INJ 2102-T - Injector

2703012

https://www.phoenixcontact.com/nl/products/2703012

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PoE injector, 30 W, RJ45 jack on IDC terminal blocks, 10/100/1000 Mbps, DIN rail mounting, IP20, potential separation, shield contacting with strain relief, shield current monitoring, surge protection

Product description

The midspan injectors connect Ethernet devices without PoE (e.g., switches) to PoE-capable end devices (e.g., IP cameras). As power sourcing equipment (PSE), the injector supplies the required power to a powered device (PD) via the data cable. The injector and end device negotiate the electrical power requirements autonomously. The IDC fast connection terminal blocks enable tool-free connection without stripping the single-core wires. The terminal blocks with inserted wires are simply pressed shut by hand. Observe the permissible single-core wire diameter and the permissible insulation material.

Your advantages

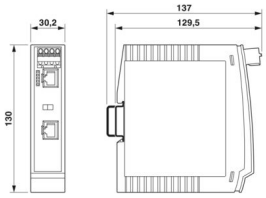
- Extended temperature range of -40 °C ... +75 °C
- Fast connection of the PoE cable
- Wiring space covered with front panel cover
- Integrated surge protection to ensure high system availability
- Electrical isolation of the internal power supply unit for protection against short circuits on the PoE side
- 10/100/1000 Mbps

Commercial data

Item number	2703012
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNC351
Product key	DNC351
GTIN	4055626463209
Weight per piece (including packing)	465,4 g
Weight per piece (excluding packing)	324,72 g
Customs tariff number	85044083
Country of origin	DE

Technical data

Dimensions

Dimensional drawing	
Width	30.2 mm
Height	130 mm
Depth	120 mm

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.

Material specifications

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

Mounting

Mounting type	DIN rail mounting
Mounting position	vertical

Interfaces

Basic functions	PSE/Midspan, compliant with IEEE 802.3af, at

Data: Power over Ethernet

Serial transmission speed	10/100/1000 Mbps
Frequency range	125 MHz
Connection method	IDC connection
Note on the connection method	CAT5e
No. of channels	1
Pin assignment	1:1
Transmission length	100 m (including patch cables)
Single conductor/terminal point, rigid	0.14 mm² ... 0.34 mm²
Single-wire/terminal point, flexible	0.14 mm² ... 0.34 mm²
Max. AWG conductor cross-section, flexible	22

Min. AWG conductor cross-section, flexible	26
Single-wire/terminal point, rigid AWG max.	22
Single-wire/terminal point, rigid AWG min.	26
Wire diameter incl. insulation	1.6 mm (Terminal block is tested with PVC insulation - other insulation materials available on request)
Frequency of connections between conductors of the same cross section	10
Output nominal voltage	54 V DC (PoE)
Output power	30 W
Maximum output power	40 W (UL)

Data: Ethernet

Connection method	RJ45 jack
Note on the connection method	CAT5e

Product properties

IEC test classification	C2
MTTF	1510 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	661 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	256 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

Functions

Basic functions	PSE/Midspan, compliant with IEEE 802.3af, at

Security functions

Basic functions	PSE/Midspan, compliant with IEEE 802.3af, at

Electrical properties

Electrical isolation	VCC // SCM + FE // PoE
Maximum power dissipation for nominal condition	7 W (at 18 V DC)
	5 W (24 V DC ... 48 V DC)
Test voltage data interface/power supply	1.5 kV AC (50 Hz, 1 min.)

Supply

Supply voltage range	18 V DC ... 57 V DC
Nominal supply voltage	24 V DC (SELV/PELV, restrictions for ATEX applications)
	48 V DC
Max. current consumption	2.1 A
	1.4 A (24 V DC, Ex areas in accordance with UL-HazLoc)
	0.7 A (48 V DC, Ex areas in accordance with UL-HazLoc)
Power consumption	≤ 40 W
Protective circuit	Reverse polarity protection

Function

Designation	Shield current monitoring

Switch-on threshold	≥ 30 mA
Local diagnostics	Yellow LED
Precision	± 5 %
Response time	3 s
Current	≤ 2 A
Power consumption	270 mW (Shield current monitoring)

Connection data

Supply

Connection method	Push-in connection
Conductor cross-section, flexible, with ferrule, without plastic sleeve	0.25 mm² ... 2.5 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 2.5 mm²
Single conductor/terminal point, rigid	0.2 mm² ... 2.5 mm²
Single-wire/terminal point, flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section, flexible [AWG]	20 ... 12

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20 (Manufacturer's declaration)
Ambient temperature (operation)	-40 °C ... 65 °C (75°C, observe derating)
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)
Air pressure (operation)	80 kPa ... 110 kPa (Restrictions for ATEX applications)

Standards and regulations

Standards/regulations	IEC 61643-21

Approvals

CE

Certificate	CE-compliant

ATEX

Identification	Ⓔx II 3G Ex ec nC IIC T4 Gc
Certificate	PxCIF19ATEX2703011X
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

Power over Ethernet

Identification	IEEE 802.3af
	IEEE 802.3at

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)

	± 2 kV (I/O cable on field side only, asymmetric)
Comments	Criterion B

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.

System properties

Functionality

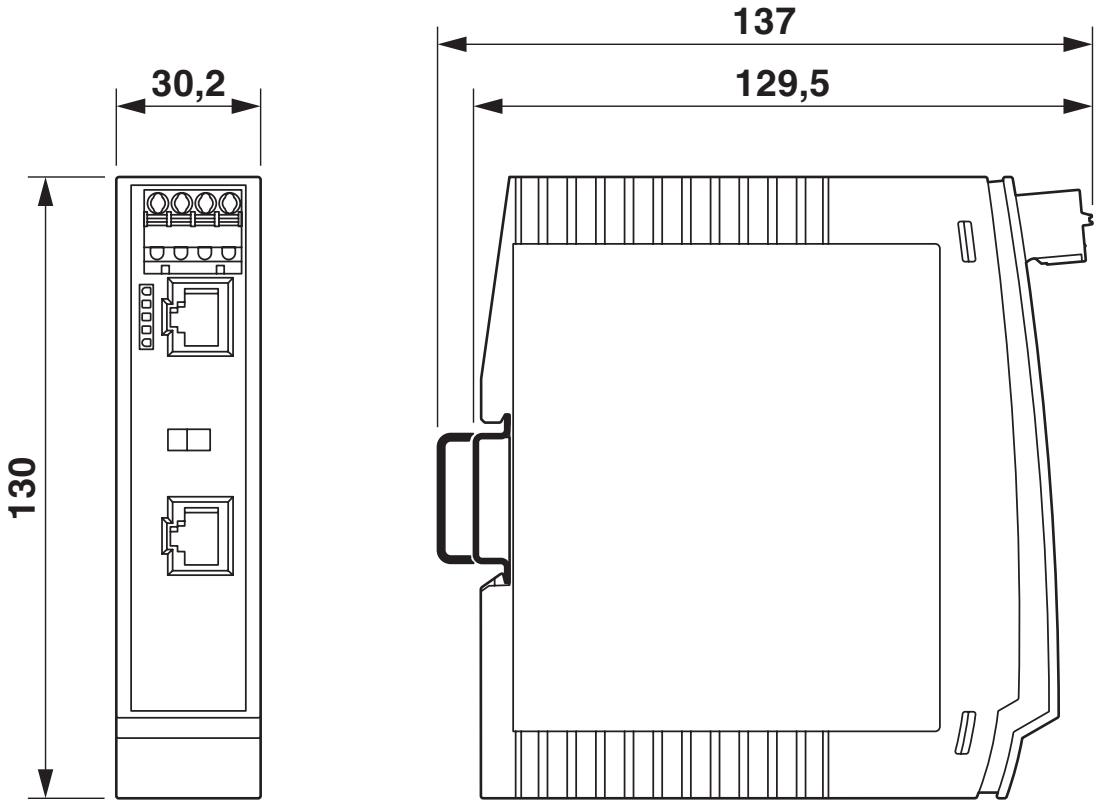
Basic functions	PSE/Midspan, compliant with IEEE 802.3af, at

Signaling

Optical representation	Yellow LED

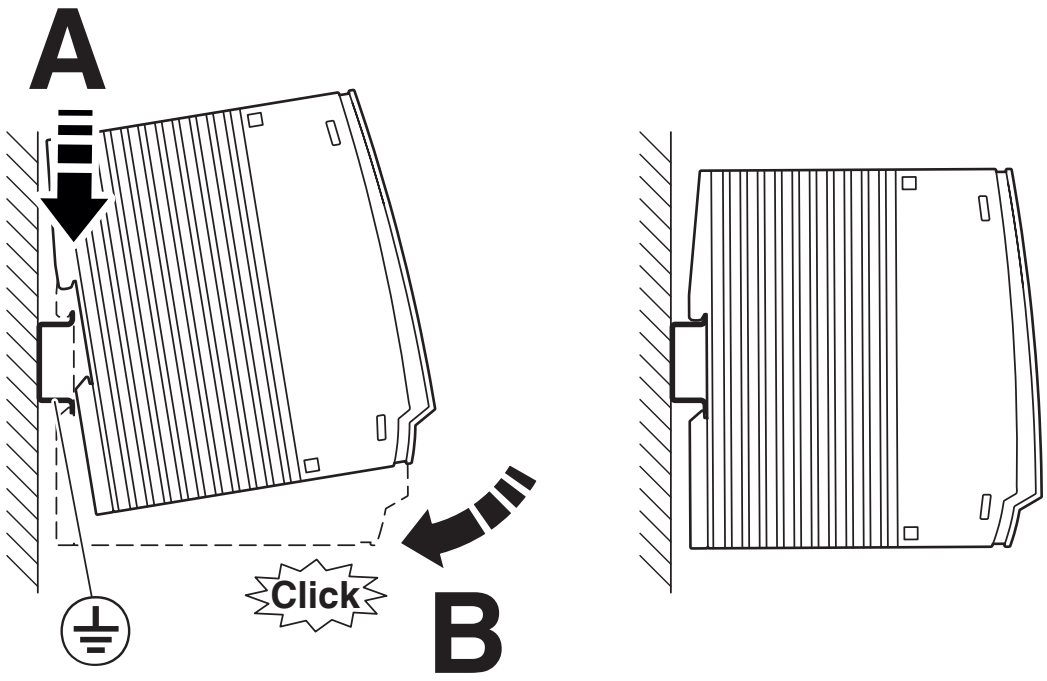
Drawings

Dimensional drawing



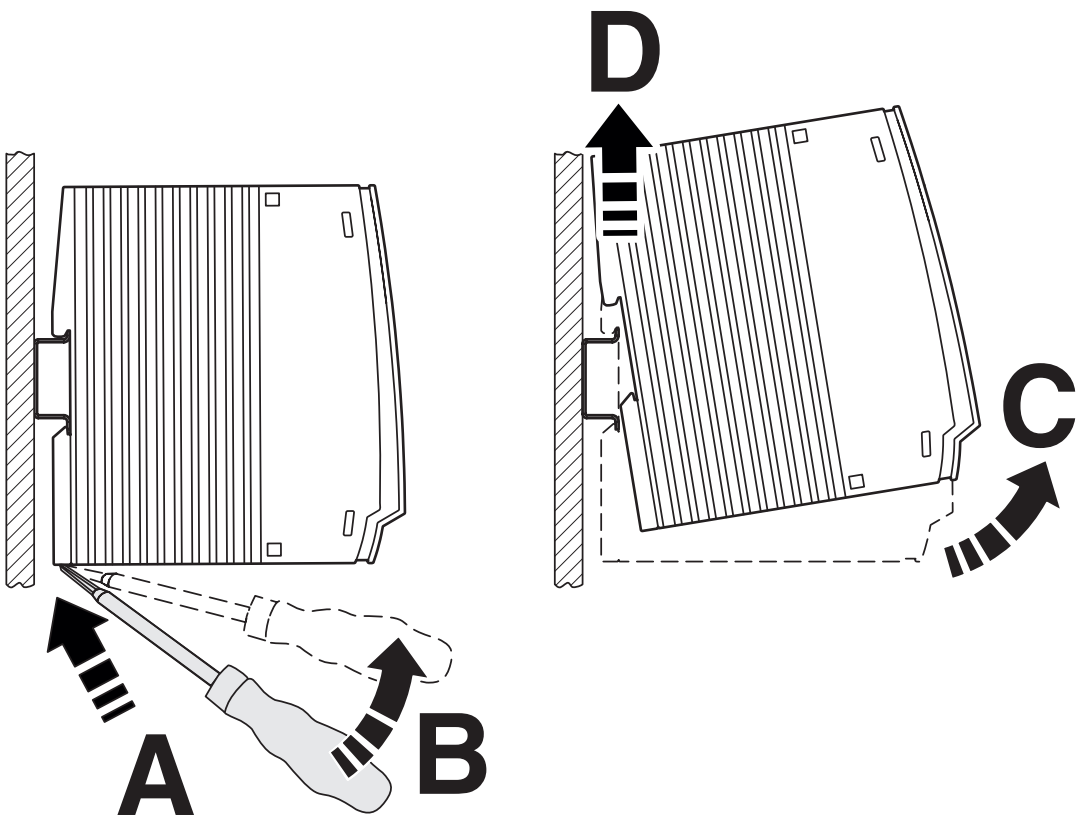
Housing dimensions

Schematic diagram



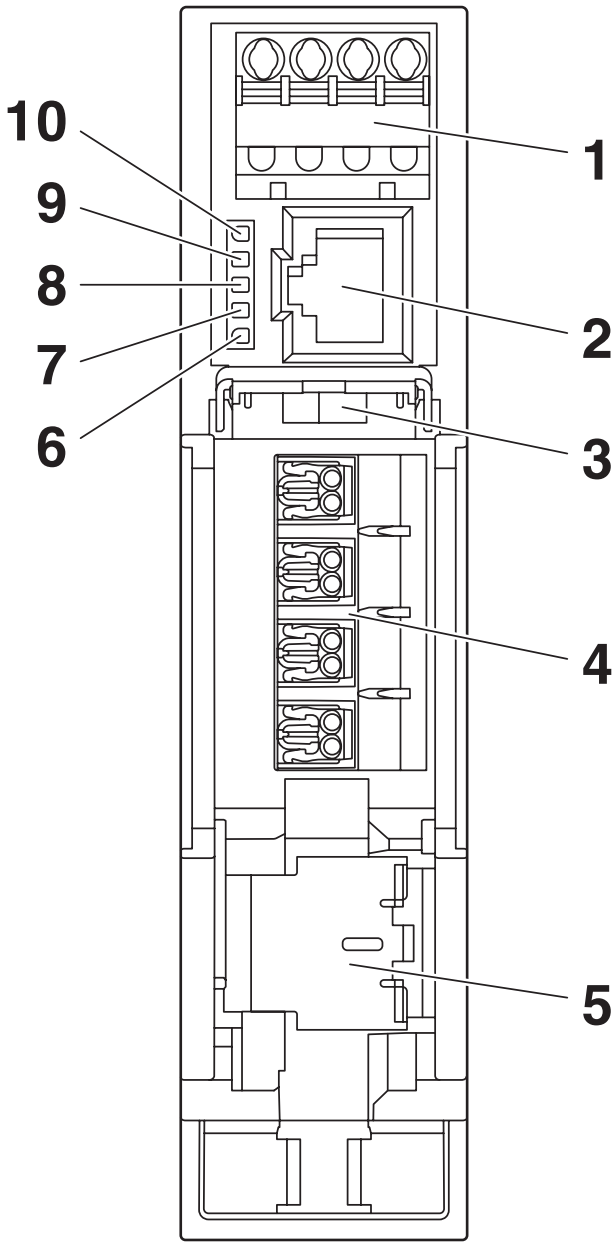
Mounting

Schematic diagram



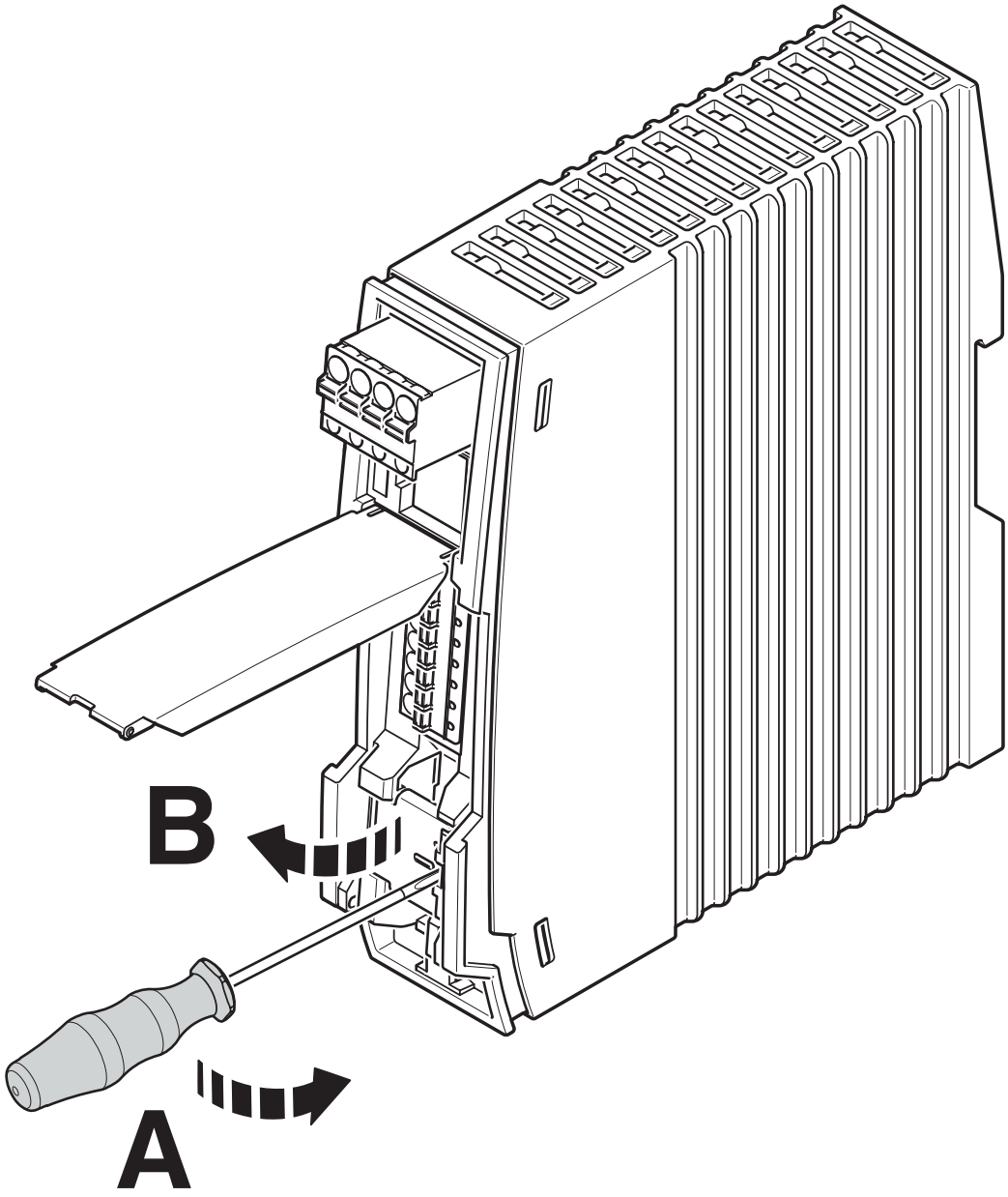
Removal

Schematic diagram



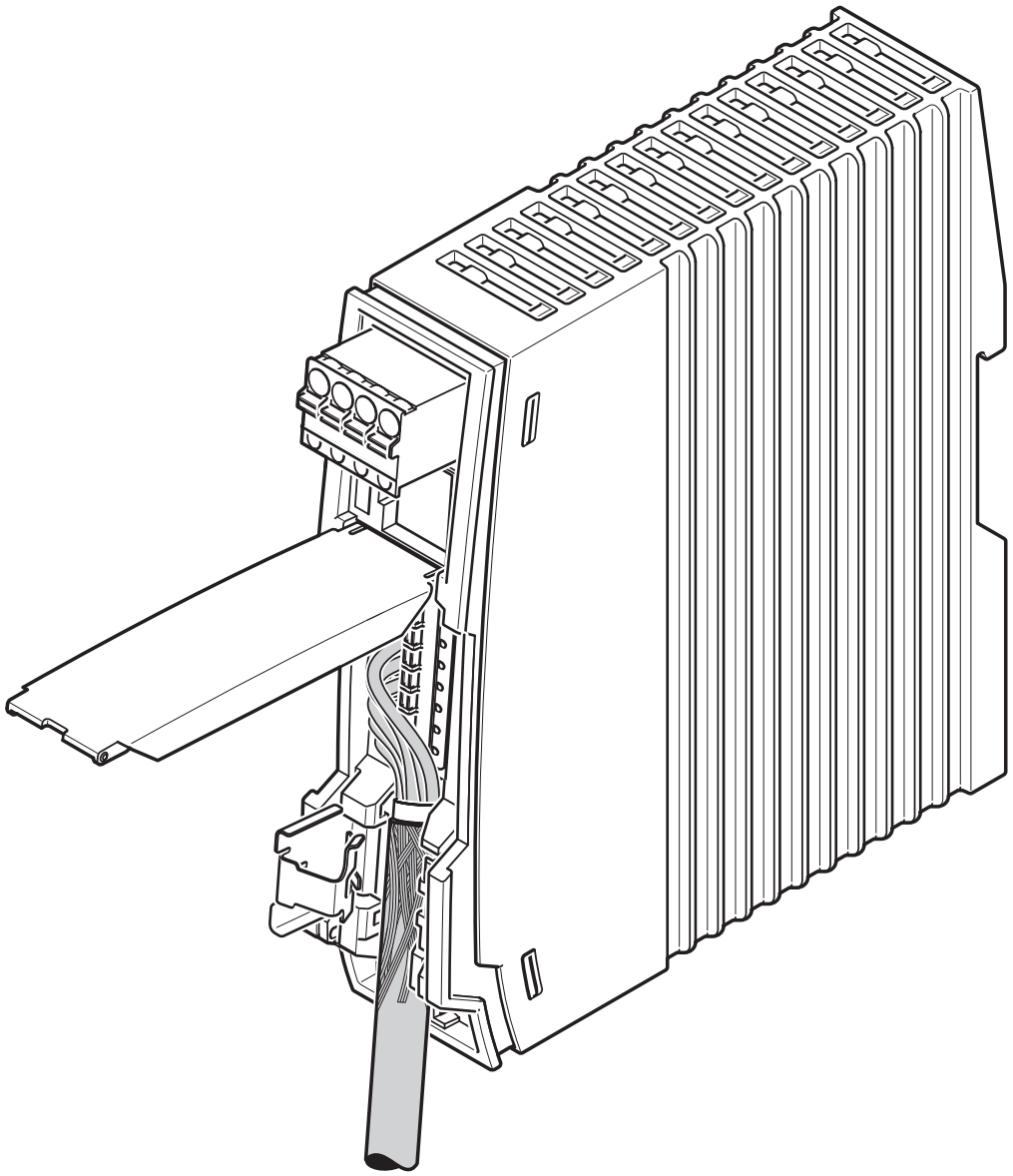
Front view

Schematic diagram



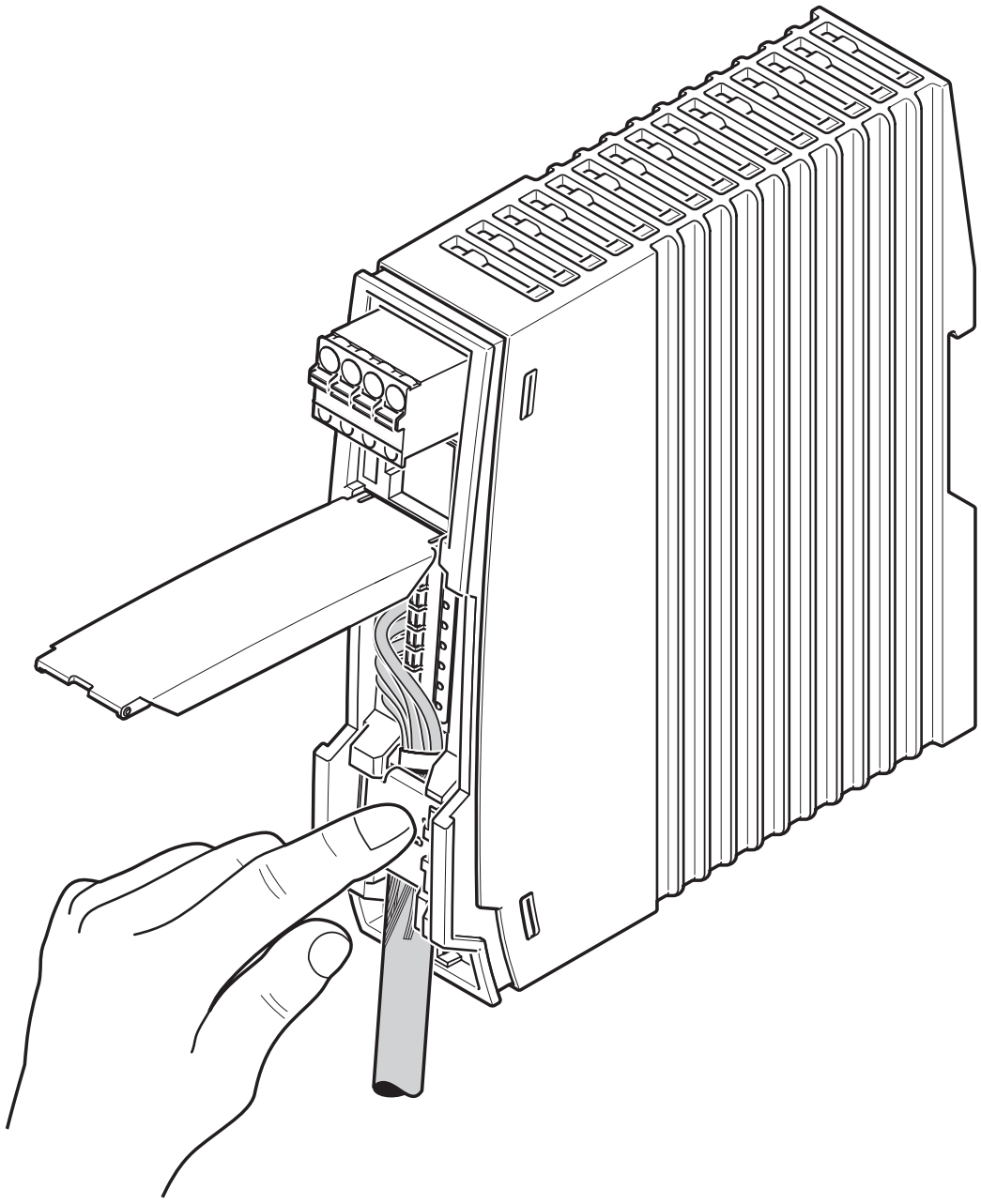
Open shield contact spring

Schematic diagram



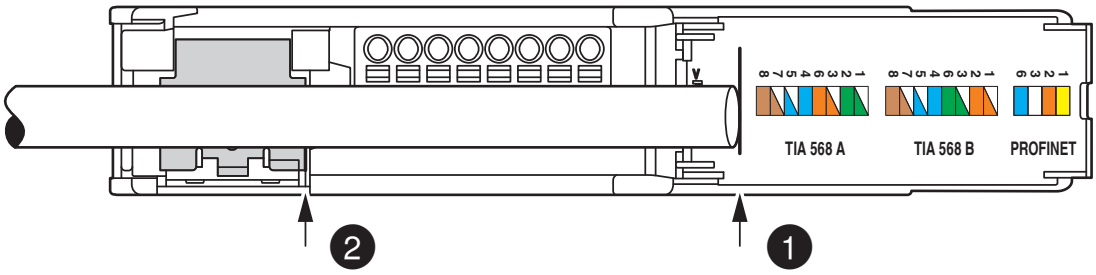
Inserting the cable

Schematic diagram



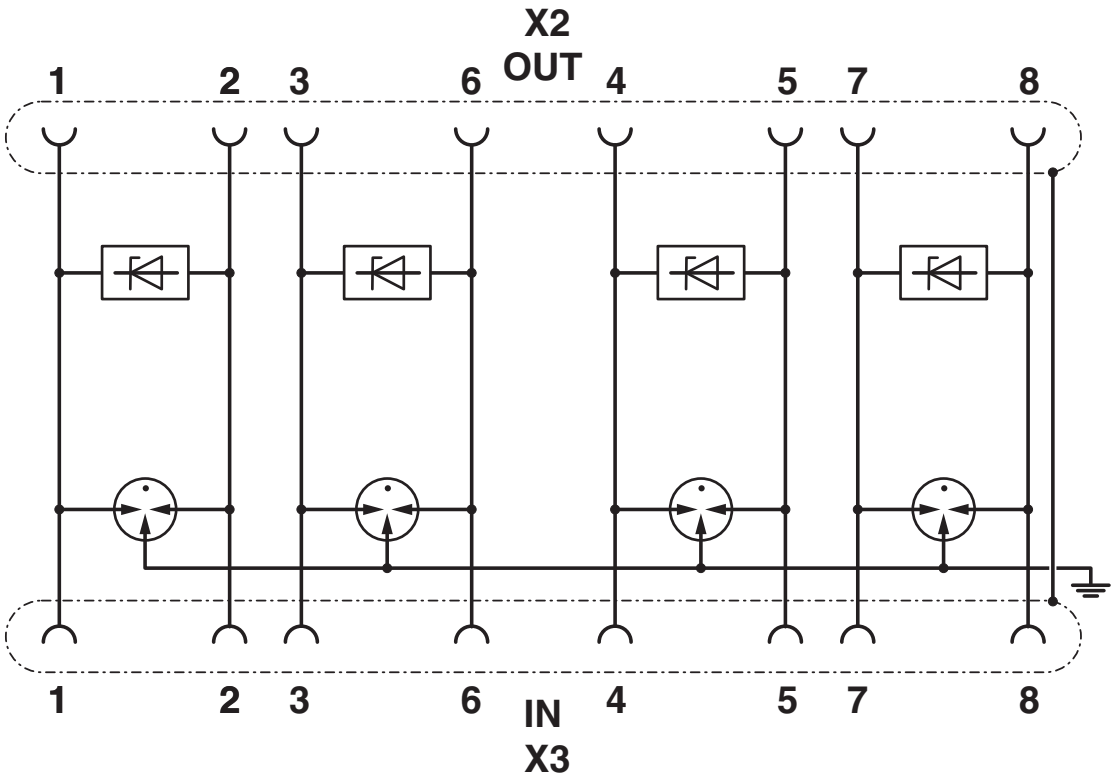
Close shield contact spring

Schematic diagram



Stripping length

Circuit diagram



Circuit diagram (surge protection only)

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/nl/products/2703012

cULus Listed
Approval ID: E238705

cULus Listed
Approval ID: E366272

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	6(c), 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	e5f41b04-2afe-4987-a9f2-7c8ab8b081f7

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