PP-RJ-SC-F - Patch panel

2703021

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Patch panel, RJ45 jack on screw terminal blocks, CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, shield contacting with strain relief, shield current monitoring, surge protection

Product description

This product is the successor to FL-PP-RJ45-SC, item no. 2901643. 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
Sales key	DN07
Product key	DNC334
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

Note on application

Note on application	Only for industrial use

Utilization restriction

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

Product properties

Product type	Patch panel
IEC test classification	C2
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
Maximum power dissipation for nominal condition	0 W
Rated insulation voltage	85 V DC

Supply

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

Function

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

Interfaces

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

Serial transmission speed	10/100/1000 Mbps
Frequency range	125 MHz
Connection method	Screw connection
Note on the connection method	CAT5e
Tightening torque	0.22 Nm ... 0.25 Nm
Pin assignment	1:1
Transmission length	100 m (including patch cables)
Single conductor/terminal point, rigid	0.14 mm² ... 1.5 mm²
Single-wire/terminal point, flexible	0.14 mm² ... 1.5 mm²
Max. AWG conductor cross-section, flexible	16
Min. AWG conductor cross-section, flexible	28
Single-wire/terminal point, rigid AWG max.	16
Single-wire/terminal point, rigid 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+))

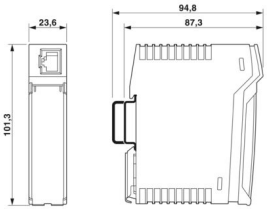
Data: Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3

Connection method	RJ45 jack

Signaling

Optical representation	Yellow LED

Dimensions

Dimensional drawing	
Width	23.8 mm
Height	101.3 mm
Depth	86 mm

Material specifications

Color (Housing)	light gray (RAL 7035)
Material (Housing)	Plastic
Flammability rating according to UL 94	V0

Cable/line

External cable diameter	5.5 mm ... 6.5 mm

Mechanical tests

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	Operation: 10 Hz ... 57 Hz, amplitude ±3.5 mm, 57 Hz ... 150 Hz, 5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	Operation: 30g for 11 ms, three shocks in each spatial direction
Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27	Operation: 10g for 16 ms, 1000 shocks in each spatial direction

Environmental and real-life conditions

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)

Approvals

CE

Certificate	CE-compliant

ATEX

Identification	⟨Ex⟩ II 3 G Ex ec nC IIC T4 Gc
Certificate	PxCIF18ATEX2703020X
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

UL, Canada

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

Corrosive gas test

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

Shipbuilding

Identification	DNV GL

Shipbuilding 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

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

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

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

Surge current load (surge)

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

Conducted interference

Standards/regulations	EN 61000-4-6

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.

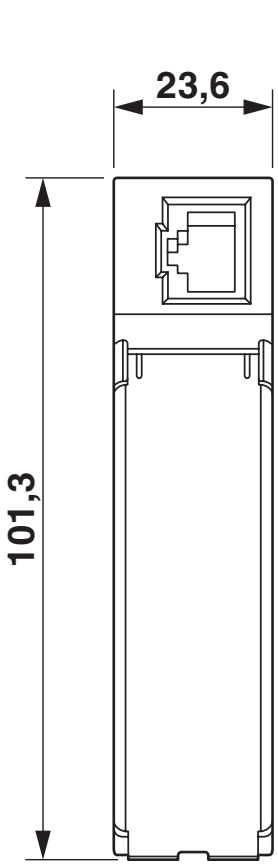
Standards and regulations

Standards/regulations	DIN EN 61643-21
Standard designation	Surge protective devices in the low-voltage range, in telecommunications and signaling networks

Mounting

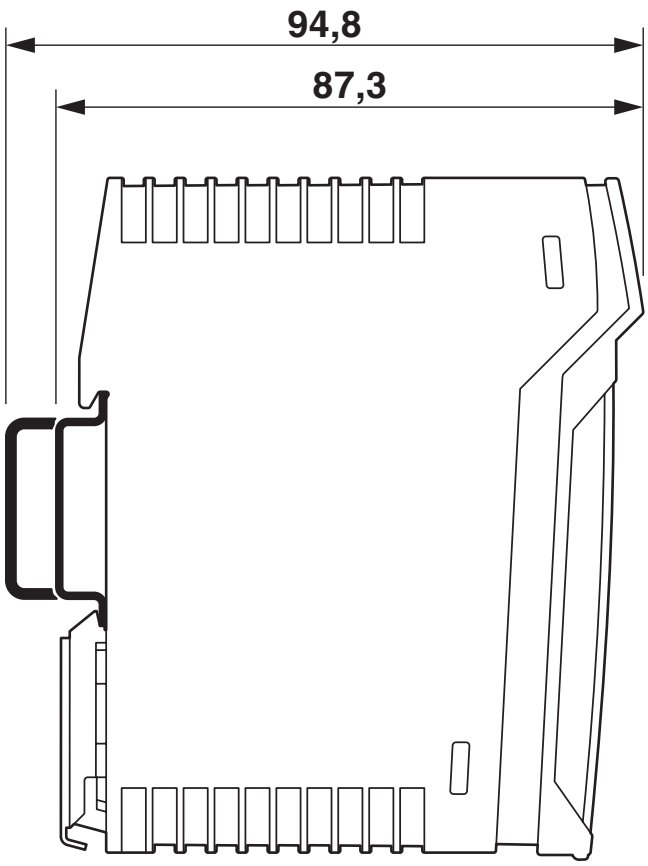
Mounting type	DIN rail mounting
Assembly note	The product can be snapped onto all 35 mm DIN rails in accordance with EN/IEC 60715.
Useable DIN rail type	DIN rail: 35 mm

Drawings

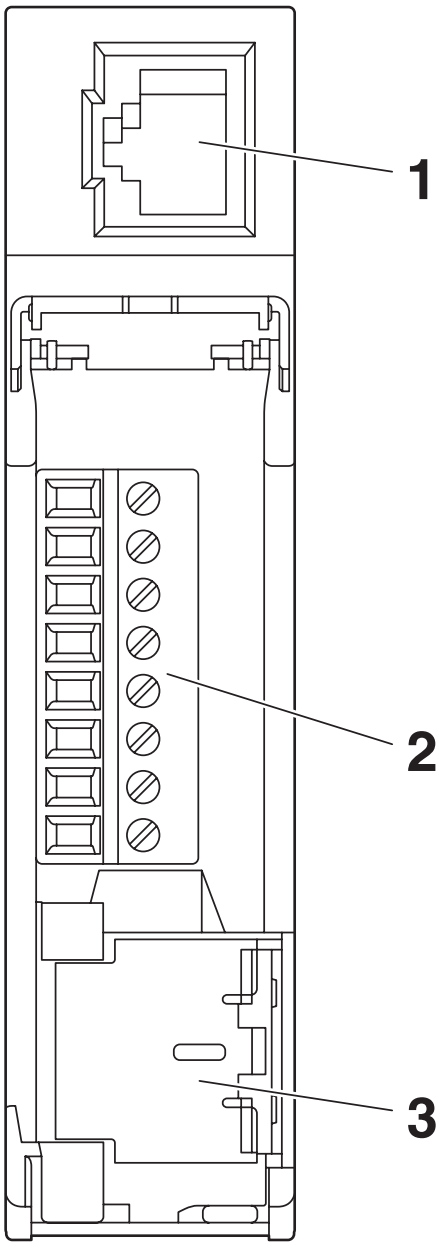


Housing dimensions

Dimensional drawing

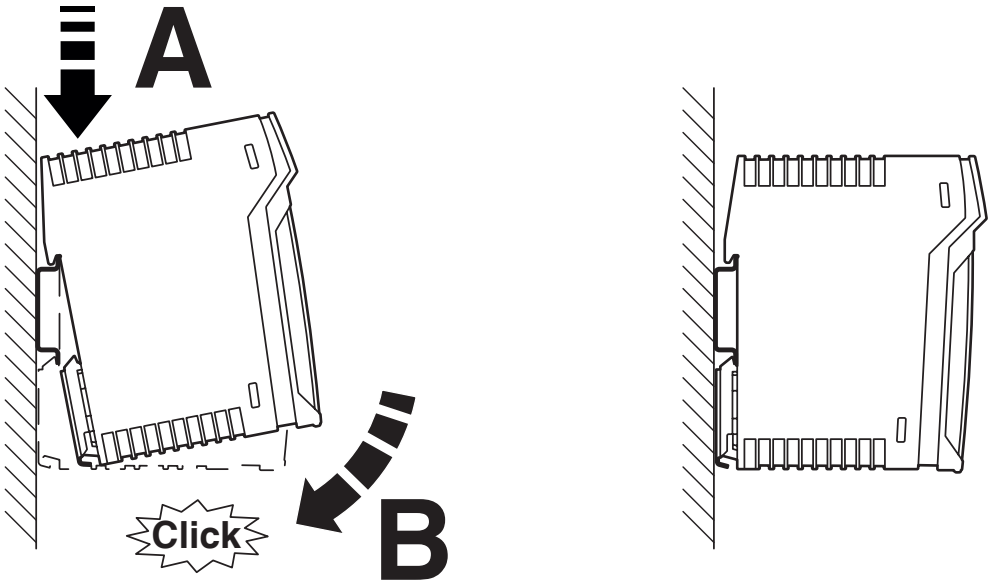


Schematic diagram



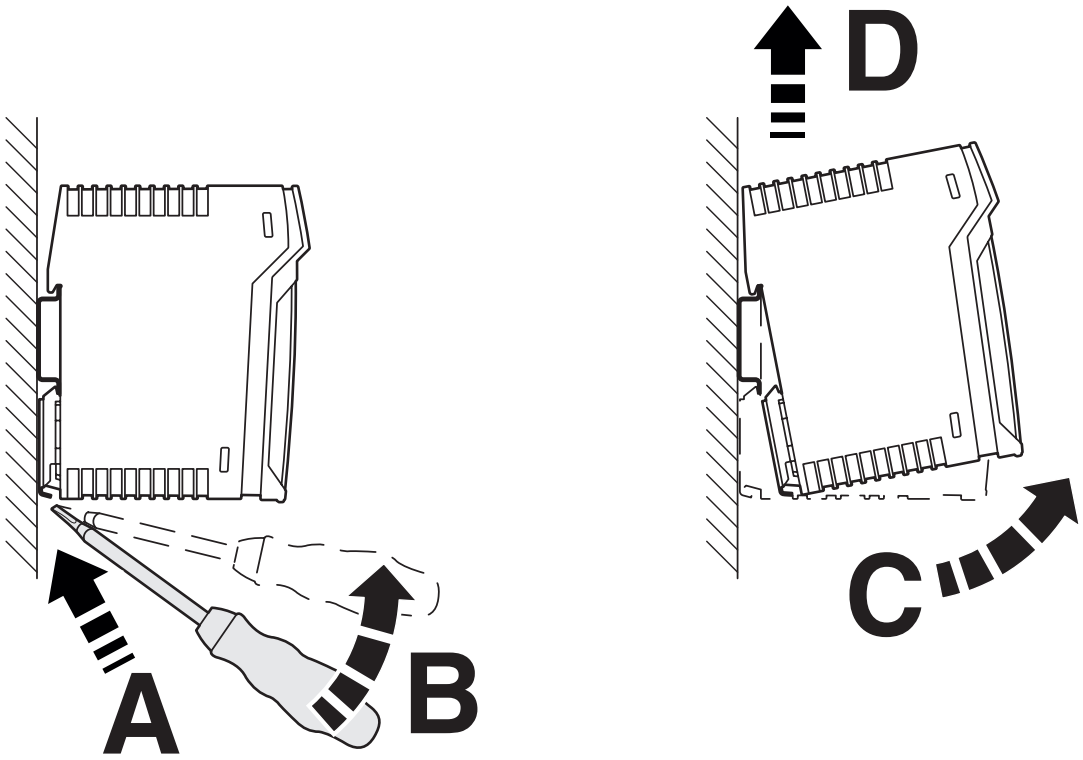
Front view

Schematic diagram



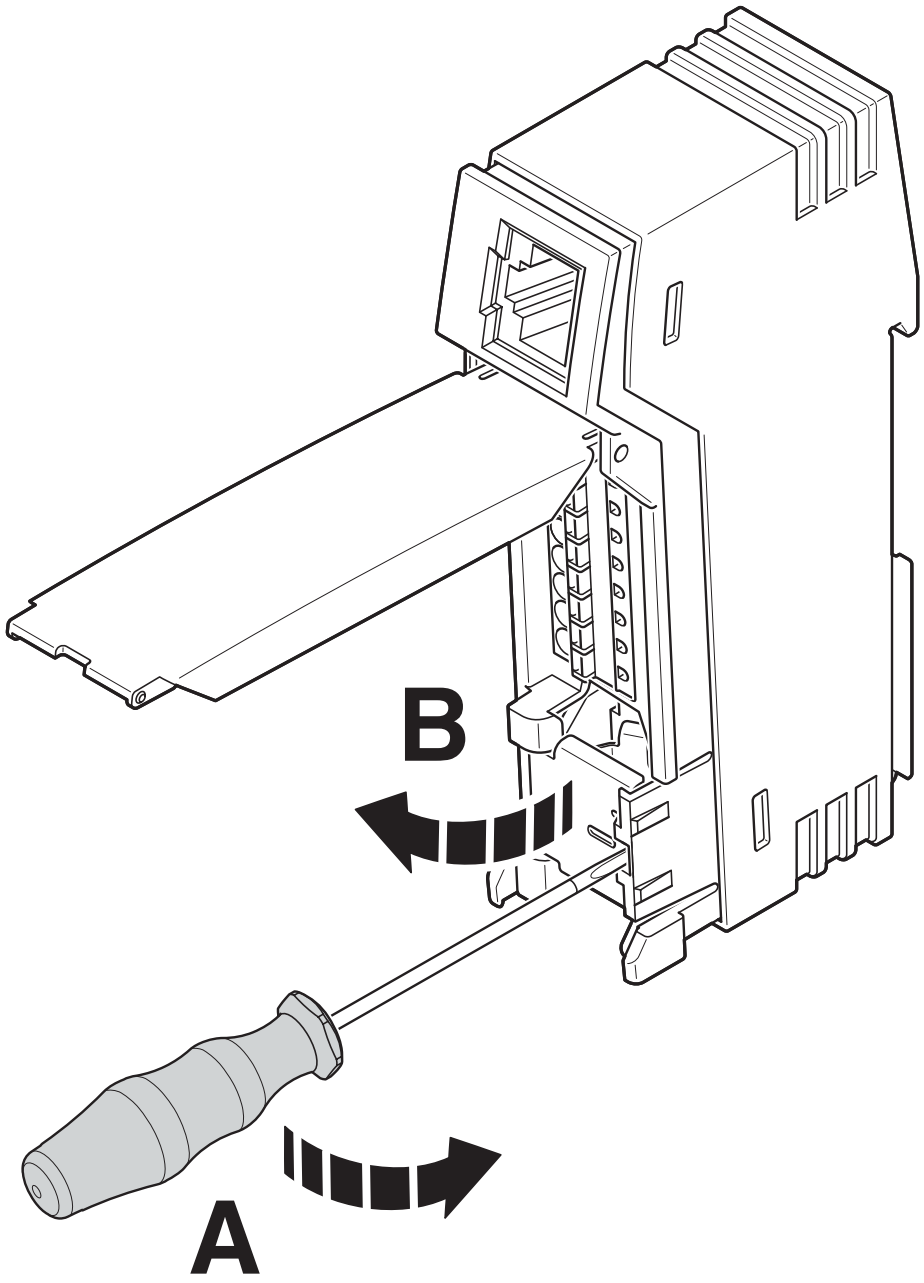
Mounting on a DIN rail

Schematic diagram



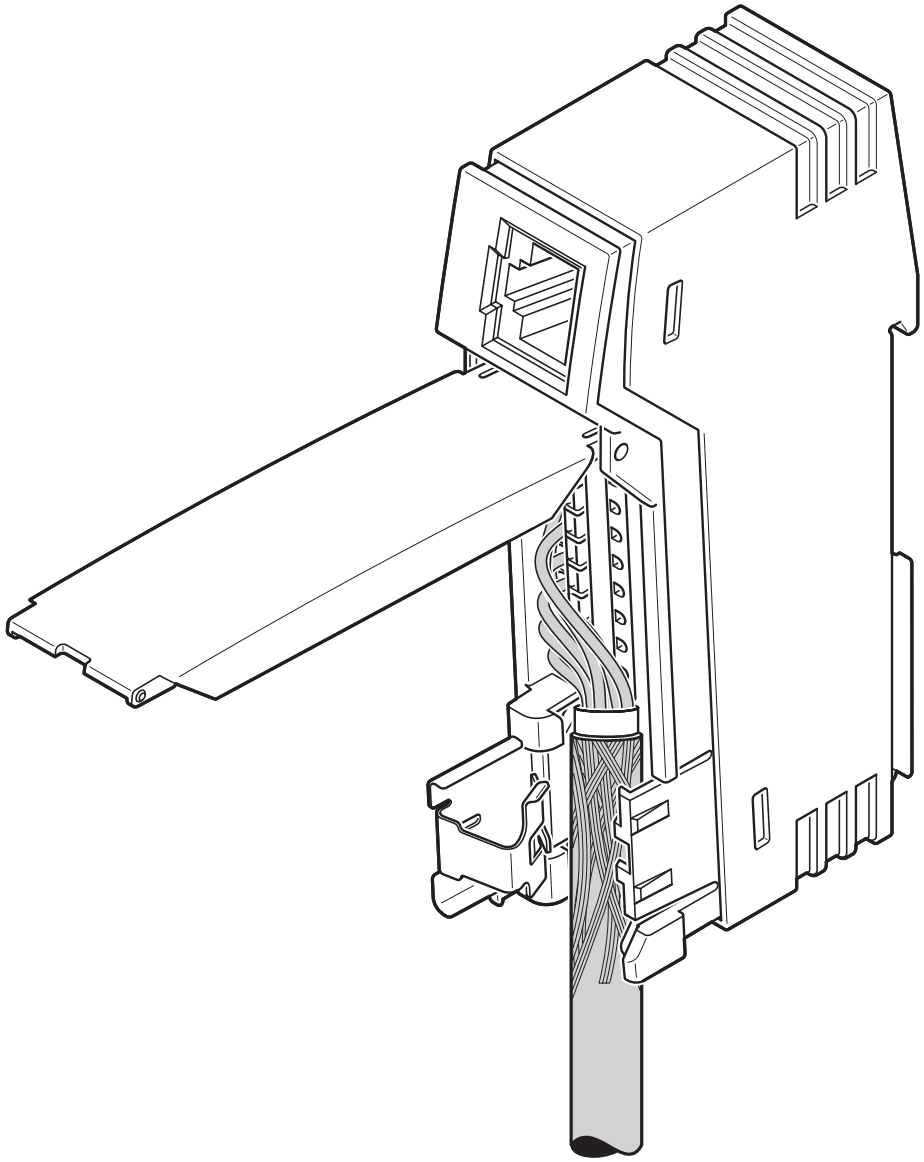
Removal

Schematic diagram



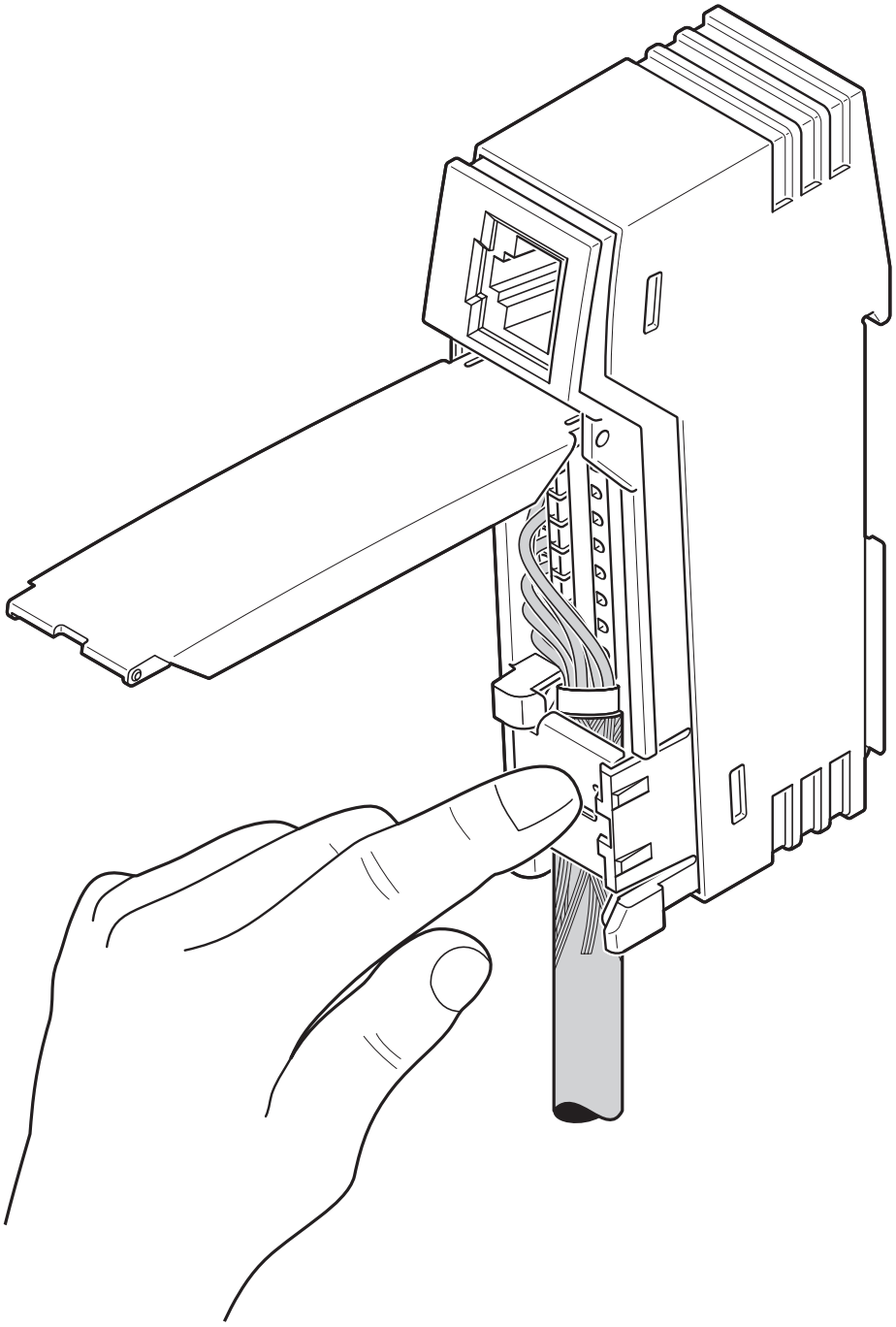
Open shield contact spring

Schematic diagram



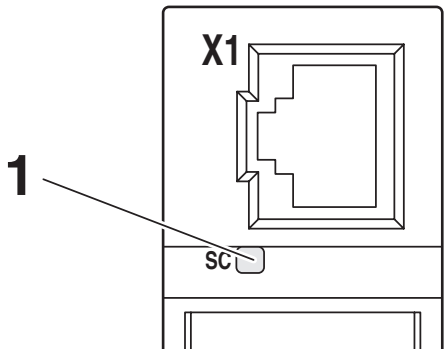
Inserting the cable

Schematic diagram



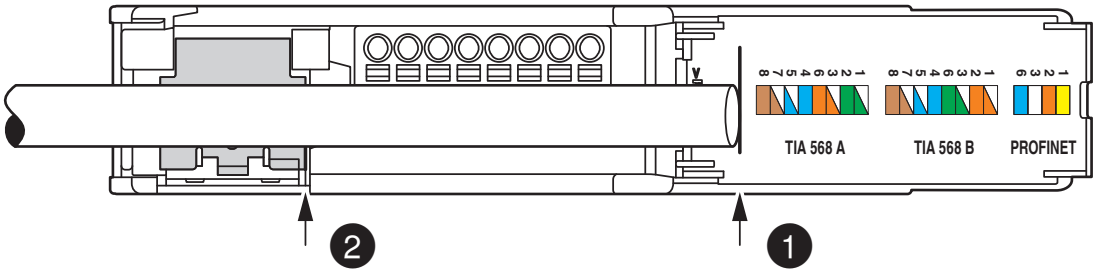
Close shield contact spring

Schematic diagram



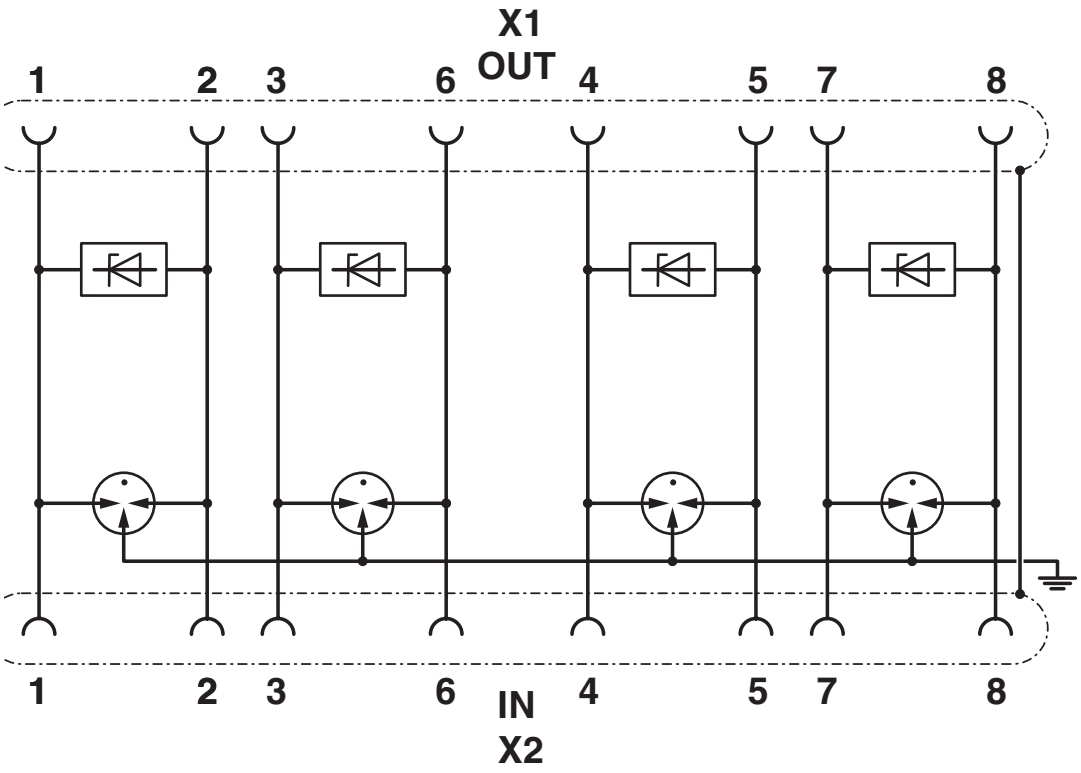
Shield current monitoring

Schematic diagram



Stripping length

Circuit diagram



Circuit diagram

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2703021

cULus Listed
Approval ID: E238705

DNV GL
Approval ID: TAA00001KR

Classifications

ECLASS

ECLASS-13.0	19170112
ECLASS-15.0	19170112

ETIM

ETIM 10.0	EC001128

UNSPSC

UNSPSC 21.0	43223300

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	6d99384f-a6dc-4c60-b921-58c6b498ebf3

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