

Patch panels - PP-RJ-SC-F

2703021

<https://www.phoenixcontact.com/pc/products/2703021>

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Patch panel, RJ45 jack on screw terminal blocks, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief, shield current monitoring, surge protection

Product Description

Ethernet patch panels enable quick and easy connection between the field cabling and control cabinet cabling. The passive termination panels are a convenient alternative to the on-site assembly of RJ45 connectors.

Your advantages

- 10/100/1000 Mbps
- Extended temperature range of -40 °C ... +75 °C
- Fast connection of the field cable
- Wiring space covered with front panel cover
- Tool-free shield contacting with strain relief
- Integrated surge protection to ensure high system availability
- Shield current monitoring with visual display
- Shipbuilding approval in accordance with DNV GL
- PoE-capable in accordance with IEEE 802.3bt, type 4

Commercial Data

Item number	2703021
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	DNC334
Catalog Page	Page 361 (C-6-2019)
GTIN	4055626463339
Weight per Piece (including packing)	149.6 g
Weight per Piece (excluding packing)	124.2 g
Customs tariff number	85369010
Country of origin	DE

Technical Data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
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Product properties

IEC test classification	C2
Product type	Patch panel
MTTF	3268 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	1238 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	468 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

Insulation characteristics

Overvoltage category	II
Pollution degree	2

Electrical properties

Electrical isolation	FE // Ethernet
Rated insulation voltage	85 V DC

Supply

Supply voltage range	36 V DC ... 52 V DC \pm 10 % (via PoE)
	42 V DC ... 57 V DC (in acc. with UL)

Function

Designation	Shield current monitoring
Switch-on threshold	\geq 30 mA
Local diagnostics	Yellow LED
Precision	\pm 5 %
Response time	3 s
Current	\leq 1.5 A
Power consumption	270 mW (Shield current monitoring)
Impedance	\leq 1 Ω
Voltage	\leq 10 V

Interfaces

Data: Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3

Serial transmission speed	10/100/1000 Mbps
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Frequency range	125 MHz
Connection method	Screw terminal block
Tightening torque	0.22 Nm ... 0.25 Nm
Pin assignment	1:1
Transmission length	100 m (including patch cables)
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section flexible min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Max. AWG conductor cross section, flexible	16
Min. AWG conductor cross section, flexible	28
Single-wire/terminal point, solid AWG max.	16
Single-wire/terminal point, solid AWG min.	28
Stripping length	5 mm
Transmission medium	Copper
Maximum output power	60 W
Maximum output current	725 mA (PoE)
Current carrying capacity	≤ 1.5 A (≤ 60 W (PoE+))

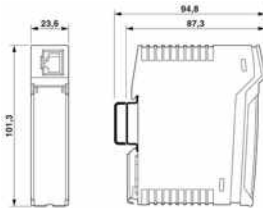
Data: Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3

Connection method	RJ45 jack
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LED signaling

Optical representation	Yellow LED
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Dimensions

Dimensional drawing	
Width	23.8 mm
Height	101.3 mm
Depth	86 mm

Material specifications

Material	Plastic (Housing)
Flammability rating according to UL 94	V0

Cable / line

External cable diameter	5.5 mm ... 6.5 mm
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Environmental and real-life conditions

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Ambient conditions

Degree of protection	IP20 (Manufacturer's declaration)
Ambient temperature (operation)	-40 °C ... 75 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
	≤ 2000 m (Restrictions for ATEX applications)
Permissible humidity (operation)	10 % ... 95 % (non-condensing)

Approval data

CE

Certificate	CE-compliant
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ATEX

Identification	<input type="checkbox"/> II 3 G Ex nA nC IIC T4 Gc X
Note	Please follow the special installation instructions in the documentation!

UL, USA / Canada

Identification	Class I, Zone 2, AEx nA IIC T4, Ex nA IIC Gc X T4
	Class I, Div. 2, Groups A, B, C, D

UL, USA

Certificate	UL 60079-0 Ed. 6 / UL 60079-15 Ed. 4
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UL, Canada

Certificate	CSA 22.2 No. 60079-0 Ed. 3 / CSA 22.2 No. 60079-15:16
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Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A
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Shipbuilding

Identification	DNV GL
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DNV GL data

Temperature	D
Humidity	B
Vibration	B
EMC	B

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
	FCC Part 15B Class A
	CISPR 22

Electrostatic discharge

Standards/regulations	EN 61000-4-2
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Electrostatic discharge

Contact discharge	± 6 kV (Test Level 3)
Discharge in air	± 8 kV (Test Level 3)
Indirect discharge	± 6 kV
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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Electromagnetic HF field

Frequency range	80 MHz ... 3 GHz (Test Level 3)
Field intensity	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4
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Fast transients (burst)

Input	± 2.2 kV (1 minute)
Signal	± 2.2 kV (1 minute)
Comments	Criterion B

Surge current load (surge)

Standards/regulations	EN 61000-4-5
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Surge current load (surge)

Input	± 0.5 kV
Signal	± 1 kV (Data line, asymmetrical)

Conducted interference

Standards/regulations	EN 61000-4-6
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Conducted interference

Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

Emitted interference

Standards/regulations	EN 61000-6-4
Comments	Class A, industrial applications

Emitted interference

Standards/regulations	EN 61000-6-3
Comments	Class B, domain of use: residential and small commercial

Criteria

Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

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Standards and regulations

Standards/regulations

DIN EN 61643-21

Mounting

Mounting type

DIN rail mounting, stationary

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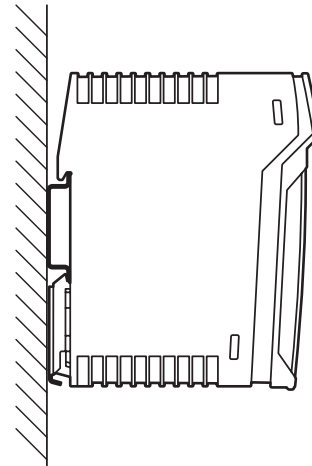
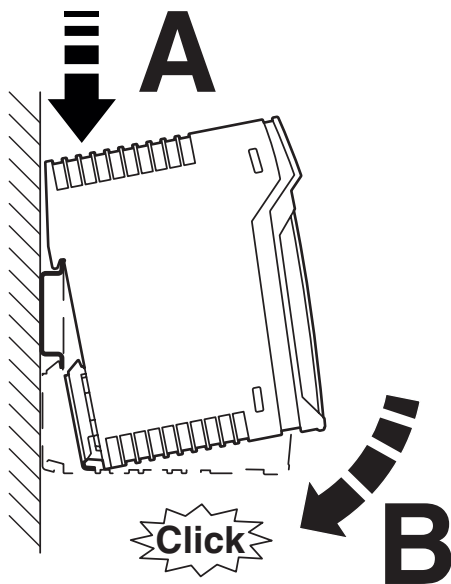
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Drawings

Schematic diagram



Mounting on a DIN rail

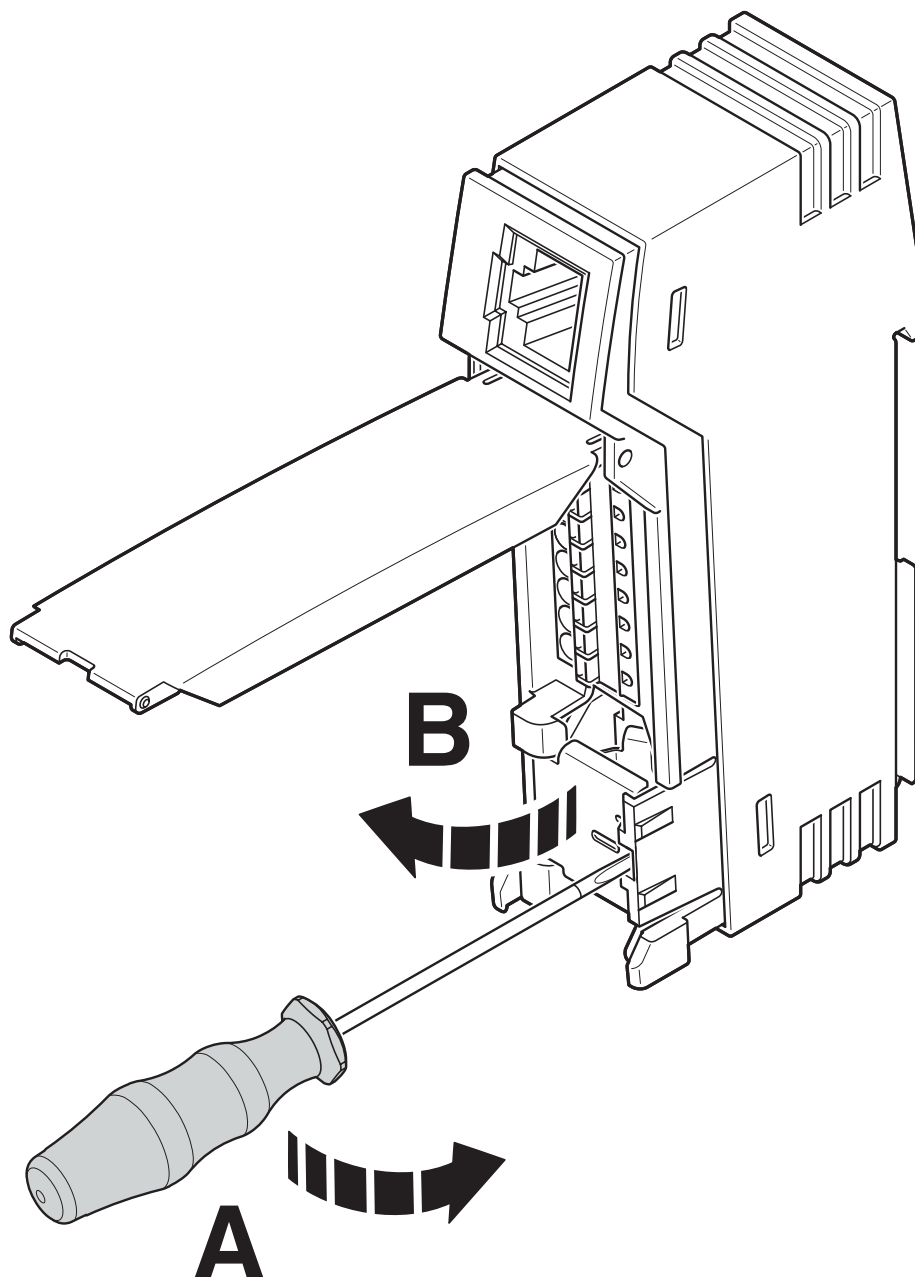
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Schematic diagram



Open shield contact spring

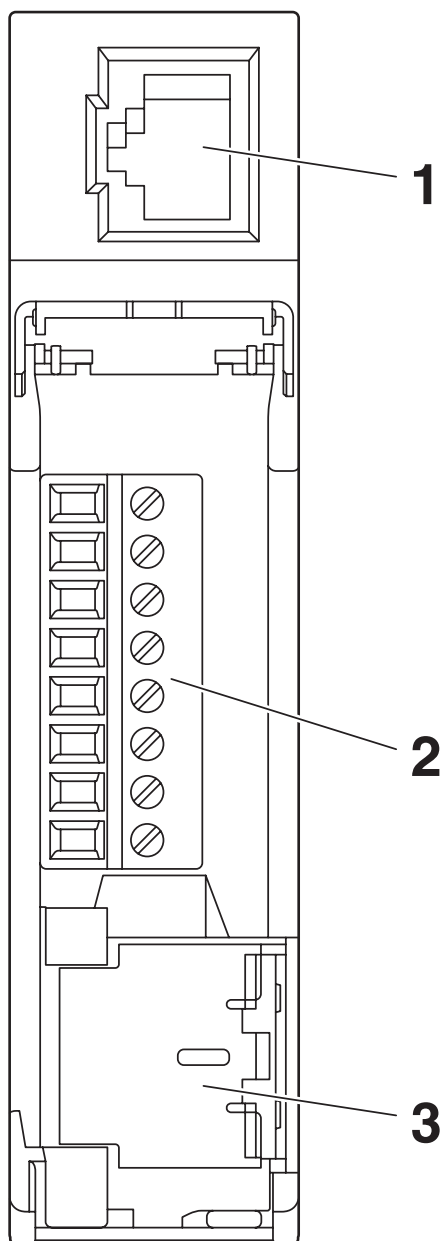
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Schematic diagram



Front view

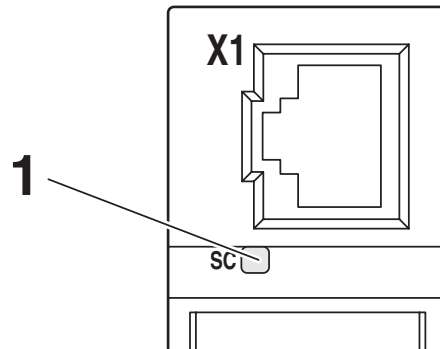
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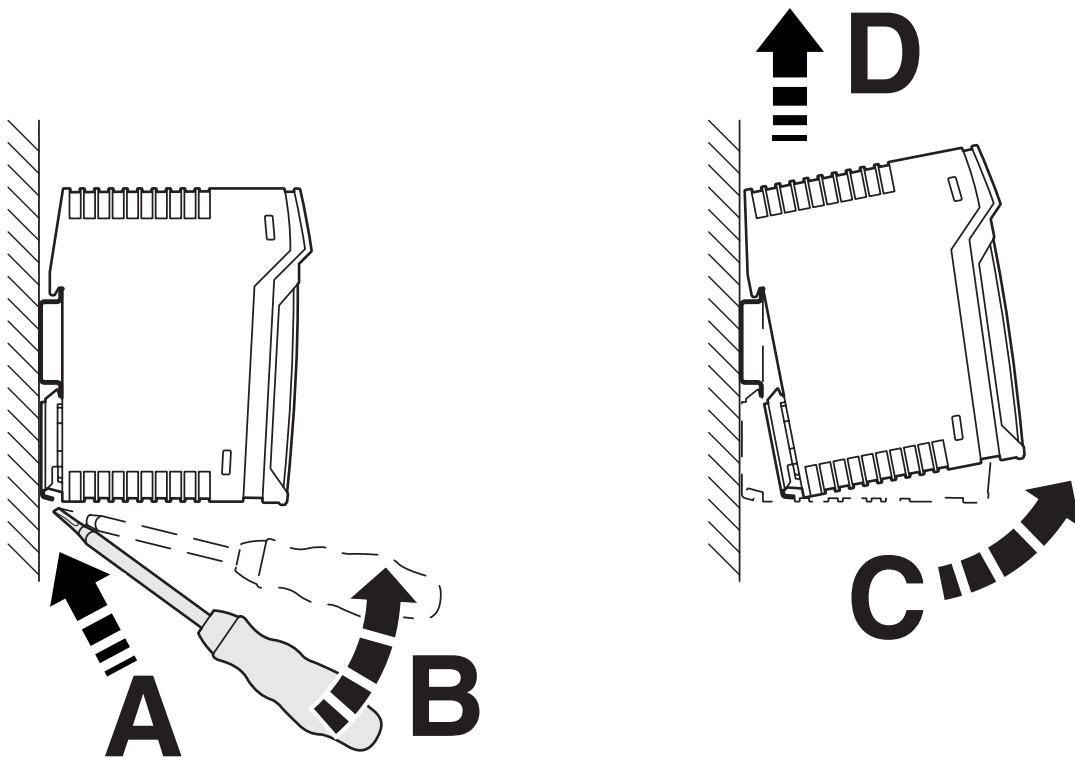


Schematic diagram



Shield current monitoring

Schematic diagram



Removal

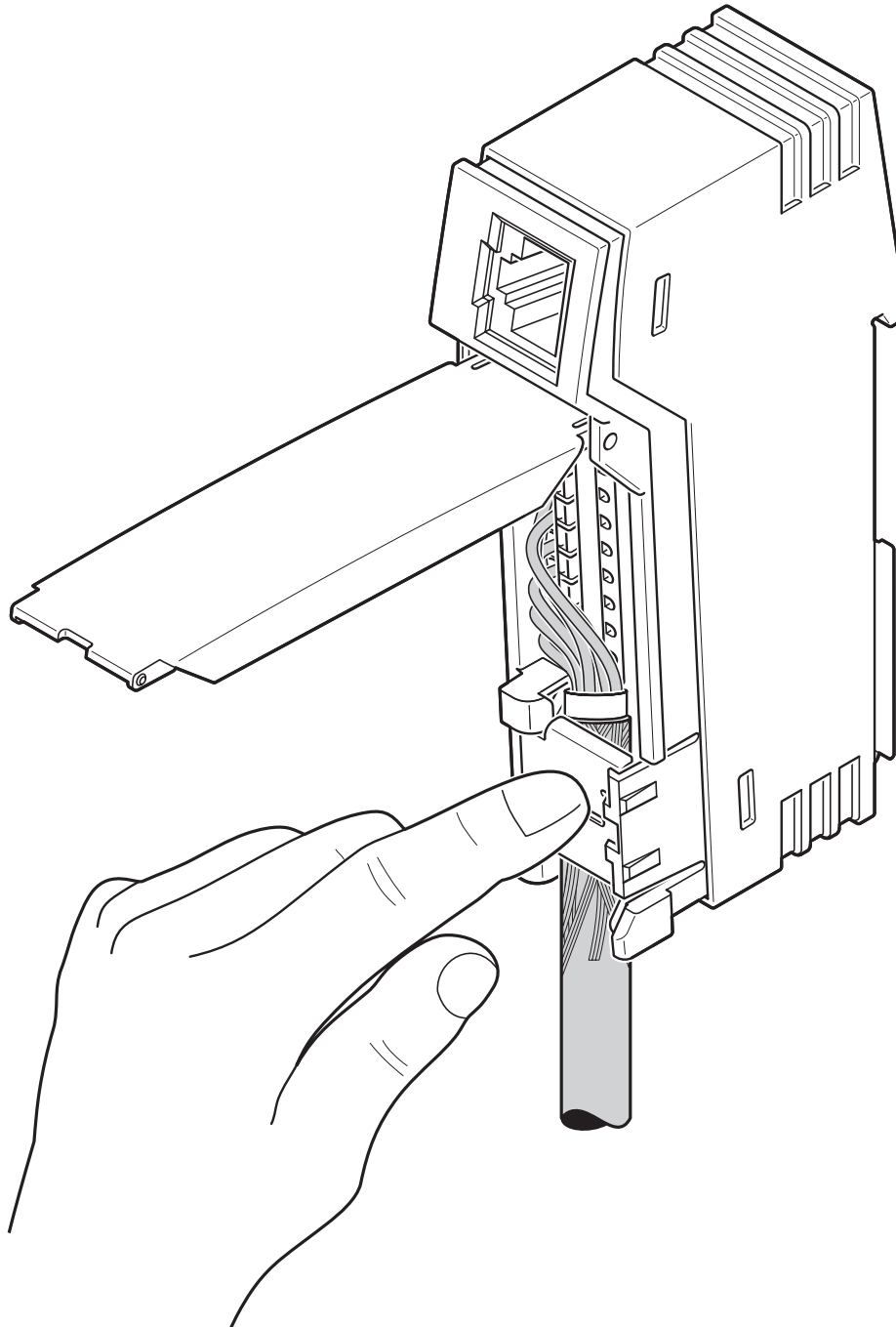
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Schematic diagram



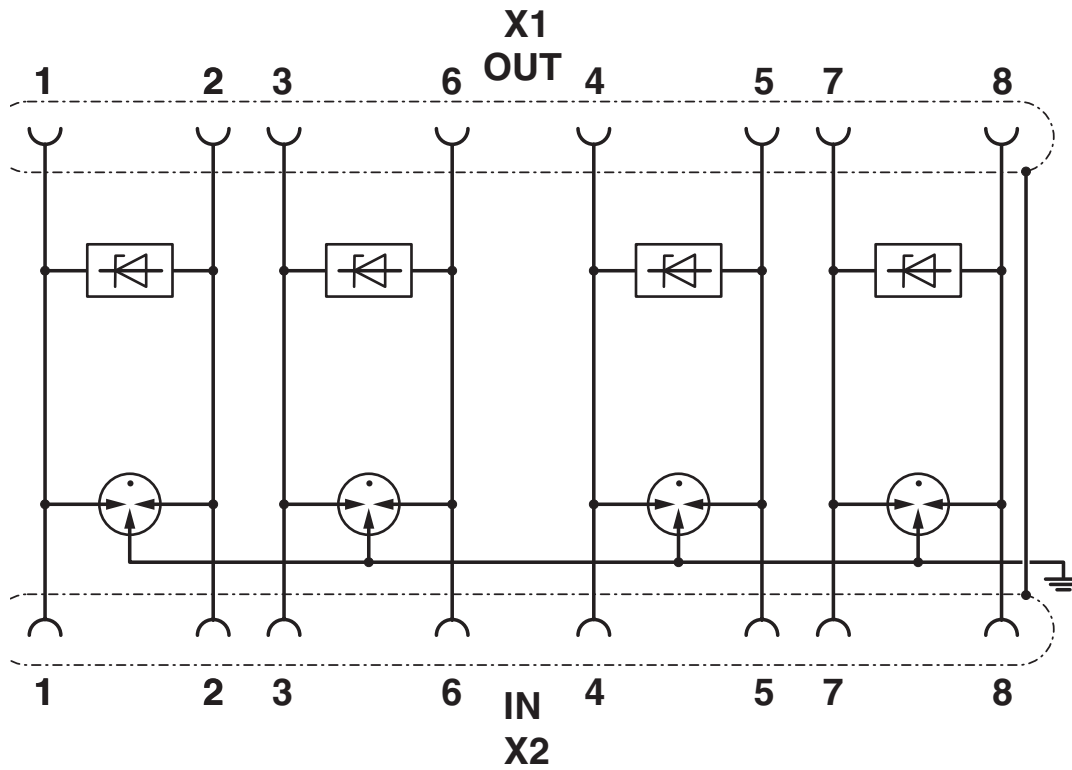
Close shield contact spring

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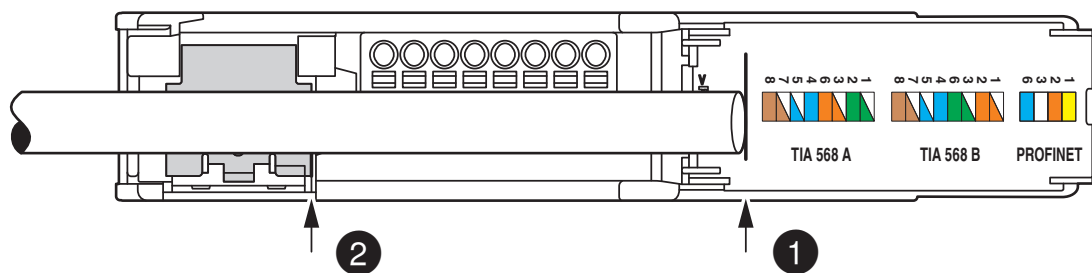
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Circuit diagram



Schematic diagram



Stripping length

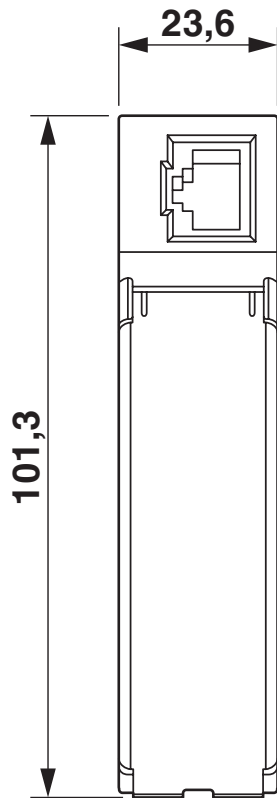
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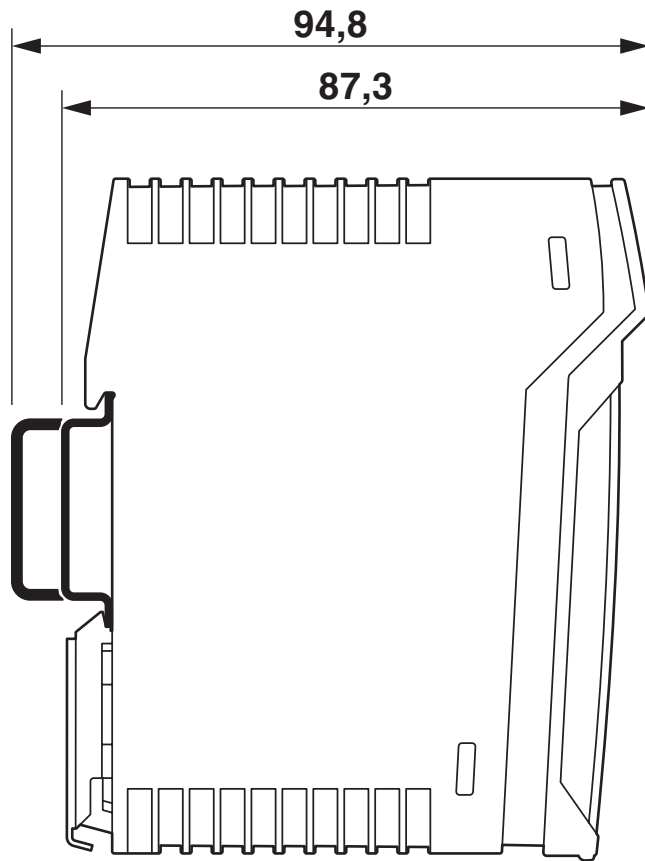
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Dimensional drawing



Housing dimensions



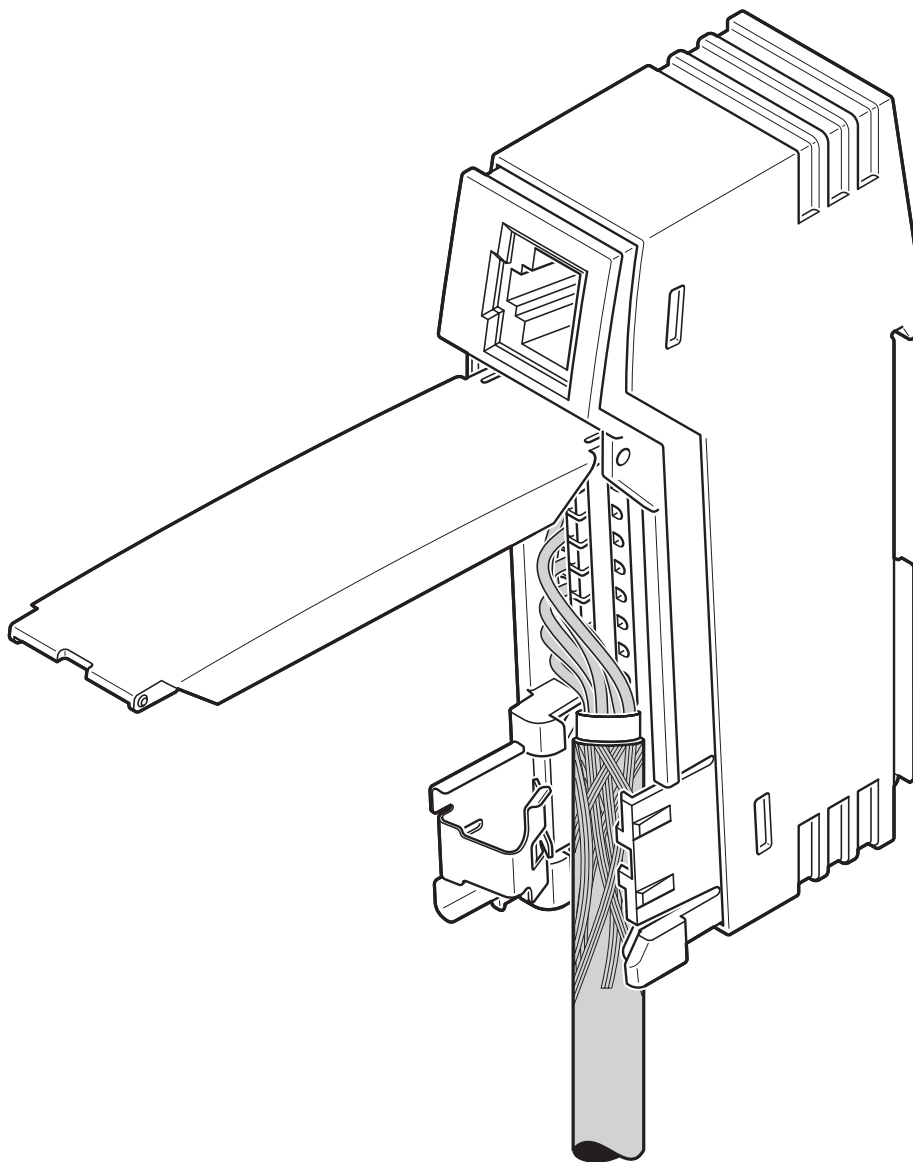
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Schematic diagram



Inserting the cable


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Approvals

 DNV GL Approval ID: TAA00001KR				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
			-	-

 UL Listed Approval ID: FILE E 238705				
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 cUL Listed Approval ID: FILE E 238705				
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 ATEX Approval ID: PxCIF18ATEX2703020X				
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cULus Listed				
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Classifications

ECLASS

ECLASS-9.0	19170112
ECLASS-10.0.1	19170112
ECLASS-11.0	19170112

ETIM

ETIM 8.0	EC002697
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UNSPSC

UNSPSC 21.0	43223300
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

Patch panels

Patch panels - PP-RJ-RJ - 2703015

<https://www.phoenixcontact.com/pc/products/2703015>



Patch panel, two RJ45 jacks, 10/100/1000 Mbps, DIN rail adapter, IP20

Patch panels

Patch panels - PP-RJ-SC - 2703016

<https://www.phoenixcontact.com/pc/products/2703016>



Patch panel, RJ45 jack on screw terminal blocks, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief

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Patch panels

Patch panels - PP-RJ-SCC - 2703018

<https://www.phoenixcontact.com/pc/products/2703018>



Patch panel, RJ45 jack on Push-in terminal blocks, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief

Patch panels

Patch panels - PP-RJ-IDC - 2703019

<https://www.phoenixcontact.com/pc/products/2703019>



Patch panel, RJ45 jack on IDC terminal blocks, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief

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Assembly tool

Assembly tool - FL CRIMPTOOL - 2744869

<https://www.phoenixcontact.com/pc/products/2744869>

Crimping pliers, for assembling the RJ45 plugs FL PLUG RJ45..., for assembly on site



Network isolator

Network isolator - FL ISOLATOR 100-RJ/SC - 2313928

<https://www.phoenixcontact.com/pc/products/2313928>



Passive network isolator for electrical isolation in Ethernet networks. This protects Ethernet devices from potential differences of up to 4 kV. Can be used for transmission speeds of up to 100 Mbps. Connection using RJ45 and COMBICON plug-in screw terminal block.

Patch panels - PP-RJ-SC-F

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<https://www.phoenixcontact.com/pc/products/2703021>



Network isolator

Network isolator - FL ISOLATOR 100-RJ/RJ - 2313931

<https://www.phoenixcontact.com/pc/products/2313931>



Passive network isolator for electrical isolation in Ethernet networks. This protects Ethernet devices from potential differences of up to 4 kV. Can be used for transmission speeds of up to 100 Mbps. Possible to connect two RJ45 plugs.

Network isolator

Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

<https://www.phoenixcontact.com/pc/products/2313915>



Passive network isolator for electrical isolation in Ethernet networks. This protects Ethernet devices from potential differences of up to 4 kV. Can be used for transmission speeds of up to 1 Gbps. Possible to connect two RJ45 plugs.

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Network isolator

Network isolator - FL ISOLATOR 100-M12 - 2902985

<https://www.phoenixcontact.com/pc/products/2902985>



Passive network isolator for electrical isolation in Ethernet networks. For the protection of Ethernet devices against potential differences of up to 4 kV. Can be used for transmission speeds of up to 100 Mbps. Ethernet connection via two M12 sockets (D-coded).

Patch cable

Patch cable - NBC-R4AC-R4AC-IE8A/.../... - 1411854

<https://www.phoenixcontact.com/pc/products/1411854>



Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6_A, cable outlet: straight, Ethernet

Patch panels - PP-RJ-SC-F

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Patch cable

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/2,0 - 1408360

<https://www.phoenixcontact.com/pc/products/1408360>



Patch cable, CAT6_A, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

Patch cable

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 1408365

<https://www.phoenixcontact.com/pc/products/1408365>



Patch cable, CAT6_A, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

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Patch cable

Patch cable - NBC-R4AC/1,0-93B/R4AC - 1408968

<https://www.phoenixcontact.com/pc/products/1408968>



Patch cable, degree of protection: IP20, cable length: 1 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

Patch cable

Patch cable - NBC-R4AC/2,0-93B/R4AC - 1408969

<https://www.phoenixcontact.com/pc/products/1408969>



Patch cable, degree of protection: IP20, cable length: 2 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

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Patch cable

Patch cable - FL CAT5 PATCH 0,3 - 2832250

<https://www.phoenixcontact.com/pc/products/2832250>



Patch cable, CAT5, assembled, 0.3 m

Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263

<https://www.phoenixcontact.com/pc/products/2832263>



Patch cable, CAT5, assembled, 0.5 m

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Patch cable

Patch cable - FL CAT5 PATCH 1,0 - 2832276

<https://www.phoenixcontact.com/pc/products/2832276>



Patch cable, CAT5, assembled, 1 m

Patch cable

Patch cable - FL CAT5 PATCH 1,5 - 2832221

<https://www.phoenixcontact.com/pc/products/2832221>



Patch cable, CAT5, assembled, 1.5 m

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Patch cable

Patch cable - FL CAT5 PATCH 2,0 - 2832289

<https://www.phoenixcontact.com/pc/products/2832289>

Patch cable, CAT5, assembled, 2 m



Patch cable

Patch cable - FL CAT5 PATCH 3,0 - 2832292

<https://www.phoenixcontact.com/pc/products/2832292>

Patch cable, CAT5, assembled, 3 m



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RJ45 connector

RJ45 connector - VS-08-RJ45-10G/Q - 1419001

<https://www.phoenixcontact.com/pc/products/1419001>



RJ45 connector, IP20, CAT6_A, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color: black

RJ45 connector

RJ45 connector - VS-PN-RJ45-5-Q/IP20 - 1658435

<https://www.phoenixcontact.com/pc/products/1658435>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 4, 100 Mbps, CAT5 (IEC 11801:2002), material: Plastic, connection method: IDC fast connection, cable outlet: straight, color: traffic grey A RAL 7042, PROFINET

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Stripping tool

Stripping tool - VS-CABLE-STRIP-VARIO - 1657407

<https://www.phoenixcontact.com/pc/products/1657407>

Stripping tool, for the multi-level stripping of shielded cables



RJ45 connector

RJ45 connector - VS-08-RJ45-5-Q/IP20 - 1656725

<https://www.phoenixcontact.com/pc/products/1656725>



RJ45 connector, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Plastic, connection method: IDC fast connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042, Ethernet

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RJ45 connector

RJ45 connector - VS-08-RJ45-5-Q/IP20 BK - 1658008

<https://www.phoenixcontact.com/pc/products/1658008>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Plastic, connection method: IDC fast connection, connection cross section: AWG 26- 23, cable outlet: straight, color: black, Ethernet

Screwdriver

Screwdriver - SZF 0-0,4X2,5 - 1204504

<https://www.phoenixcontact.com/pc/products/1204504>



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.4 x 2.5 x 75 mm, 2-component grip, with non-slip grip

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Diagonal cutter

Diagonal cutter - MICROFOX-SP - 1212488

<https://www.phoenixcontact.com/pc/products/1212488>



Electronic diagonal cutter, tapered head, angled (21°), without chamfer, with opening spring

Data cable

Data cable - VS-OE-OE-94F/... - 1417359

<https://www.phoenixcontact.com/pc/products/1417359>



Data cable, Ethernet CAT6_A (10 Gbps), 8-position halogen-free, shielded, free cable end, on free cable end, cable length: Free entry (0.5 ... 400 m)

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Patch panels

Patch panels - FL-PP-RJ45-SC - 2901643

<https://www.phoenixcontact.com/pc/products/2901643>



Patch panel, one RJ45 jack to 8 screw connection terminal blocks (1:1 assignment), CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, option of shield contacting to the DIN rail via jumpers

Patch panels

Patch panels - FL-PP-RJ45-LSA - 2901645

<https://www.phoenixcontact.com/pc/products/2901645>



Patch panel, one RJ45 jack to 8 LSA connection terminal blocks (1:1 assignment), CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, option of shield contacting to the DIN rail via bridges

Patch panels - PP-RJ-SC-F

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Patch panels

Patch panels - FL-PP-RJ45/RJ45 - 2901646

<https://www.phoenixcontact.com/pc/products/2901646>



Patch panel, two RJ45 jacks (1:1 assignment), CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, option of shield contacting to the DIN rail via jumpers

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