

Patch panels - PP-RJ-SC-F - 2703021

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Patch panel, RJ45 socket on screw terminal blocks, 10/100/1000 Mbps, DIN rail mounting, 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

- ✓ Extended temperature range of -40°C to +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
- ✓ 10/100/1000 Mbps
- ✓ Shipbuilding approval in accordance with DNV GL



Distributed Network Protocol

Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 463339
GTIN	4055626463339
Weight per Piece (excluding packing)	124.200 g
Custom tariff number	85366990
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

Patch panels - PP-RJ-SC-F - 2703021

Technical data

Dimensions

Width	23.8 mm
Height	101.3 mm
Depth	86 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 75 °C
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	FE // Ethernet
External cable diameter	5.5 mm ... 6.5 mm
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Net weight	124.2 g
Housing material	Plastic
Color	gray
MTTF	3268 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))
	1238 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	468 Years (SN 29500 standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))
Degree of pollution	2
Overvoltage category	II

Power supply

Supply voltage range	36 V DC ... 52 V DC #10 % (via PoE)
	42 V DC ... 57 V DC (With UL approval)

Interfaces

Interface 1	Ethernet interface, 10/100/1000Base-T(X) according to IEEE 802.3u
Connection method	Screw terminal block
Transmission length	100 m (including patch cables)
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section flexible min.	0.14 mm ²
Conductor cross section flexible max.	1.5 mm ²
Conductor cross section AWG min.	28
Conductor cross section AWG max.	16
Torque	0.22 Nm ... 0.25 Nm

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Interfaces

Stripping length	5 mm
Pin assignment	1:1
Serial transmission speed	10/100/1000 Mbps
Maximum output current	725 mA (PoE)
Current carrying capacity	≤ 1.5 A (≤ 60 W (PoE+))
Maximum output power	60 W
Interface 2	Ethernet interface, 10/100/1000Base-T(X) according to IEEE 802.3u
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	≤ 1.5 A
Power consumption	270 mW (Shield current monitoring)
Impedance	≤ 1 Ω
Voltage	≤ 10 V

Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	ATEX
Identification	# II 3 G Ex nA nC IIC T4 Gc X
Additional text	Please follow the special installation instructions in the documentation!
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
Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A
Designation	Shipbuilding
Identification	DNV GL
Temperature	D
Humidity	B
Vibration	B
EMC	B

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Technical data

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)
Standards/regulations	EN 61000-6-4
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Standards/regulations	DIN EN 61643-21
Rated insulation voltage	85 V DC
IEC test classification	C2

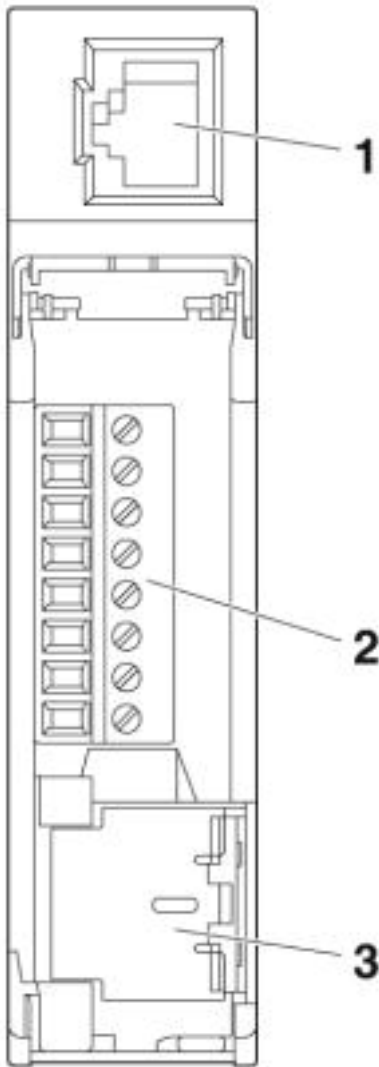
Environmental Product Compliance

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

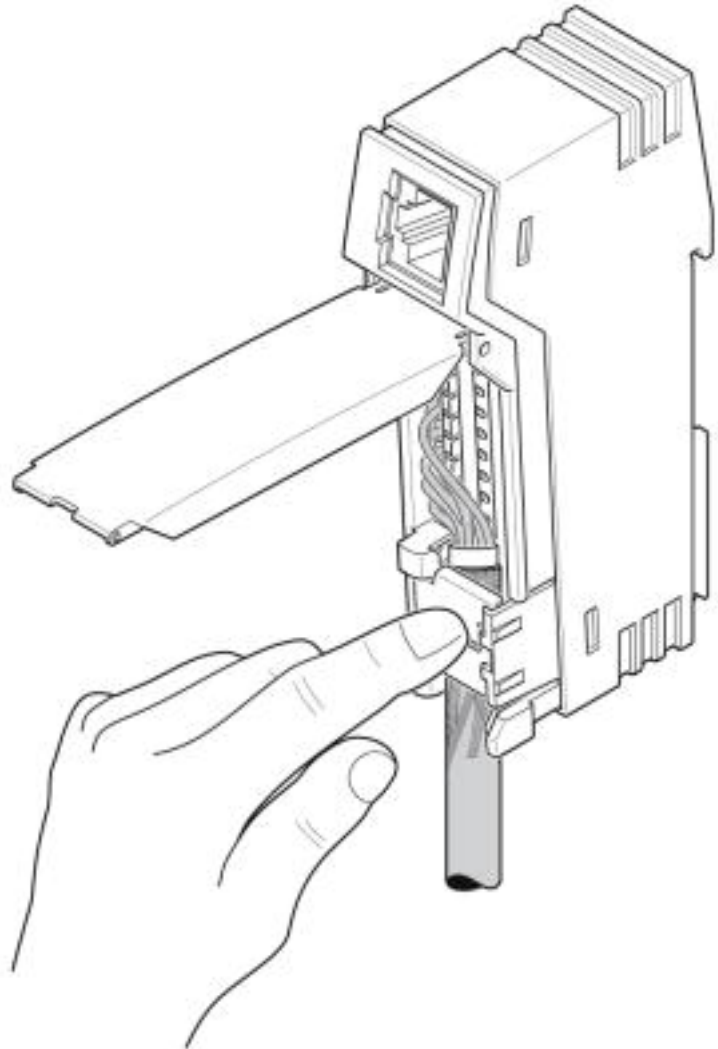
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Schematic diagram



Front view

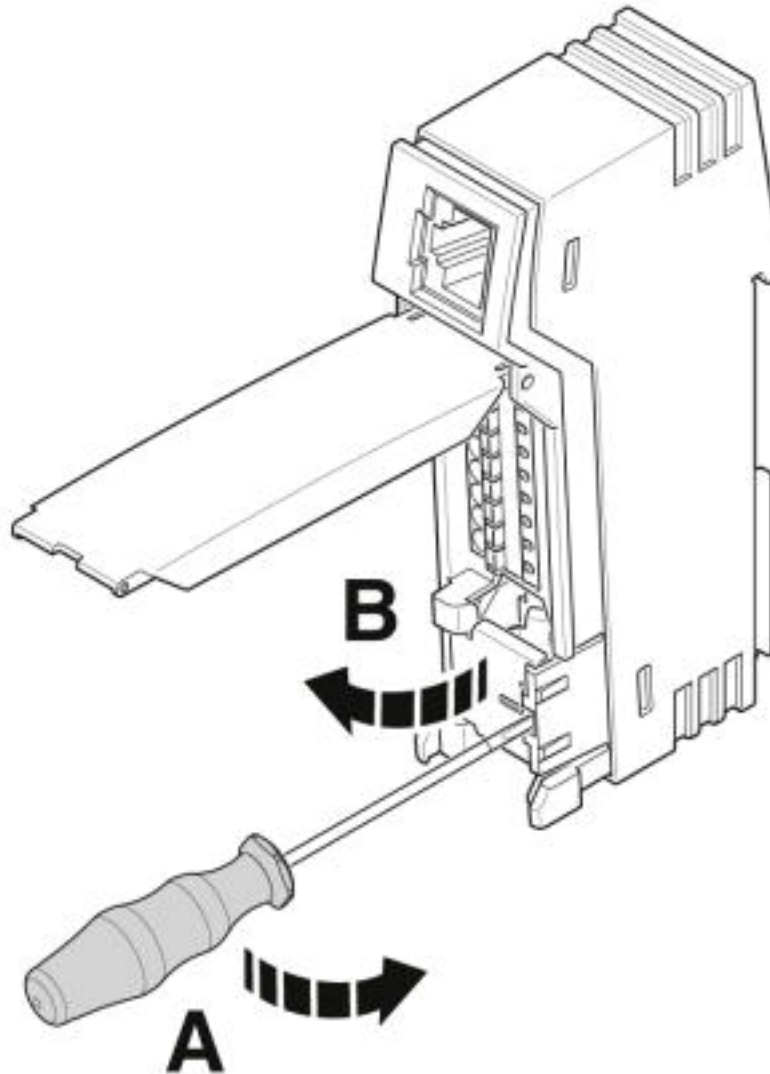
Schematic diagram



Close shield contact spring

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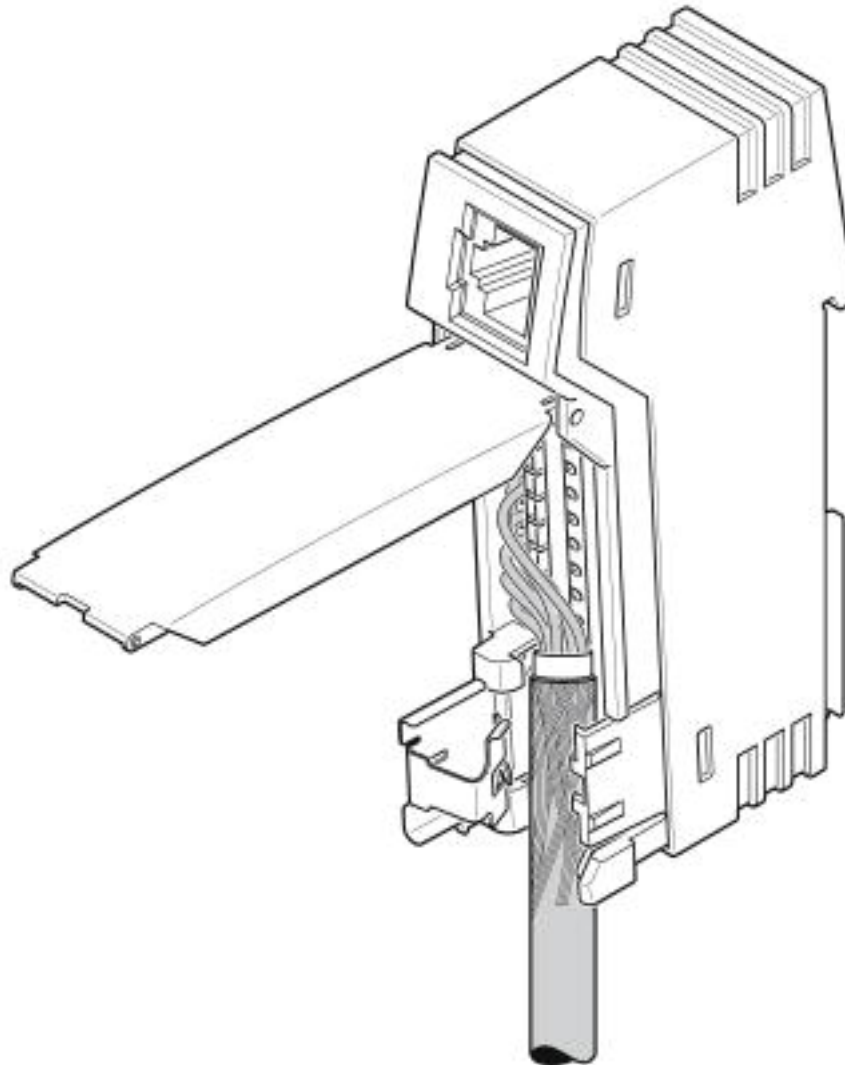
Schematic diagram



Open shield contact spring

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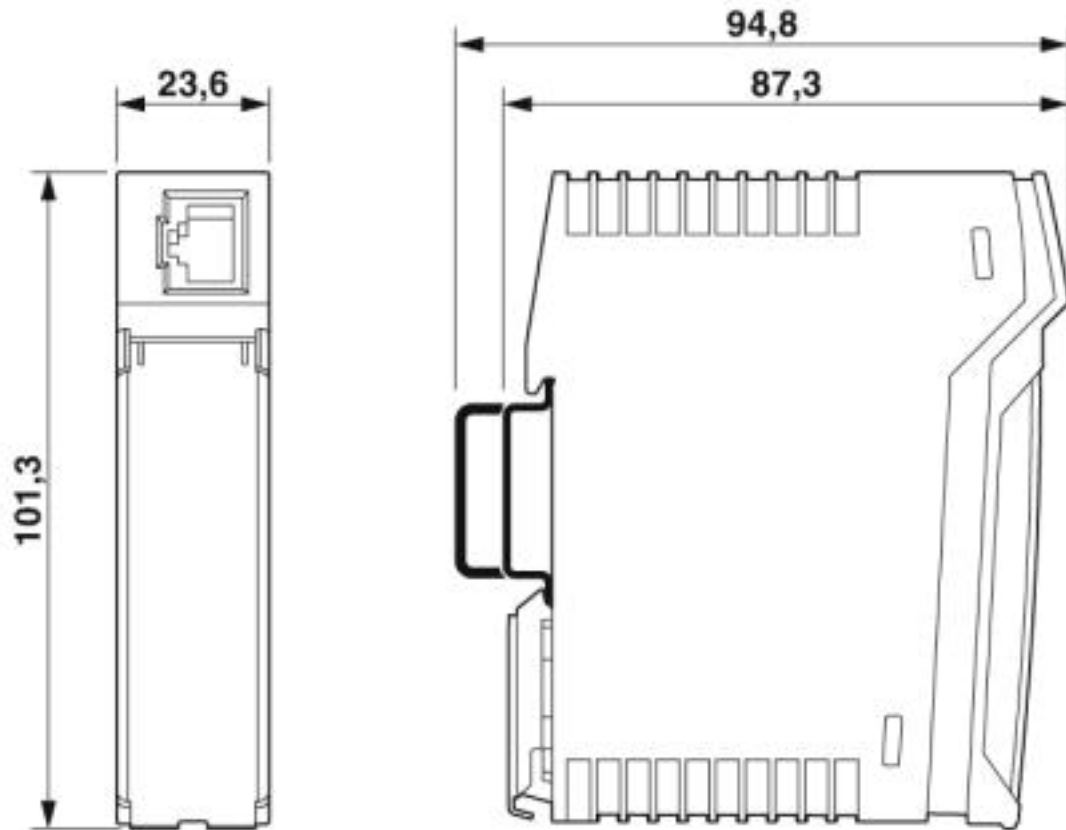
Schematic diagram



Inserting the cable

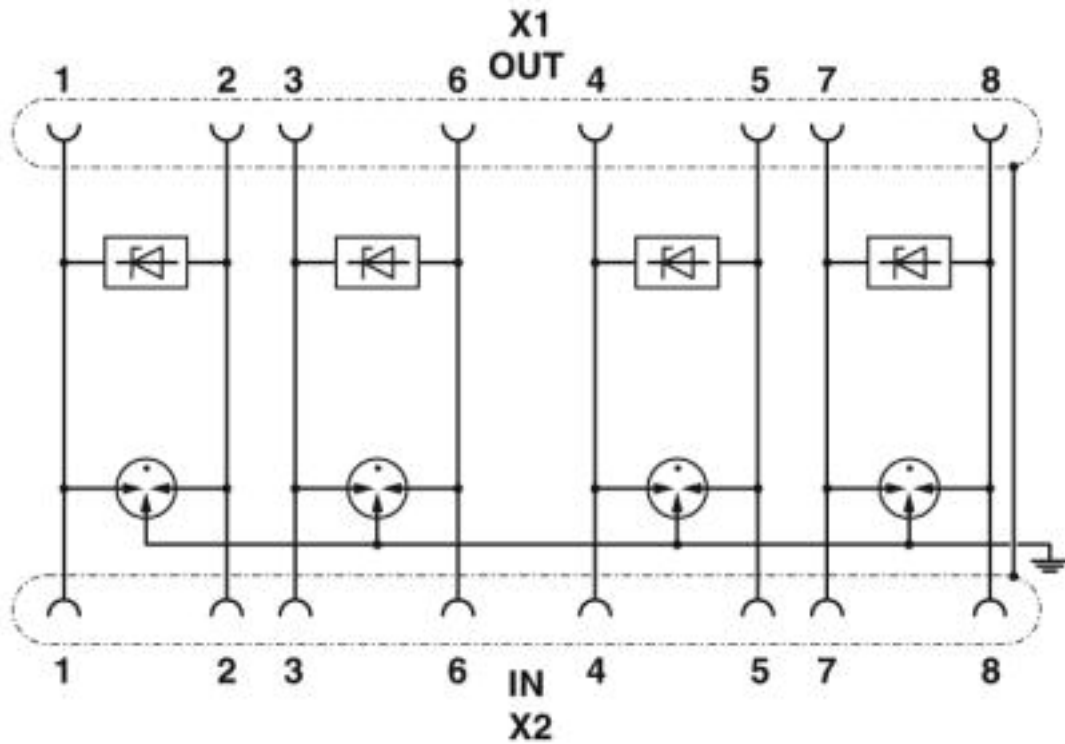
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Dimensional drawing

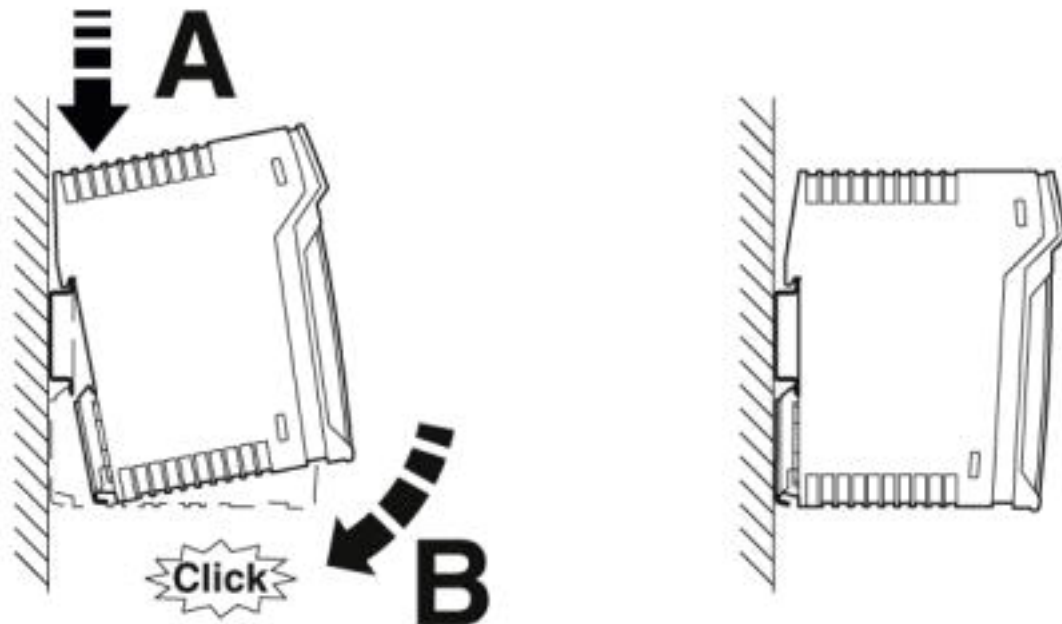


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Circuit diagram



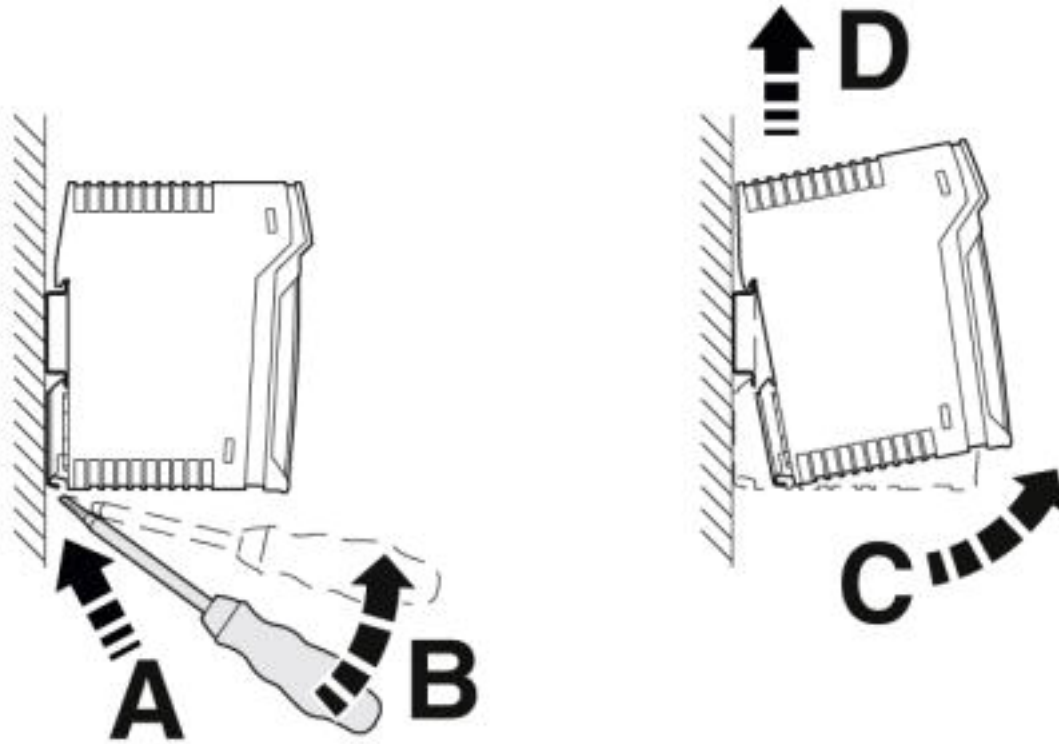
Schematic diagram



Mounting on a DIN rail

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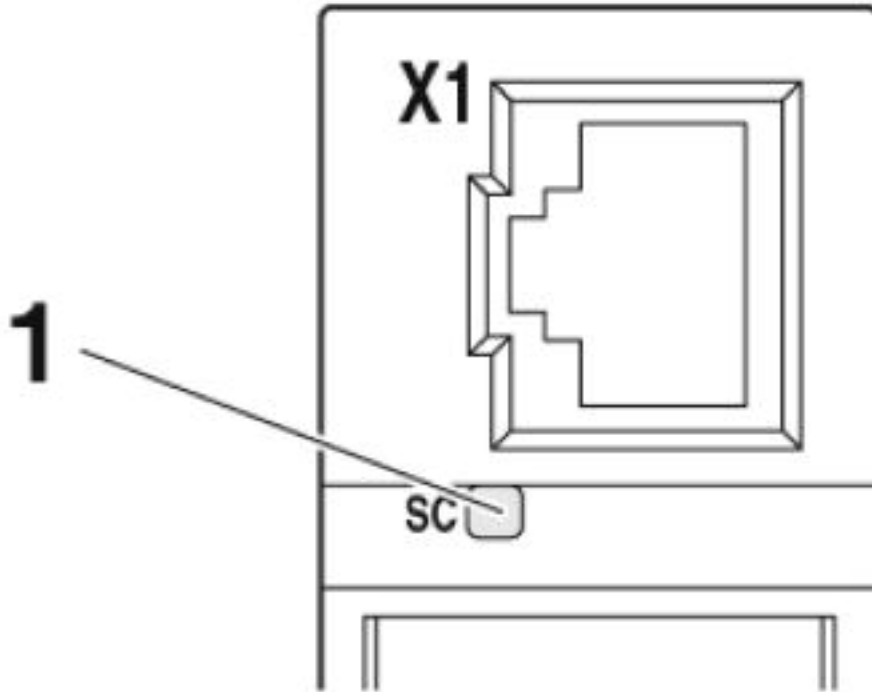
Schematic diagram



Removal

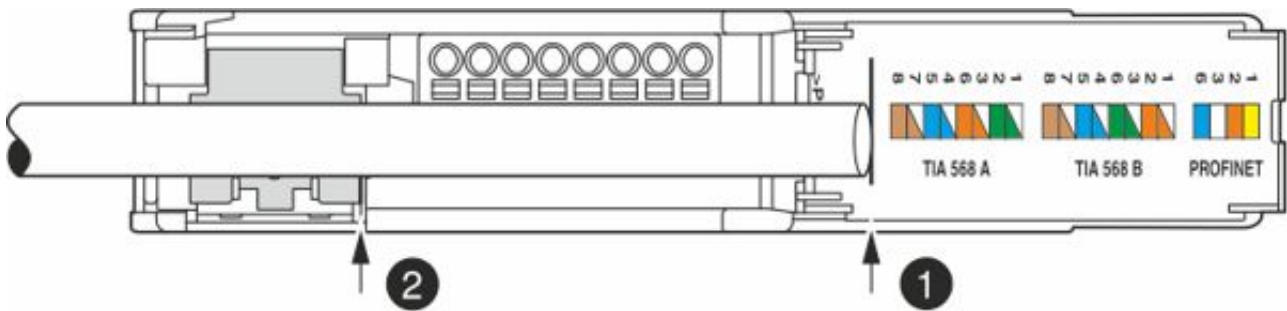
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Schematic diagram



Shield current monitoring

Schematic diagram



Stripping length

Classifications

eCl@ss

eCl@ss 6.0	19170100
eCl@ss 7.0	19170112

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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 / DNV GL / cULus Listed

Ex Approvals

ATEX

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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DNV GL		https://approvalfinder.dnvgl.com/	TAA00001KR
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cULus Listed			
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Accessories

Accessories

Data cable by the meter

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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

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Accessories

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



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

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/2,0 - 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 - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 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

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



PROFINET patch cable, shielded, star-quad, 22 AWG stranded (7-wire), green, straight RJ45 male connector/IP20 to straight RJ45 male connector/IP20, length: 1.0 m

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



PROFINET patch cable, shielded, star quad, 22 AWG stranded (7-wire), green, straight RJ45 plug/IP20, to straight RJ45 plug/IP20, length: 2 m

Data plug

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Accessories

RJ45 connector - VS-08-RJ45-10G/Q - 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 - VS-PN-RJ45-5-Q/IP20 - 1658435



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

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

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Accessories

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.

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

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Accessories

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

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 panel

Patch panels - PP-RJ-SC-F - 2703021

Accessories

Patch panels - PP-RJ-RJ - 2703015



Patch panel, two RJ45 sockets, 10/100/1000 Mbps, DIN rail mounting, IP20

Patch panels - PP-RJ-SC - 2703016



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

Patch panels - PP-RJ-SCC - 2703018



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

Patch panels - PP-RJ-IDC - 2703019



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

Screwdriver tools

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

Patch panels - PP-RJ-SC-F - 2703021

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

Additional products

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



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

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



Patch panel, one RJ45 socket to 8 IDC connection terminal blocks (1:1 assignment), CAT5e, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers

Patch panels - PP-RJ-SC-F - 2703021

Accessories

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



Patch panel, two RJ45 sockets (1:1 assignment), CAT5e, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers