

Injector - INJ 2102-T - 2703012

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PoE injector, 30 W, RJ45 socket 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.

Your advantages

- Extended temperature range of -40°C to +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



Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4055626463209
Weight per Piece (excluding packing)	324.720 g
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

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

Width	30.2 mm
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Injector - INJ 2102-T - 2703012

Technical data

Dimensions

Height	130 mm
Depth	120 mm

Ambient conditions

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

General

Electrical isolation	VCC // SCM + FE // PoE
Test voltage data interface/power supply	1.5 kV AC (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Mounting position	vertical
Net weight	324.72 g
Housing material	Plastic
Color	gray
MTTF	1510 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))
	661 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	256 Years (SN 29500 standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))

Power supply

Nominal supply voltage	24 V DC (SELV/PELV, restrictions for ATEX applications)
	48 V DC
Supply voltage range	18 V DC ... 57 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
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 2.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 2.5 mm ²
Conductor cross section flexible max.	2.50 mm ²
Conductor cross section flexible min.	0.20 mm ²
Conductor cross section solid max.	2.50 mm ²
Conductor cross section solid min.	0.20 mm ²
Conductor cross section AWG max.	12
Conductor cross section AWG min.	20

Injector - INJ 2102-T - 2703012

Technical data

Serial interface

Interface 1	Ethernet
Connection method	IDC connection
Transmission length	100 m (including patch cables)
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	0.34 mm ²
Conductor cross section flexible min.	0.14 mm ²
Conductor cross section flexible max.	0.34 mm ²
Conductor cross section AWG min.	26
Conductor cross section AWG max.	22
Wire diameter incl. insulation	1.6 mm (Terminal block is tested with PVC insulation - other insulation materials available on request)
Pin assignment	1:1
Basic functions	PSE/Midspan, compliant with IEEE 802.3af, at
Serial transmission speed	10/100/1000 Mbps
Output nominal voltage	54 V DC (PoE)
Output power	30 W
Maximum output power	40 W
Interface 2	Ethernet
Connection method	RJ45 CAT5e

Function

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

Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	ATEX
Identification	# II 3 G Ex ec nC IIC T4 Gc
Certificate	PxCIF19ATEX2703011X
Designation	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
Designation	UL, USA
Certificate	UL 60079-0 Ed. 6 / UL 60079-15 Ed. 4
Designation	UL, Canada
Certificate	CSA 22.2 No. 60079-0 Ed. 3 / CSA 22.2 No. 60079-15:16

Injector - INJ 2102-T - 2703012

Technical data

Conformance/approvals

Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	10 Hz ... 57 Hz, amplitude ± 3.5 mm, 57 Hz ... 150 Hz, 5g
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	30g for 11 ms, three shocks in each spatial direction
Type of test	Continuous shock according to EN 60068-2-27/IEC 60068-2-27
Test result	10g for 16 ms, 1000 shocks in each spatial direction
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV (Test Level 3)
Indirect discharge	± 6 kV
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz (Test Level 3)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 1 kV (Data line, asymmetrical)
	± 2 kV (I/O cable on field side only, asymmetric)
Standards/regulations	EN 61000-6-4
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Standards/regulations	IEC 61643-21
IEC test classification	C2

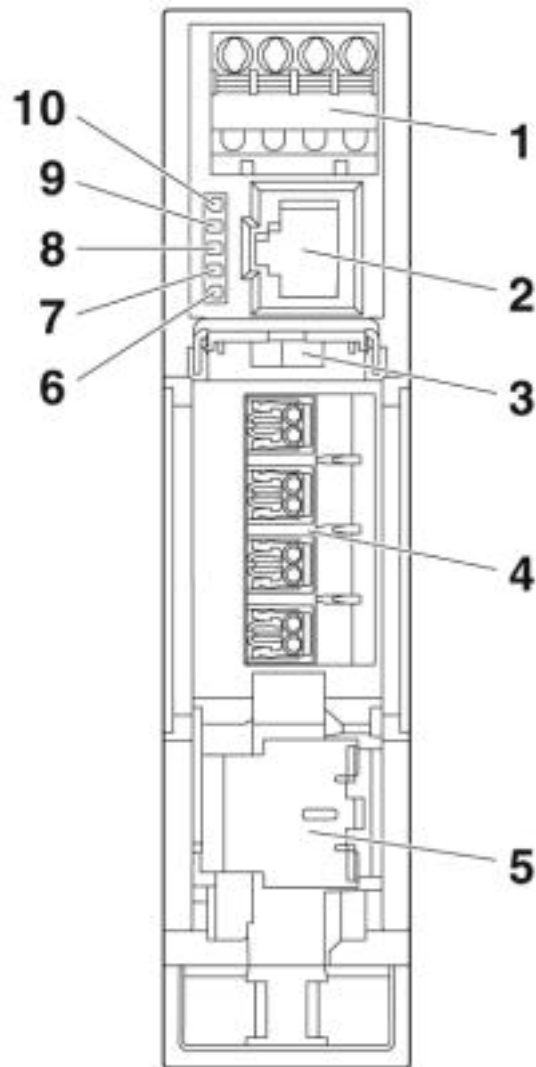
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

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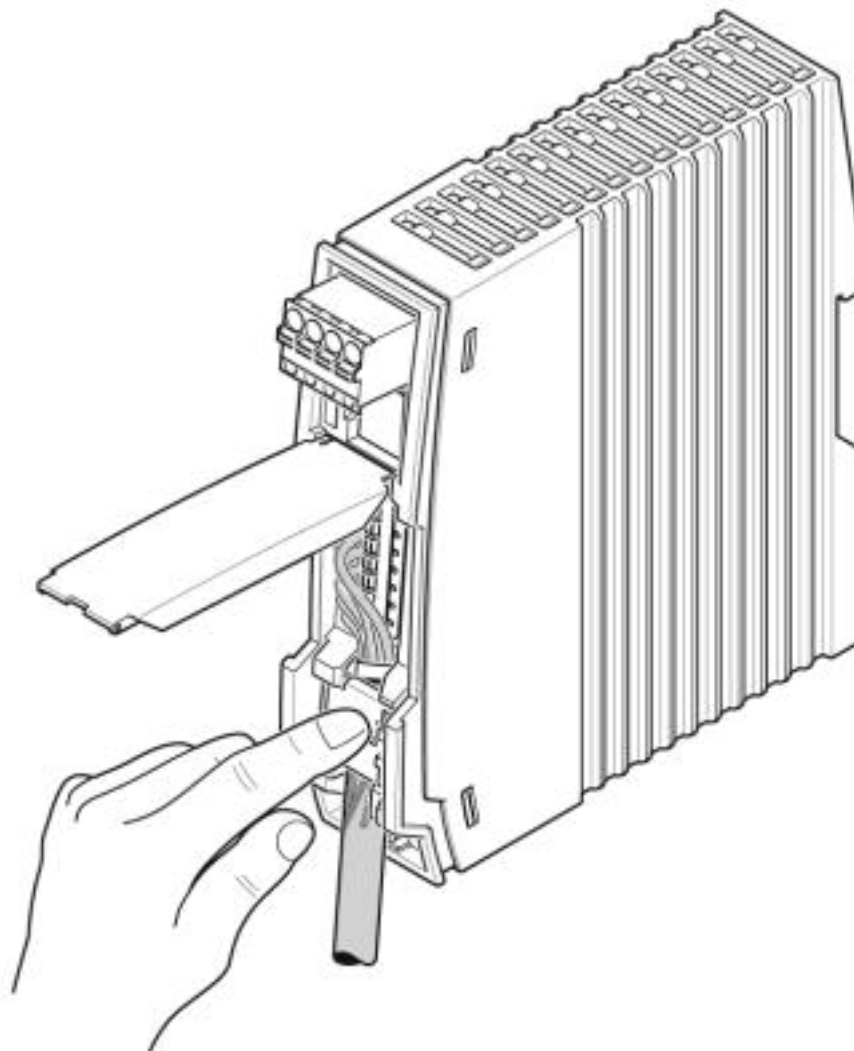
Schematic diagram



Front view

Injector - INJ 2102-T - 2703012

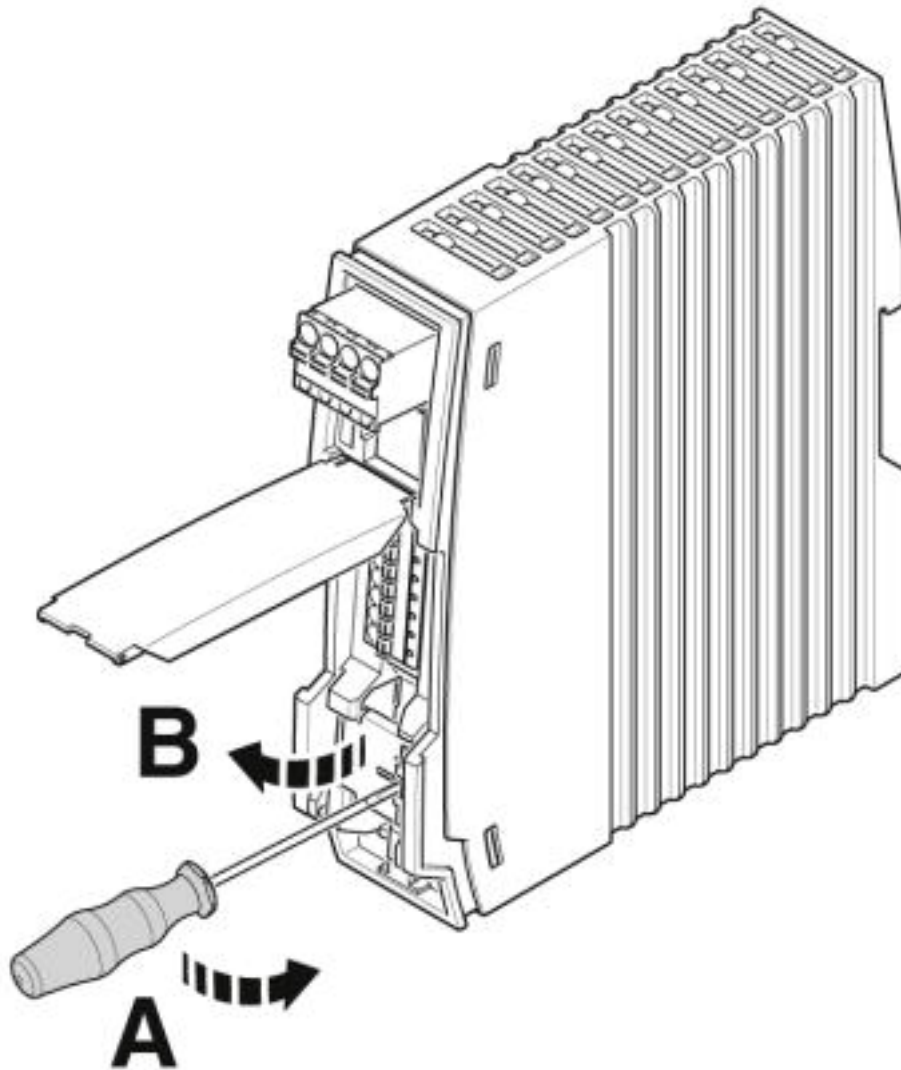
Schematic diagram



Close shield contact spring

Injector - INJ 2102-T - 2703012

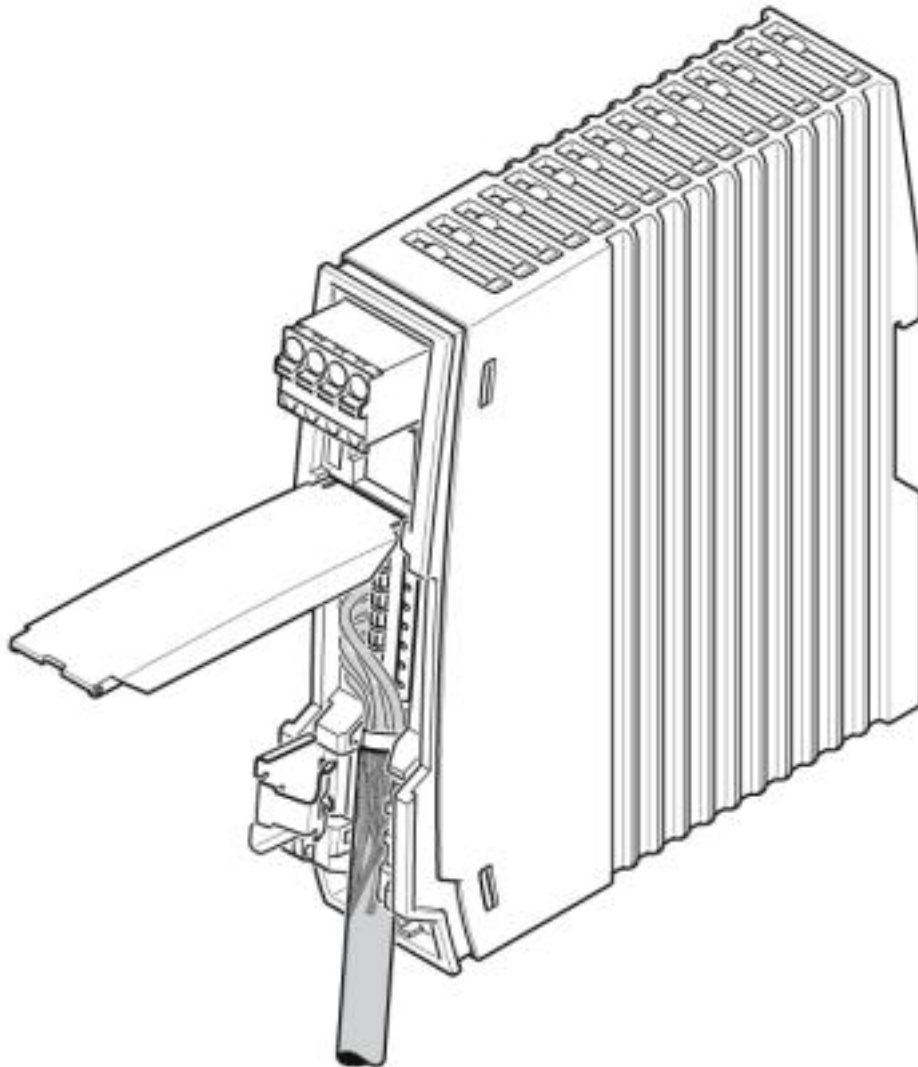
Schematic diagram



Open shield contact spring

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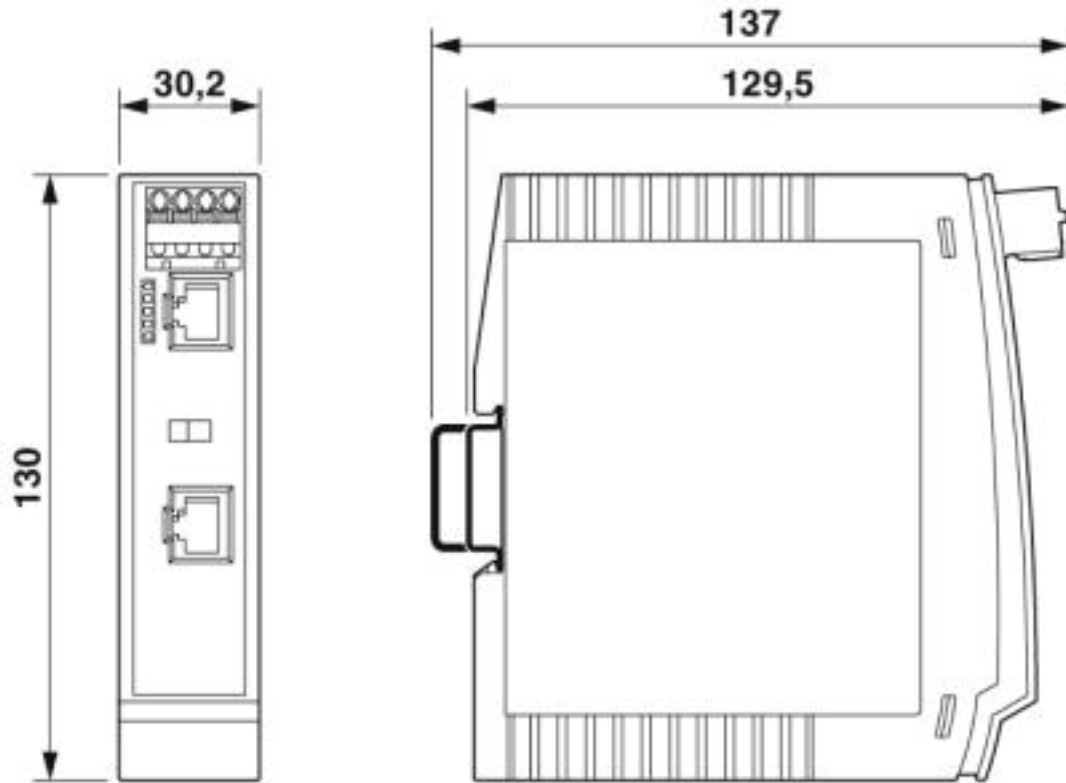
Schematic diagram



Inserting the cable

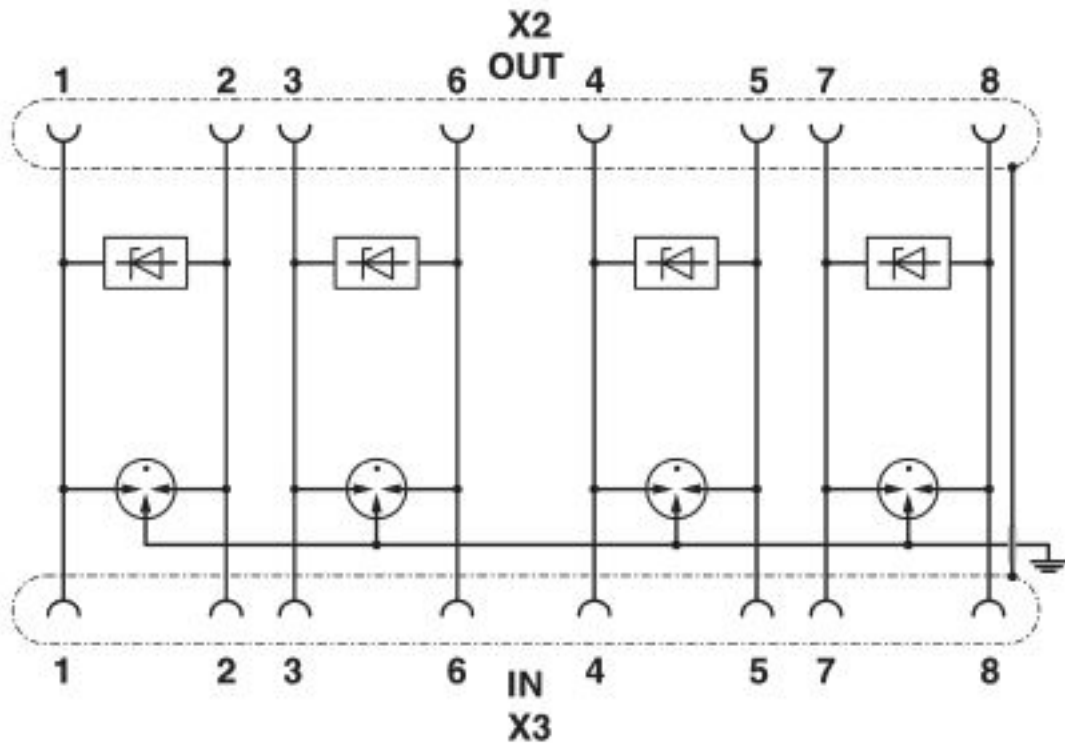
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Dimensional drawing



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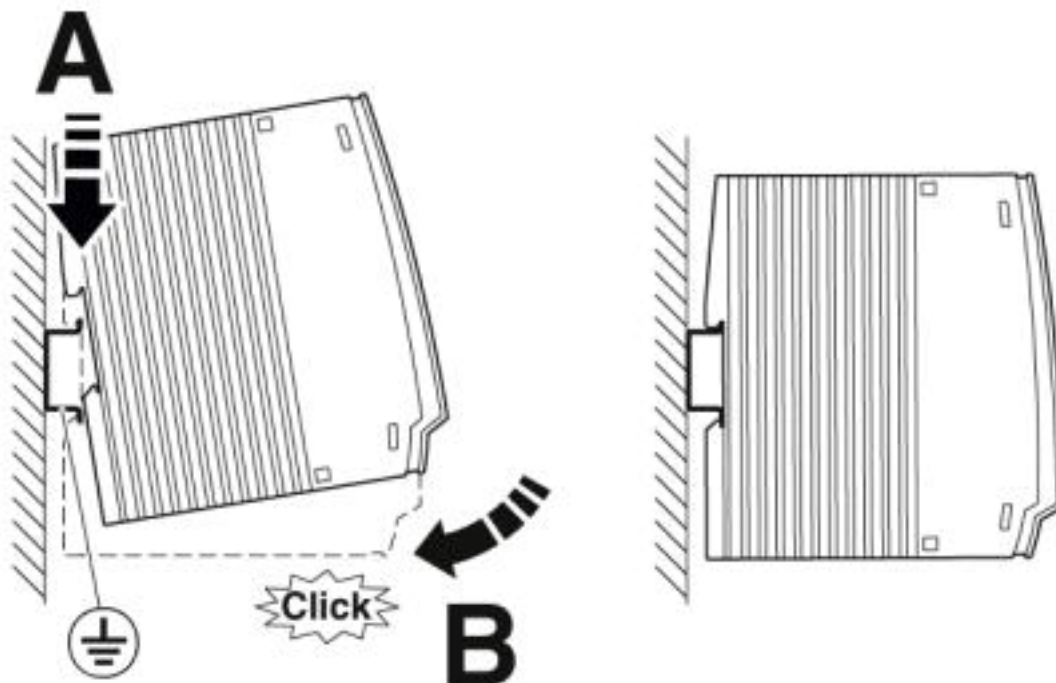
Circuit diagram



Circuit diagram (surge protection only)

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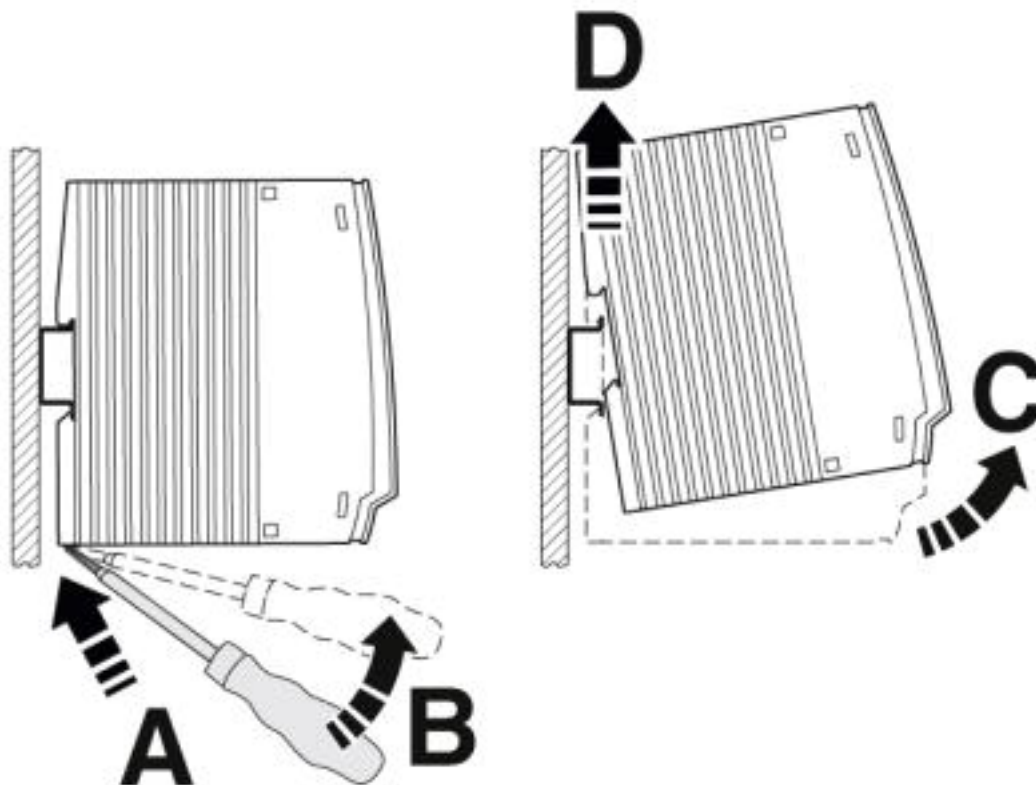
Schematic diagram



Mounting

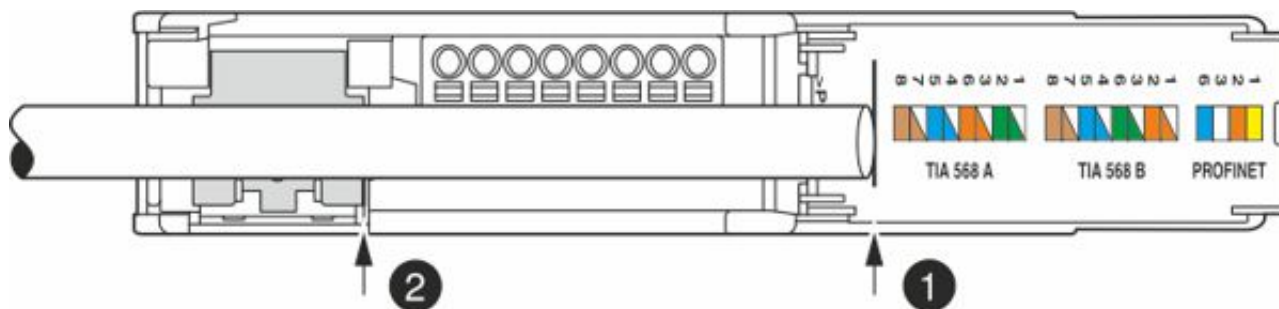
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Schematic diagram



Removal

Schematic diagram



Stripping length

Classifications

eCl@ss

eCl@ss 6.0	19170100
eCl@ss 7.0	19170112

Injector - INJ 2102-T - 2703012

Classifications

eCl@ss

eCl@ss 8.0	19170112
eCl@ss 9.0	19170112

ETIM

ETIM 5.0	EC002599
ETIM 6.0	EC002599
ETIM 7.0	EC002599

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

UL Listed / cUL Listed / cULus Listed

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
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cULus Listed			
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Accessories

Accessories

Data cable by the meter

Injector - INJ 2102-T - 2703012

Accessories

Network cable - FL CAT5 HEAVY - 2744814



CAT5-SF/UTP cable (J-02YS(ST)C HP 2 x 2 x 24 AWG), heavy-duty installation cable, 2 x 2 x 0.22 mm², solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter

Network cable - FL CAT5 FLEX - 2744830



CAT5-SF/UTP cable (J-LI02YS(ST)C H 2 x 2 x 26 AWG), light-duty, flexible installation cable 2 x 2 x 0.14 mm², stranded, shielded, outer sheath: 5.75 mm ± 0.15 mm diameter

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



Network cable, Ethernet CAT6_A (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded, free cable end, on free cable end, cable length: Free entry (0.5 ... 400 m)

Data cable preassembled

Network cable - FL CAT5 HEAVY CONF/ - 2744827



CAT5-SF/UTP cable (J-02YS(ST)C HP 2 x 2 x 24 AWG), heavy-duty installation cable, 2 x 2 x 0.22 mm², solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter, preassembled on both sides with RJ45 plug, crossover or line

Network cable - FL CAT5 FLEX CONF/ - 2744843



CAT5-SF/UTP cable (J-LI02YS(ST)C H 2 x 2 x 26 AWG), light-duty, flexible installation cable 2 x 2 x 0.14 mm², stranded, shielded, outer sheath: 5.75 mm ± 0.15 mm diameter, preassembled on both sides with RJ45 plug, crossover or line assignment

Data plug

Injector - INJ 2102-T - 2703012

Accessories

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



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

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



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

Electronics pliers

Diagonal cutter - MICROFOX-SP - 1212488



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

Network isolator

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

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

Injector - INJ 2102-T - 2703012

Accessories

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

Network isolator - FL ISOLATOR 100-M12 - 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 - FL CAT5 PATCH 0,3 - 2832250



Patch cable, CAT5, assembled, 0.3 m

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

Patch cable - FL CAT5 PATCH 1,0 - 2832276



Patch cable, CAT5, assembled, 1 m

Injector - INJ 2102-T - 2703012

Accessories

Patch cable - FL CAT5 PATCH 1,5 - 2832221



Patch cable, CAT5, assembled, 1.5 m

Patch cable - FL CAT5 PATCH 2,0 - 2832289



Patch cable, CAT5, assembled, 2 m

Patch cable - FL CAT5 PATCH 3,0 - 2832292



Patch cable, CAT5, assembled, 3 m

Patch cable - FL CAT6 PATCH 0,3 - 2891181



Patch cable, CAT6, pre-assembled, 0.3 m

Patch cable - FL CAT6 PATCH 0,5 - 2891288



Patch cable, CAT6, pre-assembled, 0.5 m

Injector - INJ 2102-T - 2703012

Accessories

Patch cable - FL CAT6 PATCH 1,0 - 2891385



Patch cable, CAT6, pre-assembled, 1.0 m

Patch cable - FL CAT6 PATCH 1,5 - 2891482



Patch cable, CAT6, pre-assembled, 1.5 m

Patch cable - FL CAT6 PATCH 2,0 - 2891589



Patch cable, CAT6, pre-assembled, 2.0 m

Patch cable - FL CAT6 PATCH 3,0 - 2891686



Patch cable, CAT6, pre-assembled, 3.0 m

Patch cable - FL CAT6 PATCH 5,0 - 2891783



Patch cable, CAT6, pre-assembled, 5.0 m

Injector - INJ 2102-T - 2703012

Accessories

Patch cable - FL CAT6 PATCH 7,5 - 2891880



Patch cable, CAT6, pre-assembled, 7.5 m

Patch cable - FL CAT6 PATCH 10 - 2891877



Patch cable, CAT6, pre-assembled, 10 m

Patch cable - FL CAT6 PATCH 12,5 - 2891369



Patch cable, CAT6, pre-assembled, 12.5 m

Patch cable - FL CAT6 PATCH 15,0 - 2891372



Patch cable, CAT6, pre-assembled, 15.0 m

Patch cable - FL CAT6 PATCH 20,0 - 2891576



Patch cable, CAT6, pre-assembled, 20.0 m

Screwdriver tools

Injector - INJ 2102-T - 2703012

Accessories

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

Assembly tool - FL CRIMPTOOL - 2744869



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

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



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

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