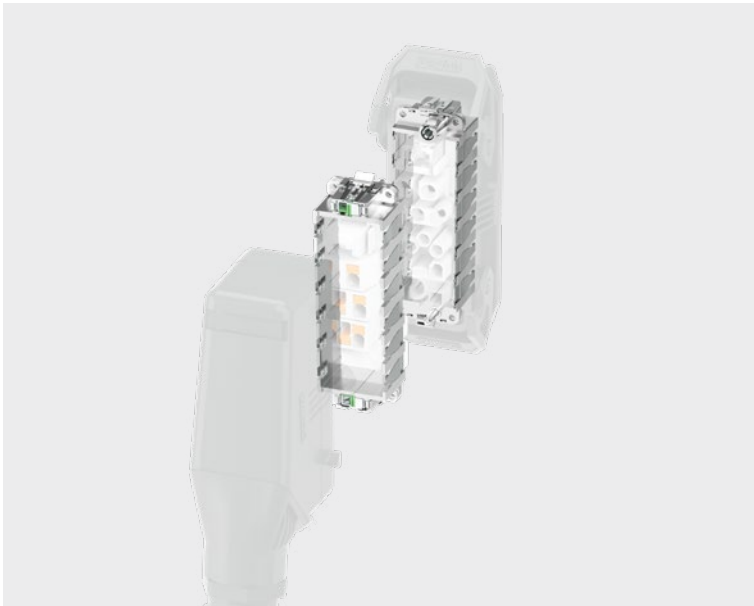


*Individual combination of different modules*

# Click-in module carrier frames for heavy-duty connectors

## Easy, tool-free installation

HEAVYCON ensures that the individual configuration and use of heavy-duty connectors is completely tool-free, making it even easier and less time-consuming. With connections that "click" – from the large portfolio of contact inserts through to the frame and the PE contact.



### Main features

- Connection technology frame: Click-in latching
- PE connection technology: Push-in connection
- Number of modules: up to 6
- Mating cycles: 500
- Temperature range: -40°C ... +125°C

### Your advantages

- ✓ Save time and money: Reliable, tool-free Click-in latching
- ✓ Fast conductor connection: Conductor connection with Push-in Technology – even with PE contact and when installed
- ✓ Convenient module latching: Easy installation with clear snap-in mechanism
- ✓ Individual and space-saving: Combination of different modules
- ✓ High-performance power modules: Reliably transmit currents of up to 300 A



Play video



Order sample



Gain more info:  
Web code #3090

## Contact insert modules with function

### Bridge, disconnect, and safeguard in the field

Modular contact inserts with a function slot and disconnect zone for HEAVYCON heavy-duty connectors offer a high degree of flexibility. Bring the function from the control cabinet to the field and realize potential bridging and power protection directly in the application.



#### Main features

- Multifunctional disconnect zone
- Double function slot
- Push-in connection technology
- 5-pos.
- 400 V, 16 A
- 0.14 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>
- Suitable for all HEAVYCON module carrier frames
- Shock- and vibration-resistant in accordance with DIN EN 61373

#### Your advantages

- ✓ Save space and reduce cabling with decentral structures
- ✓ Easy power forwarding and string protection directly in the field
- ✓ Greater flexibility: the disconnect zone for fuse plugs, component connectors, and isolating plugs
- ✓ Fast, tool-free conductor connection with Push-in Technology
- ✓ Customized interface achieved by combining various transmission media in one connector



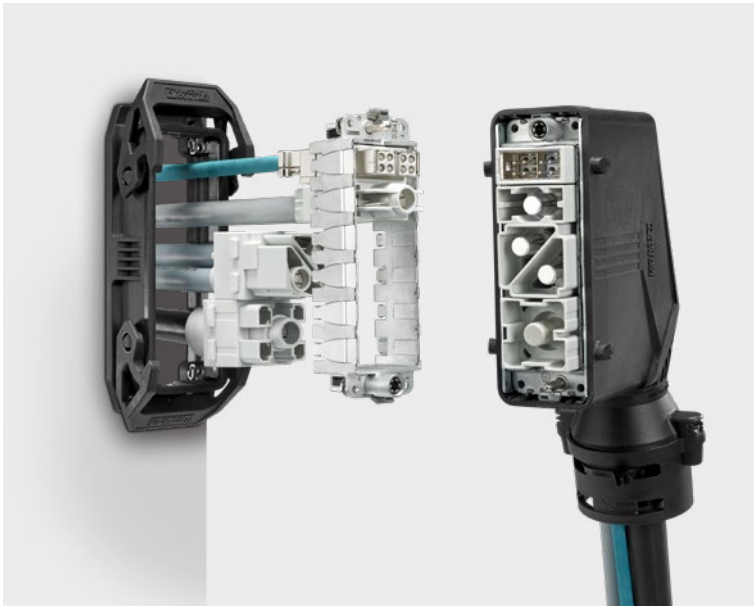
Gain more info:  
Web code #3664



# HEAVYCON Power contact insert modules

## Customized wiring of high-current applications

Transmit currents up to 300 A reliably with the contact insert modules for HEAVYCON heavy-duty connectors. By combining them with other modules for signal, data, and power transmission in one housing, you can create your own customized interface.



### Main features

- Modules with crimp connection up to 120 mm<sup>2</sup>
- Modules with Push-in connection up to 16 mm<sup>2</sup>
- Suitable for all HEAVYCON module carrier frames
- Rated voltage and current: up to 1,000 V and 300 A
- Temperature range: -40°C ... +125°C
- Shock- and vibration-resistant in accordance with DIN EN 61373

### Your advantages

- ✓ Innovative latching and unlocking of crimp contacts without using tools
- ✓ Highly compact modular interface achieved by combining various different transmission media in the same housing
- ✓ Quick and safe wiring, even in confined spaces and when installed
- ✓ Easy tool-free connection of conductors up to 16 mm<sup>2</sup> with Push-in Technology
- ✓ Connection-compatible with the market standard



Gain more info:  
Web code #3822

## Contact inserts for heavy-duty connectors

### Reliable testing of current transformers

The fixed-position and modular HEAVYCON TSC contact inserts are designed for measuring and testing tasks in the field of protection technology for medium-voltage switchgear. They are attached directly to the control cabinet as a short-term or long-term connection with high IP protection.



#### Main features

- Fixed-position versions with screw connection technology
- Modular versions with Push-in connection technology
- Can be used in plastic and metal housing
- Leading, automatic transformer short circuit

#### Your advantages

- ✓ Reliable long-term current transformer testing with robust connector housing
- ✓ Easy tool-free conductor connection with Push-in Technology
- ✓ Maximum safety with leading and automatic transformer short circuit
- ✓ Space savings achieved by combining various transmission media in the same connector
- ✓ Safe use for high IP requirements with IP66, IP67, and IP69 degree of protection



Gain more info:  
Web code #3530

# Contact inserts for heavy-duty connectors

## Powerful data transmission

The new HEAVYCON contact insert modules offer you more options for reliable high-speed data transmission. USB interfaces are integrated directly into the connector using a patch cable. Powerful Mbit and Gigabit modules support a wide range of cables.



### Main features

- Large cover for different USB patch cables
- Mbit module can be used with 4- or 8-pos. cables in 0.14 mm<sup>2</sup> ... 1.5 mm<sup>2</sup> format
- Shielding insulated or to PE potential
- Suitable for all module carrier frames
- Shock- and vibration-resistant in accordance with DIN EN 61373

### Your advantages

- ✓ Easy mounting with the innovative snap-in module carrier frame
- ✓ Optimum tolerance compensation with spring-loaded USB interfaces
- ✓ Gigabit modules transmit data quickly and reliably for high-speed applications
- ✓ Customized, compact interface achieved by combining various transmission media in the same housing
- ✓ Modules and frames are compatible with the market standard



Gain more info:  
Web code #3534

# HEAVYCON Data Center connectors

## Powerful, compact, energy-efficient

HEAVYCON industrial connectors for data centers optimize power distribution from the PDU to the IT rack. The compact heavy-duty connectors provide robust power transmission up to 70 A. Lower contact resistance reduces energy consumption and heat generation.



### Main features

- Rated current / voltage: 70 A / 690 V
- Number of positions: 4 + PE
- Conductor cross-section: 6 mm<sup>2</sup> ... 25 mm<sup>2</sup> / 10 AWG ... 4 AWG
- Crimp connection
- Mounting with Click-in latching
- M32 or M50 cable gland integrated, with or without strain relief
- Degree of protection: IP66

### Your advantages

- ✓ Space-saving cabling with a more compact design
- ✓ Short installation time with easy, tool-free installation with Click-in latching
- ✓ Reduce part costs with fixed-position contact inserts
- ✓ Optimum power transmission and energy savings of up to 60% due to the lower contact resistance of the crimp contacts
- ✓ Reduced cooling requirements due to lower heat generation



Gain more info:  
Web code #3823

## Panel-mount bases with screw-in thread

### Easy, time-saving mounting

HEAVYCON D7 panel-mount bases with screw-in thread save significant amounts of time during mounting work. They are secured conveniently in round panel cutouts using an M25 or M32 counter nut or screwed into motors and devices with the corresponding thread.



### Main features

- Die-cast aluminum and plastic housing
- Plug-in interface
- For M25 or M32 panel cutouts
- Size D7
- Angled and straight versions
- Degree of protection IP66, IP67
- Temperature range: -40°C ... +125°C
- Shock- and vibration-resistant in accordance with DIN EN 61373

### Your advantages

- ✓ Significant time savings with easy and convenient mounting in a round panel cutout
- ✓ The plug-in alternative to the existing cable gland offers greater flexibility in terms of cabling and maintenance
- ✓ Space-saving cabling in confined spaces with the compact design
- ✓ Optimum IP and EMC protection ensure reliable and safe operation of your system



Gain more info:  
Web code #3665

# Plug-in conductor connectors

## Easy wiring in the control cabinet

HEAVYCON CME plug-in conductor connectors offer greater efficiency in control cabinet wiring. You can use the conductor connector to wire up to 108 conductors directly during terminal strip production. You can connect the cable harnesses in the control cabinet by simply plugging them in.



### Main features

- Number of positions: 23+PE, 41+PE, 71+PE, 107+PE
- 250 V, 10 A
- 0.14 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>
- Crimp connection
- Protected connection with locking element
- Safe contact routing with funnel pad

### Your advantages

- ✓ Significant time and cost savings, as the terminal strips are wired directly to the plug-in connection during production
- ✓ Fast replacement of terminal strips with easy-release conductor connectors
- ✓ Avoidance of accidental connection release with the locking element
- ✓ Avoidance of contact errors, even when plugging at an angle with reliable centering of the contacts through funnel pads



Gain more info:  
Web code #3663

# Unshielded board-to-board connectors with 0.8 mm pitch

## Greater flexibility with compatible PCB footprints

The FINEPITCH board-to-board connectors in the FP 0,8 SL series are unshielded versions of the FP 0,8 series. Compatibility with the PCB footprint of the shielded FP 0,8 versions means that both versions can be replaced flexibly without adjusting the PCB layout.



### Main features

- Pitch: 0.8 mm
- Number of positions: 12, 20, 32, 52, 80
- Stack height: 6 mm ... 21 mm
- Data rates up to 52 Gbps
- Available with shielding as an option
- Nominal current: 1.7 A per contact
- Insertion cycles: 500
- Test voltage: 500 V AC



### Your advantages

- ✓ Compatible PCB footprint enables flexible replacement of shielded and unshielded versions
- ✓ Reliable mechanical and electrical connections with the double-sided ScaleX contact system
- ✓ Robustness: ScaleX technology for high tolerance compensation and protection of contacts
- ✓ Flexible device design: various numbers of positions, designs, and stack heights with high-level mating security

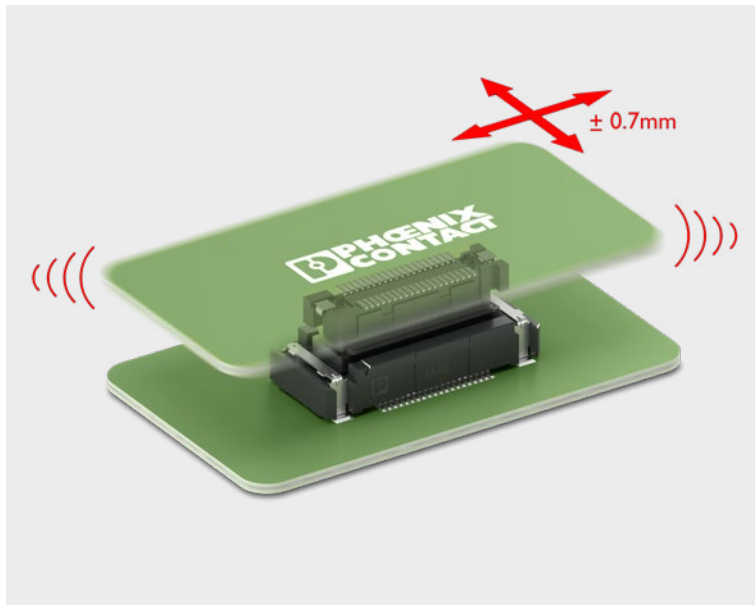


Gain more info:  
Web code #3684

## FS series board-to-board connectors

### Fast data transmission with a pitch of 0.635 mm

The space-saving board-to-board connectors of the FS 0,635 series enable mezzanine PCB arrangements with high-speed data transmission rates up to 40 Gbps. The floating system features a tolerance compensation of up to 0.7 mm in the x and y directions, as well as 0.6 mm in the z direction.



#### Main features

- Pitch: 0.635 mm
- 20- to 80-pos.
- Stack heights: 6 mm ... 16.6 mm
- Data rate: 40 Gbps
- Current: 0.5 A
- Insertion cycles: 50
- Test voltage: 500 V AC
- Floating tolerances:  $\pm 0.7$  mm (x, y direction)

#### Your advantages

- ✓ Design-in support during device development through M-CAD/ E-CAD data and a free sample service
- ✓ Cost and space savings with the comprehensive portfolio available in various stack heights
- ✓ Easy mating with integrated keyways and tolerance compensation for error-free connections
- ✓ Compensation of tolerances and mechanical stresses for a secure connection with the floating function



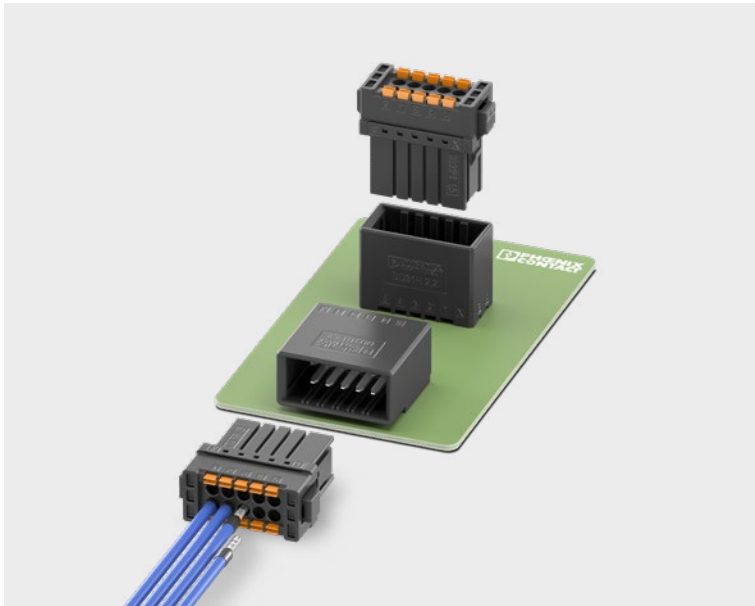
Gain more info:  
Web code #3443



# Wire-to-board connectors with Push-in Technology

## Perfectly optimized for tool-free installation

The DD31PS series CONNEXIS PCB connectors with Push-in connection technology simplify and accelerate wiring in the field and in the factory. Different pitches and designs allow for various applications in robotics, elevator technology, and battery management.



### Main features

- Conductor cross-sections up to 1.5 mm<sup>2</sup>
- Currents up to 8 A
- Voltages up to 160 V
- Pitch: 3.81 mm
- Push-in connection technology
- Halogen-free plastic

### Your advantages

- ✓ Quick, tool-free installation in the field with Push-in connection technology
- ✓ Error-free connection due to versions with mechanical keying
- ✓ Effortless compatibility during the last steps in the field with the pin connector pattern in the established market standard
- ✓ Quick and safe mounting due to custom number, letter, and symbol printing
- ✓ Design-in support during device development through M-CAD/ E-CAD data and a free sample service



Play video



Order sample

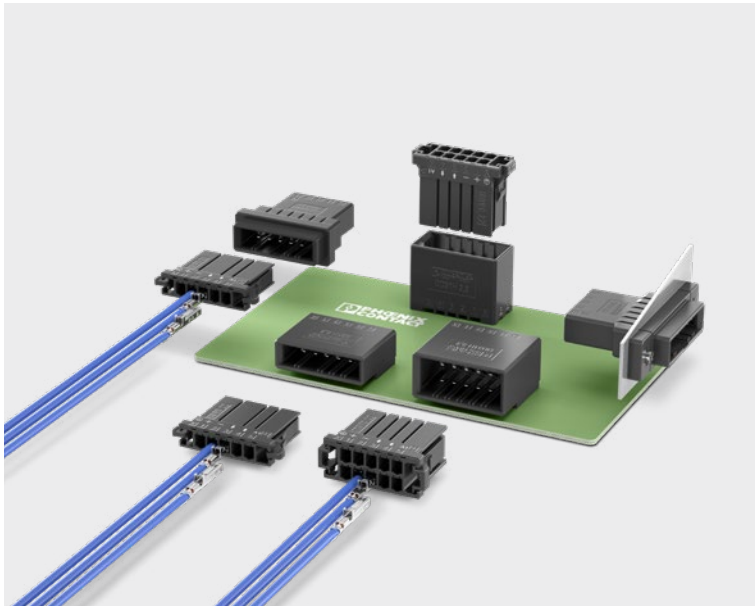


Gain more info:  
Web code #3229

## D21, D31, and D32 series CONNEXIS connectors

For automated production with a pitch of 2.50 mm, 3.81 mm, 5.08 mm

CONNEXIS series PCB connectors with crimp connection for cable assemblies simplify and accelerate automated production. With various designs and versions, such as flying leads and panel feed-throughs, the D21, D31, and D32 families enable a wide range of applications.



### Main features

- Cross-sections from 28 AWG ... 14 AWG
- Currents up to 8 A
- Voltages up to 320 V
- Pitch: 2.50 mm, 3.81 mm, 5.08 mm
- Crimp connection
- Halogen-free plastic

### Your advantages

- ✓ Quick and safe mounting due to custom number, letter, and symbol printing
- ✓ Error-free connection due to versions with mechanical keying
- ✓ Easy, time-saving production with preassembled connectors
- ✓ Design-in support during device development through M-CAD/ E-CAD data and a free sample service
- ✓ Wide range of possible applications due to different contact surfaces that are either tin- or gold-plated



Play video



Order sample

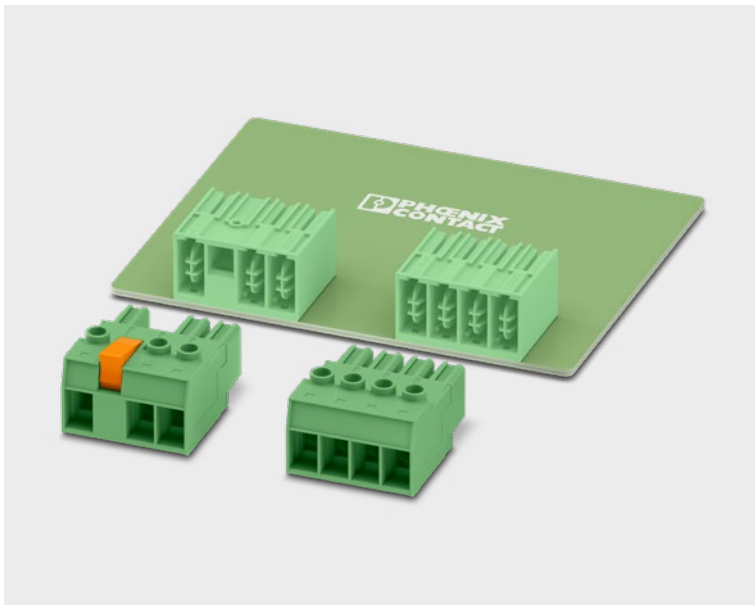


Gain more info:  
Web code #3229

# Touch-protected connectors with screw connection

## Flexible for power electronics

With the PC 16 HC series, the classic connection technology with screw connection is now also available with enhanced touch protection for the new pin connector pattern. The plugs with a 10.16 mm pitch have a current carrying capacity of 76 A at standard ambient temperatures of  $\geq 40^{\circ}\text{C}$ .



### Main features

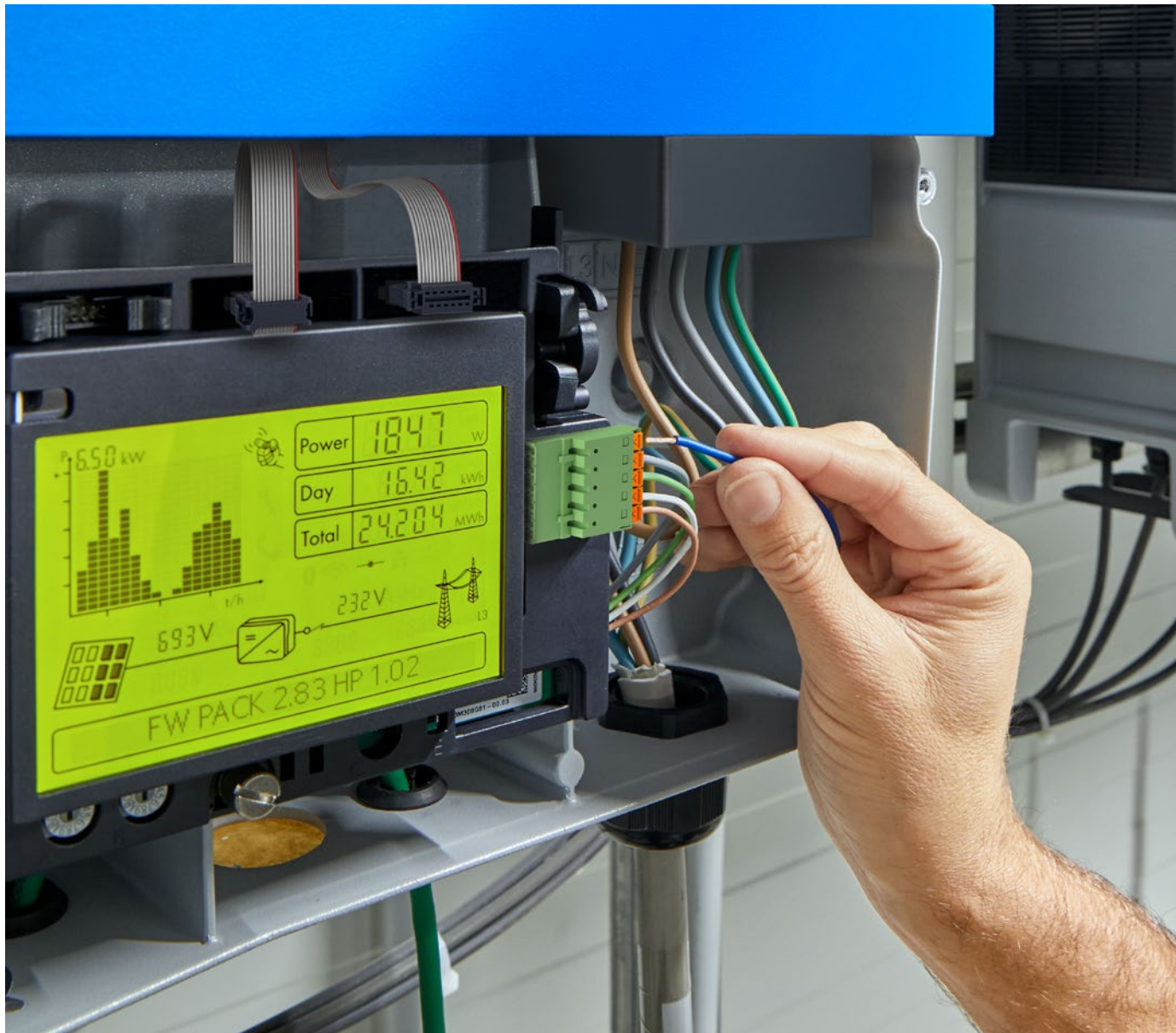
- Pitch: 10.16 mm
- Currents up to 76 A in ambient temperatures of  $\geq 40^{\circ}\text{C}$
- Voltages up to 1,000 V
- 2- to 6-pos.
- With center flange as an option
- Enhanced touch protection in accordance with IEC / UL 61800-5-1

### Your advantages

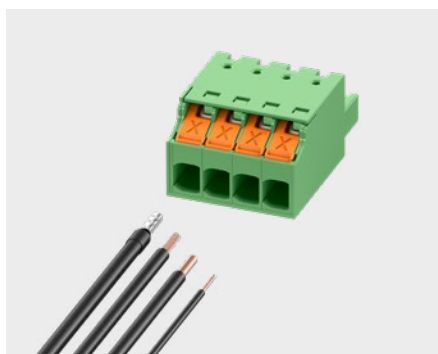
- ✓ Enhanced touch protection for a high level of safety even when not plugged in
- ✓ Pin connector pattern compatible with the LPC 16 lever-actuated PCB connector
- ✓ Well-known connection principle allows worldwide use
- ✓ Low generation of heat with a particularly high contact force
- ✓ Allows connection of two conductors



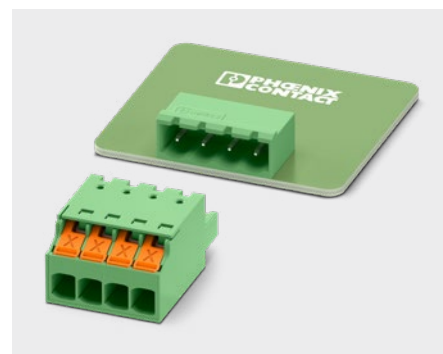
Gain more info:  
Web code #3685



Highly convenient operation thanks to effortless and tool-free conductor connection



Quick installation of all types of conductors with and without ferrule



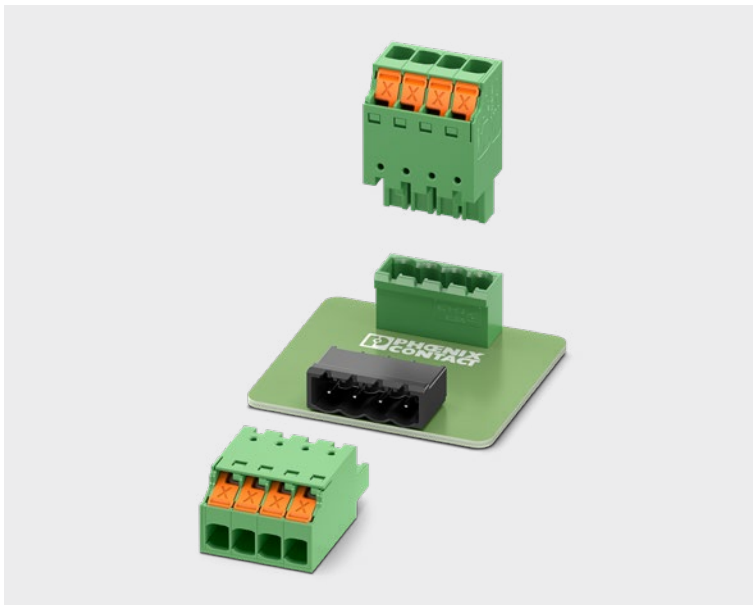
Compatibility with existing COMBICON portfolio connectors

Connect > PCB terminal blocks and PCB connectors

## PCB connectors with Push-X technology

### Highly convenient operation during conductor connection

The convenient Push-X conductor connection is integrated into XPC 2,5 series PCB connectors. Push-X technology enables you to connect flexible and rigid conductors quickly and with virtually zero effort.



#### Main features

- Currents up to 16 A
- Voltages up to 320 V (300 V UL)
- Conductor cross-sections up to 2.5 mm<sup>2</sup>
- Pitch: 5.08 mm
- 2- to 12-pos.

**Push-X Technology** <sup>2</sup>

Designed by Phoenix Contact

#### Your advantages

- ✓ Fast conductor connection for all conductor types with and without ferrules
- ✓ Highly convenient operation with the effortless and tool-free direct-connection technology
- ✓ Acoustic feedback during conductor connection
- ✓ The lever position shows the connection status
- ✓ Compatible with COMBICON PCB connectors with a pitch of 5.08 mm



Play video



Order sample

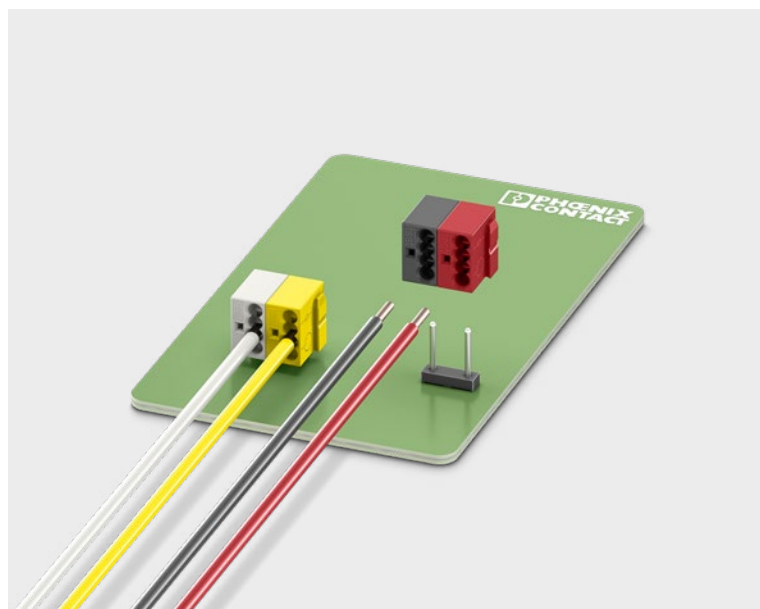


Gain more info:  
Web code #3091

## Push-in PCB connectors

### For KNX automation

With the PTS 0,5 series, Phoenix Contact is extending its portfolio for building automation to include compact PCB connectors for KNX communication. J-Y(ST)Y installation cables (0.6 mm and 0.8 mm) can be connected tool-free via the Push-in connection.



#### Main features

- Currents up to 6 A
- Voltages up to 320 V
- Pitch: 5.75 mm
- Conductor diameter up to 0.8 mm
- Push-in connection
- 2-pos.
- Four connections per potential
- THR-capable pin strips in either tape-on-reel or cardboard packaging

#### Your advantages

- ✓ Tool-free, time-saving Push-in connection
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Quick and convenient testing using the integrated testing option
- ✓ Clear contact assignment with color coding
- ✓ Ideal for bus applications: simple, uninterrupted loop through of potentials

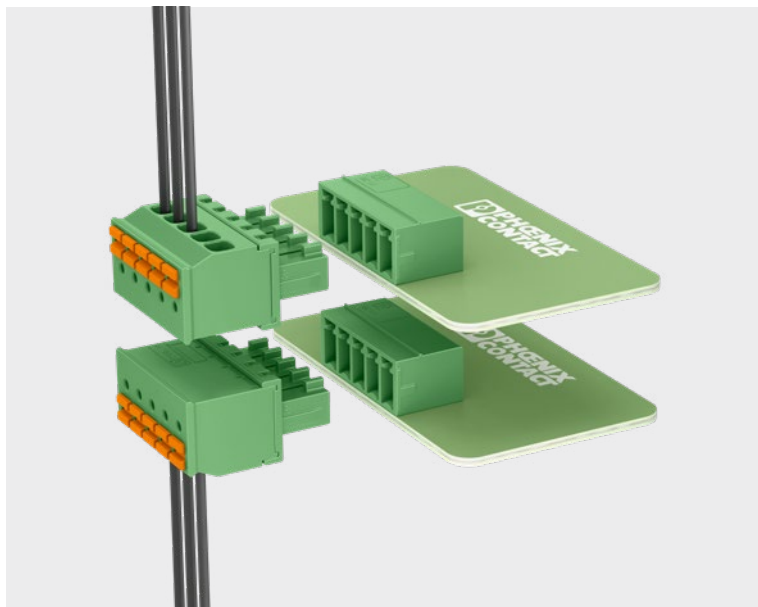


Gain more info:  
Web code #3440

## FMCOR/W 1,5 PCB connectors

### Conductor connection orthogonal to the operating direction

The new FMCOR/W 1,5 PCB connectors from Phoenix Contact enable convenient conductor connection orthogonally to the operating direction. The connectors feature Push-in connections with color-contrasting operating elements.



#### Main features

- Pitch: 3.5 mm
- Currents up to 8 A
- Voltages up to 160 V
- 2- to 16-pos.
- Available with or without flange and lock-and-release lever
- Facing the conductor entry on the coding side or rippled side

#### Your advantages

- ✓ The conductor connection orthogonal to the direction of operation simplifies the cabling of DIN-rail-mountable devices
- ✓ Tool-free, time-saving Push-in connection
- ✓ Intuitive operation with color-coded actuating push button

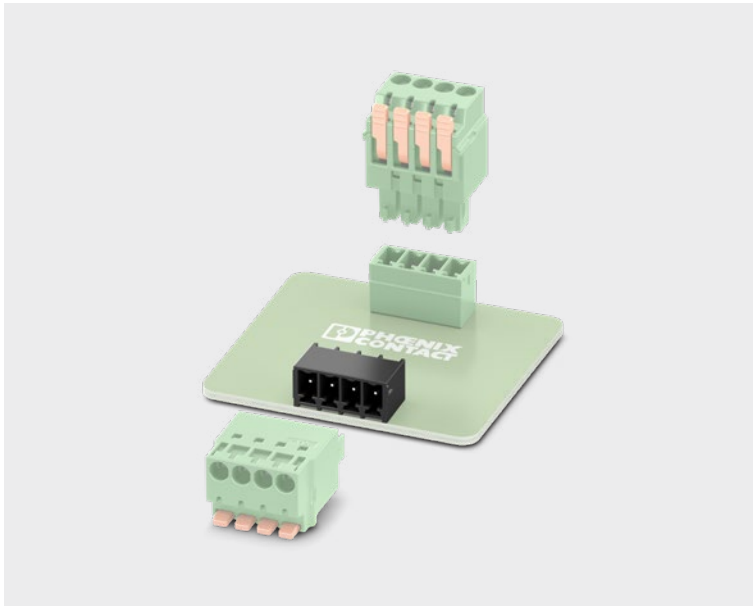


Gain more info:  
Web code #3444

# MC 1,5 series turned headers

## For automated reflow soldering

The new inverted headers with a 3.81 mm pitch extend the MC series with the ability to rotate the connector connection through 180°. THR headers allow for a reflow soldering process and automated assembly, and help reduce production costs.



### Main features

- Pitch: 3.81 mm
- Currents up to 8 A
- Voltages up to 160 V
- 2- to 16-pos.
- Standard pin length: 1.9 mm
- Material: high-temperature LCP plastic

### Your advantages

- ✓ Designed for integration into the SMT soldering process
- ✓ High flexibility when it comes to device design: one header for connectors with different connection technologies
- ✓ Familiar mounting principle enables worldwide use



Gain more info:  
Web code #3445



## Compact Push-in PCB terminal blocks

### For power electronics up to 125 A

The horizontal PCB terminal blocks of the SPT 35 series feature a large clamping space with minimum dimensions. Conductors with a cross-section of up to 35 mm<sup>2</sup> can be connected by means of convenient and tool-free Push-in connection technology and transmit currents of 125 A.



#### Main features

- Currents up to 125 A
- Voltages up to 1,000 V (1,000 V UL)
- Pitch: 15.00 mm
- Conductor cross-sections up to 35 mm<sup>2</sup>
- Push-in connection
- 1- to 5-pos.

#### Your advantages

- ✓ Tool-free, time-saving Push-in connection
- ✓ Ideal for use in the device front with the horizontal connection and actuation direction
- ✓ Defined contact force ensures that contact remains stable over the long term

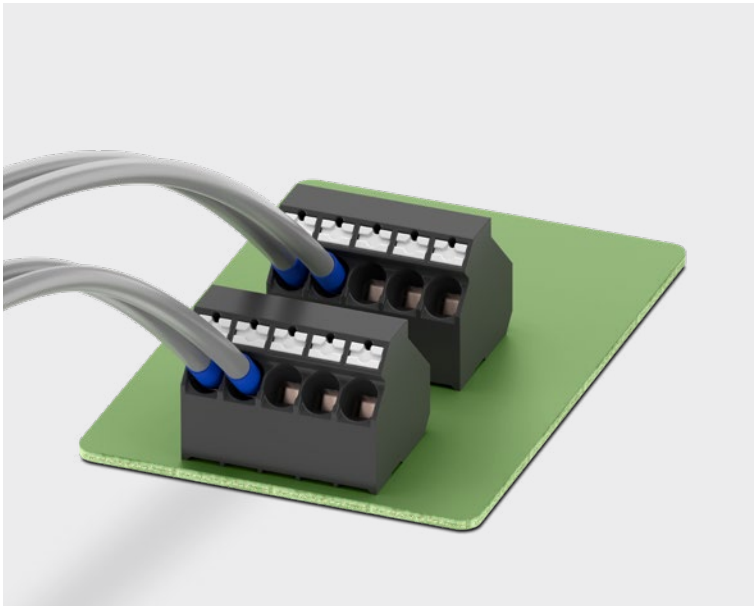


Gain more info:  
Web code #3441

## Angled THR PCB terminal blocks with 2.5 mm<sup>2</sup>

### Fast connection with Push-in spring connection

PCB terminal blocks of the SPTA-THR 2,5 series extend the product range to include angled, reflow-solderable versions for automated assembly processes. The angled connection makes the PCB terminal blocks particularly suitable for multi-row arrangement on the PCB.



#### Main features

- Currents up to 32 A
- Voltage up to 400 V
- Conductor cross-sections: 0.2 to 4 mm<sup>2</sup>
- Pitch: 5.0 mm
- 2- to 12-pos.
- Supplied in box or tape-on-reel packaging

#### Your advantages

- ✓ Tool-free, time-saving Push-in spring connection
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Intuitive operation with color-coded actuating push button
- ✓ Angled connection enables multi-row arrangement on the PCB
- ✓ Designed for integration into the SMT soldering process



Gain more info:  
Web code #3299

## PCB terminal blocks in two pitches

### For ICS series electronics housings

The new PCB terminal blocks in two pitches provide additional connection options for ICS series electronics housings. Choose between screw or Push-in connection versions of the new terminal blocks for your device solution.



#### Main features

- For ICS overall widths of 20, 25, and 50 mm
- Push-in spring connection and screw connection
- Pitch: 3.5 and 5 mm
- Alignment left and right

#### Your advantages

- ✓ Simple handling in just a few steps
- ✓ Fixed wiring and a reduced number of individual parts
- ✓ Choice between different pitches and connection methods
- ✓ One partner for everything: the right components for your device solution



Gain more info:  
Web code #3439

## New size of lower housing part

### For ICS series electronics housings

The 50 mm wide lower housing part provides the largest possible PCB surface in the ICS series and thus creates more space for the electronics it holds. In total, up to four PCBs and 20 connectors with up to 100 positions can be mounted in the housing.



#### Main features

- Width: 50 mm
- Height: 122 mm
- Depth: 130.9 mm
- Up to 20 connection openings

#### Your advantages

- ✓ More space for electronic components due to the enlarged PCB surface
- ✓ Full compatibility with the ICS product portfolio with the new combination of existing dimensions
- ✓ Integration of connectors on five connection levels due to a usable overall depth of 112 mm

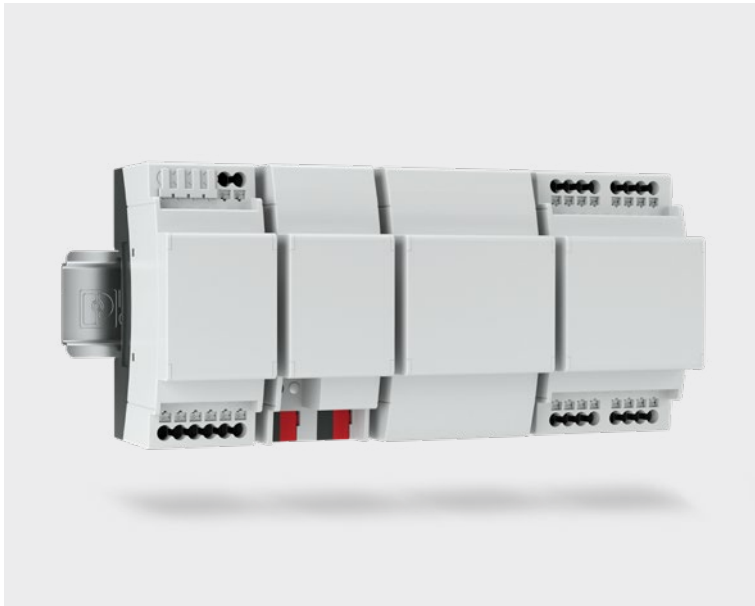


Gain more info:  
Web code #3776

# Configurable upper parts for Push-in connection

## For electronics housings for building automation

With the new upper housing parts from the BC modular series, you benefit from the convenient operation of the Push-in connection technology on the front of the housing. Configure your own customized housing solution equipped with Push-in PCB terminal blocks from the SPT-THR series.



### Main features

- DIN rail housing for use in distribution boards in accordance with DIN 43880
- Widths: 35.6 mm, 53.6 mm, 71.6 mm, 107.6 mm, and 161.6 mm
- Color: light gray (similar to RAL 7035)
- Up to 24 positions: 1.5 mm<sup>2</sup> per housing chamber
- Up to 8 positions: 2.5 mm<sup>2</sup> per housing chamber
- Prepared for use with the KNX bus

### Your advantages

- ✓ SPT-THR-harmonized housings enable fast device development and optimal protection for the electronics
- ✓ Individual configuration of each housing chamber for diverse applications in building automation
- ✓ Standard-compliant housing and installation dimensions for use in distribution boards
- ✓ Easily create the right item for you: use our intuitive online configurator



Play video



Gain more info:  
Web code #3438

## Push-in PCB terminal blocks

### For electronics housings for building automation

For the first time, Push-in PCB terminal blocks are available for the BC 17,8 (1 HP). With the PCB terminal blocks from the FKDSO 1,5 and FKDSO 2,5 series, you can implement future-proof applications in building automation with up to 16 positions per module.



#### Main features

- Up to 16 positions in an overall width of 17.8 mm (1 HP)
- Currents up to 22 A
- 3- and 4-pos. PCB terminal blocks can be combined in one upper part
- Conductor cross-sections up to 1.5 mm<sup>2</sup> (FKDSO 1,5) and 2.5 mm<sup>2</sup> (FKDSO 2,5)
- 3.5 mm pitch (FKDSO 1,5) and 5 mm pitch (FKDSO 2,5)

#### Your advantages

- ✓ Coordinated housing and connection system for faster device development
- ✓ Tool-free, time-saving Push-in connection
- ✓ Orthogonal alignment of the terminal block with the PCB for optimum accessibility in DIN-rail-mounted devices
- ✓ Defined contact force ensures that contact remains stable over the long term
- ✓ Intuitive operation with color-coded actuating push button

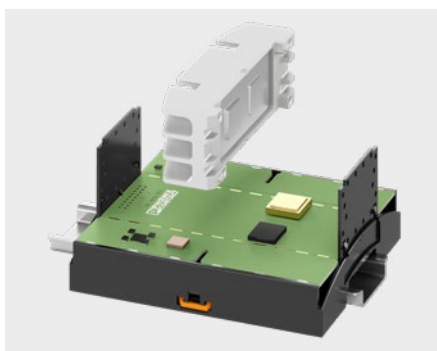


Gain more info:  
Web code #3619

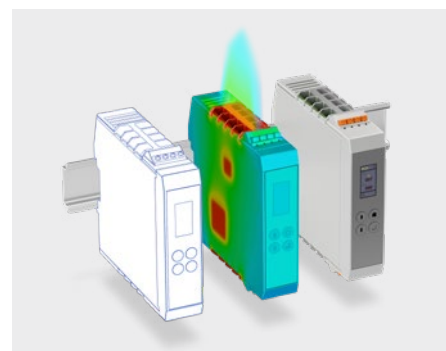




*Hybrid systems made from aluminum heatsinks and plastic housings*



*Passive cooling solutions – optimized for individual requirements*



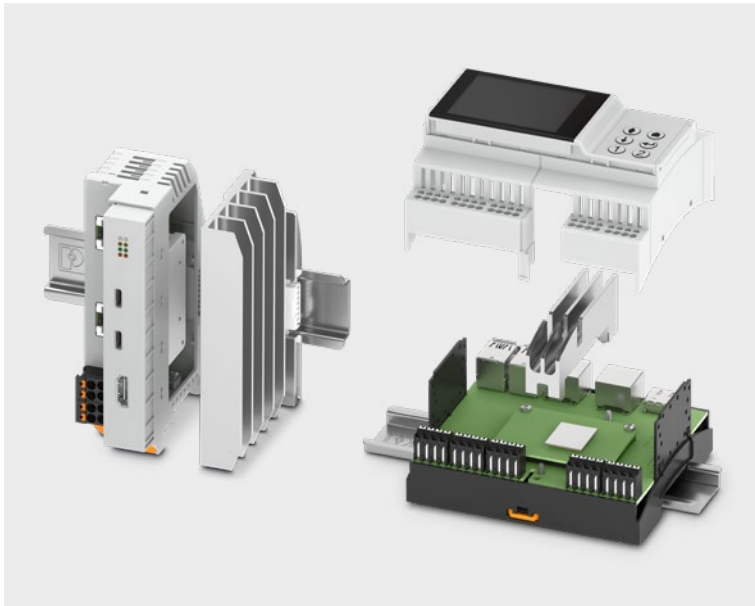
*Personal advice throughout the entire development process*



# Electronics housings with thermal simulation

## Perfectly optimized for maximum power

Maximize power density in your electronics housings with passive cooling solutions and thermally optimized PCB layouts: from configuration and comprehensive thermal simulations to implementation – ideal for powerful and miniaturized applications.



### Main features

- Material: aluminum
- Surface: natural anodized
- Heatsink topology: extruded profile (BC) / heat spreader and extruded profile (ME-IO)
- Maximum component height: 12 mm (BC) / 10 mm (ME-IO)
- Heatsink width: 17.8 mm ... 53.6 mm (BC) / 8.8 mm (ME-IO)

### Your advantages

- ✓ Efficiently embedded cooling systems through the flexible combination of heatsinks and housings for optimum cooling
- ✓ Seamless integration with tailor-made passive solutions: optimally tuned both mechanically and thermally
- ✓ Comprehensive service from online configuration and thermal simulations to integration
- ✓ Minimal space requirements due to space-saving cooling for maximum power density and utilization of space



Play video



Gain more info:  
Web code #3763

# Housing system for compact controllers

## For use with front connection technology

The ME-IO Slim is the efficient housing solution for compact controllers that require high-density front connection technology. The 18-pos. front connector makes contact directly on the PCB. With a module width of just 12 mm, the ME-IO Slim is particularly space-saving.



### Main features

- 18-pos. front connection technology
- Module width: 12 mm
- Couplers and CPU housings
- Color: light gray (similar to RAL 7035)
- 8-pos. module communication
- 6-pos. supply connector in the head station
- Status display without separate light guide

### Your advantages

- ✓ Simple module assembly with two side panels and one DIN rail fixing lever
- ✓ High connection density with 18-pos. connector with 5 mm pitch
- ✓ Ideal for price-sensitive applications due to the simple design and predefined module layout
- ✓ Machinable flaps in the CPU module allow application-specific customization
- ✓ Easy cabling in the module due to preprinted 18-pos. front connector

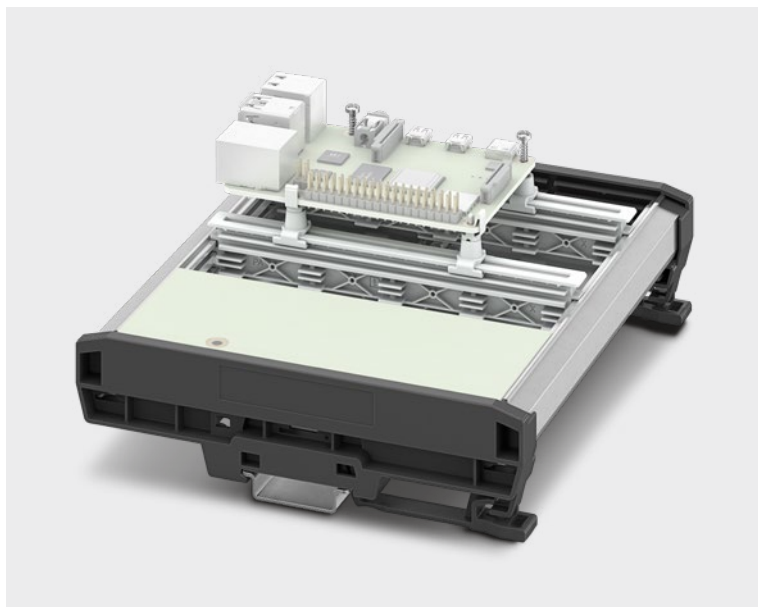


Gain more info:  
Web code #3718

## Flexible PCB holder system

### For PCBs of different sizes

The evaluation (EVA) board holder for UM-BASIC and UM-PRO is a flexibly adjustable holder system for accommodating PCBs of various sizes by means of latching or screw connection. The system can be mounted on a UM-BASIC/-PRO 122 profile from Phoenix Contact.



### Main features

- Accommodation of various PCB sizes
- Compatible with UM-BASIC/-PRO 122
- Can be moved on profile
- Color: light gray (similar to RAL 7035)
- Several PCBs can be combined

### Your advantages

- ✓ Easy mounting and removal of PCBs
- ✓ Low-cost integration of PCBs of different sizes
- ✓ A large PCB surface in a small installation space
- ✓ Flexible combination of PCBs of different sizes

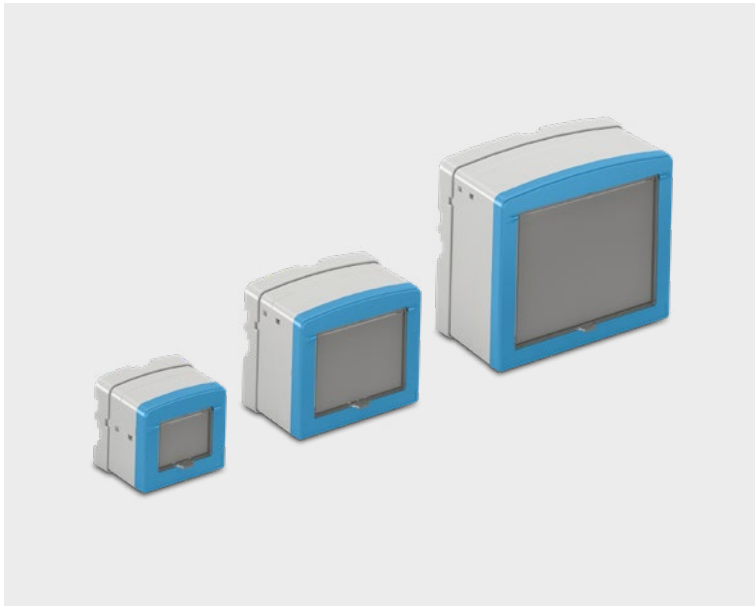


Gain more info:  
Web code #3717

# Monitoring Case System (MCS)

## For sensor and IoT/IIoT applications

Phoenix Contact offers a well-designed housing for diverse electronics with its new MCS series. It is sure to impress at all stages, from installation of the PCB and simple mounting to maintenance of the device. Modular in design, the housing offers exceptional practicality.



### Main features

- Three sizes each in two versions: IP40 and IP65/IP67 (additionally with seal and pressure equalization element)
- Temperature range: -40°C ... +85°C
- Impact resistance: IK07
- Material: PA with GF (UL94 V0)
- Colors: light gray (RAL 7035), covers also available in yellow (RAL 1018), blue (RAL 5015), and black (RAL 9005)

### Your advantages

- ✓ Convenient operation during device installation and maintenance thanks to optional hinges
- ✓ Flexible mounting thanks to the optional adapter plate
- ✓ Safe operation with the right degree of protection
- ✓ Individualized product selection due to the modular system
- ✓ Optimized PCB installation: installation of the PCB in a nearly horizontal orientation is possible due to the angled housing edge



Play video



Order sample



Gain more info:  
Web code #3462

# POS series PV system solution

## For energy self-sufficient systems

The Pico Off-Grid System (POS) is a PV panel-based, robust solution with multiple performance classes up to 190 Wp. The solution includes a housing, pole bracket, and solar panel. Computers, communication units, batteries, and more can be added to create self-sufficient solutions for field use.



### Main features

- Temperature range for the overall system: -40°C ... +85°C
- Five OCS housing sizes compatible with this system, wiring ready for connection
- Solar panel: solar panels with 36 / 45 high-performance solar cells, monocrystalline cell technology
- Pole bracket: adjustable tilt angle of the PV panel

### Your advantages

- ✓ Internationally certified housing system
- ✓ Different housing sizes can be combined with one holder
- ✓ Simple one-person mounting of the entire system
- ✓ Complete system except own electronics
- ✓ Simple supply chain



Gain more info:  
Web code #3383

## PV panel bracket

### For energy self-sufficient systems

The POS Panelfix bracket frame is suitable for mounting various solar panels in the range from 20 to 200 Wp. The flexible design is suitable for panel and mast mounting. With the innovative clamping solution, the panel can be attached very quickly using just one tool.



#### Main features

- Ideal for separate mounting of solar panels and electronics
- Mounting by clamping or screwing in place
- Compatible with all popular panels in the range from 20 to 200 Wp
- For all mast diameters from 48 to 180 mm
- Material: stainless steel

#### Your advantages

- ✓ Compatible with all standard panels (20 to 200 Wp) with innovative mounting
- ✓ One-person mounting in just 15 minutes using just one tool (SW13) with the simple clamping technology
- ✓ Flexible design for panel or mast mounting
- ✓ Suitable for harsh environments and up to wind force 10 due to additional reinforcement

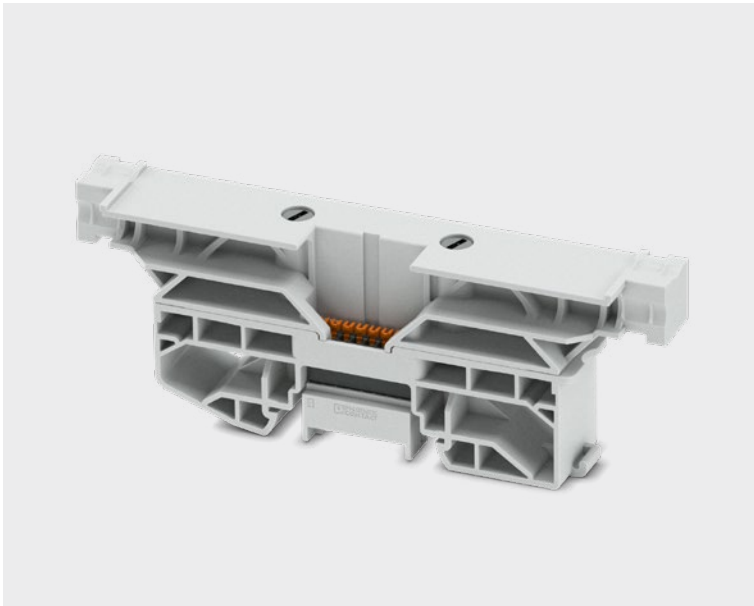


Gain more info:  
Web code #3750

## Connectors for 8-pos. TBUS connectors

### Module communication over several levels

Some applications also require data and signals from the module communication beyond the module network, for example, in the case of a line feed. Here, input and output connectors for the 8-pos. TBUS connect modules over several levels. They can be used on the left, right, and center.



#### Main features

- 8-pos. module communication
- Available as input and output
- End bracket function

#### Your advantages

- ✓ Input and output of the 8-pos. bus connection in the module network with ME-IO and ICS housings
- ✓ Optimum use of space with ordered cable routing
- ✓ Easy marking with a large printing area

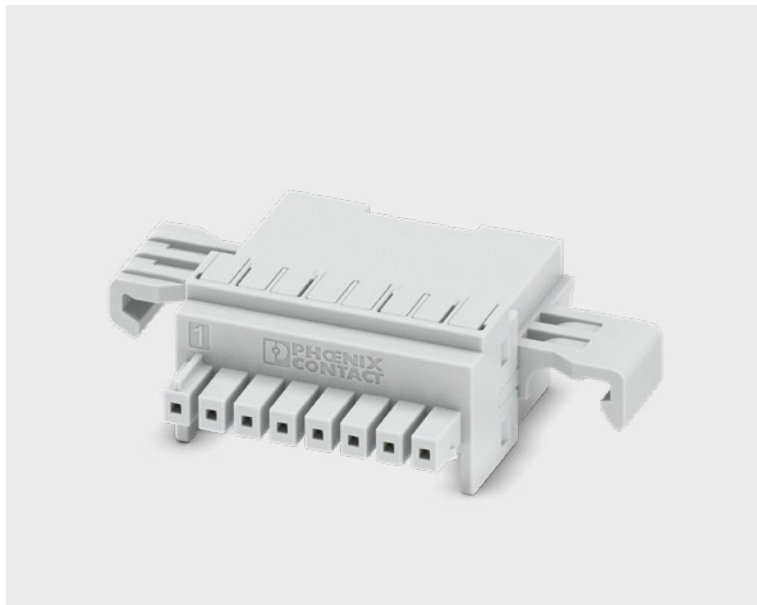


Gain more info:  
Web code #3460

## Bridge for TBUS connectors

### Making optimum use of installation space

The transmission of data and signals for applications without a necessary output to the PCB can be looped through by a bridge for DIN rail bus connectors below the module. This enables you to maximize the use of the PCB surface.



#### Main features

- 8-pos. module communication
- Available in the widths 18.8, 20, and 25 mm

#### Your advantages

- ✓ Can be integrated into device applications based on ME-IO and ICS housings
- ✓ Increased maximum PCB surface
- ✓ Connection of the positions in the field with FMC connectors



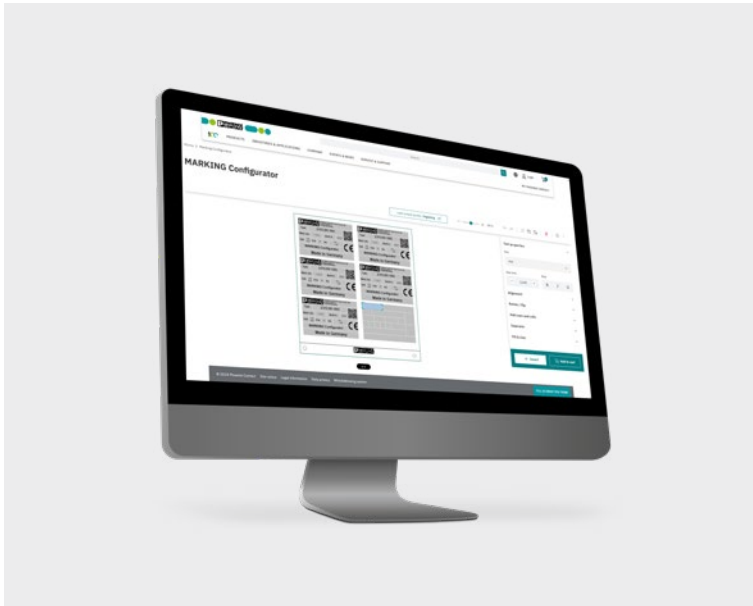
Gain more info:  
Web code #3461



## Tailored marking solutions

### Configure and order direct online

The MARKING Configurator features a particularly high degree of user-friendliness and flexibility when it comes to the individual marking of marking materials. The ordering process is designed to be simple, transparent, and completely digitalized – starting from a batch size of one.



#### Main features

- Online-based configurator for the tailored creation of marking solutions
- End-to-end digitalized and transparent ordering process
- More than 2,000 standard materials are available with tailored marking
- Project overview for simplified reordering

#### Your advantages

- ✔ Standard materials can be ordered individually and ready for marking
- ✔ Intuitive and efficient editing functions with the context-sensitive menu structure
- ✔ Error avoidance by displaying a digital image of the individual marking
- ✔ Convenient saving of the project for easy reordering via “My Solutions”



Play video

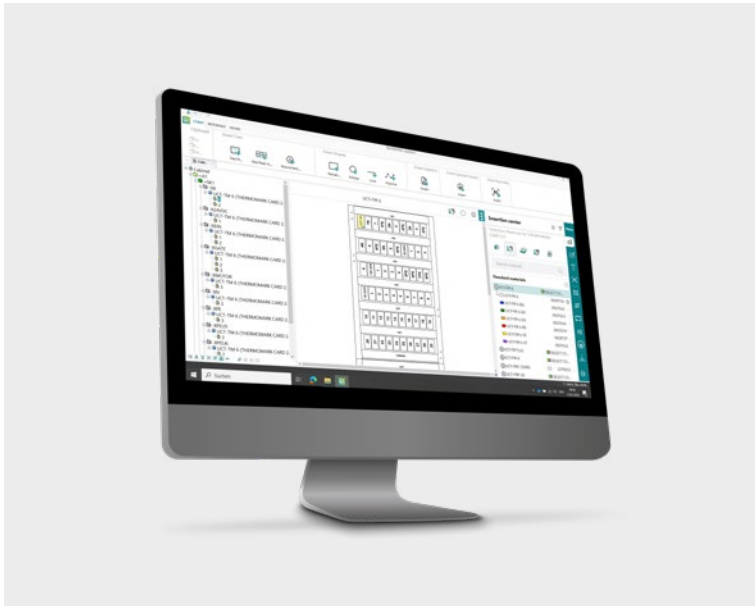


Gain more info:  
Web code #3514

# High-performance marking software

## Efficient creation of marking solutions

The MARKING system software features powerful functions for the easy and standard-compliant design of application-specific marking solutions, high-performance interfaces for the efficient import of data from ECAD systems, and common data exchange formats.



### Main features

- One software program for all marking systems from Phoenix Contact
- Direct interfaces to common ECAD systems
- Comprehensive data import manager
- Efficient wire marking with the Wire Marking Application Center
- Template Designer with comprehensive design options



### Your advantages

- ✓ Efficient creation of marking projects with a clear user interface and extensive design options
- ✓ High-performance interfaces for the efficient import of data from ECAD systems and common data exchange formats
- ✓ Optimum management of the entire marking process with structured projects in accordance with IEC 81346
- ✓ Central control and management of all marking systems



Gain more info:  
Web code #3558





*Highly efficient with automated material processing*



*High-quality marked and resistant markers*



*Low maintenance due to the simple cartridge replacement*

Mark, assemble, and install > Printers

## Efficient UV inkjet printers

### Efficient marking of card material

The BLUEMARK E.CARD card printer is characterized by its high efficiency and resilient identification solutions. With its modular ink concept, the low-maintenance UV inkjet printer enables optimal print results on plastic and metal materials.



### Main features

- Monochrome UV inkjet card printer
- Thermal inkjet printing technology with UV curing
- Identification of UC and UCT cards, UM strips, and metal markers
- Automatic material feed
- Interfaces: USB, Ethernet, Wi-Fi

### Your advantages

- ✓ Time savings of up to 40% with automated material processing
- ✓ Application-optimized identification with the modular ink concept
- ✓ Optimal print results with the innovative combination of UV LED ink and thermal inkjet technology
- ✓ Easy operation with intuitive user guidance and efficient software solutions
- ✓ Low maintenance costs by simply replacing the entire ink system with the ink cartridge



Gain more info:  
Web code #3768

## Mobile thermal transfer card printer

### Flexible and direct marking on site

The THERMOMARK PRIME 2.0 prints marking materials in card format. Thanks to the integrated MARKING system app, 7" color touch display, and replaceable battery, the printer can be operated intuitively and is suitable for stationary and mobile use directly on site.



### Main features

- MARKING system app integrated marking software
- Replaceable battery for mobile use
- Ink ribbon, magazine, and material detection
- For all UCT, US, and UM card materials
- 7" color touch display
- Low-maintenance thermal transfer printing technology
- Print resolution of 300 dpi

### Your advantages

- ✓ Easy design of marking solutions with the MARKING system app integrated marking software
- ✓ Fully independent with replaceable and rechargeable battery
- ✓ Fast and high-quality printing of all card materials in under 8 s
- ✓ Automatic ink ribbon, magazine, and material detection prevents printing errors
- ✓ Material and ink ribbon can be changed easily in less than 10 s



Gain more info:  
Web code #3557





*Tailored equipment with the modular system and accessories*



*Ergonomic design and efficient material provision*



*Easy to set up, customized workstation solutions*



Mark, assemble, and install > Workstation solutions

## Modular workstation systems

### For efficient processes in control cabinet building

With the clipx BASIC line workstation systems, you can quickly and easily configure your own individual workstation for efficient and ergonomic working. The modular system can be flexibly adapted or extended at any time to meet your requirements.



#### Main features

- Workstation system consisting of a basic workstation and appropriate accessories
- Tailored to specific process steps (e.g., picking, assembly, wiring)
- Ergonomic design
- Modular design
- Worker assistance software can be integrated

#### Your advantages

- ✓ Workstations individually equipped and extended with modular, scalable accessories
- ✓ Rapid process optimization and increased efficiency with a concept that is easy to implement
- ✓ Increased productivity due to the ergonomic design and structured arrangement of components
- ✓ Optimized for production processes in control cabinet building based on years of experience in process consulting

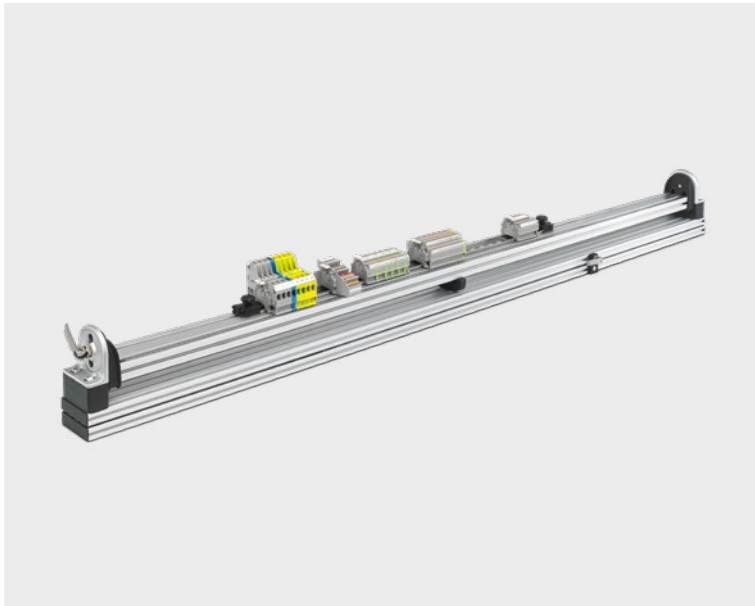


Gain more info:  
Web code #3771

## Mounting device

### For terminal strip production

Our ergonomic mounting device enables you to produce terminal strips conveniently and safely. The DIN rail is fixed with screw-type clamping devices. The rotation and sliding function enables the mounting device to be rotated and adjusted flexibly.



#### Main features

- Dimensions (W x H x L):  
107 mm x 187 mm x 1,863 mm
- Equipped with quick-release fasteners, clamping devices, and measuring scale
- With rotation and sliding function
- Additional sliding blocks integrated to accommodate further clamping devices
- Parallel production of at least 2 terminal strips possible

#### Your advantages

- ✓ Improved ergonomics and safe working during terminal strip mounting
- ✓ Easy and secure fixing of the DIN rail with screw-type clamping devices
- ✓ Time savings, with parallel production of several terminal strips possible
- ✓ Convenient mounting of terminal markers with rotation function
- ✓ Optimum working conditions with a central view, thanks to sliding function

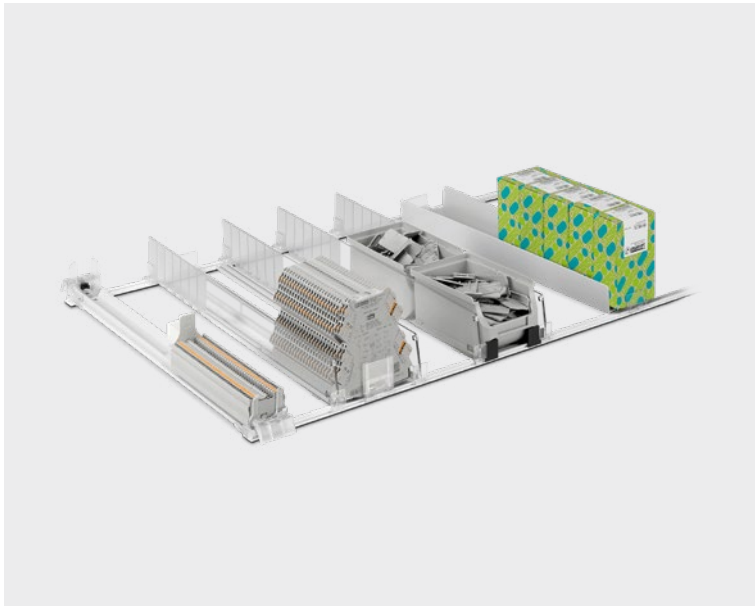


Gain more info:  
Web code #3929

# Modular magazine system

## For efficient material provision

Optimize your assembly process in control cabinet building with the modular magazine system for the efficient and mounting-oriented provision of components. Different magazine types enable different components and materials to be provided quickly and flexibly.



### Main features

- Feed magazines for DIN-rail-mountable components (e.g., terminal blocks) and for marking materials
- Universal feed magazine for various applications
- Bulk goods magazine for small parts
- Flexible arrangement of shelf dividers
- Different mounting profiles for sticking on

### Your advantages

- ✓ Tailored material provision as required and useful with the modular system
- ✓ Targeted retrieval of required components and quantity through selective provision
- ✓ Improved ergonomics with parts and components arranged suitably for assembly
- ✓ Reduced search times during mounting through efficient provision
- ✓ Fewer errors due to the structured arrangement of components

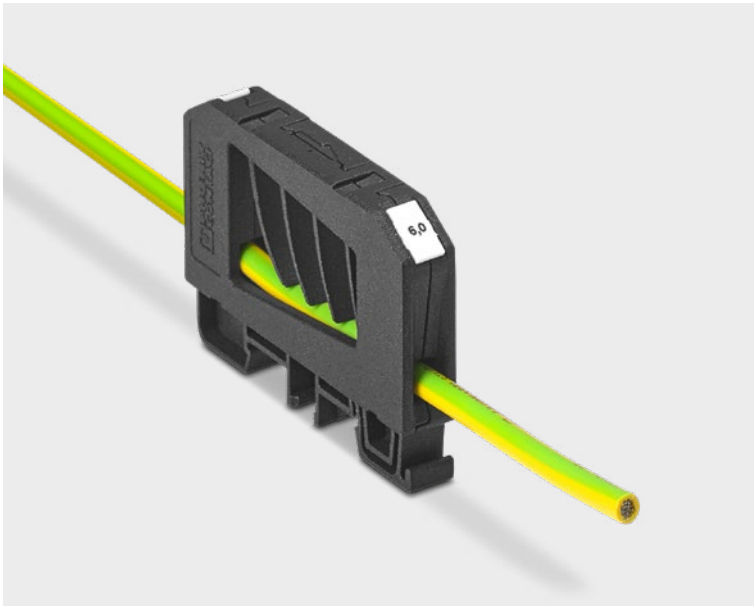


Gain more info:  
Web code #3675

# Wire brake for assembly workstations

## For efficient workstation design

The wire brake enables you to configure wires clearly and effortlessly in the cross-section range from 0.5 to 6 mm<sup>2</sup> at assembly workstations. The wire brake can be marked with the respective conductor cross-section and can be easily installed by snapping it onto DIN rails.



### Main features

- Conductor cross-section: 0.5 mm<sup>2</sup> ... 6 mm<sup>2</sup>
- Mounting type: snapped onto NS 35 DIN rail
- Mounted by means of screw connection (optional)
- Can be marked with marking material for terminal blocks (UCT-TM6, UC-TM6)
- Dimensions (W x H x D):  
11 mm x 45 mm x 70 mm

### Your advantages

- ✓ Time savings and reduction of search times with fast wire access
- ✓ Clearly arranged assembly workstations for wiring with orderly wire routing
- ✓ Marking option reduces the risk of mix-ups with similar cross-sections
- ✓ Improved accessibility of wires with flexible mounting options
- ✓ Easy installation due to compatibility with NS 35 DIN rails



Gain more info:  
Web code #3561

## Zero-cut block for DIN rail cutters

### Fast, precise zero cuts without measuring

During the manual cutting of perforated DIN rails, the zero-cut block enables fast and reproducible zero cuts without the need for time-consuming, repeated measurements. The slide can be used to easily set different zero-cut conditions.



#### Main features

- Suitable for perforated NS 35/7,5, NS 35/15, and NS 15 DIN rails
- Slide for setting different zero-cut conditions
- Equipped with cylindrical pin and magnets for a secure hold
- Compatible with PPS profile cutters from Phoenix Contact

#### Your advantages

- ✓ Reproducible and qualitative zero cuts for perforated DIN rails with just one setting
- ✓ Time savings and error reduction for zero cuts, since repeated measurement and drawing are no longer required
- ✓ Acceleration of the cutting process for DIN rails with time savings for zero cuts
- ✓ Fast setting of different zero-cut conditions with the slider



Gain more info:  
Web code #3698

## Smart automatic stripping device

### Strip wires quickly and easily

With the E.FOX S 10 smart automatic stripping device, you can process wires easily and efficiently. The touch display makes operation intuitive. The short cycle time and parameter adjustment via electric drives ensure fast stripping processes with repeat accuracy.



#### Main features

- Conductor cross-section: 0.08 mm<sup>2</sup> ... 10 mm<sup>2</sup>/28 AWG ... 8 AWG
- Stripping length: 2 mm ... 20 mm
- Cycle time: 0.3 s
- 5" touch display
- Storage of up to 100 favorites
- Favorite selection with barcode scanner (optional)
- Stripping blade: V-shaped and flat blade (optional)
- Control via worker assistance software

#### Your advantages

- ✓ High efficiency through consistent use of data and smart worker assistance
- ✓ Time savings due to short cycle times and electric parameter adjustment
- ✓ A wide range of possible applications due to V-shaped blades with large cross-section range for diverse wire types
- ✓ Easy operation with intuitive visualization



Gain more info:  
Web code #3515

## Worker assistance software

### For guided assembly

The clipx ENGINEER assemble worker assistance software is an add-on for the clipx ENGINEER engineering software. By using the data from the engineering process, the software enables intuitive terminal strip assembly using step-by-step instructions.



### Main features

- Software for terminal strip assembly including marking with step-by-step instructions
- Direct data transfer from the engineering process
- Paid add-on for the clipx ENGINEER engineering software (for the desktop version)
- Available on a subscription basis (12-month period)

### Your advantages

- ✓ Time savings achieved by directly transferring project data from the engineering process
- ✓ Simplified representation of projects in production with step-by-step display of the process steps
- ✓ Selection of incorrect items prevented through the use of a pick-by-light system
- ✓ Process costs reduced by the direct printing of marking and labeling within the assembly process

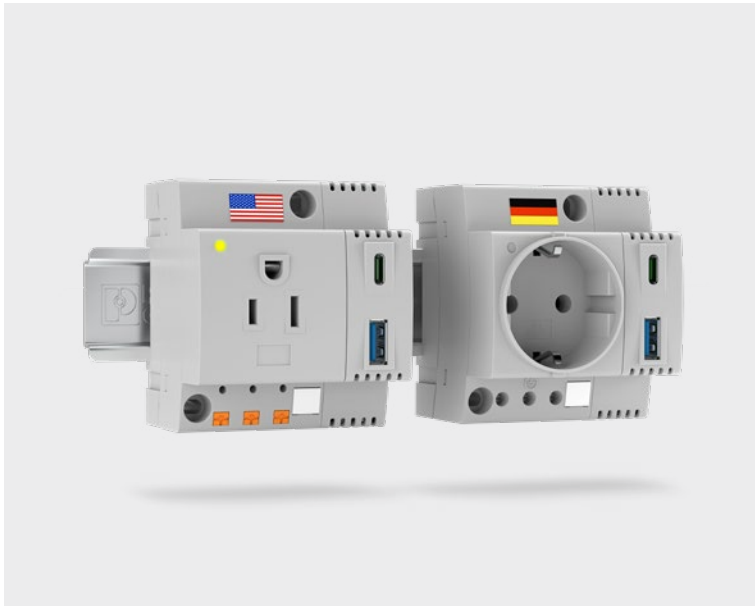


Gain more info:  
Web code #3563

# Sockets with USB interfaces

## Universal with three connections

The electrical outlets with a German and American pin connector pattern feature an additional USB-A and USB-C interface. This means that various devices can be supplied. You can choose between Push-in and screw connection for the power connection.



### Main features

- Pin connector pattern: Germany / USA
- 16 A, 250 V / 15 A, 125 V
- USB interfaces: USB-A and USB-C
- USB values: 5 V, 3 A (total), efficiency: DOE Level IV
- Connection method: Push-in / screw
- Conductor cross-section: 0.2 mm<sup>2</sup> ... 4 mm<sup>2</sup> / 24 AWG ... 12 AWG
- LED display for USA types
- Conforms with relevant safety standards

### Your advantages

- ✓ 3-in-1: ready-to-use power supply for external devices during maintenance and servicing
- ✓ Safe USB power supply and fast charging with 15 W USB power
- ✓ Energy savings with a particularly high efficiency of the USB interface in no load and partial-load operation
- ✓ Flexible mounting: DIN rail mounting or direct mounting via screw
- ✓ Quick and easy installation with Push-in connection technology



Gain more info:  
Web code #3676



# Configurable signal tower with IO-Link

## Individual signaling

The new signal towers use IO-Link to communicate machine and system states in individually adjustable colors and tones. The signal towers are available in two sizes with nine or 15 segments. The robust design enables them to be used in many applications.



### Main features

- Traffic light mode, autoscale mode, level mode, or individual mode
- IO-Link communication
- Ten different signal tones
- RGB color spectrum
- M12 connection technology, 4-pos.
- 9 or 15 segments with and without acoustic element



### Your advantages

- ✓ High degree of flexibility with individual configurations in one compact tower
- ✓ Easy parameterization in PLCnext Engineer
- ✓ Clear signaling with homogenous light pattern and full-surface light fixture
- ✓ Robust industrial design for harsh environments



Gain more info:  
Web code #3725

## Signal lights for smart applications

### Signaling of functional areas

The lights are available in two compact, application-oriented designs, specifically developed for M22 installation. Different signaling options are simply controlled via multicolor LEDs using bit combinations.



#### Main features

- Multicolor and multifunctional
- Wear-free touch button
- M22 installation and M12 connection
- Excellent color fastness
- 2 designs
- ECO mode

#### Your advantages

- ✓ Clear and reliable signaling increases system availability
- ✓ Cost savings due to easy installation
- ✓ A wide range of possible applications (optical and acoustic) with the coordinated product portfolio
- ✓ Compact design enables installation in confined spaces



Gain more info:  
Web code #3781

## LED enclosure light with socket

### Universal lighting of control cabinets

The light is used to illuminate control cabinets. It can be used universally due to its AC wide range input and country-specific sockets. A motion detector is integrated. Various mounting options round out the product.



#### Main features

- AC wide range input 100 V AC ... 240 V AC
- Country-specific sockets
- Integrated motion detector
- Light output: 1,400 lm
- Color temperature: 5000 K (neutral white)

#### Your advantages

- ✓ Optimum illumination of the control cabinet due to glare-free optics
- ✓ Modern and robust design for a long service life
- ✓ Brightly lit work area due to high light output
- ✓ Sockets enable the operation of external devices



Gain more info:  
Web code #3726

## Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing forward-thinking products and solutions for the comprehensive electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network, we maintain close relationships with our customers, something we believe is essential for our common success.

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

