

# INJ 2112-T - Injector



2703014

<https://www.phoenixcontact.com/us/products/2703014>

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PoE injector, 60 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	2703014
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN18
Product key	DNC351
GTIN	4055626463223
Weight per piece (including packing)	458.59 g
Weight per piece (excluding packing)	330.88 g
Customs tariff number	85044083
Country of origin	DE

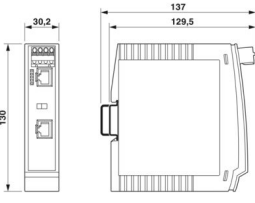
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## Technical data

### Dimensions

Dimensional drawing	
Width	30.2 mm
Height	130 mm
Depth	120 mm

### Notes

#### Note on application

Note on application	Only for industrial use
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#### Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
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### 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
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#### 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 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
Single-wire/terminal point, flexible	0.14 mm <sup>2</sup> ... 0.34 mm <sup>2</sup>
Max. AWG conductor cross-section, flexible	22

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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	60 W
Maximum output power	75 W (UL)

## Data: Ethernet

Connection method	RJ45 jack
Note on the connection method	CAT5e

## Product properties

Product type	Injector
IEC test classification	C2
MTTF	1797 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) 733 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) 283 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

## Functions

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

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

Electrical isolation	VCC // SCM + FE // PoE
Maximum power dissipation for nominal condition	12 W (at 18 V DC) 9 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	4.2 A 2.73 A (24 V DC, Ex areas in accordance with UL-HazLoc) 1.34 A (48 V DC, Ex areas in accordance with UL-HazLoc)
Power consumption	≤ 75 W
Protective circuit	Reverse polarity protection

## Function

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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 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Single conductor/terminal point, rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Single-wire/terminal point, flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
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 ... 45 °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
Standard designation	Surge protective devices in the low-voltage range, in telecommunications and signaling networks

## Approvals

### CE

Certificate	CE-compliant
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### ATEX

Identification	⊕ II 3G Ex ec nC IIC T4 Gc
Certificate	PxCIF19ATEX2703014X
Note	Please follow the special installation instructions in the documentation!

### UL, USA/Canada

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

Identification	IEEE 802.3af IEEE 802.3at
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## EMC data

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

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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
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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

## System properties

### Functionality

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

Optical representation	Yellow LED
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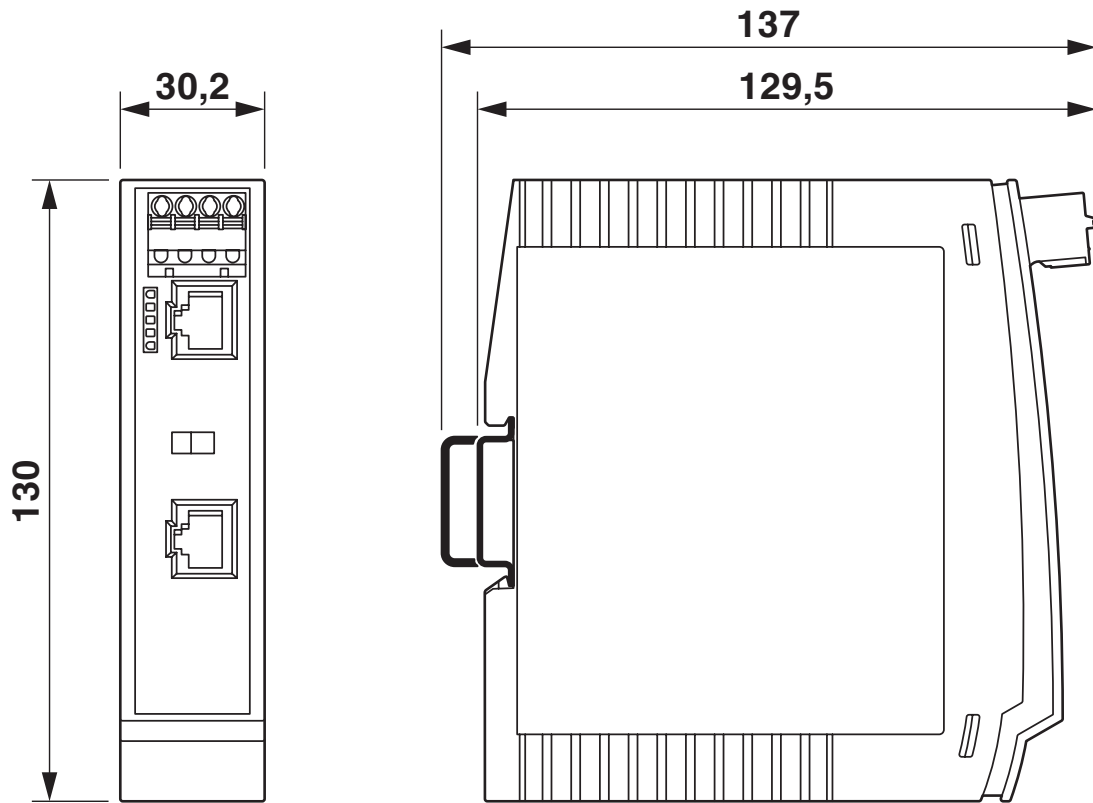
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## Drawings

Dimensional drawing



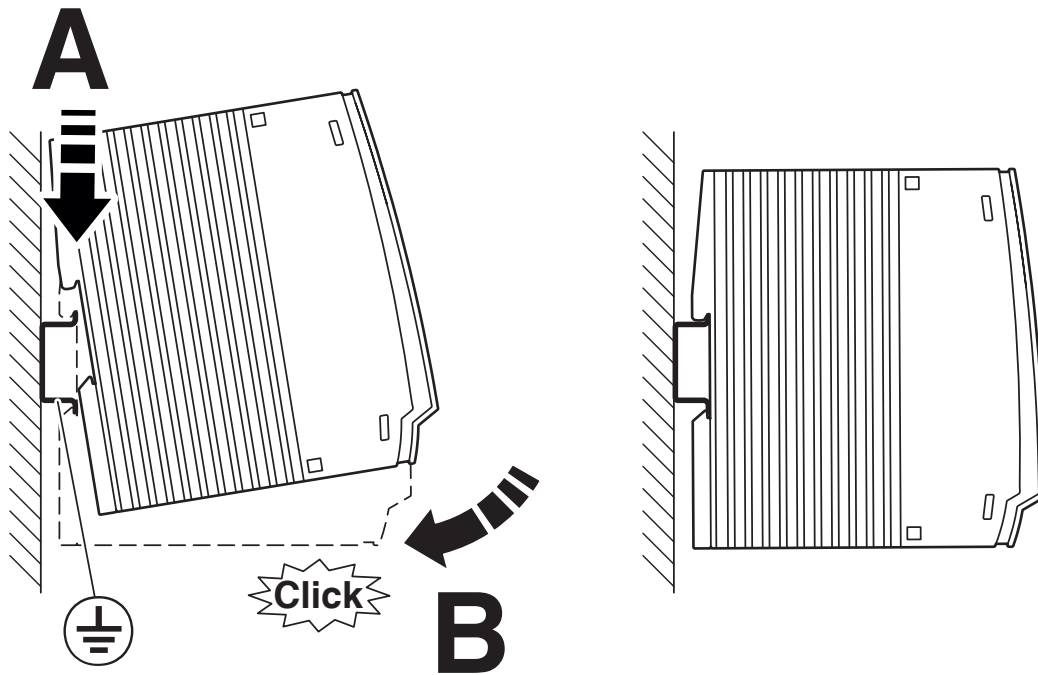
Housing dimensions

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Schematic diagram



Mounting

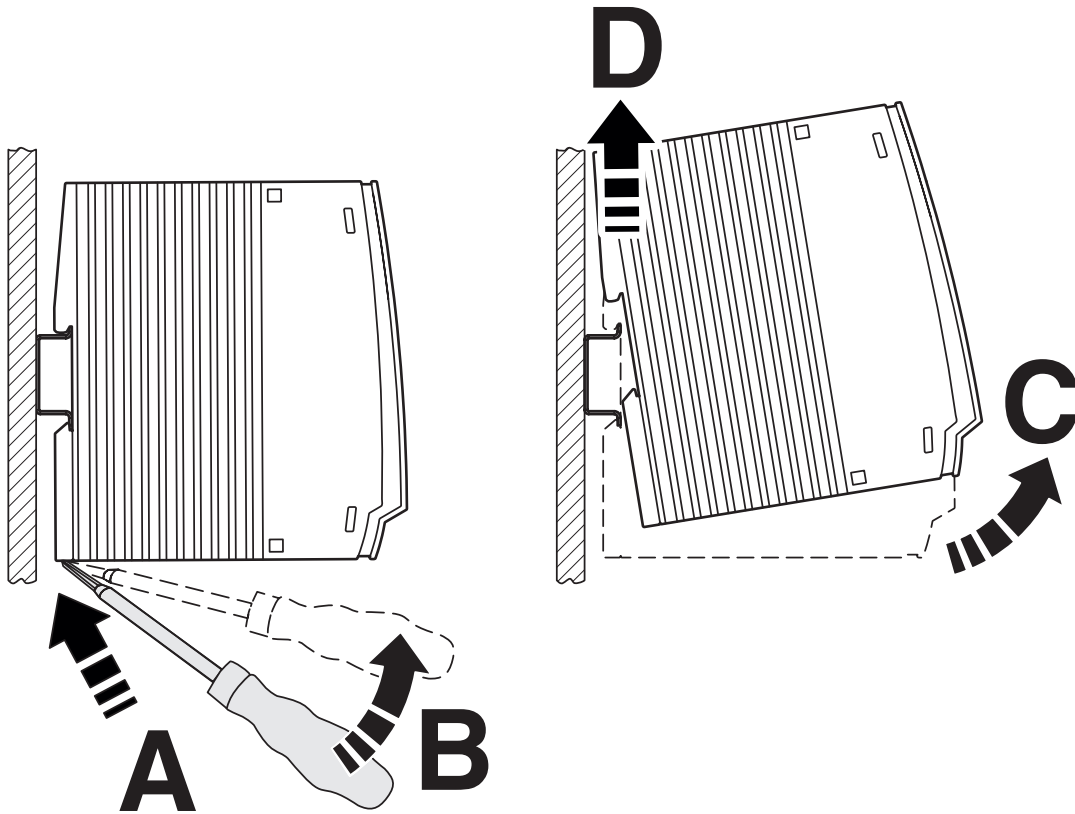
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Schematic diagram



Removal

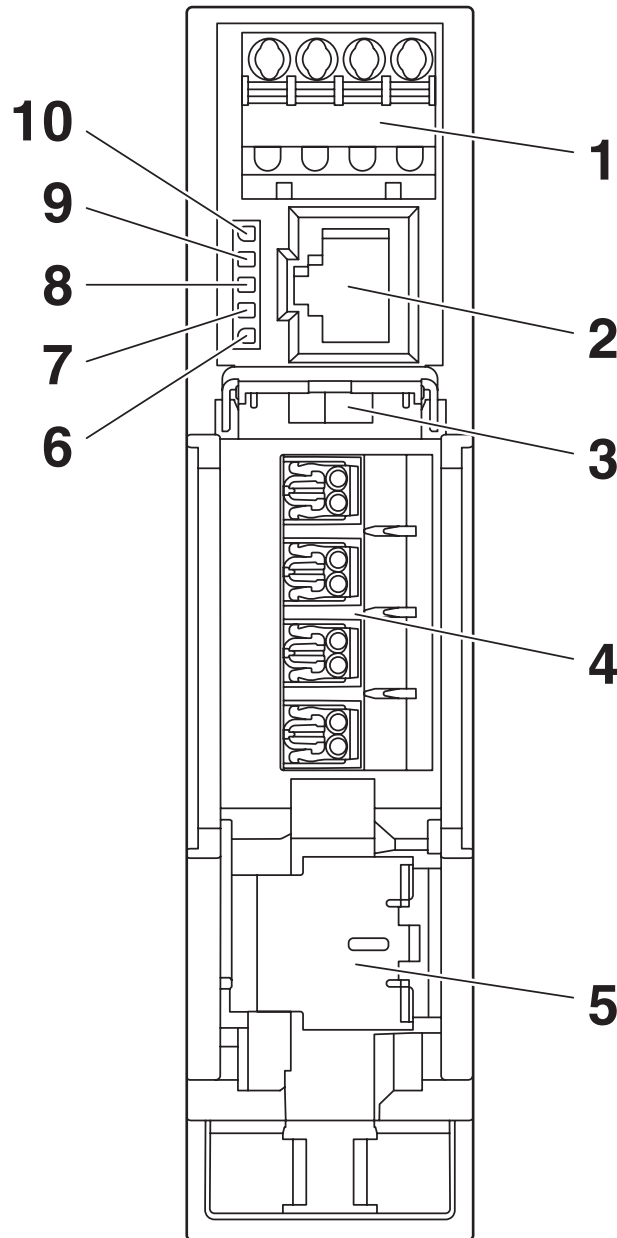
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Schematic diagram



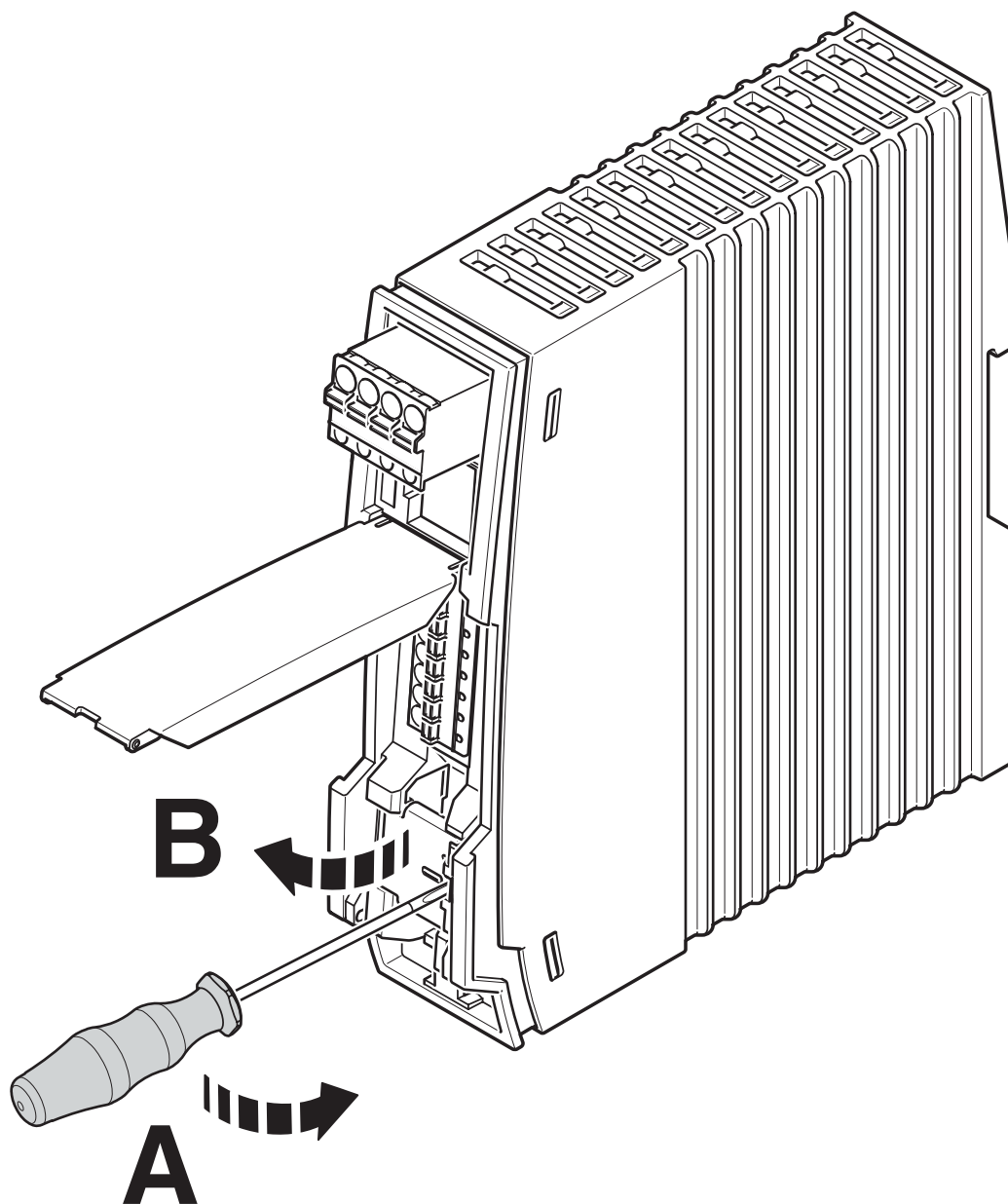
Front view

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Schematic diagram



Open shield contact spring

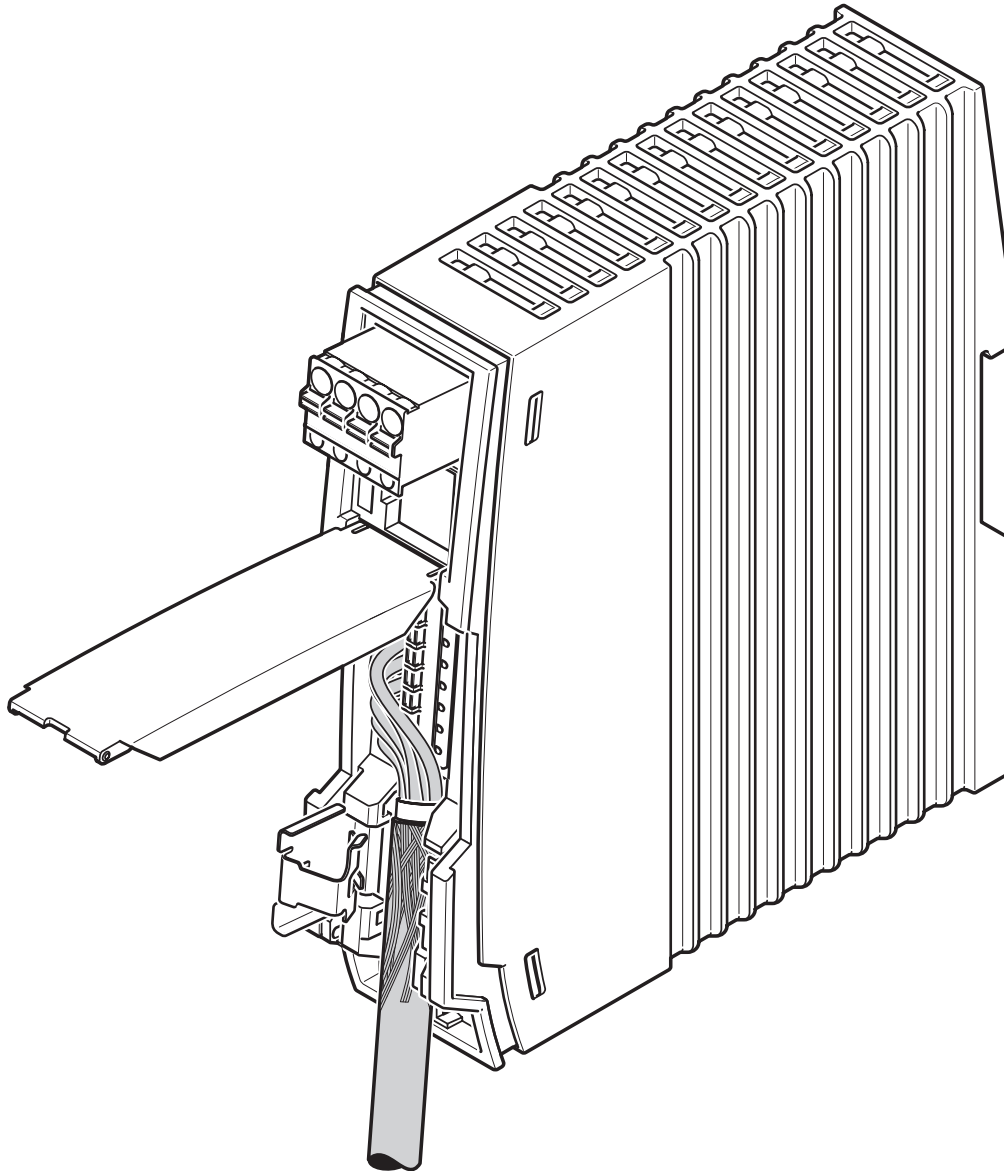
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Schematic diagram



Inserting the cable

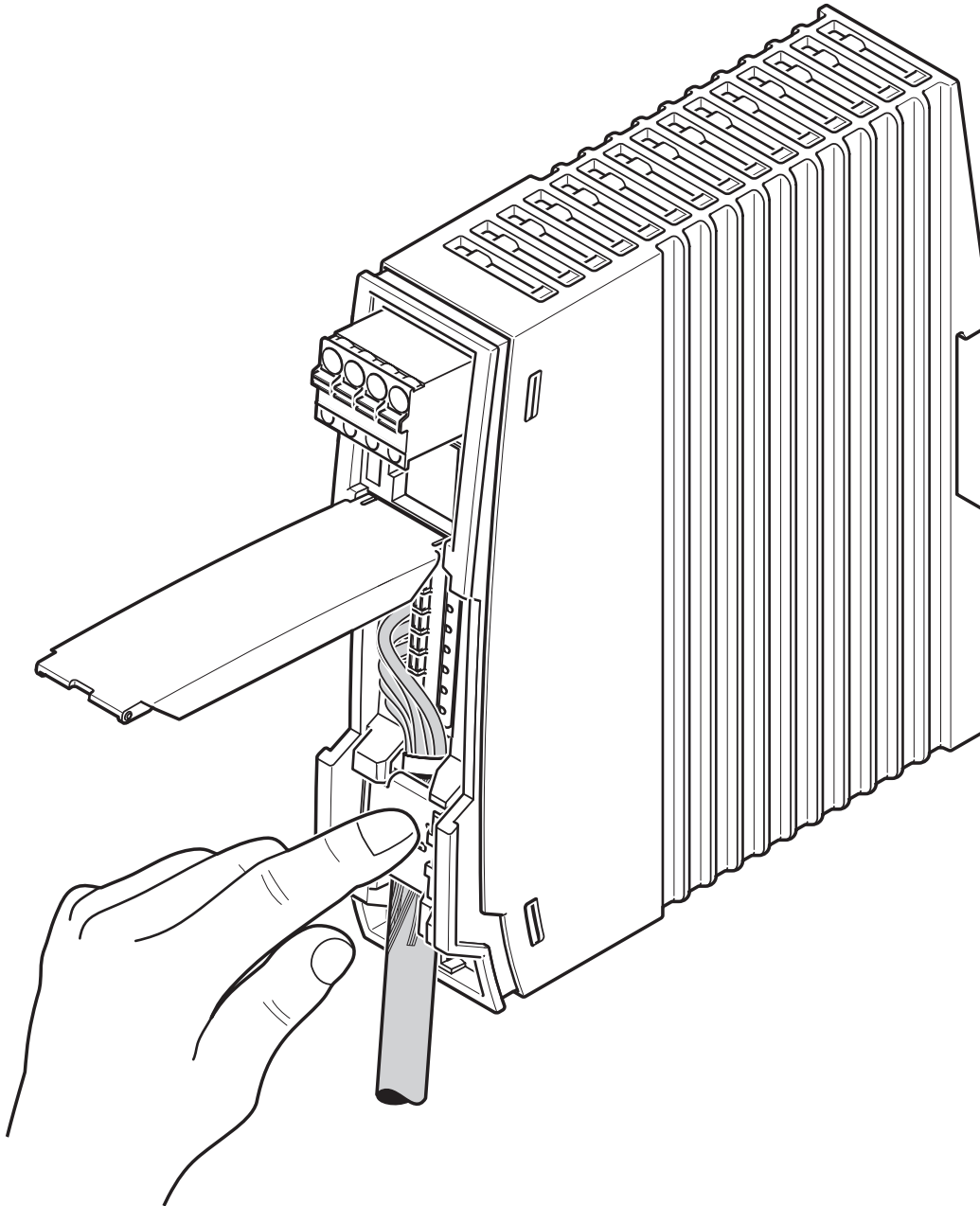
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Schematic diagram



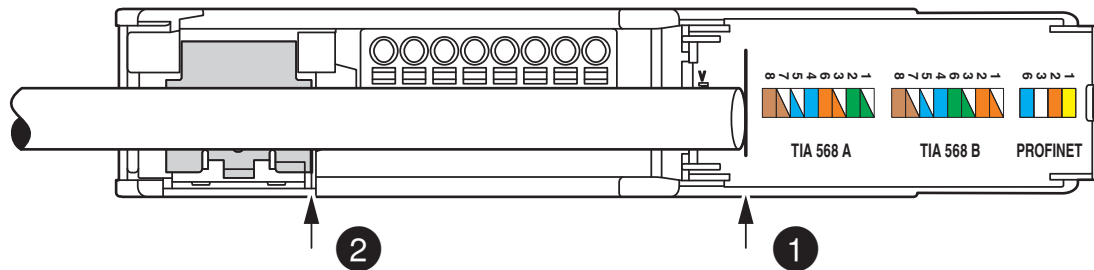
Close shield contact spring

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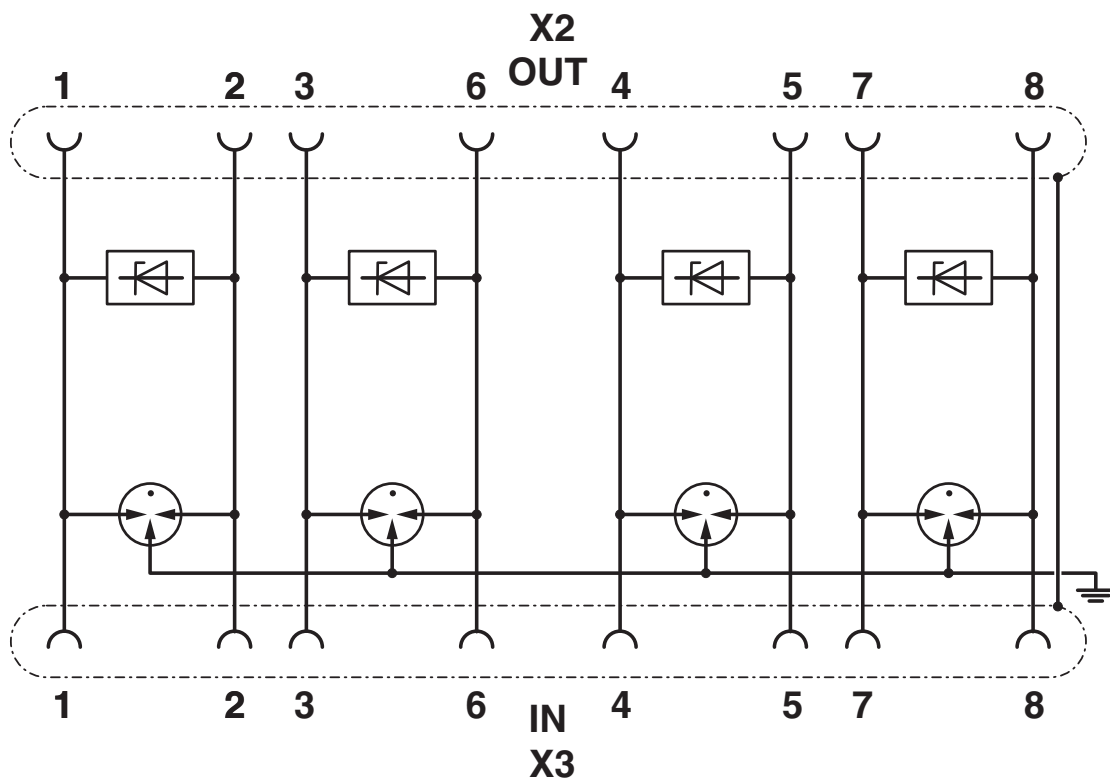
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Schematic diagram



Stripping length

Circuit diagram



Circuit diagram (surge protection only)

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2703014>



**cULus Listed**

Approval ID: E238705



**cULus Listed**

Approval ID: E366272

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## Classifications

### ECLASS

ECLASS-13.0	19170112
ECLASS-15.0	19170112

### ETIM

ETIM 10.0	EC001128
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### UNSPSC

UNSPSC 21.0	43223300
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## 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	4b4da3f2-63fb-45d9-b473-456daa4fe119

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