New products 2016

Connection and automation technology

New products for 2016 – innovative products for your industrial systems

As a leading manufacturer of connection technology and automation components, we continually strive to transform the growing requirements placed on your applications and markets into new innovations. Our products are the nerve center of your industrial systems and help you increase their efficiency, availability, and safety. Find out about our wide range of new products from the fields of connection technology, automation components, surge protection, marking, and tools.

Find out more with the web code

You can find our web code in each product table: a hash symbol followed by a four-digit number combination (example: #1234).

This allows you to access information on our website quickly.

It couldn't be simpler:

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

| #1234 | **Search** |

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

Contents

Test disconnect system for energy technology
Modular test disconnect sockets

FAME is the innovative test disconnect system for switchgear in energy technology. With the modular system, you can now perform manual testing operations automatically, safely, and more quickly. FAME 3 with screw connection technology for ring cable lugs completes the range of test disconnect systems.

Your advantages

☑ Maximum safety with leading and automatic transformer short circuit

☑ Space saving, thanks to compact, modular test disconnect sockets

☑ Convenient mounting using patented wall fastening for simple rectangular cutouts

☑ Flexible, thanks to configurable test disconnect sockets with standardized CLIPLINE complete system accessories

☑ Safe application, thanks to the touch-proof design

Main features

- Test disconnect system without operating plug
- Configurable transformer short circuit in the test disconnect socket
- Mounting in standard panel cutouts
- Screw connection for ring and fork-type cable lugs
- Versions with custom number of positions available on request

	Web code: #0576	Test disconnect socket		Blind plug, can be sealed	
Description		Test disconnect socket		Blind plug, can be sealed	
Number of positions		10	14	10	14
Current		30 A		-	
Voltage		400 V		-	
Cross section		10 mm²		-	
Designation		RSCWE 6-3/10	RSCWE 6-3/14	FBP-2/10	FBP-2/14
Order No.		3969926	3969928	3069881	3069885

Test disconnect system for energy technology
Test plugs for free assembly

The test plug for FAME 3 with patented rotary handle ensures a safe test procedure. Individual switching operations can be performed with service connectors. Transparent protective covers ensure safe test sequences. The test disconnect system makes consistent use of CLIPLINE complete system accessories.

Your advantages

☑ Safe, thanks to guided operation with patented rotary handle

☑ Easy and time saving, thanks to functional grouping of switching operations

☑ Maximum safety with leading and automatic transformer short circuit and touch-proof design

☑ Cost-effective, thanks to the tailored, modular design and use of standardized CLIPLINE complete accessories

☑ Space saving, thanks to offset test socket arrangement

Main features
• Voltage: 400 V
• Current: 24 A
• Versions with custom number of positions available on request

ℹ️ **Web code:** #0576

Description	Test plug with standard handle		Test plug with rotary handle		Service connector	Service cover
Number of positions	10	14	10	14	2	10
Connection	4 mm sockets		4 mm sockets			-
Mounting	Plug-in		Plug-in		Plug-in	Snap-on, sealable as an option
Designation	FTP-2/10S	FTP-2/14S	FTPR-2/10S	FTPR-2/14S	FIP-3/2 Service	FBP-3/10 TR
Order No.	3069951	3069953	3069955	3069957	3069920	3069924

Pluggable Push-in multi-conductor terminal blocks for modular switchgear configuration

The new PT 4 plug-in multi-conductor terminal blocks have two Push-in connections as well as one or two plug-in connections. You can therefore achieve high wiring density with minimal space requirements, even for higher power levels. 2.5 mm² couplings complete the product range for terminal blocks.

Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Maximum safety, thanks to touch-proof design

☑ Protection against mismatching, thanks to individual coding options

☑ Easy potential distribution in the double function shaft of the terminal blocks

☑ Comprehensive, optional snap-on accessories

☑ Reduction in logistics costs with uniform CLIPLINE complete system accessories

Main features
- Push-in connection
- Modular couplings for DIN rail, panel cutout, and free-hanging wiring
- Standardized COMBI plug-in zone

ℹ Web code: #0579	Three-conductor terminal block	Four-conductor terminal block	Coupling for DIN rail mounting	Coupling, snap-on	Panel feed-through, snap-on
Description	Three-conductor terminal block	Four-conductor terminal block	Coupling for DIN rail mounting	Coupling, snap-on	Panel feed-through, snap-on
Cross section	4 mm²		2.5 mm²		-
Terminal points	2		1		-
Slots	1	2	1		-
Current / voltage	32 A / 800 V		24 A / 500 V		-
Designation	PT 4-TWIN/1P	PT 4-QUATTRO/2P	PPC 2,5-NS/1-L	PPC 2,5/1-L	SSL 2,5
Order No.	3212200	3211991	3000652	3000653	3043815

Feed-through and multi-conductor terminal blocks for underfloor wiring

The PTS 4 terminal block range offers an extremely compact desk design. The angled conductor entry and design are particularly suitable for underfloor wiring systems. Two, three, and four-conductor terminal blocks of the same shape are available with corresponding ground terminals.
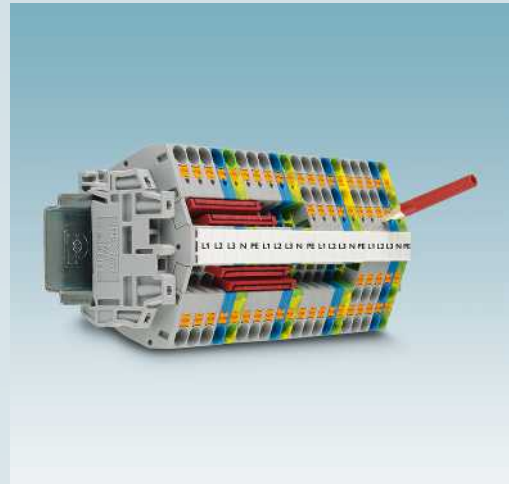
Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Optimum conductor entry, thanks to compact and angled design

☑ Flexibility for potential distribution, e.g., of a three-phase system, thanks to up to four function shafts

☑ Large-surface marking options

☑ Reduction in logistics costs with uniform CLIPLINE complete system accessories

Main features
- Push-in connection
- Narrow snap-on foot
- Voltage: 800 V
- Current: up to 38 A
- Cross section: up to 6 mm²

ℹ **Web code:** #0554

Description	Two-conductor terminal block	Two-conductor PE terminal	Three-conductor terminal block	Three-conductor PE terminal	Four-conductor terminal block	Four-conductor PE terminal
Terminal points	2		3		4	
Protective conductor foot	No	Yes	No	Yes	No	Yes
Designation	PTS 4	PTS 4-PE	PTS 4-TWIN	PTS 4-TWIN-PE	PTS 4-QUATTRO	PTS 4-QUATTRO-PE
Order No.	3213601	3213603	3213604	3213606	3213607	3213609

Multi-conductor terminal blocks with Push-in connection for confined spaces

Achieve high wiring density with minimal space requirements using the new PT multi-conductor terminal blocks. Contact up to four conductors quickly and easily using Push-in connection technology. Ground terminals of the same shape are available.

Push-in Technology
Designed by PHOENIX CONTACT
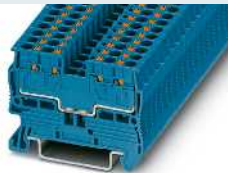
Your advantages

☑ Space savings, thanks to up to 30% more compact design

☑ Easy potential distribution with jumpers in the double function shaft

☑ Large-surface marking options

☑ Reduction in logistics costs with uniform CLIPLINE complete system accessories

Main features
- Push-in connection
- Voltage: 500 V
- Maximum load current with 2.5 mm² conductor cross section: 22 A
- Maximum load current with four connected conductors, 2.5 mm², solid: 24 A

ℹ️ Web code: #0553	Four-conductor feed-through terminal block	Four-conductor neutral terminal block	Four-conductor ground terminal
Description	**Four-conductor feed-through terminal block**	**Four-conductor neutral terminal block**	**Four-conductor ground terminal**
Designation	PT 2,5/S-QUATTRO	PT 2,5/S-QUATTRO BU	PT 2,5/S-QUATTRO-PE
Order No.	3211019	3211022	3211025

Barrier terminal blocks with screw and Push-in connection

Connect conductors safely and conveniently with the new BT barrier terminal blocks. In combination with the Push-in connection technology, the screw connection principle with spring-guided screw results in quick and easy wiring.

Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Free choice of connection technology – meet requirements for internal and external wiring at the same time

☑ Convenient ring cable lug connection, thanks to the screw connection principle with spring-guided screw

☑ Easy and tool-free direct plug-in, thanks to Push-in multi-conductor connection

☑ Easy potential distribution with time-saving CLIPLINE complete jumper system, large-surface marking options

☑ Safety for users, thanks to integrated touch proofness

Main features
- Push-in and screw connection
- Maintenance-free screw connection with integrated screw locking
- Voltage: 690 V
- Current: up to 32 A
- Cross section: up to 4 mm²

	Description	Feed-through terminal block with screw connection	Hybrid terminal block with screw and Push-in connection	Multi-conductor terminal block of the same shape with Push-in connection
ℹ Web code: #0580				
Cross section up to 1.5 mm²	**Des.**	BT 1,25	BTH 1,25	BTP 1,25
	Order No.	3281122	3281101	3281102
Cross section up to 2.5 mm²	**Des.**	BT 2,0	BTH 2,0	BTP 2,0
	Order No.	3281123	3281108	3281109
Cross section up to 4.0 mm²	**Des.**	BT 3,5	BTH 3,5	BTP 3,5
	Order No.	3281124	3281115	3281116

Three-level terminal blocks with screw connection
Space-saving wiring of conductors up to 10 mm²

Wire conductors up to 10 mm² in a confined space with the new UT three-level terminal block. It has all the system features of the CLIPLINE complete system and is therefore suitable for space-saving power wiring, including a bridging facility on each level.
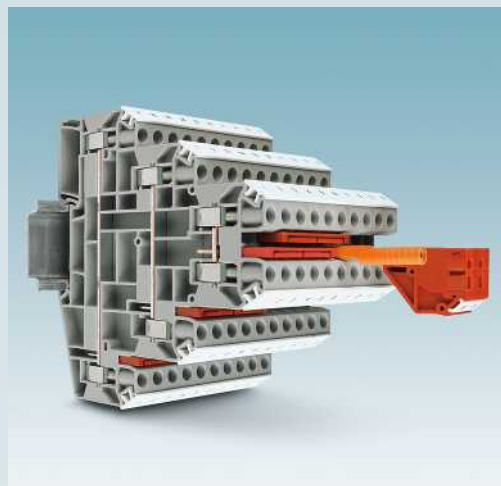
Your advantages

☑ Space saving, as there are up to three potentials in one terminal housing

☑ Easy potential distribution, thanks to function shafts on each level

☑ Clear arrangement, as all terminal points are marked

☑ Reduction in logistics costs with uniform CLIPLINE complete system accessories

Main features

• Screw connection
• Voltage: 1000 V/UL 600 V
• Current: up to 50 A
• Cross section: up to 10 mm²

ⓘ **Web code:** #0578

Description	Three-level terminal block
Designation	UT 6-3L
Order No.	3046703

Knife disconnect terminal blocks with screw connection for convenient, tool-free measurement

The new knife disconnect terminal blocks with screw connection have a disconnect lever which can be actuated without using any tools. Versions with test socket screws enable convenient measurement.

Your advantages

☑ Convenient separation of circuits via disconnect lever which can be actuated without using any tools

☑ Easy current measurement, thanks to testing facility either side of the disconnect point

☑ Safe operation, as the disconnect lever is locked in the end positions

☑ Clear identification of the disconnect point, thanks to color marking

☑ Reduction in logistics costs with uniform CLIPLINE complete system accessories

Main features
- Screw connection
- Disconnect lever color versions: orange, white, red
- Voltage: 500 V
- Current: 20 A
- Cross section: up to 10 mm²

ℹ **Web code:** #0581

Description	Knife disconnect terminal block 6 mm²		Knife disconnect terminal block 10 mm²	
Test socket	No	Yes	No	Yes
Designation	UT 4-MTL	UT 4-MTL-P/P	UT 6-MTL	UT 6-MTL-P/P
Order No.	3046144	3046146	3046145	3046147

Component connector for disconnect terminal blocks
Plug-in integration of discrete components

The component connector enables the plug-in integration of discrete components with a diameter up to 10 mm in your application. The new connectors allow you to contact your components quickly and without soldering thanks to integrated spring-cage contacts.
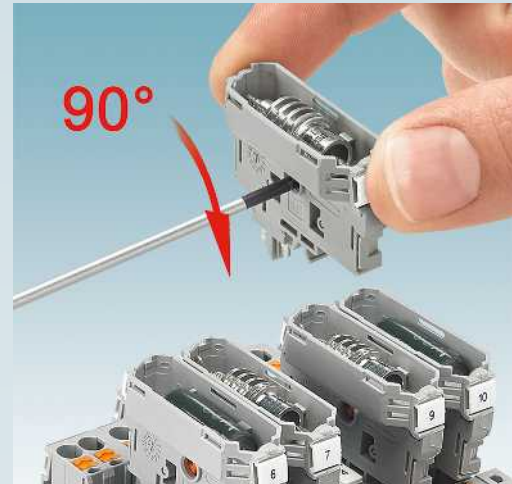
Your advantages

☑ Fast component installation without soldering, thanks to spring-cage connection

☑ Can be flexibly plugged into all CLIPLINE complete disconnect terminal blocks, thanks to universal disconnect zone

☑ Safe use of discrete components with high power dissipation, thanks to optimum heat dissipation

☑ Coding ensures connection without the risk of polarity reversal

☑ Shock and vibration resistant by snapping into the terminal marking groove: suitable for railway applications

Main features

• Spring-cage connection
• Version for SKN 2,5 diodes
• Can be marked on both sides
• Maximum component diameter: 10 mm
• Rated voltage: 400 V
• Nominal current: 10 A (depending on the power dissipation of the component used)
• Overall width: 12.4 mm

ℹ **Web code:** #0556		
Description	**Component connector**	**Component connector for SKN diodes**
Designation	P-CO XL	P-CO XL SKN
Order No.	3036797	3036798

Covering hoods for test disconnect terminal blocks
Sealable touch proofness

The covering hoods prevent inadvertent switching operations or tampering on protection and measuring disconnect terminal rails. The covering hoods also provide touch-proof and dust-proof encapsulation of your components and terminal blocks.
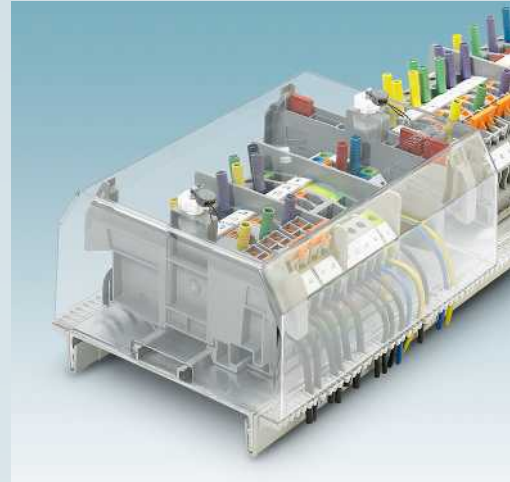
Your advantages

☑ Reliable protection against tampering, thanks to sealing option

☑ Protection against accidental contact and dust

☑ Design specifically adapted to the shape of the test disconnect terminal blocks

Main features

- Flammability rating of covering hood according to UL: V0
- Covering hood material: polycarbonate
- End bracket can be sealed and mounted on NS 35 DIN rail

ⓘ **Web code:** #0552	Covering hood 145 mm x 150 mm x 80 mm	Covering hood 115 mm x 150 mm x 80 mm	End bracket for covering hood
Description	**Covering hood 145 mm x 150 mm x 80 mm**	**Covering hood 115 mm x 150 mm x 80 mm**	**End bracket for covering hood**
Designation	AH-ME 145X150X80	AH-ME 115X150X80	E/NS 35 N-APH
Order No.	3240266	3240267	3240269

Polyester empty enclosures and junction boxes for the ex area

The new CLIPSAFE polyester enclosures for the potentially explosive area complement the existing CLIPSAFE enclosure series. Therefore, in addition to the stainless steel enclosures, another ex-certified enclosure version is available for use in process technology environments.

Your advantages

☑ 35 robust standard enclosures in four designs as the basis for individual ex junction boxes

☑ Reduced mounting and approval effort, thanks to ready-assembled junction boxes

☑ Individual assembly with all ex-approved terminal blocks from the CLIPLINE complete system

☑ Can be assembled with approved controller and interface components on request

☑ Professional customer support and short delivery times, thanks to our worldwide sales network

Main features

• Approvals: ATEX and IEC Ex
• Temperature range: -55°C ... +130°C
• Degree of protection: IP66 according to EN 60529
• Door opening angle: 135°
• Material: fiberglass-reinforced, halogen-free polyester resin with graphite additive
• Flammability rating: V0
• Color: black

ℹ **Web code:** #0582

Description	Empty enclosure with door	Empty enclosure with cover	Empty enclosure with 2 wiring levels	Empty enclosure, eight levels, with cover
Dimensions W x H x D	200 mm x 300 mm x 168 mm	250 mm x 400 mm x 161 mm	360 mm x 360 mm x 145 mm	161 mm x 161 mm x 93 mm
Designation	C PX A 200X300X168	E PX A 250X400X161	D PX A 360X360X145	O PX A 161X161X93
Order No.	0899332	0899319	0899326	0899329

For processed ex empty enclosures and assembled ex junction boxes, please contact your local Phoenix Contact sales partner.

Polyester empty enclosures and junction boxes for industrial applications

The new CLIPSAFE polyester enclosures complement the existing CLIPSAFE enclosure series. A standard version is therefore now also available for industrial environments as well as for non-hazardous areas of the process industry.

Your advantages

☑ 46 robust standard enclosures in three designs as the basis for individual junction boxes

☑ Individual assembly with all products from the Phoenix Contact product range

☑ Space savings, thanks to the double wiring level

☑ Safe to use outdoors, thanks to IP66 according to EN 60529

☑ Professional customer support and short delivery times, thanks to our worldwide sales network

Main features

- Temperature range: -40°C ... +100°C
- Degree of protection: IP66 according to EN 60529
- Door opening angle: 135°
- Material: fiberglass-reinforced polyester resin
- Color: gray

Description	Empty enclosure with door	Empty enclosure with door and viewing window	Empty enclosure with cover	Empty enclosure with 2 wiring levels
Dimensions W x H x D	200 mm x 200 mm x 170 mm	200 mm x 200 mm x 170 mm	250 mm x 400 mm x 161 mm	360 mm x 360 mm x 145 mm
Designation	C PE A 200X200X170	W PE A 200X200X170	E PE A 250X400X161	D PE A 360X360X145
Order No.	0899373	0899379	0899357	0899364

ℹ **Web code:** #0583

For processed empty enclosures and assembled junction boxes, please contact your local Phoenix Contact sales partner.

Mobile thermal transfer printer for professional marking on site

The compact THERMOMARK PRIME thermal transfer printer is suitable for stationary operation as well as mobile use on site. It impresses with its intuitive marking software, integrated, high-performance energy supply, and smart interfaces for data exchange.

Your advantages

☑ Easy data input, thanks to integrated marking software

☑ Up to seven hours of operation, thanks to the high-performance battery pack

☑ Material and ink ribbon can be changed easily in under ten seconds

☑ Wide range of materials, with more than 600 marker types for marking a wide range of applications

☑ Automatic ink ribbon, magazine, and material detection prevents printing errors

Main features

• Thermal transfer printing
• Print resolution: 300 dpi
• Print speed: 50 mm/s
• Battery charging time: max. 3 h
• Dimensions: 122 mm x 292 mm x 224 mm
• Weight: 6 kg
• Approvals: UL/CSA, CCC, FCC class A, CB, EAC (TR/TS)

ℹ **Web code:** #0590

Description	Printer
Designation	THERMOMARK PRIME
Order No.	5148888

Mobile thermal transfer printer
Accessories for more functions

With its comprehensive range of accessories, the THERMOMARK PRIME offers numerous additional functions. The printer is optimally equipped for mobile use in a wide range of applications.

Your advantages

☑ Can be easily carried using the backpack for the THERMOMARK PRIME and THERMOFOX

☑ Optimally protected printing systems, thanks to safe storage in a bag or case

☑ Wide range of possible applications with ink ribbons in various colors

ℹ️ Web code: #0590	Power supply unit	Battery	Transport bag	Backpack	Magazine	Ink ribbon
Description	Power supply unit	Battery	Transport bag	Backpack	Magazine	Ink ribbon
Designation	TMP/EXT. POWER-SUPPLY 100-240V	TMP/ACCU	TMP BAG	MOBILE BACKPACK	TMP-UCT-MAG1	TMP-RIBBON 110 BK 100
Order No.	0803672	0803668	0803674	0803717	0803342	0803374

Mobile thermal transfer printer
Marking material for devices

For marking devices, the THERMOMARK PRIME processes a range of new marking materials that supplement the existing material portfolio with UCT cards and US strip format.

Your advantages

☑ Various options for marking equipment, devices, and switches

☑ Precise markings for various applications, e.g., rotary switches

☑ Particularly durable, thanks to the high quality of the carrier material and marking

☑ Optimally coordinated material and marking ensures high-quality markings

Main features
- Wipe-proof according to DIN EN 61010-1
- Free from silicone and halogen
- Can be marked with THERMOMARK PRIME and THERMOMARK CARD

ℹ **Web code:** #0591

Description	Label, rectangular	Label, round	Insert strips for PLC devices	Marking for rotary switches	Marking for buttons
Material	Polyester				PVC
Color	Yellow	White	White	Silver	White
Temperature range	-40°C … +150°C	-40°C … +150°C	-40°C … +120°C	-40°C … +150°C	-30°C … +80°C
Designation	US-EML (15X9) YE	US-EML (D39)	US-EMT (103X17)	US-EML-RS (45,7X45,7) SR	US-EMLP-HA 24 (30X15/12,5)
Order No.	0803813	0803822	0803846	0803826	0803874

Mobile thermal transfer printer
Marking material for plants

New marking materials are also available for plant marking, which can be printed with the THERMOMARK PRIME. Choose from markings for outdoor marking, for fire alarm systems, emergency switches or circuits.
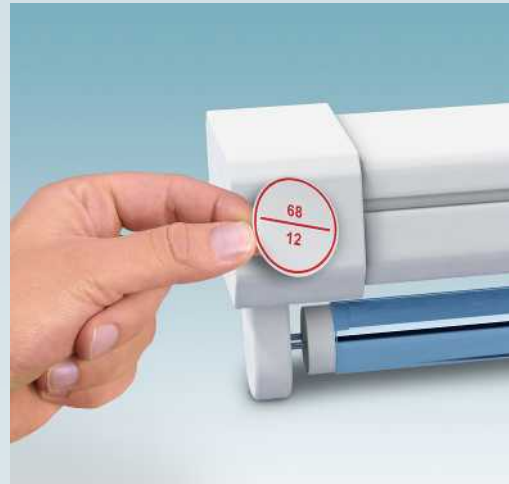
Your advantages

☑ Clear plant marking, thanks to the large choice of different marking materials

☑ Time savings, thanks to plant marking on site

☑ Easy mounting, thanks to self-adhesive labels

☑ Particularly resistant materials for outdoor use

Main features
- Material: PVC
- Free from silicone
- Wipe-proof according to DIN EN 61010-1 (VDE 0411-1)
- Mounting type: self-adhesive
- Temperature range: -40°C ... +90°C
- Can be marked with THERMOMARK PRIME and THERMOMARK CARD

ℹ **Web code:** #0592				
Description	**Marking for outdoor use**	**Label, round**	**Label for fire alarm systems**	**Label for emergency stop**
Color	Yellow	White	Red	Yellow
Designation	US-EMLF (15X9) YE	US-EMLF (D39)	US-PML-F100 (50x25)	US-PML-ESS100 (D90) YE
Order No.	0803828	0803845	0803866	0803872

Handheld printer
for quick marking on site

The new THERMOFOX handheld printer is ideal for quick marking on site. The printer is robust, easy to use, and offers versatile functions. The thermal transfer printer processes continuous media for cable and wire marking, equipment marking, terminal marking, and plant marking.

Your advantages

☑ Processing of shrink sleeves, labels, and non-adhesive materials

☑ Intelligent keypad allows symbols, barcodes, and serial numbers to be integrated

☑ Optimum print settings, thanks to automatic material detection

☑ Easy exchange of marking data, thanks to link to the CLIP PROJECT planning and marking software

☑ Fast material change, thanks to the combined material and ink ribbon cassette

Main features
- Thermal transfer printing
- Print resolution: 203 dpi
- 55 materials available
- Dimensions: 230 mm x 98 mm x 69 mm
- Weight: approx. 620 g
- Approvals: UL/CSA, CCC, FCC class B

ℹ **Web code:** #0593

Description	Handheld printer	Printer set	Battery	Case	Bag
Designation	THERMOFOX	THERMOFOX SET	THERMOFOX/ACCU	THERMOFOX/CASE	THERMOFOX/BAG
Order No.	0803984	0803986	0805009	0805002	0805003

Handheld printer
Marking material for terminal blocks

Print materials for terminal marking directly at the control cabinet using the THERMOFOX handheld printer. Robust polyester strips for insertion in the terminal groove and transparent self-adhesive labels are available.

Your advantages

☑ Time savings by creating markings directly at the control cabinet

☑ Subsequent terminal marking with self-adhesive labels that can be attached to zack marker strips

☑ Fast material change, thanks to the combined material and ink ribbon cassette

Main features
- Material: polyester
- Free from silicone and halogen
- Wipe-proof according to DIN EN 61010-1 (VDE 0411-1)
- At least 30% more material per cassette

ℹ **Web code:** #0577	Adhesive marking, transparent		Snap-in marking, white	
Description	Adhesive marking, transparent		Snap-in marking, white	
Temperature range	-40°C … +149°C		-5°C … +49°C	
Material width	4.2 mm	9.5 mm	6.35 mm	9.5 mm
Designation	MM-TML (EX4,2)R C1 TR/BK	MM-TML (EX9,5)R C1 TR/BK	MM-TMT (EX6,35)R C1	MM-TMT (EX9,5)R C1 WH/BK
Order No.	0803979	0803981	0803982	0803983

Handheld printer
Marking material for conductors

You can use different materials for wire marking with the THERMOFOX handheld printer. Shrink sleeves can be processed, as can cable markers with laminate strips, which are particularly resistant to moisture, and markings for insertion in marker carriers.

Your advantages

☑ High degree of flexibility, thanks to the wide range of materials and sizes

☑ Fast material change, thanks to the combined material and ink ribbon cassettes

☑ Printing of shrink sleeves with 2:1 and 3:1 shrink rates

☑ Larger cross section range of 3.2 to 9.5 mm using shrink sleeves

Main features

• Free from silicone and halogen
• Color: black on white
• Wipe-proof according to DIN EN 61010-1 (VDE 0411-1)
• At least 30% more material per cassette

ℹ **Web code:** #0594				
Description	**Shrink sleeve 2:1**	**Shrink sleeve 3:1**	**Self-laminating label**	**Insert strip for marking holder**
Material	Polyolefin		PVC	Polyester
Mounting type	Slide-on		Self-adhesive	Insert
Temperature range	-45°C … +125°C		-40°C … +80°C	-5°C … +49°C
Designation	MM-WMS 3,2 (EX5)R C1 WH/BK	MM-WMS-2 3,2 (EX5)R C1 WH/BK	MM-WML 3 (EX10)R C1 WH/BK	MM-EMT (EX6)R C1 WH/BK
Order No.	0803923	0803927	0803931	0803963

Handheld printer
Marking material for equipment and plants

New labels and markers in various materials are available for equipment and plant marking with the THERMOFOX handheld printer. Materials in numerous different colors are available for plant marking, which are suitable for indoor and outdoor use.

Your advantages

☑ High degree of flexibility, thanks to the wide range of materials and sizes

☑ Fast material change, thanks to the combined material and ink ribbon cassettes

☑ Clear plant marking, thanks to six color variants (white, yellow, orange, red, blue, and green)

☑ Wide range of possible applications, e.g., for signal marking or as cable flags

Main features

• Mounting type: self-adhesive
• Max. label width: 24 mm
• Free from silicone and halogen
• Wipe-proof according to DIN EN 61010-1 (VDE 0411-1)
• At least 30% more material per cassette

ℹ **Web code:** #0595				
Description	Adhesive label for equipment and plant marking	Adhesive label for equipment and plant marking		
Material	Vinyl polymer	Nylon fabric	Polyester	
Color	White	White	White	Silver
Temperature range	-20°C … +75°C	0°C … +80°C	-40°C … +150°C	
Designation	MM-EMLF (EX10)R C1 WH/BK	MM-EMLC (EX10)R C1 WH/BK	MM-EML (EX10)R C1 WH/BK	MM-EML (EX10)R C1 SR/BK
Order No.	0803937	0803933	0803970	0803974

Crimping tool
for electrical installation

CRIMPFOX Centrus are self-adjusting crimping pliers which, thanks to their ergonomic and improved mechanical design, make for light work when crimping ferrules. Available in four versions, the crimping pliers process a wide range of ferrules quickly and reliably.

Your advantages

☑ Tool fits perfectly in your hand, thanks to the small handle width

☑ Pressure lock ensures consistently high quality crimping results

☑ Up to 30% lower actuation force, thanks to optimized leverage

☑ Ergonomic handle design ensures comfortable, fatigue-free handling

☑ Sturdy plastic guard over the head of the pliers protects the tool against damage caused by dropping

Main features

• Square or hexagonal crimping shape
• Cross section range:
  0.14 mm² … 6 mm² and 0.14 mm² … 10 mm²
• Suitable for insulated and uninsulated standard, TWIN, and special sleeves
• Ergonomically designed handles made from two-component plastic

ℹ️ **Web code:** #0557	Crimping pliers Square		Crimping pliers Hexagonal		Crimping pliers set Square
Description	**Crimping pliers Square**		**Crimping pliers Hexagonal**		**Crimping pliers set Square**
Cross section	0.14 mm² … 6 mm² (26 - 10 AWG)	0.14 mm² … 10 mm² (26 - 8 AWG)	0.14 mm² … 6 mm² (26 - 10 AWG)	0.14 mm² … 10 mm² (26 - 8 AWG)	0.14 mm² … 6 mm² (26 - 10 AWG)
Designation	CRIMPFOX CENTRUS 6S	CRIMPFOX CENTRUS 10S	CRIMPFOX CENTRUS 6H	CRIMPFOX CENTRUS 10H	CRIMPFOX CENTRUS 6S SET
Order No.	1213144	1213154	1213146	1213156	1213999

Heavy-duty connectors
for compact power transmission

The new HEAVYCON D7 housings and contact inserts enable you to transmit power in an extremely compact design. In combination with an EMC cable gland, the metal housings discharge electromagnetic interference.

Your advantages

☑ Power transmission in confined spaces, thanks to the compact design

☑ Lightweight metal housings made from corrosion-resistant die-cast aluminum

☑ Potential savings, thanks to plastic housings with molded cable gland

☑ Flexible mounting of the panel mounting base using two or four screws

☑ Contact inserts with protection against mismatching, thanks to simple coding with plastic profiles

Main features

• Single locking latch with plastic latch
• Seals: NBR, conductive
• Degree of protection: IP66, IP67, NEMA 4X
• Temperature range: -40°C … +125°C
• For square contact inserts (21 mm x 21 mm)
• Contact inserts with crimp connection or axial screw connection, 2 to 12-pos.

ℹ **Web code:** #0586

Description	Sleeve housing		Panel mounting base		Contact insert	
Material	Die-cast aluminum	Polyamide	Die-cast aluminum	Polyamide	Polycarbonate	
Version	Angled	Straight	Straight	Angled	Crimp connection 7-pos.	Crimp connection 12-pos.
Voltage / current	-		-		400 V / 10 A	
Designation	HC-STA-D07-HHFS-1SM20-EL-AL	HC-STA-D07-HHFS-1TGM20-PL-BK	HC-STA-D07-BWS-EL-AL	HC-STA-D07-BAWS-PL-BK	HC-Q07-I-CT-M/F	HC-Q12-I-CT-M/F
Order No.	1419235	1419255	1419249	1419266	1418624 / 1418623	1418626 / 1418625

Heavy-duty connectors for outdoor applications

HEAVYCON ADVANCE heavy-duty connectors with screw locking are uncompromisingly robust and sealed tight up to IP69K. Thanks to the special powder coating and UV-resistant seals, the new outdoor housings are ideal for use under extreme outdoor conditions.

Your advantages

☑ Ideal for the most stringent environmental requirements and aggressive environments, thanks to the high degree of protection

☑ Cost and space savings, thanks to direct mounting without a panel mounting base

☑ Robust screw locking prevents opening by unauthorized persons

☑ Compatible with standard panel cutouts

☑ Weatherproof seal

Main features

- Sizes: B6 … B24
- Designs: high and low
- Housing material: corrosion-resistant die-cast aluminum with powder coating
- Sealing material: Viton
- Degree of protection: IP66, IP68, IP69K, NEMA 6P
- Temperature range: -40°C … +125°C
- Screw locking: stainless steel

Web code: #0588					
Description	**Sleeve housing High**	**Sleeve housing Low**	**Sleeve housing High**	**Sleeve housing High**	**Panel mounting flange set**
Size	B6	B10	B16	B24	-
Cable outlet	Side	Top	Side	Top	-
Designation	HC-ADV-B06-HHWH-1STM25-MF-BK	HC-ADV-B10-HLWH-1STM25-MF-BK	HC-ADV-B16-HHWH-1STM40-MF-BK	HC-ADV-B24-HHWH-1TTM25-MF-BK	HC-B-AF-SET
Order No.	1420898	1420911	1420916	1420925	1604638

Heavy-duty connectors for confined spaces

With the HEAVYCON EVO heavy-duty connectors, you can flexibly set the cable outlet direction on site thanks to the patented EVO-Lock system. The low-profile sleeve housings in sizes B16 and B24 and a B6 TWIN housing complement the existing portfolio and also enable use in confined spaces.

Your advantages

☑ Flexible, thanks to on-site selection of the cable outlet direction

☑ Low inventory costs, thanks to fewer parts

☑ Ideal for confined spaces, thanks to the low-profile design and two flexible cable outlets in one TWIN housing

☑ Robust high-performance plastic with IK09 shock resistance

☑ Can be combined with all standard aluminum housings on the market because it is compatible with the industry standard

Main features

• Sizes: B16 and B24 in low-profile design
• Sizes of TWIN housing: B6 … B24
• Housing material: polyamide
• Sealing material: NBR
• Degree of protection: IP66, NEMA 4X
• Temperature range: -40°C … +125°C
• Locking: single or double locking latch

ℹ️ **Web code:** #0587

Description	TWIN sleeve housing	Sleeve housing Low		M25 screw connection	Panel mounting base	
Size	B6	B16	B24	-	B16	B24
Locking	For single locking latch	For double locking latch		-	With double locking latches	
Clamping area		-		9 mm … 17 mm	-	
Designation	HC-EVO-B06-HHFS-2B-PL-BK	HC-EVO-B16-HLFD-PLBK	HC-EVO-B24-HLFD-PLBK	HC-B-G-M25-PLRBK	HC-EVO-B16-BWD-PLRBK	HC-EVO-B24-BWD-PLRBK
Order No.	1420930	1420932	1420935	1407670	1407648	1407661

Modular inserts for heavy-duty connectors
Transmit signals, power, and compressed air

Combine the appropriate modules for your application from our wide range of products: HEAVYCON modular includes contact inserts for signal and power transmission and for pneumatic applications. The innovative snap-in frame with sturdy catch springs enables quick mounting.

Push-in Technology
Designed by PHOENIX CONTACT

<div style="background:teal">Your advantages</div>

☑ The right connector for every application, thanks to the comprehensive range of contact inserts

☑ Highly compact interface, thanks to the combination of various different transmission media in the same housing

☑ Safety through touch proofness and leading PE contact

☑ Easy assembly of the housings, thanks to snap-in frame with catch springs

☑ Module frame fits in all HEAVYCON STANDARD, EVO, and ADVANCE housings and is compatible with the market standard

Main features of the contact inserts
• Material: polycarbonate
• Current: up to 200 A
• Voltage: up to 2500 V
• Signals: up to 25-pos.
Main features of the snap-in frame
• Size: B6 … B24
• Slots: 2 … 6
• Material: zinc die-cast
• Fixing: catch springs

ℹ **Web code:** #0585

Description	Contact insert for power			Contact insert for signals	Contact insert for pneumatics	Snap-in frame B24
Version	Push-in 5-pos.	Axial screw 2-pos.	Crimp 6-pos.	Crimp 17-pos.	3-pos.	-
Current / voltage	16 A / 400 V	100 A / 1000 V	16 A / 830 V	10 A / 160 V	-	-
Designation pin	HC-M-05-PT-M	HC-M-02-AT-M-35	HC-M-06P-CT-M	HC-M-17-M-CT-M	HC-M-03-PN-M-F	HC-M-B24-MF-H
Order No. pin	1417372	1417392	1414368	1414356	1417433	1417406
Designation socket	HC-M-05-PT-F	HC-M-02-AT-F-35	HC-M-06P-CT-F	HC-M-17-M-CT-F	HC-M-03-PN-M-F	HC-M-B24-MF-B
Order No. socket	1417373	1417390	1414369	1414357	1417433	1417402

Modular inserts for heavy-duty connectors
Reliable data transmission

With the HEAVYCON modular contact inserts and the innovative snap-in frame, you can create your own individual connector. The new product range offers contact inserts for virtually all applications in data transmission: from RJ45 and Gigabit to fiber optics.

Your advantages

☑ Easy integration of RJ45 data cables, also available as pre-assembled patch cables

☑ Fast and reliable data transfer via Gigabit modules with 360° shielding as well as contacts shielded in pairs

☑ Accommodation of fiber optics based on LC or SC technology via contacts from Phoenix Contact

☑ Easy assembly of the housings, thanks to snap-in frame with catch springs

☑ Module frame fits in all HEAVYCON STANDARD, EVO, and ADVANCE housings and is compatible with the market standard

Main features of the contact inserts
• 1 module slot per contact insert
• Material: polycarbonate

Main features of the snap-in frame
• Size: B6 … B24
• Slots: 2 … 6
• Material: zinc die-cast
• Fixing: catch springs

ℹ **Web code:** #0584

Description	Contact insert, RJ45	Contact insert, Gbit	Contact insert, FO SC	Contact insert, FO LC	Contact insert, D-SUB	Snap-in frame B24
Application	PROFINET/Ethernet		Data/signals			-
Transmission medium	Copper		Plastic fiber	Fiberglass	Copper	-
Designation pin	HC-M-RJ45-08-M	HC-M-08-GBIT-CT-M	HC-M-04-SCFC-M	HC-M-04-LCFC-M	HC-M-DSUB 09-CT-M	HC-M-B24-MF-H
Order No. pin	1419887	1417302	1419889	1419891	1417309	1417406
Designation socket	HC-M-RJ45-08-GC-F/F	HC-M-08-GBIT-CT-F	HC-M-04-SCFC-F	HC-M-04-LCFC-F	HC-M-DSUB 09-CT-F	HC-M-B24-MF-B
Order No. socket	1419886	1417303	1419890	1419892	1417308	1417402

M12 circular connectors and distributors for data and signal transmission

Connect shielded data and signal lines quickly and safely with the M12 connectors for assembly. The Y-distributor enables the easy integration of hybrid M12 interfaces into existing systems.

Your advantages

☑ Reliable connection of shielded cables

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

☑ Convenient connection with standard tools

☑ Easy integration of devices with Y-coded M12 interface

☑ One M12 interface for data and power: Power with Ethernet (PWE)

Main features
- QUICKON fast connection technology (IDC)
- 360° shielded housing
- SPEEDCON fast locking system

Description	X-coded connector		A-coded connector		Y-coded Y-distributor
Application	Ethernet	PROFINET	Ethernet	Signal	Ethernet (PWE)
Transmission speed	10 Gbps		1 Gbps	-	100 Mbps
Number of positions	8		8		4+4
Conductor cross section [AWG/mm²]	26 … 22 0.14 … 0.34	24 … 20 0.25 … 0.5	26 … 22 0.14 … 0.34	26 … 20 0.14 … 0.5	-
Order No. connector	-	-	1421679	1414610	1410630
Order No. socket	1414586	1414587	1421680	1414611	-

ℹ **Web code:** #0589

Pre-assembled 19" splice boxes
for control cabinets and computer centers

The 19" splice boxes, which are fully pre-assembled ready to splice, have a front tray that can be pulled out and up to 24 LC duplex connections per rack unit, thus providing high connection density. High-quality individual components and individual test reports for each pigtail meet the highest quality requirements.

Your advantages

☑ Front tray that can be pulled out

☑ Fully pre-assembled, high-quality components

☑ Color-coded pigtails including individual test reports

☑ Cable glands and 19" mounting set included

Main features
- Made from robust sheet steel
- 12 or 24 ceramic couplings
- 24 or 48 pigtails
- 2 or 4 splice cassettes
- Shrink splice protection for 24 or 48 splices
- 4 or 8 splice combs

ℹ **Web code:** #0663				
Description	19" splice box for 12 x LC duplex	19" splice box for 24 x LC duplex	19" splice box for 12 x LC duplex	19" splice box for 24 x LC duplex
Fiber class	OM2		OM4	
Housing color	Gray		Black	
Designation	FOC-SB-FR19:1U-LCD12-OM2 GY	FOC-SB-FR19:1U-LCD24-OM2 GY	FOC-SB-FR19:1U-LCD12-OM4 BK	FOC-SB-FR19:1U-LCD24-OM4 BK
Order No.	1418815	1418816	1418817	1418818

Accessories for E-Mobility
Hinged covers for Infrastructure Socket Outlets

The new self-opening or self-closing hinged covers complement the existing equipment for charging stations with type 2 and GB/T standard Infrastructure Socket Outlets. The installation position of the hinged covers can be selected when mounted, allowing the hinged cover to be opened from the left, right, top or bottom.

Your advantages

- ☑ Flexible installation options, thanks to free choice of left, right, top or bottom mounting position
- ☑ User-friendly handling with self-opening or self-closing cover mechanism
- ☑ Can be installed on front or rear-mounted Infrastructure Socket Outlets

Main features

- Wear-resistant spring mechanism
- Compatible with type 2 and GB/T Infrastructure Socket Outlets
- Color: black
- Customer logo can be added
- Degree of protection: IP54

Description	Self-closing hinged cover		Self-opening hinged cover
Web code: #0601			
Mounting positions GB/T	Left/right		
Mounting positions type 2	All		
Screw connection points	Ø 4.3 mm (M4)	Ø 7.3 mm (M6)	Ø 4.3 mm (M4)
Designation	EV-SC-D4,3MM	EV-SC-D7,3MM	EV-SCO
Order No.	1623416	1623888	1623415

Accessories for E-Mobility
Holders for Vehicle Connectors

The new holders for AC and DC Vehicle Connectors provide reliable protection for the Vehicle Connector during charging breaks. These so-called park positions support variable installation by means of front or rear mounting.

Your advantages

☑ Optimum protection of the Vehicle Connector during charging breaks, thanks to high-quality materials

☑ Variable installation depth with front and rear mounting

☑ Sturdy holder, thanks to locking clips in the plastic housing

☑ Flexible use, thanks to variable mounting positions

Main features
- Available for all standards
- Screw connection positions of AC versions correspond to those of the Infrastructure Socket Outlet
- Color: black

ⓘ **Web code:** #0602

Description	Park position AC type 1	Park position CCS type 1	Park position AC type 2	Park position CCS type 2	Park position AC GB/T	Park position DC GB/T
IP degree of protection	IP24				IP54	
Dimensions W x H x D	75 mm x 75 mm x 37 mm	75 mm x 118 mm x 37 mm	75 mm x 75 mm x 44.7 mm	75 mm x 118 mm x 54 mm	75 mm x 75 mm x 40 mm	91 mm x 91 mm x 41 mm
Hole dimensions W x H	60 mm x 60 mm	60 mm x 103 mm	60 mm x 60 mm	60 mm x 103 mm	60 mm x 60 mm	72 mm x 72 mm
Designation	EV-T1AC-PARK	EV-T1CCS-PARK	EV-T2AC-PARK	EV-T2CCS-PARK	EV-GBAC-PARK	EV-GBDC-PARK-REAR-FASTEN
Order No.	1624139	1624143	1624148	1624153	1624142	1623496

AC charging cable for E-Mobility with Infrastructure Plug

The new design line of AC Vehicle Connectors has been developed in accordance with the requirements of the automotive industry. High-quality materials and convenient handling make the mobile charging cables the ideal companion for you and your electric vehicle.

Your advantages

☑ Developed in accordance with the requirements of the automotive industry (LV 124 and LV 214)

☑ All international standards with type 1, type 2, and GB/T available

☑ Modern design with robust and high-quality materials

☑ Convenient handling, thanks to low insertion and withdrawal force

☑ Type 1 and GB/T actuating lever can be locked with 4 mm U-lock

Main features

- Type 1 according to IEC 62196-2/SAE J1772: up to 250 V AC, up to 32 A, 1-phase
- Type 2 according to IEC 62196-2: up to 480 V AC, up to 32 A, 1 and 3-phase
- GB/T 20234.2: up to 440 V AC, up to 32 A
- IP degree of protection with protective cap: IP56
- Color: black and gray

ℹ Web code: #0598

Description	Mobile AC charging cable, type 1		Mobile AC charging cable, type 2		Mobile AC charging cable, GB/T	
Actuating lever can be locked	Yes		No		Yes	
Cable length	4.0 m		4.0 m		5.0 m	
Rated voltage	250 V		250 V	480 V	250 V	440 V
Rated current	20 A	32 A	20 A	32 A	16 A	32 A
Designation	EV-TAG3PK1-AC20A-4,0M2,5ESBK01	EV-TAG3PK-1AC32A-4,0M6,0ESBK01	EV-T2G3PC-1AC20A-4,0M2,5ESBK01	EV-T2G3PC-3AC32A-4,0M6,0ESBK01	EV-GBG3JK-1AC16A-5,0M2,5ESBK01	EV-GBG3JK-3AC32A-5,0M6,0ESBK01
Order No.	1623908	1623909	1623506	1623509	1623515	1624138

AC charging cable for E-Mobility with open cable end

The new design line of AC Vehicle Connectors has been developed in accordance with the requirements of the automotive industry. The charging cables with open cable end can be connected to your charging point and are characterized by their convenient handling. High-quality materials round off the modern design.

Your advantages

☑ Developed in accordance with the requirements of the automotive industry (LV 124 and LV 214)

☑ All international standards with type 1, type 2, and GB/T available

☑ Modern design with robust and high-quality materials

☑ Convenient handling, thanks to low insertion and withdrawal force

☑ Type 1 and GB/T actuating lever can be locked with 4 mm U-lock

Main features

- Type 1 according to IEC 62196-2/SAE J1772: up to 250 V AC, up to 32 A, 1-phase
- Type 2 according to IEC 62196-2: up to 480 V AC, up to 32 A, 1 and 3-phase
- GB/T 20234.2: up to 440 V AC, up to 32 A
- IP degree of protection with protective cap: IP56
- Color: black and gray

ℹ **Web code:** #0599

Description	AC Vehicle Connector Type 1		AC Vehicle Connector Type 2		AC Vehicle Connector GB/T	
Actuating lever can be locked	Yes		No		Yes	
Cable length	4.0 m		4.0 m		5.0 m	
Rated voltage	250 V		250 V	480 V	250 V	440 V
Rated current	20 A	32 A	20 A	32 A	16 A	32 A
Designation	EV-T1G3K-1AC20 A-4,0M2,5ESBK01	EV-T1G3K-1AC32 A-4,0M6,0ESBK01	EV-T2G3C-1AC20 A-4,0M2,5ESBK01	EV-T2G3C-3AC32 A-4,0M6,0ESBK01	EV-GBG3K-1AC16 A-5,0M2,5ESBK01	EV-GBG3K-3AC32 A-5,0M6,0ESBK01
Order No.	1623236	1623224	1623502	1623505	1623510	1624137

AC charging controllers for E-Mobility Specifically for North America

The new EV Charge Control Basic NAR AC charging controller is designed specifically for charging stations in the North American market. With integrated circuit breakers and residual current detection, as well as UL certification, it satisfies all the normative requirements for a turnkey E-Mobility solution.

Your advantages

☑ Optimized for charging stations in the North American market with bundled functions on just one PCB

☑ Low certification effort, thanks to existing UL approval

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

☑ Easy integration in management systems using standardized communication interfaces

Main features

• Level 2 charging according to SAE J1772
• Control according to UL 2594
• Residual current monitoring according to UL 2231
• DIN rail device
• Supply voltage: 110 V … 240 V, 50 Hz/60 Hz
• Configurable charging current: 6 A … 40 A
• 3 digital outputs, 2 digital inputs
• RS-485 interface, Modbus/RTU

ℹ **Web code:** #0596

Description	AC charging controller
Designation	EV-CC-AC1-L2-NAR-SER-PCB
Order No.	1623656

DC charging controllers for E-Mobility
Specifically for fast charging stations

The new EV Charge Control Professional DC charging controller encompasses all the interfaces of a sophisticated fast charging station in a single device. During DC charging, communication with the electric vehicle is in accordance with CCS. The charging station is integrated into billing systems via OCPP.
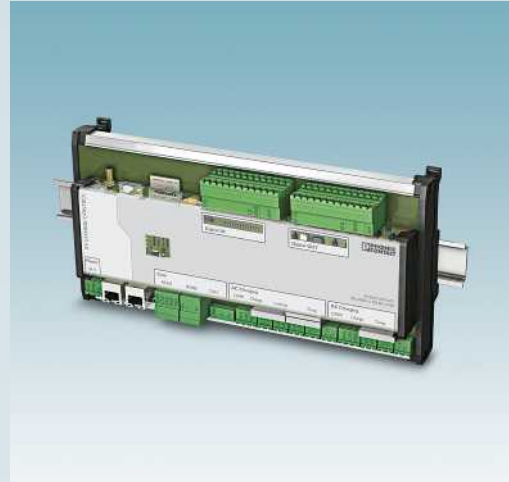
Your advantages

☑ High-level communication for DC charging in accordance with DIN SPEC 70121

☑ Optimum control solution for AC and DC charging in accordance with the Combined Charging System (CCS)

☑ Easy system integration, thanks to comprehensive I/Os and serial interfaces

☑ Reliable communication with management systems using the Open Charge Point Protocol (OCPP)

☑ Freely programmable in accordance with IEC 61131

Main features

- Charging in accordance with IEC 61851-1/-23, DIN SPEC 70121
- Charging methods: AC and DC
- DIN rail device
- 3 digital outputs, 2 digital inputs
- Vehicle interfaces: 2 (1 x AC, 1 x DC)
- Interfaces: digital I/Os, RS-485, RS-232, CAN, temperature monitoring, Ethernet, GSM
- Open Charge Point Protocol (OCPP)

ℹ **Web code:** #0597

Description	DC charging controller
Designation	EV-PLCC-AC1-DC1
Order No.	1624130

Bluetooth adapter
for wireless communication

Conveniently exchange data between Interface products and mobile terminal devices using the new Bluetooth adapter. The wireless connection enables more convenient control and regulation processes in industrial applications.

Your advantages

☑ Convenient data exchange between Interface products and mobile terminal devices, thanks to Bluetooth adapter

☑ Very convenient operation, thanks to wireless connection

☑ Flexible use with smartphone, tablet or PC

Main features

• Accessory for MINI Analog Pro, MINI Analog, MACX Analog, PLC logic, and Interface System Gateways
• Connection via micro USB or S-PORT interface
• ATEX approval for Zone 2

ⓘ **Web code:** #0604

Description	Bluetooth adapter
Designation	IFS-BT-PROG-ADAPTER
Order No.	2905872

Highly compact signal conditioners for easy temperature monitoring

The 6 mm MINI Analog Pro signal conditioners with plug-in connection technology offer the easiest installation and startup in a confined space. You can easily monitor temperature limit values with the new temperature threshold value switches.

Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Easy installation, thanks to easily accessible terminal points, power bridging, and plug-in connection terminal blocks

☑ Numerous parameterization options via DIP switch configuration, software or smartphone app

☑ Easy to maintain, thanks to large-surface marking areas, status and error indicators, and group error messaging

☑ Optimum signal quality, thanks to the latest switching technology and safe electrical isolation

Main features

• Universal input for resistance thermometers, remote resistance-type sensors, thermocouples, and mV sources
• Safe electrical isolation with 3 kV test voltage
• Supply voltage range: 9.6 V DC … 30 V DC
• Temperature range: -40°C … +70°C

ℹ **Web code:** #0605

Description	Temperature threshold value switch with relay output		Temperature threshold value switch with 2 transistor outputs	
Connection technology	Push-in	Screw	Push-in	Screw
Designation	MINI MCR-2-T-REL-PT	MINI MCR-2-T-REL	MINI MCR-2-T-2RO-PT	MINI MCR-2-T-2RO
Order No.	2905633	2905632	2906877	2906876

Signal conditioners with functional safety for signal transmission without auxiliary power

Thanks to consistent SIL certification, MACX Analog signal conditioners offer maximum safety for machines and systems. The new input loop-powered passive signal conditioners enable safe signal transmission without additional auxiliary power.

Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ No separate power supply required, thanks to energy supply via the input

☑ High risk reduction due to SIL 3 according to IEC 61508/EN 61511 with just one channel

☑ Can also be used in extreme temperatures from -40°C to +85°C

☑ High level of accuracy, thanks to transmission errors below 0.1%

Main features
- Input: 0(4) mA … 20 mA, IN = OUT
- Output: 0(4) mA … 20 mA, IN = OUT
- Input voltage: up to 30.5 V DC
- 2-way electrical isolation with 2.5 kV test voltage and 300 V AC/DC rated insulation voltage

	Signal conditioner, single-channel		Signal conditioner, two-channel	
Description				
Connection technology	Screw	Push-in	Screw	Push-in
Designation	MACX MCR-SL-I-I-ILP	MACX MCR-SL-I-I-ILP-SP	MACX MCR-SL-2I-2I-ILP	MACX MCR-SL-2I-2I-ILP-SP
Order No.	2905278	2905279	2905280	2905281

ℹ **Web code:** #0606

Ex i signal conditioners with functional safety for binary inputs and outputs

The Ex i signal conditioners from the MACX Analog Ex range offer maximum explosion protection for all ex zones and all gas and dust groups. New to the range are two NAMUR signal conditioners for Honeywell and Yokogawa as well as two solenoid drivers. They offer line fault transparency and line fault detection.

Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Universal use for all ex zones and for all gas and dust groups, thanks to [Ex ia] IIC/IIIC approval

☑ Functional safety and reliability with consistent SIL certification

☑ Significant space savings with an overall width of just 12.5 mm

☑ Reduced wiring effort with NAMUR signal conditioners, thanks to line fault transparency on the signal lines

☑ Easy installation and startup, thanks to plug-in connection technology

Main features
- Intrinsically safe input and output
- Can be used up to SIL 2 and SIL 3
- Safe 3-way electrical isolation
- Supply via DIN rail connector
- Housing overall width: 12.5 mm
- Screw or Push-in connection

ℹ **Web code:** #0607

Description	NAMUR signal conditioners		Solenoid drivers	
Input	[Ex ia], sensors, switch contacts	[Ex ia], sensors, switch contacts	Logic input (Low/High signal)	Logic input (Low/High signal)
Output	Resistive, Honeywell	Resistive, Yokogawa	[Ex ia], off-load voltage: 24.3 V	[Ex ia], off-load voltage: 21.1 V
Designation	MACX MCR-EX-SL-NAM-HO	MACX MCR-EX-SL-NAM-YO	MACX MCR-EX-SL-SD-24-48-LFD	MACX MCR-EX-SL-SD-21-25-LFD
Order No.	2907404	2905723	2906155	2905669

Multifunctional process display for analog and temperature signals

The new FA MCR process display enables you to monitor and display analog and temperature signals as well as to control them via digital and analog outputs. Sensor supply is also possible. Advantages include the high number of sensors that can be connected and the color change in the event of an error.

Your advantages

☑ Easy configuration, either via front keypad or with FDT/DTM software

☑ Simultaneous display of process values and bar graph or measuring point designation

☑ Easy installation, thanks to standardized housing dimensions and plug-in connection terminal blocks

☑ Identification in the event of error states, thanks to the entire display changing color

☑ International use, thanks to UL and CSA approvals

Main features

• Input: thermocouples, resistance thermometers, 0(4) mA … 20 mA, 0 mA … 5 mA, 0(2) V … 10 V, 0(1) V … 5 V, 0 V … 1 V, ±1 V, ±10 V, ±30 V, 30 Ω … 3000 Ω
• Output: 0(4) mA … 20 mA, 0(2) V … 10 V, 0(1) V … 5 V, 2 x relay (PDT)
• Installation dimensions: 92 mm x 45 mm
• Supply: 24 V AC/DC … 230 V AC/DC
• UL and CSA approvals

ℹ **Web code:** #0608

Description	Multifunctional process display
Designation	FA MCR-D-TUI-UI-2REL-UP
Order No.	2907064

Intelligent photovoltaic panel shutdown for working safely in rooftop systems

Rooftop photovoltaic systems generate lethal voltages. They cannot be disconnected easily on the DC side. SOLARCHECK RSD shuts down your system intelligently and safely. Personnel are protected from electric shock during installation and maintenance or in dangerous situations.

Auto Rapid Shutdown

Your advantages

☑ Safety during maintenance and in dangerous situations, thanks to patented error detection and safe shutdown

☑ Controlled restart via safe autostart

☑ Easy installation, thanks to the use of existing DC cables

☑ Easy startup without any programming or manual setup

Main features

- Automatic shutdown and start function with Auto Rapid Shutdown (Auto RSD)
- For system voltages up to 1000 V DC
- Input current: max. 10 A

	Web code: #0609	Shutdown unit	Startup unit, autonomous	Startup unit, externally supplied
Description		Shutdown unit	Startup unit, autonomous	Startup unit, externally supplied
Supply		By the PV system	By the PV system	By external power supply
Release		Via startup unit	Auto RSD	Auto RSD
Signaling		-	-	Via signal contact
Designation		SCK-RSD-100	SCK-RSD-400	SCK-RSD-600
Order No.		2905029	2905030	2906273

LED machine lights
New versions for optimum illumination

Two new performance classes complete the portfolio for the PLD machine lights. Optimum illumination is possible in almost every environment as the lights are available in various degrees of protection, designs, and lengths and can be swiveled. You can now choose the right light for your application from three performance classes.

Your advantages

☑ No maintenance effort or replacement of lights, thanks to long LED service life

☑ Flexible mounting, thanks to different designs and accessories

☑ Can be swiveled, ensuring optimum illumination

☑ Can also be used in machine tools, thanks to resistance to coolants and lubricants

Main features

• Available in lengths from 190 mm … 1176 mm
• Power consumption:
  3.5 W … 42 W (depending on the light)
• LED service life: at least 50000 h (L70)
• Nominal voltage: 24 V DC
• Supply line by means of punched-on cable or M12 connector (depending on the light)

ℹ Web code: #0624				
Description	**Class 100 (example)**	**Class 200 Ø 40 mm (example)**	**Class 200 Ø 70 mm (example)**	**Class 200 IP69**
Max. illuminance	391 lx (d = 0.5 m)	477 lx (d = 1 m)	443 lx (d = 1 m)	869 lx (d = 1 m)
Emission angle	95°/105°	85°/95°	75°/95°	40°
Degree of protection	IP67			IP67/IP69
Temperature range	0°C … +25°C	0°C … +50°C	0°C … +45°C	0°C … +25°C
Resistant to coolants/lubricants	No	Yes		
Order No.	2702476	2702481	2702484	2702491

LED enclosure lights
New power supply units for universal use

The two plug-in power supply units provide a transportable and therefore universal power supply for class 400 PLD enclosure lights. Thanks to the input voltage range and the country-specific plug adapters, the lights can be used in many different countries.

Your advantages

☑ Worldwide use possible, thanks to adapters and wide-range input

☑ Transportable and can be used universally

☑ High fault tolerance, thanks to protective functions

Main features

- Adapters for EU, US, UK, AU
- Nominal input voltage: 100 V AC … 240 V AC
- Protective functions: surge voltage, overload, short circuit
- Temperature range: 0°C … +40°C
- Degree of protection: IP42

	Plug-in power supply unit 12 W	Plug-in power supply unit 30 W
Description	Plug-in power supply unit 12 W	Plug-in power supply unit 30 W
Output current	500 mA	1250 mA
Designation	PLD E 400-PS/1AC/24DC/12W	PLD E 400-PS/1AC/24DC/30W
Order No.	2702435	2702436

ℹ **Web code:** #0625

LED signal lights for maritime applications
Efficient control of transportation projects

The new LED signal lights for maritime use can be used for the reliable and energy-efficient operation of light-signal systems, such as locks. Status and diagnostics functions provide a detailed database for smart maintenance and ensure the traceability of the system operating behavior.

Your advantages

☑ Fast diagnostics and long-term data backup through integration into your network with standard protocols

☑ Robust aluminum housing and salt-water-resistant connectors for harsh outdoor use

☑ Save costs with durable and efficient LED technology

☑ High availability, thanks to the use of safety-related autonomous monitoring functions

Main features

• High light and color intensity
• Various light colors available according to IALA recommendation E200-1
• Degree of protection: IP65/IP67
• Temperature range: -25°C ... +55°C
• Can be dimmed in 256 steps
• Operating hours counter
• 400 meter safe connection to the control unit

ℹ **Web code:** #0657

Description	Signal light Green	Signal light Red	Signal light White	Signal light Blue	Signal light Yellow
Designation	CSD-SL 300 GN	CSD-SL 300 RD	CSD-SL 300 WH	CSD-SL 300 BU	CSD-SL 300 YE
Order No.	2701786	2701788	2701785	2402723	2701787

Monitors with multi-touch function for remote operating concepts

The monitors in the modern industrial design and with multi-touch display are suitable for operating concepts where the processor unit and display unit are physically separated. Thanks to the different display sizes, you will find the right monitor for your application.

Your advantages

☑ System enhanced by an attractive design

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

☑ Implementation of state-of-the-art operating concepts, thanks to multi-touch support

☑ Easy integration into existing systems, thanks to standardized interfaces

Main features

- Display sizes: 15.6"/18.5"/21.5"
- 10-finger multi-touch
- PCAP display
- 1 x VGA, 1 x DVI-I, 1 x DisplayPort
- 1 x USB 1.1 and 1 x USB 2.0 type A

ⓘ **Web code:** #0651

Description	Multi-touch monitor 15.6"	Multi-touch monitor 18.5"	Multi-touch monitor 21.5"
Resolution	1366 x 768 pixels		1920 x 1080 pixels
Designation	BL FPM 15.6	BL FPM 18.5	BL FPM 21.5
Order No.	2402980	2402981	2400515

Powerful box and panel PCs
for state-of-the-art operating concepts

The new generation of box and panel PCs in the Valueline range delivers state-of-the-art operating concepts. You will be impressed by the improved performance, comprehensive functions, and attractive design of the versatile industrial PCs.

Your advantages

☑ Easy implementation of state-of-the-art operating concepts, thanks to multi-touch support

☑ System enhanced by an attractive design

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

☑ Maintenance-friendly, thanks to access to all important components

☑ RAID 1 support for high data security

Main features

• Display sizes: 15.6"/18.5"/21.5"
• 10-finger multi-touch
• Latest Intel® Celeron® and Intel® Core™ i5 processors
• Up to 2 x SATA HDD/SSD (RAID 0,1)
• Up to 2 x DisplayPort
• PCI/PCIe slot (optional)
• Fanless design

ℹ **Web code:** #0649

Description	Box PC			Panel PC		
Processor	Intel® Celeron® N2930 1.83 GHz	Intel® Core™ i3-4010U 1.7 GHz	Intel® Core™ i5-4300U 1.9 GHz	Intel® Celeron® N2930 1.83 GHz	Intel® Core™ i3-4010U 1.7 GHz	Intel® Core™ i5-4300U 1.9 GHz
Designation	VL2 BPC 2000	VL2 BPC 3000	VL2 BPC 7000	VL2 PPC 2000	VL2 PPC 3000	VL2 PPC 7000
Order No.	2400332	2400492	2400333	2400334	2400498	2400346

Proven box and panel PCs with the latest processors

The box and panel PCs in the Valueline range are equipped with the latest Intel® Celeron® and Intel® Core™ i3 processors. Use state-of-the-art technology and benefit from industrial PCs that can be configured in a variety of ways for visualization, measurement, and control applications.

Your advantages

☑ High system availability, thanks to the fanless design suitable for industrial use

☑ Easy integration into existing systems, thanks to proven design with unchanged dimensions

☑ Maintenance-friendly, thanks to access to all important components

☑ Can be extended, thanks to optional PCI slots

☑ Optional front USB connection for easy startup

Main features

- Display sizes: 12" … 24", 4:3 or 16:9
- Resistive industrial touch foil
- Latest Intel® Celeron® and Intel® Core™ i3 processors
- RAM: up to 16 GB DDR3
- 2 open PCI slots (optional)
- Windows® 7 64-bit compatible
- 1 x COM (RS-232/RS-422/RS-485) configurable

ℹ **Web code:** #0650

Description	Box PC		Panel PC	
Processor	Intel® Celeron® N2930 1.83 GHz	Intel® Core™ i3-4010U 1.70 GHz	Intel® Celeron® N2930 1.83 GHz	Intel® Core™ i3-4010U 1.70 GHz
Designation	VL BPC 2000	VL BPC 3000	VL PPC 2000	VL PPC 3000
Order No.	2402759	2400183	2402760	2400184

Tablet PCs
with new processors and Full HD

Tablet PCs suitable for industrial use are the ideal solution for working on the go indoors and outdoors. The new generation offers improved processor power and Full HD displays. Thanks to optimized energy efficiency, you can operate the devices for up to eight hours.

Your advantages

☑ Work on the go without interruption, as the battery can be replaced during operation

☑ Large visualization, thanks to 13.3" display with Full HD resolution

☑ Optimum performance suited to every application, thanks to Intel® Celeron® and Intel® Core™ processors

☑ Stable connections via WLAN and Bluetooth

☑ Sound and proven handling, thanks to enclosed monocoque frame

Main features

• Display size: 13.3"
• 10-finger multi-touch
• TFT display with Full HD resolution
• WLAN 802.11 a/g/n
• Bluetooth 4.0 Class 1 and Class 2
• Processor: Intel® Core™ i5 or Intel® Celeron®
• Degree of protection: IP53, IP65 (front)
• Battery runtime: up to 8 hours

ℹ **Web code:** #0652

Description	Tablet PC with Intel® Core™ i5 4300U		Tablet PC with Intel® Celeron® 2980U		
Operating system	Windows® Embedded 8.1 Industry Pro 64-bit	Windows® 7 Ultimate 64-bit	Windows® Embedded 8.1 Industry 64-bit	Windows® 7 Ultimate 64-bit	Windows® Embedded Standard 7 64-bit
Designation	ITC 8113 PWES8	ITC 8113 PW7	ITC 8113 SWES8	ITC 8113 SW7	ITC 8113 SWES7
Order No.	2402963	2402961	2402959	2402957	2402979

HMIs for HTML5 applications
Design custom user interfaces

The touch panels offer all the advantages of HTML5 technology in a robust and high-performance industrial device. When it comes to the custom design of interfaces for operation and monitoring, you are not bound to a particular visualization. The panels are now also available in 12.1" and 15.4" display sizes.

Your advantages

☑ Flexible, thanks to open web standard and free choice of web server and visualization software

☑ Independent, thanks to self-programmed HTML5 applications including JavaScript

☑ Secure communication, thanks to protected data transmission with SSL encryption

☑ Lower maintenance costs, as no security updates are required for Java and Flash thanks to HTML5

☑ 100% suitable for industrial use, as the browser is the only interaction interface

Main features

• Processor: ARM® Cortex® A8, 800 MHz
• Software: Debian GNU/Linux, Midori browser, PDF viewer
• RAM: 512 MB
• Mass storage: 1 GB Flash
• 2 x USB, 1 x Ethernet 10/100 Mbps
• Temperature range: 0°C ... +50°C

ⓘ **Web code:** #0654		
Description	**Web panel 12.1"**	**Web panel 15.4"**
Resolution	800 x 600 pixels	1280 x 800 pixels
Designation	WP 3121S	WP 3154W
Order No.	2402635	2402636

HMIs for Visu+ software
New display sizes, higher graphics performance

You can design complex operating and monitoring interfaces with the HMIs for the Visu+ visualization software. Using detail-rich graphics, you can optimally reproduce your systems and processes. The new display sizes enable even greater flexibility when planning the system.

Your advantages

☑ Fast display refresh and response times, thanks to the more powerful generation of processors

☑ Integrated Visu+ visualization software

☑ Flexible connection by means of various drivers, including third-party systems

☑ Mobile system access with the Visu+ mobile app

☑ Lower costs for acoustic signaling devices, thanks to integrated buzzer with 85 dB

Main features

- Processor: ARM® Cortex® A8, 800 MHz
- Software: Windows® Embedded Compact 7, VISU+ RT, AX OPC Server
- RAM: 512 MB
- Mass storage: 1 GB Flash
- 2 x USB, 1 x Ethernet 10/100 Mbps
- Temperature range: 0°C ... +50°C

ℹ **Web code:** #0653

Description	Touch panel 4.3"	Touch panel 9.0"	Touch panel 12.0"	Touch panel 15.4"
Resolution	480 x 272 pixels	800 x 480 pixels	1280 x 800 pixels	1280 x 800 pixels
Designation	TP 3043W	TP 3090W	TP 3120W	TP 3154W
Order No.	2402629	2402630	2400457	2402631

Visualization software for an easy introduction

A good visualization software tool provides the basis for efficient automation – whether in production or directly on the machine. The new Visu+ 2 Express software, which is available free of charge, provides an easy introduction to the visualization of typical operating and monitoring tasks.

Your advantages

☑ No license fees

☑ Time and cost savings, thanks to the simplified user interface

☑ Web access via the Visu+ mobile app

☑ Maximum flexibility, thanks to the wide range of driver interfaces for leading controller manufacturers

Main features

• Integrated event and alarm management
• Data logging, trend display, and recipe management
• OPC Classic interface and direct drivers
• Multilingual software and projects, thanks to Unicode support and online selection
• Access protection with user management

ℹ **Web code:** #0653

Description	Visualization software
Designation	VISU+ 2 EXPRESS
Order No.	2402774

Highly compact zero-speed relay for monitoring drives without sensors

Use the narrow PSRmotion zero-speed relay to monitor the downtime of a dangerous movement without additional sensors. For example, a guard locking device can be controlled in this way. Downtime is detected by evaluating the voltage induced by the motor winding.

Relay Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Reduced design effort, as sensors do not have to be mounted

☑ Up to 70% space savings without limiting performance, thanks to new relay technology developed in-house

☑ Flexible use, thanks to application-specific configuration options

☑ Universal use for machines with and without frequency inverters

☑ Easy retrofitting, thanks to the extremely narrow design

Main features
- Monitoring of 1 and 3-phase AC or DC motors
- Overall width: 12.5 mm
- Switching threshold: 50 mV … 500 mV, adjustable
- Time delay: 0.5 s … 20 s, adjustable
- Up to PL e according to ISO 13849
- 1 safe relay output, 2 signal outputs
- UL and cUL

ℹ **Web code:** #0627

Description	Zero-speed relay without sensors
Designation	PSR-MM25
Order No. Screw connection	2702355
Order No. Spring-cage connection	2702356

Highly compact safety relays with new functions for machine building

PSRmini are the narrowest safety relays available on the market and offer proven safety in an overall width of just 6 or 12 mm thanks to force-guided contacts. The new products now support even more possible applications thanks to additional functions that can be configured.

Relay Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Up to 70% space savings without limiting performance, thanks to new relay technology developed in-house

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

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

☑ New possible applications, thanks to configurable functions such as retriggering and pick-up and release delay

☑ Approvals for all global markets

Main features
- Overall width: 6.8 mm and 12.5 mm
- For loads up to 6 A
- Up to PL e according to ISO 13849
- Up to SILCL 3 according to IEC 62061
- UL and cUL
- Can be retriggered in up to 60 s

ℹ **Web code:** #0626

Description	Two-hand relay		Safe time relay		Safe coupling relay
Enable paths	2 paths, 1-channel	2 paths, 2-channel	2 paths, 1-channel	2 paths, 2-channel	1 path, 2-channel
Safety classification	EN 574 Type IIIA	EN 574 Type IIIC	Up to PL e/SIL 3		
Overall width	12.5 mm				6.8 mm
Designation	PSR-MC60	PSR-MC62	PSR-MC70	PSR-MC72	PSR-MS21
Order No. Screw connection	2700571	2700574	2702094	2702096	2702192
Order No. Spring-cage connection	2700572	2700575	2702095	2702097	-

Industrial relay system
Universal relays with bipolarity

The new industrial relays without display and input circuit are particularly cost-effective. Thanks to the bipolarity, they are also suitable for negative switching applications and can therefore be used universally. The relays are compatible with the bases from the RIFLINE complete and PR series.

Your advantages

☑ Universal use, thanks to bipolarity

☑ Switching state can be quickly identified, thanks to mechanical switch position indicator

☑ Functionality can be extended with plug-in modules

Main features
• Versions with 2 and 4 PDT
• Contact material: AgNi
• Switching voltage: max. 250 V AC/DC

ℹ **Web code:** #0613

Description	Industrial relay with 2 PDT			Industrial relay with 4 PDT		
Nominal input voltage	24 V DC	100 V AC	200 V AC	24 V DC	100 V AC	200 V AC
Limiting cont. current		12 A			6 A	
Ambient temperature (operation)	-40°C … +70°C	-40°C … +55°C		-40°C … +70°C	-40°C … +55°C	
Designation	REL-IR2/ 24DC/2X21	REL-IR2/ 100AC/2X21	REL-IR2/ 200AC/2X21	REL-IR4/ 24DC/4X21	REL-IR4/ 100AC/4X21	REL-IR4/ 200AC/4X21
Order No.	2907051	2907052	2907053	2907054	2907055	2907056

Industrial relay system
Octal relays for energy applications

New to the industrial relay system range are the octal relays for voltages up to 220 V DC. They are suitable for applications in the energy sector and fit in the relay bases from the RIFLINE complete and PR series.

Your advantages

☑ Overview of the switching state, thanks to integrated status LED and mechanical switch position indicator

☑ Extended functionality, thanks to detectable manual operation

☑ Stability, thanks to the robust design

Main features

- Contact material: AgNi
- Limiting continuous current: 10 A
- Ambient temperature (operation): -40°C ... +70°C
- Defined pick-up voltage range: 0.6 ... 0.8 x U_N

ⓘ **Web code:** #0614

Description	Octal relay with 2 PDT	Octal relay with 3 PDT
Designation	REL-OR2/LDP-220DC/2X21	REL-OR3/LDP-220DC/3X21
Order No.	2907026	2907027

Industrial relay system
High-power relays for high DC loads

Implement all standard relay applications using RIFLINE complete. You can now also switch high DC loads with the new plug-in high-power relays. An integrated blowout magnet protects the contacts against excessive wear during the switch-off process.

Your advantages

☑ Increased service life, thanks to integrated blowout magnets

☑ Good tolerance of and resistance to voltage and current peaks due to high-performance contact material

☑ Stability, thanks to the robust design

Main features
- Limiting continuous current: 16 A
- Contact material: AgNi
- Switching voltage: max. 250 V AC/DC
- Clearance: ≥ 6.3 mm
- Creepage distance: ≥ 8.0 mm
- 1 N/O contact

ℹ **Web code:** #0620

Description	High-power relay			
Nominal input voltage	24 V DC	110 V DC	220 V DC	230 V AC
Designation	REL-PR1-24DC/1/MB	REL-PR1-110DC/1/MB	REL-PR1-220DC/1/MB	REL-PR1-230AC/1/MB
Order No.	2908040	2908044	2908046	2908047

Industrial relay system
Interference suppression modules for protecting the relay

Implement all standard relay applications using RIFLINE complete. The new interference suppression modules are inserted in the base and protect the relay components when switching off inductive loads by reducing voltage peaks. A new bridge rectifier is also available.

Your advantages

☑ Protection against mismatching, thanks to mechanical coding

☑ Relay protected by limiting the coil induction voltage

Main features
• Integrated status LED
• Can be plugged onto RIF-1 to RIF-4 relay bases

ℹ **Web code:** #0612

Description	Plug-in module with LED and diode	Plug-in module with LED and varistor	Plug-in module with bridge rectifier
Polarity	A1-, A2+	A1-, A2+	Rel A1+, Rel A2-
Designation	RIF-LDM-12-24 DC	RIF-LVM-100-200 AC/110 DC	RIF-BR-12-230 AC
Order No.	2907057	2907058	2907060

Digital extension module
for Interface System Gateways

For more complex applications with Interface system devices (IFS), the new extension module offers digital inputs and outputs for processing additional signals from the field. Quickly and easily connect the module to an IFS gateway as a slave via the DIN rail connector.

Your advantages

☑ Use of additional field signals in more complex applications with IFS devices such as hybrid motor starters and motor managers

☑ Easy connection to IFS gateway via DIN rail connector

☑ Assignment of process data and status indicators for inputs and outputs using the IFS-CONF PC software

Main features
- Compatible with the Interface system (IFS)
- 8 digital inputs
- 4 digital outputs
- LED status indicator

ℹ️ **Web code:** #0615

Description	Digital extension module for IFS gateways
Designation	EM-D-8/4-24DC-IFS
Order No.	2904473

Universal I/O platform for DCS systems
Flexible combination of analog and digital signals

With the VIP system cabling solution for DCS systems, you can implement different I/O requirements with a high degree of flexibility. The base element serves as the interface for signal transmission between control and field level. The plug-in accessory parts enable functional expansion and can be quickly replaced if required.
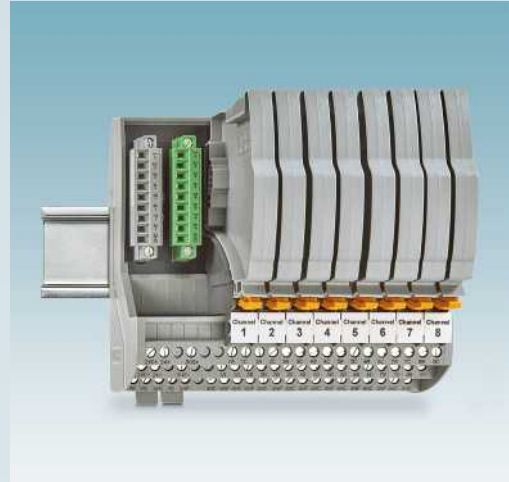
Your advantages

☑ Flexible channel configuration for special functions with I/O accessories

☑ Easy handling and quick replacement of plug-in I/O accessories without wiring

☑ Error-free wiring, thanks to special codings

☑ Reliable signal protection, thanks to integrated shielding in the base element

Main features

• Functions: 1:1 signal transmission, isolation, fuse, relay, testing via 2 test points
• 3 isolated potential levels
• 8 channel slots that can be marked
• 4 connections per channel and multiple shield options

ℹ **Web code:** #0619

Description	Base element		Analog protection module	Digital input module	Digital output module	Feed-through module
Control side connection	MINI COMBICON	D-SUB 25-pos.		-		
Field side connection	Screw connection			-		
Number of channels	8 (marked 1 ... 8)		1 (plug-in)			
Functions	-		Isolation, fuse, 24 V DC	1 PDT (N/O), 24 V DC	1 PDT (N/O / N/C), 120 V AC/DC	1:1 connection, 24 V DC
Order No.	2906596	2906595	2906599	2906603	2906602	2906598

I/O system for the control cabinet
Axioline F now with SafetyBridge technology

Axioline F is the fast, particularly robust I/O system with high signal density. SafetyBridge technology offers a network and control-independent safety solution. This technology enables you to transmit safety-related signals via standard automation networks.

SafetyBridge Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Cost-effective system configuration, as no safety PLC or safe fieldbus system is required

☑ Flexible use, thanks to compatibility with all bus couplers from the Axioline F range

☑ Easy configuration using the free SAFECONF software

☑ Reduced installation time, thanks to fast wiring and easy handling

Main features
- Temperature range: -35°C ... +60°C
- Maximum altitude: 3000 m above sea level (without derating)
- Vibration resistance: 5g according to EN 60068-2-6
- Shock resistance: 30g according to EN 60068-2-27
- Push-in connection

ℹ Web code: #0622

Description	I/O logic module with 8 digital outputs	I/O module with 8 digital inputs	I/O module with 8 digital outputs
Designation	AXL F LPSDO8/3 1F	AXL F SSDI8/4 1F	AXL F SSDO8/3 1F
Order No.	2702171	2702263	2702264

I/O system for the control cabinet
New mixed module for Axioline F

Axioline F is fast, robust, and easy. Use the new digital mixed module for optimum monitoring and control of self-contained system parts, where more signals are received than are output.

Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Tailored station configuration possible, thanks to function-optimized ratio of inputs and outputs

☑ High degree of immunity, thanks to adjustable filter times for the inputs

☑ Reliable use even under the most adverse conditions, thanks to the particularly robust mechanical design

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

Main features

• 16 digital inputs and 8 digital outputs with max. 2 A output current per channel
• Temperature range: -25°C ... +60°C
• Vibration resistance: 5g according to EN 60068-2-6
• Shock resistance: 30g according to EN 60068-2-27
• Noise emission: Class B according to EN 55022
• Noise immunity: 8 kV air discharge according to EN 61000-4-2
• Push-in connection

ℹ **Web code:** #0623

Description	I/O mixed module
Designation	AXL F DI16/1 DO8/2-2A 2H
Order No.	2702291

I/O system for the control cabinet
Inline now offers even greater versatility

Inline is the flexible all-rounder down to the last detail. A bus coupler in the new, innovative design and three additional I/O modules supplement the wide choice of components. You can now also use the isolator terminal to extend an existing Inline I/O station with intrinsically safe components.

Your advantages

☑ Maximum flexibility, thanks to a large selection of I/O modules, function terminals, bus couplers, and controllers

☑ The narrow overall width and tailored number of channels of the modules save space in the control cabinet

☑ International approvals as well as safety and Ex i modules enable a wide range of applications

☑ Versatile software for planning, configuration, and programming

Main features

• Vibration resistance: 5g according to EN 60068-2-6
• Shock resistance: 25g according to EN 60068-2-27
• Noise emission: Class A according to EN 55011
• Noise immunity: 8 kV air discharge according to EN 61000-4-2

ℹ️ **Web code:** #0621

Description	Bus coupler for CANopen®	I/O module		Isolator terminal
I/O functionality	-	2 inputs for strain gauge	8 inputs for temperature sensors	Isolation of standard and intrinsically safe I/O modules
Connection method	Spring-cage connection	Spring-cage connection, 4-conductor, 6-conductor	Spring-cage connection, 2-conductor, 3-conductor	-
Designation	IL CO BK-PAC	IB IL SGI 2/P/EF-PAC	IB IL TEMP 8 UTH/ RTD-PAC	IB IL EX PWR-ISO-PAC
Order No.	2702230	2702373	2701000	2869909

Wireless system with new firmware for wireless and wired I/O communication

Thanks to the new firmware for the Radioline wireless system, you can now distribute I/O signals wirelessly and via two-wire cables in the same network.
I/O mapping is simply performed via the thumbwheel. Wireless modules for three frequency ranges and an RS-485 bus coupler are available.

TRUSTED WIRELESS ™

Your advantages

☑ Extension of existing Radioline wireless systems to include wired stations

☑ Easy startup, thanks to I/O mapping via the thumbwheel

☑ I/O communication over distances in excess of 32 kilometers

Main features
- Temperature range: -40°C … +70°C
- ATEX, IECEx, and UL
- License-free frequency bands:
  2.4 GHz, 868 MHz, and 900 MHz
- Channel-to-channel electrical isolation

ℹ️ **Web code:** #0629

Description	Wireless front module for 868 MHz	Wireless front module for 900 MHz	Wireless front module for 2.4 GHz	Front module for RS-485 2-wire
Range	20 km	32 km	5 km	1200 m
Area of application	Europe	North/South America, Canada	Worldwide	Worldwide
Designation	RAD-868-IFS	RAD-900-IFS	RAD-2400-IFS	RAD-RS485-IFS
Order No.	2904909	2901540	2901541	2702184

High-speed mobile communication routers for infrastructure applications

The mobile communication routers enable high-performance high-speed data links via mobile 4G LTE networks. Thanks to the extended temperature range, they are ideal for use in infrastructure applications. An inexpensive 3G version is available for mid-level bandwidth requirements.

Your advantages

☑ Strong performance, thanks to 4G LTE data links

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

☑ Fast configuration with new startup wizard

☑ Easy integration via two Ethernet connections

☑ Convenient operation directly on the front of the device

Main features

- Temperature range: -40°C … +70°C
- 4G LTE connections up to 100 Mbps
- Mobile communication fallback to 3G or 2G networks
- ATEX approval up to Zone 2
- Plug-in configuration memory
- High level of security, thanks to IPsec and OpenVPN tunnel as well as integrated firewall
- 2 digital inputs, 1 digital output

ℹ Web code: #0628		
Description	**4G mobile communication router**	**3G mobile communication router**
Antenna connections	2 x MIMO antenna for maximum performance	1 x standard antenna
Designation	TC ROUTER 3002T-4G	TC ROUTER 3002T-3G
Order No.	2702528	2702529

WLAN leaky wave cable for track-guided transport systems

Leaky wave cables allow you to send a wireless signal that is restricted to the local area for reliable wireless communication in track-guided transport systems. The new leaky wave cable now offers easier adaptation and mounting thanks to optimized accessories.

Your advantages

☑ Defined dispersion of the WLAN signal along the leaky wave cable

☑ Good degree of predictability, thanks to consistent signal quality

☑ Suitable for track-guided mobile systems, thanks to reliable wireless connection even in areas that are difficult to access

☑ Easy assembly, thanks to coordinated accessories

Main features
- For 2.4 GHz WLAN
- Configurable cable length
- Connector connection: N (female)

ℹ **Web code:** #0634

Description	Cable	Connector	Alignment tool	Cable tie
Designation	FL LCX CABLE 24 E	FL LCX CON-N-F E	FL LCX TOOL E	FL LCX CLAMP E
Order No.	2702553	2702518	2702519	2702520

Ethernet extender system
Easy networking of large IP networks

Use the Ethernet extender system to connect managed and unmanaged extenders up to 20 kilometers – it couldn't be easier thanks to Plug and Play. This interaction not only enables you to diagnose all devices and paths via IP, but to also network large systems cost-effectively.

Your advantages

☑ Save time, thanks to quick and easy startup via Plug and Play

☑ Save costs, thanks to the use of unmanaged extenders in complex IP networks

☑ Greater flexibility, thanks to continuous remote diagnostics of all devices and paths via IP

☑ High fault tolerance, thanks to preemptive maintenance with replaceable PLUGTRAB PT-IQ surge protection

☑ Easy retrofitting using any two-wire cable

Main features
- Ethernet communication up to 20 km over any two-wire cable
- Automatic alarm generation via Simple Network Management Protocol (SNMP)
- Automatic topology and data detection

ℹ Web code: #0630	Managed Ethernet extender		Unmanaged Ethernet extender	Replaceable surge protection	
Description					
Replaceable surge protection	Yes		No	-	
Ports	2 x SHDSL, 4 x Ethernet	1 x SHDSL, 1 x Ethernet	2 x SHDSL, 1 x Ethernet	2 x SHDSL	1 x SHDSL
Topologies	Ring, line, point-to-point	Point-to-point	Ring, line, point-to-point	-	
Local diagnostics	Display	LEDs	LEDs	-	
Designation	TC EXTENDER 6004 ETH-2S	TC EXTENDER 4001 ETH-1S	TC EXTENDER 2001 ETH-2S	TC EXTENDER PT-IQ-2S	TC EXTENDER PT-IQ-1S
Order No.	2702255	2702253	2702409	2702258	2702257

Security router for the process industry
Satisfies the most demanding IT requirements

Security routers protect your industrial networks against IT attacks. The new security router has been specifically developed for the process industry and satisfies the demanding hardware and IT requirements for security products in process technology and process engineering.

Your advantages

☑ Security of the highest level, thanks to intelligent firewall and Deep Packet Inspection (DPI) for OPC Classic

☑ Extended temperature range and protective coating for use under extreme ambient conditions

☑ ATEX and IECEx approval for use in the process industry

☑ Easy configuration via central management tool

☑ Quick and easy startup, updates, and device replacement, thanks to replaceable configuration memory

Main features
- 2 RJ45 ports
- 2 digital I/Os
- 24 V power supply
- Metal housing
- Stateful inspection firewall
- Slot for SD memory card
- Router with NAT and 1:1 NAT routing also for OPC Classic

ℹ **Web code:** #0635

Description	Security router
Designation	FL MGUARD RS4000 TX/TX-P
Order No.	2702259

Smart Managed Narrow Switches for long distances

Smart Managed Narrow Switches are particularly narrow switches which are suitable for industrial use and which can be used in both PROFINET and EtherNet/IP™ applications. Thanks to the FO ports, you can even integrate very remote components into your Ethernet network using the new Switches.

Your advantages

☑ Cover long distances, thanks to FO ports

☑ Easy configuration via Smart mode button on the device

☑ Flexible use, thanks to EtherNet/IP™ and PROFINET support

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

☑ Space savings in the control cabinet, thanks to the narrow design

Main features

- PROFINET conformance class B
- Media Redundancy Protocol (MRP) according to IEC 62439
- Link Layer Discovery Protocol (LLDP)
- Virtual Local Area Network (VLAN)
- Configuration memory
- PC Worx and STEP 7 integration
- Extended multicast filter for EtherNet/IP™

	Smart Managed Narrow Switch for multi-mode fiber	Smart Managed Narrow Switch for single-mode fiber
ⓘ Web code: #0632		
Description	Smart Managed Narrow Switch for multi-mode fiber	Smart Managed Narrow Switch for single-mode fiber
Ports	6 x RJ45 2 x SC multi mode	6 x RJ45 2 x SC single mode
Dimensions W x H x D	56 mm x 133 mm x 125 mm	
Designation	FL SWITCH SMN 6TX/2FX	FL SWITCH SMN 6TX/2FX SM
Order No.	2989543	2989556

Advanced Managed Switches
FO integration with Gigabit combo ports

The 7000 series Managed Switches offer a particularly high degree of availability in EtherNet/IP™ networks, thanks to almost bumpless DLR redundancy. Thanks to their Gigabit combo ports, the new models also enable flexible integration of SFP modules as well as particularly fast data transmission.

Your advantages

☑ Combo ports for flexible use of FO technologies, thanks to optional use as an RJ45 or SFP port

☑ Optimum integration in company networks, thanks to Gigabit combo pots

☑ Superior system availability, thanks to almost bumpless DLR redundancy under 3 milliseconds

☑ Cost-effective network structures by integrating several devices in a Device Level Ring (DLR)

☑ Easy configuration and diagnostics, as the Common Industrial Protocol (CIP) is supported

Main features

• DLR redundancy mechanism
• (Port-based) DHCP server
• CIP support
• HTTPS/SNMPv3
• IGMP snooping
• Multicast source detection
• Auto query port
• Temperature range: -40°C … +70°C

ⓘ **Web code:** #0631

Description	Advanced Managed Switch with 2 combo ports	Advanced Managed Switch with 4 combo ports	
Ports	6 x RJ45, 2 x Gigabit combo	4 x RJ45, 4 x Gigabit combo	4 x RJ45, 2 x Fast Ethernet combo, 2 x Gigabit combo
Dimensions W x H x D	60 mm x 130 mm x 136 mm		
Designation	FL SWITCH 7006-2GC-EIP	FL SWITCH 7004-4GC-EIP	FL SWITCH 7004-2TC-2GC-EIP
Order No.	2701554	2701553	2702175

SFP media modules for Managed Switches
Flexible use of FO technologies

You can use SFP modules to flexibly connect fiber optics to Ethernet switches. With the new WDM versions, we now offer a solution for applications where only a single fiber is available. In addition, you can cover distances of up to two kilometers with the new SX2 version.

Your advantages

☑ Versatile use, thanks to 100 Megabit and Gigabit versions

☑ Long transmission distances with the SX2 version for multi-mode fiber

☑ Data transmission via a single fiber with the WDM versions

☑ Connection of WDM media converters via WDM versions

☑ Optimum port use on the Switch, thanks to flexible media connection

Main features
• Temperature range: -40°C ... +75°C

ℹ **Web code:** #0633

Description	Set of 2 SFP modules for single-mode fiber (simplex)		SFP module for multi-mode fiber (duplex)
Set consists of	Order No. 2702437 and 270438	Order No. 2702440 and 2702441	-
Port speed	100 Mbps	1 Gbps	1 Gbps
Wavelength	1550/1310 nm		1310 nm
Transmission length	Up to 20 km	Up to 10 km	Up to 2 km
Designation	FL SFP FE WDM20-SET	FL SFP WDM10-SET	FL SFP SX2
Order No.	2702439	2702442	2702397

Cloud system for PROFINET
Easy networking and automation across borders

The PROFICLOUD system enables easy and secure communication and control of machines and systems across different locations worldwide. The unique combination of the proven PROFINET standard and Cloud services offers new possibilities for automation, including in the Industrie 4.0 environment.

Your advantages

☑ PROFINET network can be extended to include Cloud services, without requiring any further specialist knowledge

☑ Maximum flexibility, thanks to automation across borders, from any location, via the Internet

☑ Easy engineering, as distributed devices and Cloud services appear in the local PROFINET network

☑ Efficient automation, thanks to preconfigured and preprogrammed PROFICLOUD products

☑ Secure communication, thanks to TLS encryption

Main features

Preconfigured system consisting of:
- PROFICLOUD coupler
- PROFICLOUD controller
- PROFICLOUD license
- Cloud service for weather data
- Cloud service for calculations

ℹ Web code: #0656

Description	PROFICLOUD coupler	PROFICLOUD controller	PROFICLOUD license	Cloud service for weather data	Cloud service for calculations
Designation	CLOUD COUPLER-PRO	AXC CLOUD-PRO	CLOUD CREDIT-5	CLOUD SERVICE/ WEATHER	CLOUD SERVICE/ CALC
Order No.	2402990	2402985	2402987	2403325	2403326
Versions	-		1, 2, 5, 10 years	Further Cloud services available on request	

Ethernet HART multiplexer
Transmit process data via Ethernet

Transmit critical HART process data over Ethernet networks with the new multiplexer. In addition to the high Ethernet speed, benefit from the additional transmission of secondary process data. The universal version also supports PROFINET in addition to Modbus/TCP and HART IP.

Your advantages

☑ Simultaneous access to primary and diagnostic data in the overall network

☑ Modular system enables scalable station configuration with up to five extension modules

☑ Digital extension module enables additional digital I/Os to be acquired

☑ Monitoring and targeted response to active and passive process data with the aid of the digital inputs and outputs

☑ Use of familiar software tools, thanks to HART IP protocol

Main features

- Electrical isolation
- Connection of up to 40 HART devices per station
- Every channel is a HART master
- Parameterization via integrated web server
- Approvals: ATEX Zone 2, IECEx Zone 2
- Screw connection
- Temperature range: -40°C … +70°C

ℹ **Web code:** #0636

Description	Ethernet front module		8-channel extension module		4-channel extension module	
Protocols	Modbus/TCP, HART IP	Modbus/TCP, HART IP, PROFINET IP, FDT/DTM	8 x HART passive	8 x HART active	4 x Digital IN 4 x Digital OUT	4 x HART passive
Speed	10/100 Mbps		-			
Designation	GW PL ETH/ BASIC-BUS	GW PL ETH/ UNI-BUS	GW PL HART8-BUS	GW PL HART8+AI-BUS	GW PL DIO4-BUS	GW PL HART4-BUS
Order No.	2702321	2702233	2702235	2702236	2702237	2702234

Modbus gateways
for **PROFIBUS DP/PA** and **FOUNDATION** Fieldbus

Use the Modbus gateways to connect Modbus/RTU devices to the FOUNDATION Fieldbus, PROFIBUS DP, and PROFIBUS PA process fieldbuses. Using a gateway, you can conveniently access the Modbus/RTU of up to four devices.

Your advantages

☑ Integrate proven Modbus/RTU devices into the modern process field

☑ Up to four Modbus/RTU devices supported with just one gateway

☑ Space savings with just 6 mm required per channel

☑ Easy installation and startup via software such as Siemens PDM or Pepperl+Fuchs PACTware

Main features
• Approvals: ATEX Zone 2, IECEx Zone 2
• Screw connection
• Temperature range: -40°C … +70°C

ℹ **Web code:** #0637	Modbus gateway for **FOUNDATION** Fieldbus	Modbus gateway for **PROFIBUS PA**	Modbus gateway for **PROFIBUS DP**
Description	Modbus gateway for **FOUNDATION** Fieldbus	Modbus gateway for **PROFIBUS PA**	Modbus gateway for **PROFIBUS DP**
Speed	31.25 kbps		9.6 kbps … 12 Mbps
Designation	GW PL FF/MODBUS	GW PL PA/MODBUS	GW PL DP/MODBUS
Order No.	2316363	2316364	2316365

Redundant fieldbus power supplies for **PROFIBUS PA** and **FOUNDATION** Fieldbus

The plug-in fieldbus power supplies have been specifically developed for process fieldbuses. There is space for up to eight power supplies on one motherboard, which means that you can implement up to four redundant supply paths. In addition, proven ACB technology doubles the service life.

Auto Current Balancing Technology

Designed by PHOENIX CONTACT

Your advantages

☑ No additional monitoring of remote signaling required, as it is already integrated in the redundant configuration

☑ Compatible with major control systems from Yokogawa and Invensys

☑ Double the service life, thanks to even load distribution by means of ACB (auto current balancing) technology

☑ Local diagnostics via LEDs on the device as well as remote diagnostics via remote indication contact

Main features

• Plug-in power supply with 14 W power
• Approvals: ATEX Zone 2, IEC Ex Zone 2
• Temperature range: -40°C … +70°C

	Four-channel motherboard for D-SUB 25	Four-channel motherboard for Yokogawa AKB336, 20-pos.	Four-channel motherboard for Invensys® D-SUB 25	Plug-in power supply for motherboard
ⓘ Web code: #0638				
Description	**Four-channel motherboard for D-SUB 25**	**Four-channel motherboard for Yokogawa AKB336, 20-pos.**	**Four-channel motherboard for Invensys® D-SUB 25**	**Plug-in power supply for motherboard**
Designation	FB-PS-MB-25DSUB/EX	FB-PS-MB-Y/EX	FB-PS-MB-I/EX	FB-PS-PLUG-24DC/28DC/0.5/EX
Order No.	2316146	2316148	2316149	2316132

Configurable power supplies for superior system availability

The fourth generation of the high-performance QUINT POWER power supplies ensures superior system availability by means of new functions. Signaling thresholds and characteristic curves can be individually adjusted via the NFC interface.

Selective Fuse Breaking Technology
Designed by PHOENIX CONTACT

Your advantages

☑ SFB technology trips standard circuit breakers selectively, loads that are connected in parallel continue working

☑ Preventive function monitoring indicates critical operating states before errors occur

☑ Signaling thresholds and characteristic curves that can be adjusted via NFC maximize system availability

☑ Easy system expansion, thanks to static boost; starting of heavy loads, thanks to dynamic boost

☑ High degree of immunity, thanks to integrated gas-filled surge arrester and mains failure bridging time of more than 20 milliseconds

Main features

• SFB (selective fuse breaking) technology: 6 times the nominal current for 15 ms
• Power reserves:
  - Static boost: up to 125% for a sustained period
  - Dynamic boost: up to 200% for 5 s
• Integrated gas-filled surge arrester
• Temperature range: -40°C … +70°C
• Near field communication (NFC interface)

ℹ **Web code:** #0640

Description	Power supply 1-phase			Power supply 3-phase		
Input voltage	100 V AC … 240 V AC			3 x 400 V AC … 500 V AC		
Output voltage	24 V DC … 29.5 V DC					
Output current Dynamic boost SFB technology	5 A 10 A (5 s) 30 A (15 ms)	10 A 20 A (5 s) 60 A (15 ms)	20 A 30 A (5 s) 120 A (15 ms)	5 A 10 A (5 s) 30 A (15 ms)	10 A 20 A (5 s) 60 A (15 ms)	20 A 30 A (5 s) 120 A (15 ms)
Dim. W x H x D [mm]	36 x 130 x 125	50 x 130 x 125	70 x 130 x 125	36 x 130 x 125	50 x 130 x 125	70 x 130 x 125
Designation	QUINT4-PS 1AC/24DC/5	QUINT4-PS 1AC/24DC/10	QUINT4-PS 1AC/24DC/20	QUINT4-PS 3AC/24DC/5	QUINT4-PS 3AC/24DC/10	QUINT4-PS 3AC/24DC/20
Order No.	2904600	2904601	2904602	2904620	2904621	2904622

Redundancy modules
for demanding ambient conditions

Increase your system availability, even in demanding ambient conditions, with the new diodes from the QUINT range. Use the module for redundancy or increased performance.

Your advantages

☑ Safe decoupling of power supplies connected in parallel

☑ Consistent wiring with large conductor cross sections, thanks to same size of input and output terminals

☑ High system availability, thanks to the robust design

☑ Optimum interaction with QUINT POWER power supplies

Main features

- Wide input voltage range:
  - 10 V DC … 30 V DC
  - 30 V DC … 56 V DC
- High shock and vibration resistance
- Temperature range: -40°C … +70°C
- Conductor cross sections: up to 16 mm²

ℹ **Web code:** #0641

Description	Diode module	
Nominal input voltage	12 V DC … 24 V DC	48 V DC
Voltage drop Input/output	0.5 V	0.7 V
Output current	40 A (increased performance) / 20 A (redundancy)	
Dimensions W x H x D	50 mm x 130 mm x 125 mm	
Designation	QUINT4-DIODE/12-24DC/2X20/1X40	QUINT4-DIODE/48DC/2X20/1X40
Order No.	2907719	2907720

Redundancy modules with Push-in connection

Increase your system availability with the new diodes from the TRIO range. Use the module to decouple power supplies or for increased performance.

Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Safe decoupling of power supplies connected in parallel

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

☑ System compatibility with TRIO POWER power supplies

Main features
- Fast Push-in connection
- Wide input voltage range: 10 V DC … 30 V DC
- High shock and vibration resistance
- Temperature range: -25°C … +70°C

ℹ **Web code:** #0611

Description	Diode module	
Nominal input voltage	12 V DC … 24 V DC	
Voltage drop Input/output	0.5 V	
Output current	10 A (redundancy)	20 A (redundancy)
Dimensions W x H x D	35 mm x 130 mm x 115 mm	41 mm x 130 mm x 115 mm
Designation	TRIO2-DIODE/12-24DC/2X10/1X20	TRIO2-DIODE/12-24DC/2X20/1X40
Order No.	2907380	2907379

AC UPS for the DIN rail
with integrated power storage

Supply AC loads reliably with the new uninterruptible power supplies from the TRIO range for the DIN rail. Connected industrial PCs can be shut down via the integrated USB interface.

Push-in Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Smooth transition, thanks to pure sine curve: sine generated in battery operation is synchronous with mains previously used for supply

☑ Space saving: UPS module and power storage combined in one housing

☑ Long buffer times with integrated VRLA power storage, can be extended with additional power storage

☑ USB interface for connection to higher-level controllers such as industrial PCs

☑ Startup from power storage possible, even without mains input

Main features
- Two versions: 120 V AC and 230 V AC
- Pure sine curve at the output
- Comprehensive signaling
- 600 W for 90 s
- Temperature range: 0°C ... +40°C
- Integrated USB interface

ℹ️ Web code: #0642		
Description	**AC UPS**	
Nominal input voltage	230 V AC	120 V AC
Nominal output voltage	230 V AC	120 V AC
Apparent / real power	750 VA / 600 W	
Dimensions W x H x D	210 mm x 169 x mm x 139 mm	
Designation	TRIO-UPS-2G/1AC/1AC/230V/750VA	TRIO-UPS-2G/1AC/1AC/120V/750VA
Order No.	2905909	2905908

DC/DC converter with basic functionality for photovoltaic applications

Supply your control cabinet directly from the photovoltaic system with the new DC/DC converters from the UNO POWER range. In this way you can save installation costs and increase the efficiency of the system.

Your advantages

☑ Direct field installation: no need to supply an AC connection

☑ Simplified approval of the overall system, thanks to existing UL 1741 certification for the DC/DC converter

☑ Robust and reliable at temperatures from -25°C to +70°C

☑ Can also be used in small control boxes, thanks to the compact design and high degree of efficiency

☑ Simplified startup, thanks to LED function monitoring

Main features

• Wide input voltage range: 300 V DC … 1000 V DC
• UL 1741 certification
• Efficiency: > 90%

ℹ **Web code:** #0639

Description	DC/DC converter
Nominal input voltage	350 V DC … 900 V DC
Nominal output voltage	24 V DC
Output current / power	2.5 A / 60 W
Dimensions W x H x D	55 mm x 90 mm x 84 mm
Designation	UNO-PS/350-900DC/24DC/60W
Order No.	2906300

Surge protection for photovoltaic systems with generator voltages up to 1500 V

The new VALVETRAB-MB product range now offers powerful and compact protective devices for photovoltaic applications up to 1500 V. Thanks to their variable connection options, the KEMA-certified products can be easily integrated into various photovoltaic applications.

Your advantages

☑ Optimum protection for the system, thanks to the low voltage protection level

☑ High operational reliability, thanks to high short-circuit current rating

☑ Independently tested safety through KEMA approval

☑ Can be used up to 6000 m according to EN 50539-11

☑ Increased resistance to creepage, thanks to extended insertion funnel

Main features

- Short-circuit current rating I_{SCPV}: 2000 A
- Maximum discharge surge current I_{max}: 40 kA
- Optical mechanical status indicator
- With or without floating remote indication contact
- Double terminal block for easy equipotential bonding

ℹ **Web code:** #0643

Description	Type 1/type 2 lightning current arrester and surge protective device combination			Type 2 surge protective device
Maximum continuous voltage U_{CPV}	800 V DC	1000 V DC	1500 V DC	1500 V DC
Voltage protection level U_P	≤ 2.9 kV	≤ 3.3 kV	≤ 4.5 kV	≤ 4.5 kV
Designation	VAL-MB-T1/T2 600DC-PV/2+V-FM	VAL-MB-T1/T2 1000DC-PV/2+V-FM	VAL-MB-T1/T2 1500DC-PV/2+V-FM	VAL-MB-T2 1500DC-PV/2+V-FM
Order No.	2906292	2905638	2905640	2905646

Surge protection for 230/400 V networks
Handles lightning currents up to 50 kA

Protect your applications in 230/400 V networks with the new FLASHTRAB-SEC-PLUS type 1 lightning current arrester. Lightning currents up to 50 kA can now be handled without any problems. Used in the main supply, the lightning current arrester provides protection for single and three-phase power supply systems.

Safe Energy Control Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Long service life of the arrester and the electrical installation, thanks to SEC technology with a spark gap without line follow current

☑ Space-saving installation, thanks to the compact design

☑ Easy replacement during servicing, thanks to protective devices which are all pluggable

☑ Individual marking options, thanks to large-surface marking areas

☑ No mismatching of plugs, thanks to mechanical coding

Main features

- Maximum continuous voltage U_C: 264 V AC
- Voltage protection level U_P: ≤ 2.5 kV
- Nominal voltage U_N: 240 V AC
- Lightning impulse current I_{imp}: 50 kA per position
- Suitable for use in the unmetered area
- Floating remote indication contact
- Optical mechanical status indicator
- Plugs can be tested with CHECKMASTER 2

ℹ **Web code:** #0645			
Description	Type 1 lightning current arrester		
Network type	1-phase TN-C	1-phase TN-S	3-phase TN-C
Designation	FLT-SEC-P-T1-1C-264/50-FM	FLT-SEC-P-T1-1S-264/50-FM	FLT-SEC-P-T1-3C-264/50-FM
Order No.	2907387	2907388	2907390

Surge protection for 400/690 V networks
Pluggable with integrated backup fuse

FLASHTRAB-SEC-HYBRID is the first pluggable type 1 arrester with integrated backup fuse. The new products are suitable for use in 400/690 V AC systems such as wind turbine generators. In combination with the spark gap without line follow current, you will save space and reduce costs in the control cabinet.

Safe Energy Control Technology
Designed by PHOENIX CONTACT

Your advantages

- ☑ Long service life of the arrester and the electrical installation, thanks to SEC technology with a spark gap without line follow current
- ☑ Space-saving installation, thanks to the compact design
- ☑ Reduced wiring effort and shorter cable paths, thanks to integrated backup fuse
- ☑ Easy removal and insertion with the innovative push-pull locking mechanism
- ☑ Lower overall voltage protection level, thanks to integrated backup fuse

Main features

- Maximum continuous voltage U_C: 440 V AC
- Voltage protection level U_P: ≤ 2.5 kV
- Nominal voltage U_N: 400 V AC
- Lightning impulse current I_{imp}: 25 kA per position
- Suitable for use in the unmetered area
- Floating remote indication contact
- Optical mechanical status indicator
- Plugs can be tested with CHECKMASTER 2

ℹ **Web code:** #0644

Description	Type 1 lightning current arrester	
Network type	1-phase TN	3-phase TN
Designation	FLT-SEC-H-T1-1C-440/25-FM	FLT-SEC-H-T1-3C-440/25-FM
Order No.	2907259	2907260

Surge protection for 400/690 V networks
Handles lightning currents up to 35 kA

FLASHTRAB-SEC-PLUS are extremely powerful and robust type 1 arresters for 400/690 V AC systems. Lightning currents up to 35 kA are safely handled. The compact design enables space-saving and flexible installation. Shock and vibration resistance allows use in wind turbine generators and industrial systems.

Safe Energy Control Technology
Designed by PHOENIX CONTACT

Your advantages

☑ Long service life of the arrester and the electrical installation, thanks to SEC technology with a spark gap without line follow current

☑ Space-saving installation, thanks to the compact design

☑ Easy replacement during servicing, thanks to protective devices which are all pluggable

☑ Suitable for use in IT systems, thanks to TOV requirements that are satisfied

☑ No mismatching of plugs, thanks to mechanical coding

Main features

- Maximum continuous voltage U_C: 440 V AC
- Voltage protection level U_P: ≤ 2.5 kV
- Nominal voltage U_N: 400 V AC
- Lightning impulse current I_{imp}: 35 kA per position
- Suitable for use in the unmetered area
- Floating remote indication contact
- Optical mechanical status indicator
- Plugs can be tested with CHECKMASTER 2

ℹ️ **Web code:** #0646			
Description	Type 1 lightning current arrester		
Network type	1-phase TN-C	3-phase TN-C	3-phase TN-S/TT
Lightning imp. current$_{imp}$	35 kA (L-PEN)		35 kA (L-N) / 100 kA (N-PE)
Designation	FLT-SEC-P-T1-1C-440/35-FM	FLT-SEC-P-T1-3C-440/35-FM	FLT-SEC-P-T1-3S-440/35-FM
Order No.	2905987	2905988	2908264

Test device for surge protection
New test adapters, more options

The new test adapters for the CHECKMASTER 2 extend the testing options for pluggable surge protective devices. You can now also test protective devices from the FLASHTRAB-SEC-HYBRID, UFBK, and UAK product ranges with the CHECKMASTER 2 and log the results in compliance with standards.

Your advantages

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

☑ Test adapter can be replaced during operation

☑ Hardware coding prevents test adapters being inserted incorrectly

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

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

Main features

- Test adapters for virtually all surge protection plugs from Phoenix Contact
- High quality and safety standard
- Standard-compliant logging in accordance with IEC 62305
- Optional: robust transport case for up to four test adapters

ⓘ Web code: #0648		
Description	**Test adapter for FLASHTRAB-SEC-HYBRID** (similar to image)	**Test adapter for UFBK and UAK**
Designation	CM 2-PA-SEC-HYBRID	CM 2-PA-PT/A
Order No.	2907889	2907891

Worldwide service and support:
we are there for you

At Phoenix Contact, the focus is always on you, the customer. With 50 subsidiaries and over 30 agencies we are always close by. This enables us to provide you with services such as first-hand expert consultation and prompt delivery.

We develop special solutions according to your specific requirements. This is made possible by our extensive manufacturing capabilities combined with the expertise of our developers.

No matter where you are in the world, we'll provide you with the ideal solution for your application quickly and reliably: a complete package of high-quality, optimally coordinated, and carefully chosen components.

We are also there for you after your purchase – with our comprehensive after-sales services.

Always up-to-date, always available to you. Here you'll find everything on our products, solutions and service:

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Product range

- Cables and wires
- Connectors
- Controllers
- Electronics housings
- Electronic switchgear and motor control
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems

- Industrial communication technology
- Industrial Ethernet
- Installation and mounting material
- Lighting and signaling
- Marking and labeling
- Measurement and control technology
- Modular terminal blocks
- Monitoring
- PCB terminal blocks and PCB connectors

- Power supply units and UPS
- Protective devices
- Relay modules
- Sensor/actuator cabling
- Software
- Surge protection and interference filters
- System cabling for controllers
- Tools
- Wireless data communication

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstraße 8
32825 Blomberg, Germany
Phone: + 49 5235 3-00
Fax: + 49 5235 3-41200
E-mail: info@phoenixcontact.com
phoenixcontact.com

PHŒNIX CONTACT

INSPIRING INNOVATIONS