Patch panels - PP-RJ-SC-F

2703021

https://www.phoenixcontact.com/us/products/2703021

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Patch panel, RJ45 jack on screw terminal blocks, 10/100/1000 Mbps, DIN rail adapter, 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

- 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	C19
Product Key	DNC334
Catalog Page	Page 361 (C-6-2019)
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

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area

Utilization restriction

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

Product properties

IEC test classification	C2
Product type	Patch panel
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
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 terminal block
Tightening torque	0.22 Nm ... 0.25 Nm
Pin assignment	1:1
Transmission length	100 m (including patch cables)
Conductor cross section flexible max.	1.5 mm²
Conductor cross section flexible min.	0.14 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section solid min.	0.14 mm²
Max. AWG conductor cross section, flexible	16
Min. AWG conductor cross section, flexible	28
Single-wire/terminal point, solid AWG max.	16
Single-wire/terminal point, solid 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+))

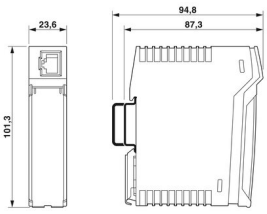
Data: Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3

Connection method	RJ45 jack

LED signaling

Optical representation	Yellow LED

Dimensions

Dimensional drawing	
Width	23.8 mm
Height	101.3 mm
Depth	86 mm

Material specifications

Material	Plastic (Housing)
Flammability rating according to UL 94	V0

Cable / line

External cable diameter	5.5 mm ... 6.5 mm

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)

Approval data

CE

Certificate	CE-compliant

ATEX

Identification	☐ II 3 G Ex nA nC IIC T4 Gc X
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

DNV GL 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

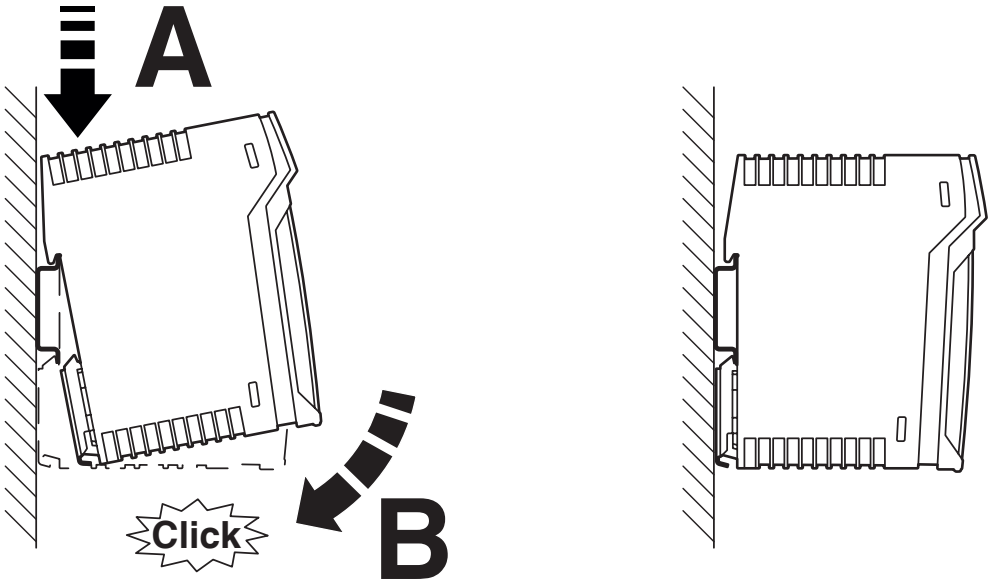
Standards/regulations	DIN EN 61643-21

Mounting

Mounting type	DIN rail mounting, stationary

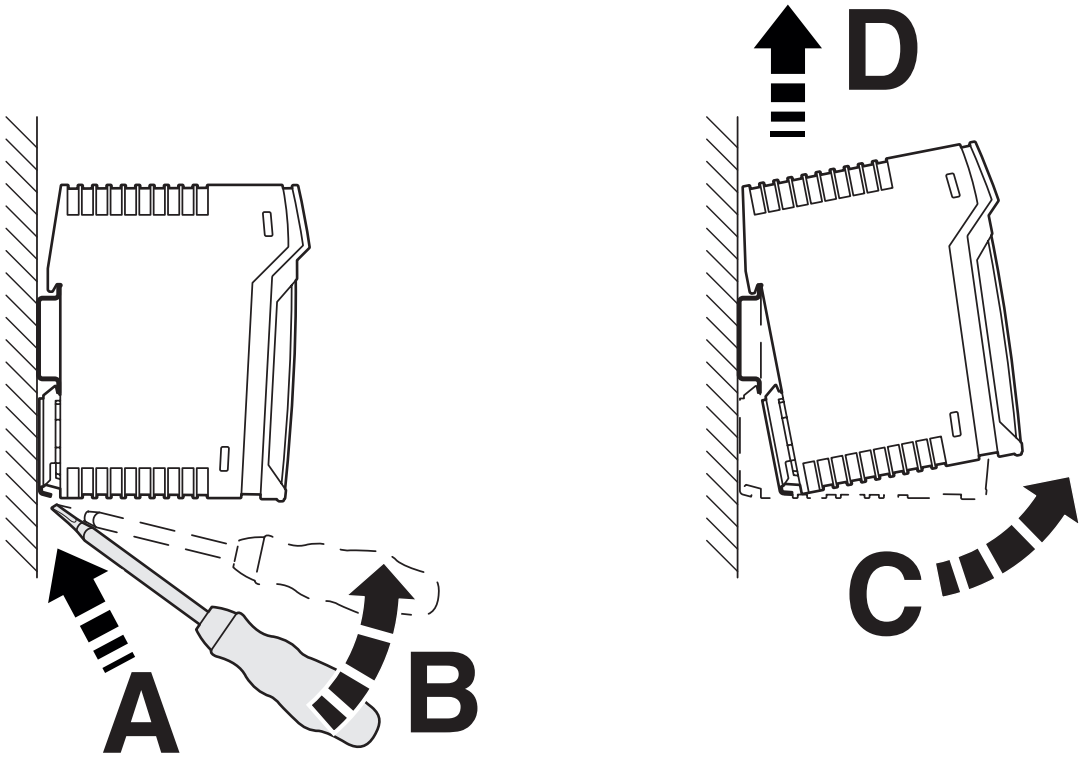
Drawings

Schematic diagram



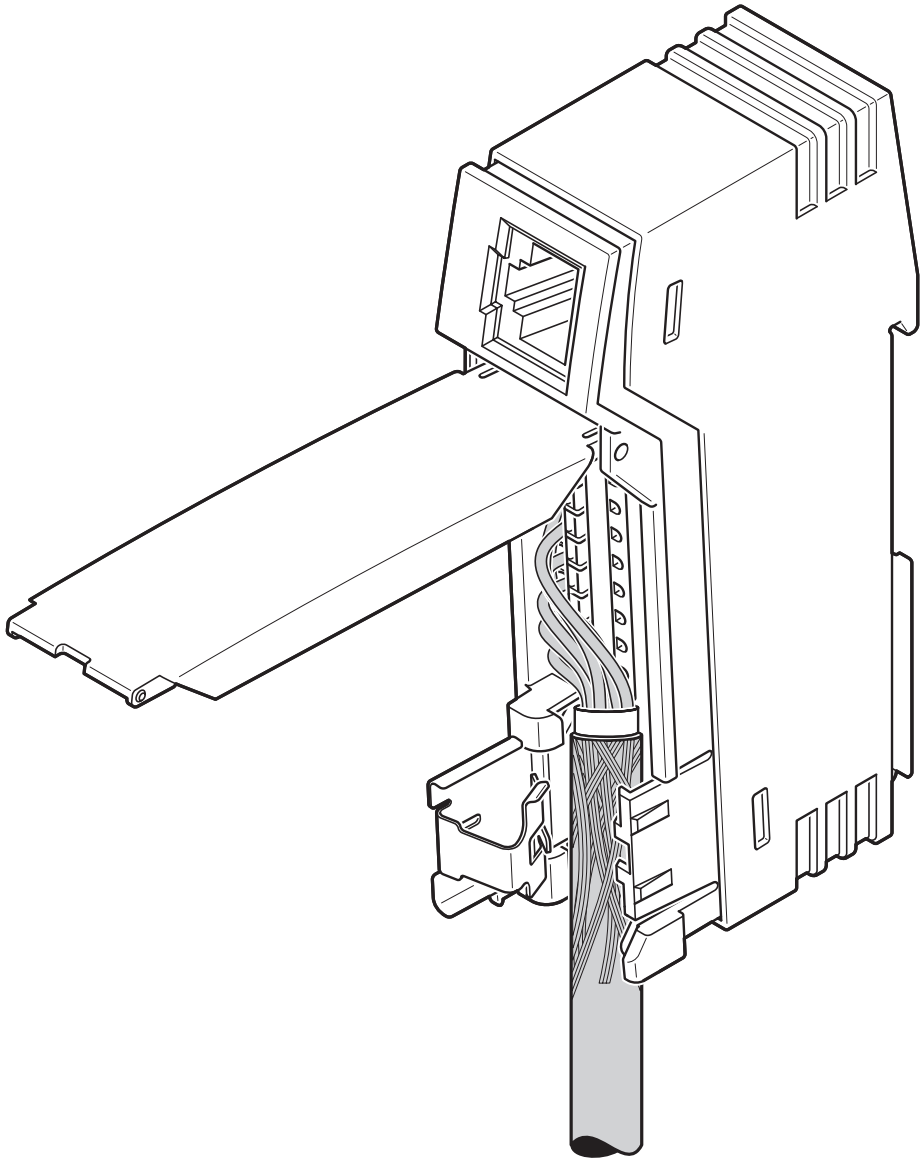
Mounting on a DIN rail

Schematic diagram



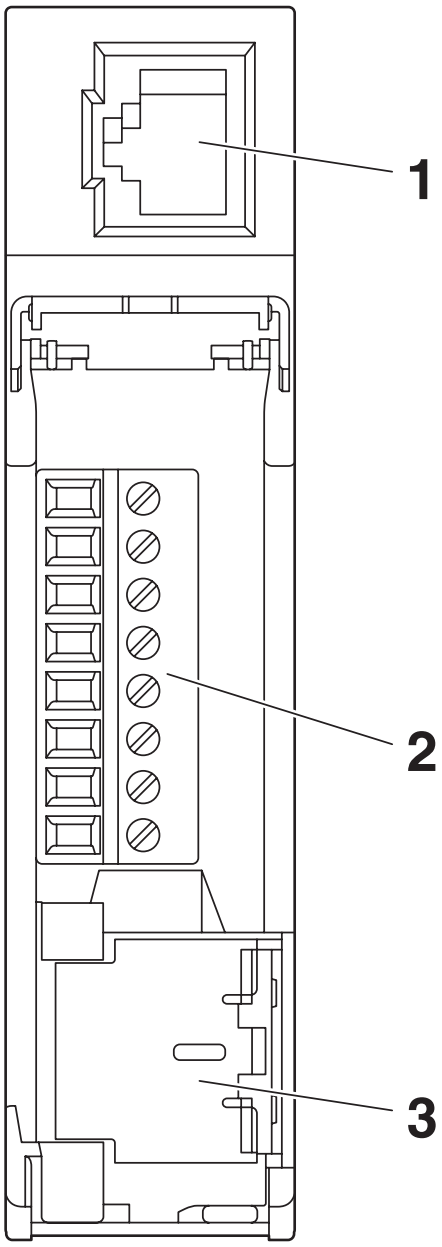
Removal

Schematic diagram



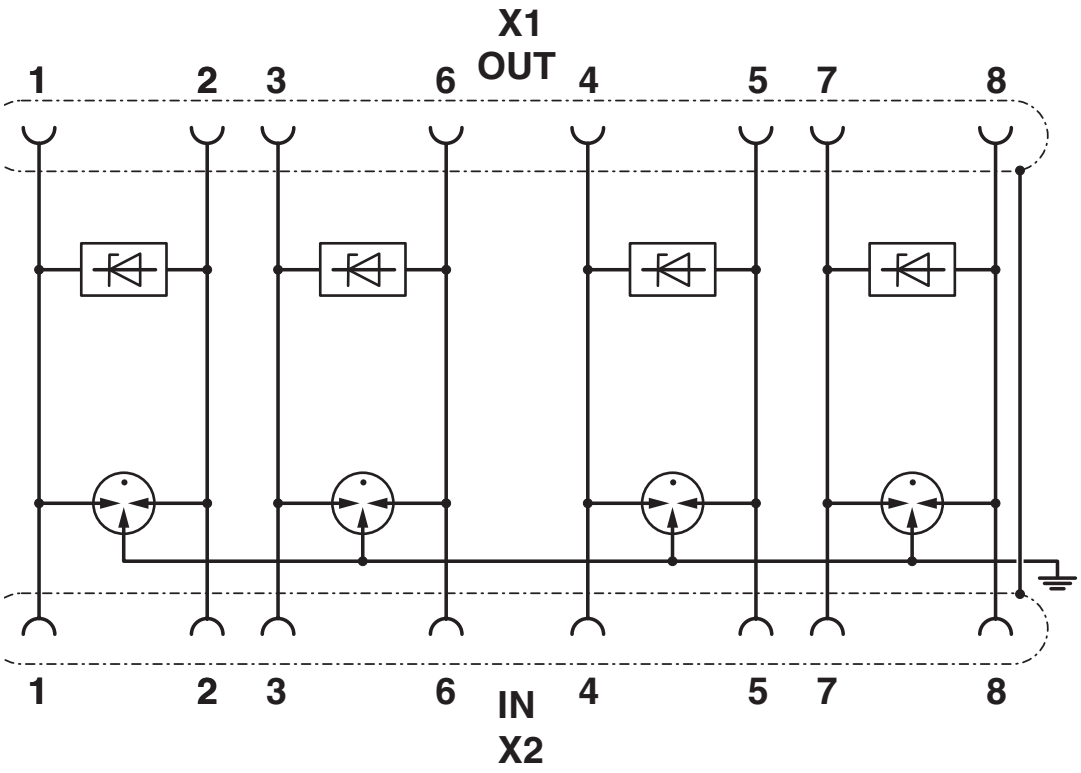
Inserting the cable

Schematic diagram

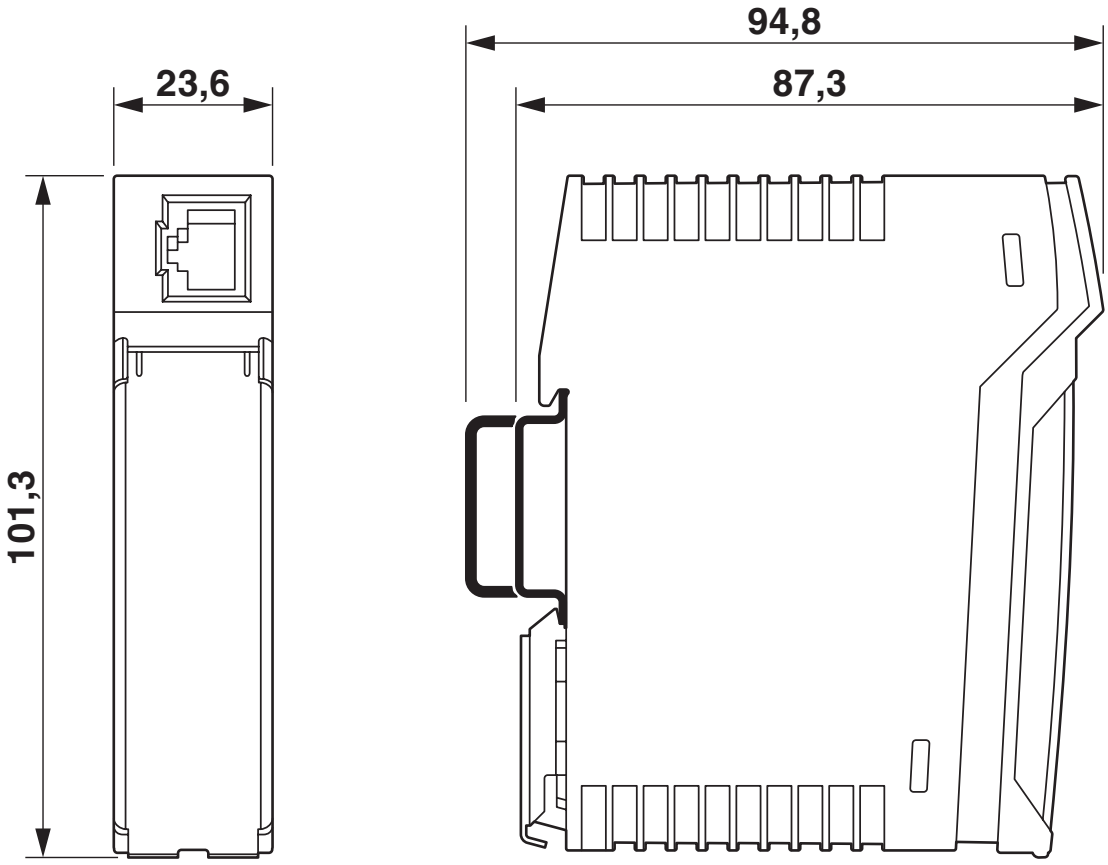


Front view

Circuit diagram

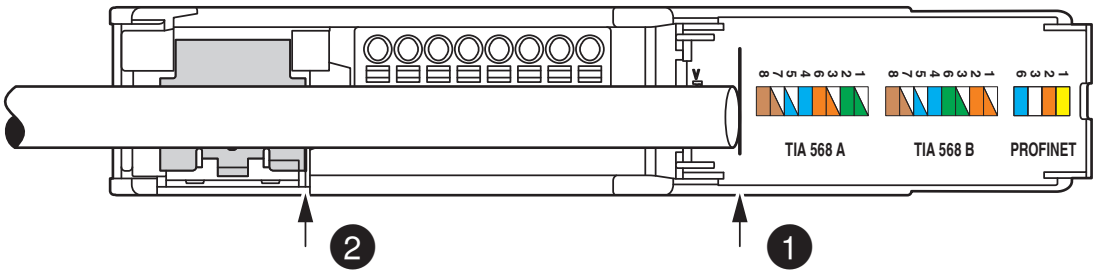


Dimensional drawing



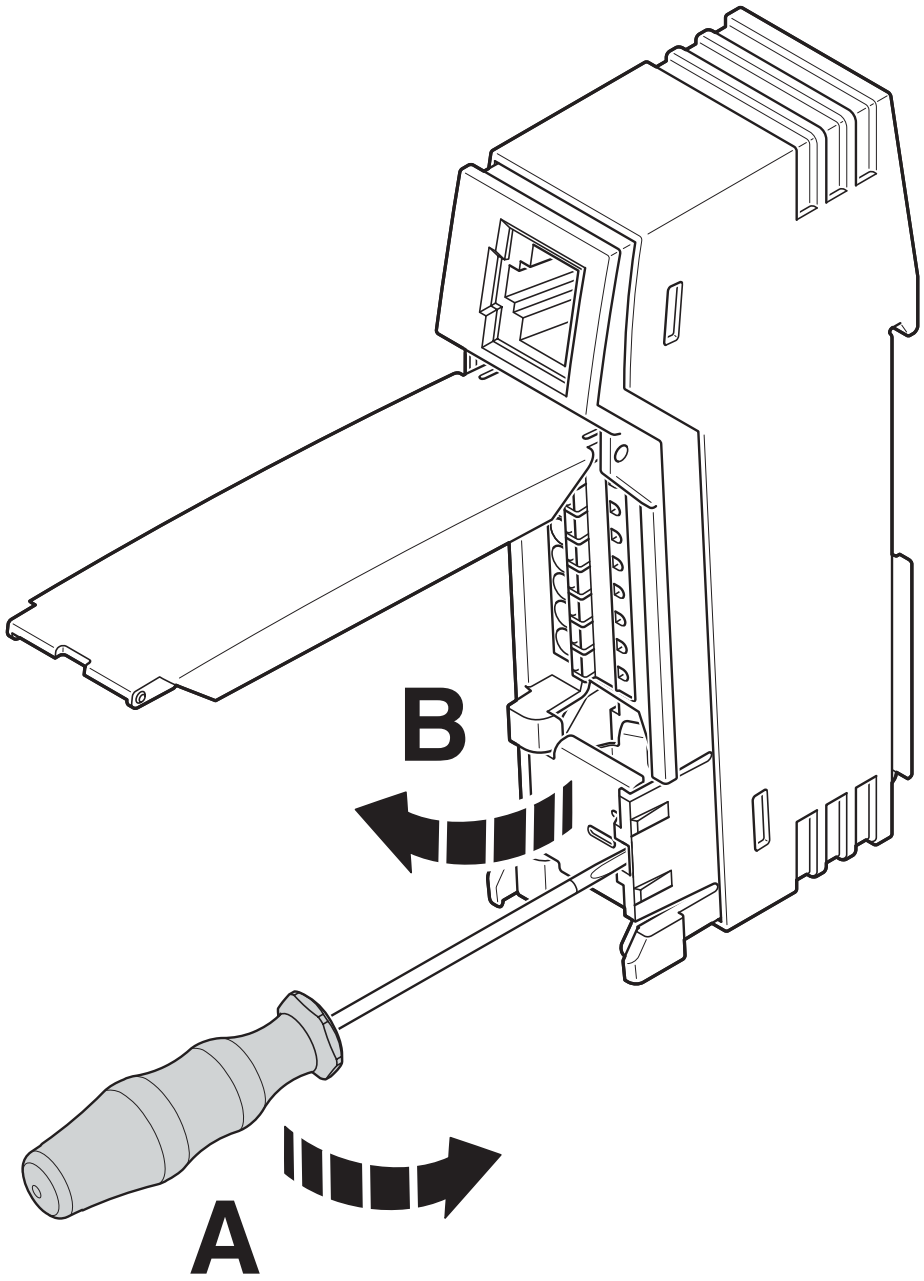
Housing dimensions

Schematic diagram



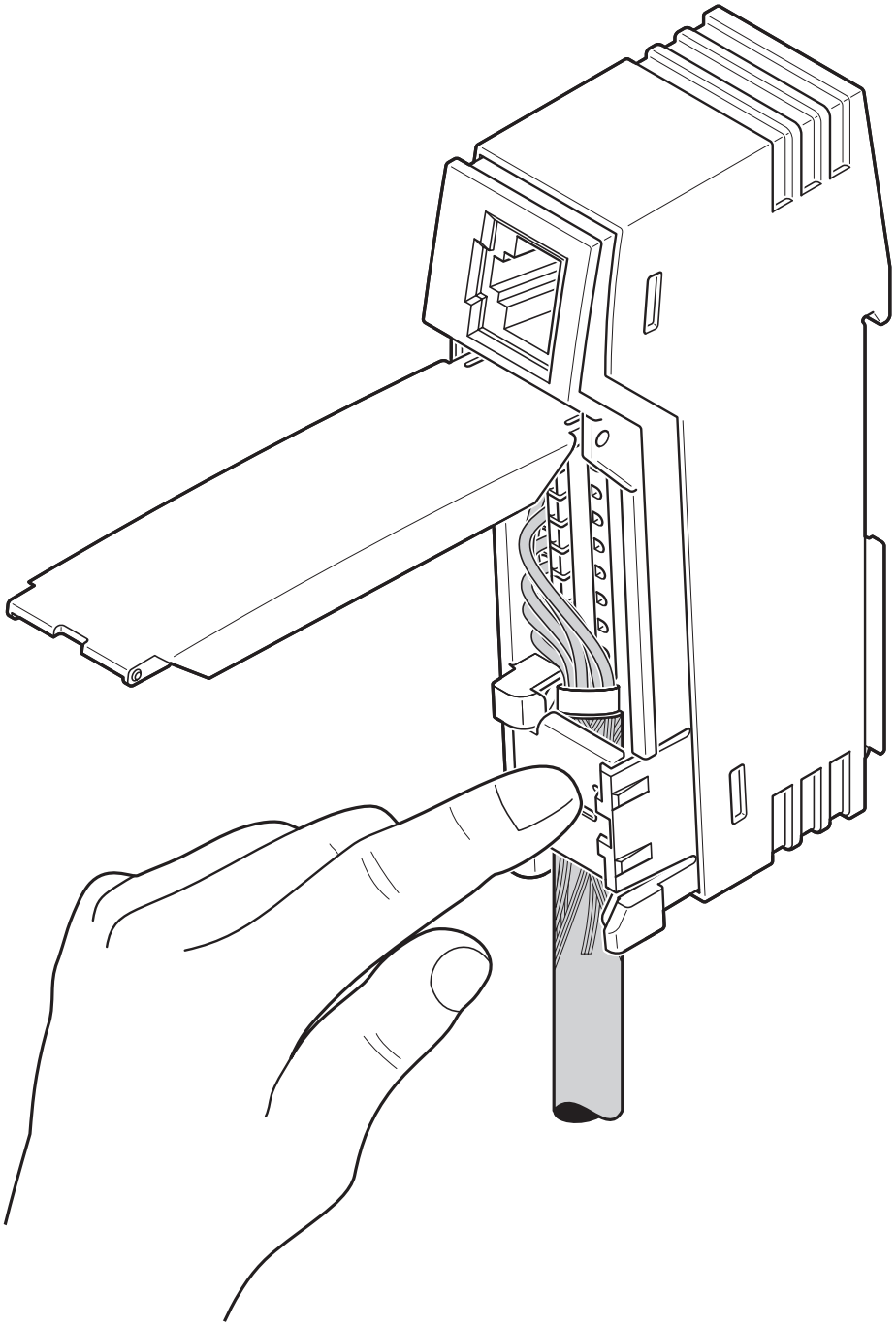
Stripping length

Schematic diagram



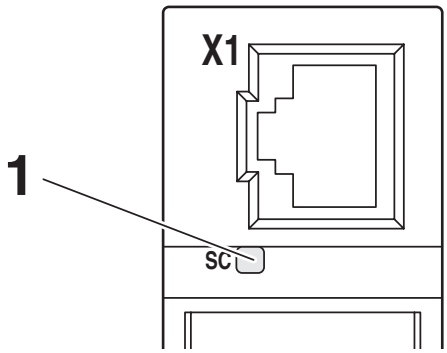
Open shield contact spring

Schematic diagram



Close shield contact spring

Schematic diagram



Shield current monitoring

Approvals

DNV GL
Approval ID: TAA00001KR

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
			-	-

UL Listed
Approval ID: FILE E 238705

cUL Listed
Approval ID: FILE E 238705

ATEX
Approval ID: PxCIF18ATEX2703020X

cULus Listed

Classifications

ECLASS

ECLASS-9.0	19170112
ECLASS-10.0.1	19170112
ECLASS-11.0	19170112

ETIM

ETIM 8.0	EC002697

UNSPSC

UNSPSC 21.0	43223300

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer’s declaration available under “Downloads”

Accessories

Patch panels

Patch panels - PP-RJ-RJ - 2703015

https://www.phoenixcontact.com/us/products/2703015



Patch panel, two RJ45 jacks, 10/100/1000 MBps, DIN rail adapter, IP20

Patch panels

Patch panels - PP-RJ-SC - 2703016

https://www.phoenixcontact.com/us/products/2703016



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

Patch panels

Patch panels - PP-RJ-SCC - 2703018

https://www.phoenixcontact.com/us/products/2703018



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

Patch panels

Patch panels - PP-RJ-IDC - 2703019

https://www.phoenixcontact.com/us/products/2703019



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

Assembly tool

Assembly tool - FL CRIMPTOOL - 2744869

https://www.phoenixcontact.com/us/products/2744869



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

Network isolator

Network isolator - FL ISOLATOR 100-RJ/SC - 2313928

https://www.phoenixcontact.com/us/products/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

Network isolator - FL ISOLATOR 100-RJ/RJ - 2313931

https://www.phoenixcontact.com/us/products/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

Network isolator - FL ISOLATOR 1000-RJ/RJ - 2313915

https://www.phoenixcontact.com/us/products/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

Network isolator - FL ISOLATOR 100-M12 - 2902985

https://www.phoenixcontact.com/us/products/2902985

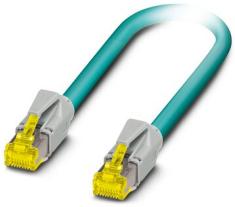


Passive network isolator for electrical isolation in Ethernet networks. For the protection of Ethernet devices against potential differences of up to 4 kV. Can be used for transmission speeds of up to 100 Mbps. Ethernet connection via two M12 sockets (D-coded).

Patch cable

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

https://www.phoenixcontact.com/us/products/1411854

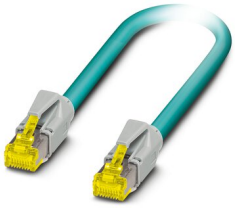


Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, $CAT6_A$, cable outlet: straight, Ethernet

Patch cable

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/2,0 - 1408360

https://www.phoenixcontact.com/us/products/1408360

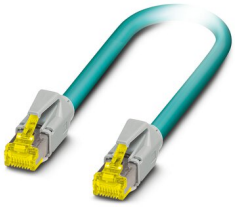


Patch cable, CAT6$_A$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

Patch cable

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 1408365

https://www.phoenixcontact.com/us/products/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

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

https://www.phoenixcontact.com/us/products/1408968



Patch cable, degree of protection: IP20, cable length: 1 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

Patch cable

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

https://www.phoenixcontact.com/us/products/1408969



Patch cable, degree of protection: IP20, cable length: 2 m, number of positions: 4, 100 Mbps, CAT5, material: PA 6.6, PROFINET

Patch cable

Patch cable - FL CAT5 PATCH 0,3 - 2832250

https://www.phoenixcontact.com/us/products/2832250



Patch cable, CAT5, assembled, 0.3 m

Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263

https://www.phoenixcontact.com/us/products/2832263



Patch cable, CAT5, assembled, 0.5 m

Patch cable

Patch cable - FL CAT5 PATCH 1,0 - 2832276

https://www.phoenixcontact.com/us/products/2832276



Patch cable, CAT5, assembled, 1 m

Patch cable

Patch cable - FL CAT5 PATCH 1,5 - 2832221

https://www.phoenixcontact.com/us/products/2832221



Patch cable, CAT5, assembled, 1.5 m

Patch cable

Patch cable - FL CAT5 PATCH 2,0 - 2832289

https://www.phoenixcontact.com/us/products/2832289



Patch cable, CAT5, assembled, 2 m

Patch cable

Patch cable - FL CAT5 PATCH 3,0 - 2832292

https://www.phoenixcontact.com/us/products/2832292



Patch cable, CAT5, assembled, 3 m

RJ45 connector

RJ45 connector - VS-08-RJ45-10G/Q - 1419001

https://www.phoenixcontact.com/us/products/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

RJ45 connector - VS-PN-RJ45-5-Q/IP20 - 1658435

https://www.phoenixcontact.com/us/products/1658435



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

Stripping tool

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

https://www.phoenixcontact.com/us/products/1657407

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



RJ45 connector

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

https://www.phoenixcontact.com/us/products/1656725



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

RJ45 connector

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

https://www.phoenixcontact.com/us/products/1658008



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

Screwdriver

Screwdriver - SZF 0-0,4X2,5 - 1204504

https://www.phoenixcontact.com/us/products/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

Diagonal cutter

Diagonal cutter - MICROFOX-SP - 1212488

https://www.phoenixcontact.com/us/products/1212488



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

Data cable

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

https://www.phoenixcontact.com/us/products/1417359



Data cable, Ethernet CAT6$_A$ (10 Gbps), 8-position halogen-free, shielded, free cable end, on free cable end, cable length: Free entry (0.5 ... 400 m)

Patch panels

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

https://www.phoenixcontact.com/us/products/2901643



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

Patch panels

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

https://www.phoenixcontact.com/us/products/2901645



Patch panel, one RJ45 jack to 8 LSA connection terminal blocks (1:1 assignment), CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, option of shield contacting to the DIN rail via bridges

Patch panels - PP-RJ-SC-F

2703021

https://www.phoenixcontact.com/us/products/2703021

Patch panels

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

https://www.phoenixcontact.com/us/products/2901646



Patch panel, two RJ45 jacks (1:1 assignment), CAT5e, 10/100/1000 Mbps, DIN rail adapter, IP20, option of shield contacting to the DIN rail via jumpers

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