

# PP-RJ-SC-F - Patch panels



2703021

<https://www.phoenixcontact.com/gb/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	DNC334
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

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## Technical data

### Notes

#### Utilization restriction

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

CCCex note	Use in potentially explosive areas is not permitted in China.
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### 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
Maximum power dissipation for nominal condition	0 W
Rated insulation voltage	85 V DC

#### Supply

Supply voltage range	36 V DC ... 52 V DC $\pm 10\%$ (via PoE)
	42 V DC ... 57 V DC (in acc. with UL)

#### Function

Designation	Shield current monitoring
Switch-on threshold	$\geq 30$ mA
Local diagnostics	Yellow LED
Precision	$\pm 5\%$
Response time	3 s
Current	$\leq 1.5$ A
Power consumption	270 mW (Shield current monitoring)
Impedance	$\leq 1$ $\Omega$
Voltage	$\leq 10$ V

### Interfaces

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

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Serial transmission speed	10/100/1000 Mbps
Frequency range	125 MHz
Connection method	Screw connection
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 mm <sup>2</sup>
Conductor cross section flexible min.	0.14 mm <sup>2</sup>
Conductor cross section, rigid max.	1.5 mm <sup>2</sup>
Conductor cross section, rigid min.	0.14 mm <sup>2</sup>
Max. AWG conductor cross section, flexible	16
Min. AWG conductor cross section, flexible	28
Single-wire/terminal point, rigid AWG max.	16
Single-wire/terminal point, rigid 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+))

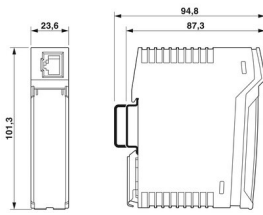
Data: Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3

Connection method	RJ45 jack
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## Signaling

Optical representation	Yellow LED
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## Dimensions

Dimensional drawing	
Width	23.8 mm
Height	101.3 mm
Depth	86 mm

## Material specifications

Material	Plastic
Flammability rating according to UL 94	V0

## Cable/line

External cable diameter ( )	5.5 mm ... 6.5 mm
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## 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)

## Approvals

### CE

Certificate	CE-compliant
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### 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
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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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### Shipbuilding

Identification	DNV GL
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### 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

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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.

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Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.
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## Standards and regulations

Standards/regulations	DIN EN 61643-21
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## Mounting

Mounting type	DIN rail mounting, stationary
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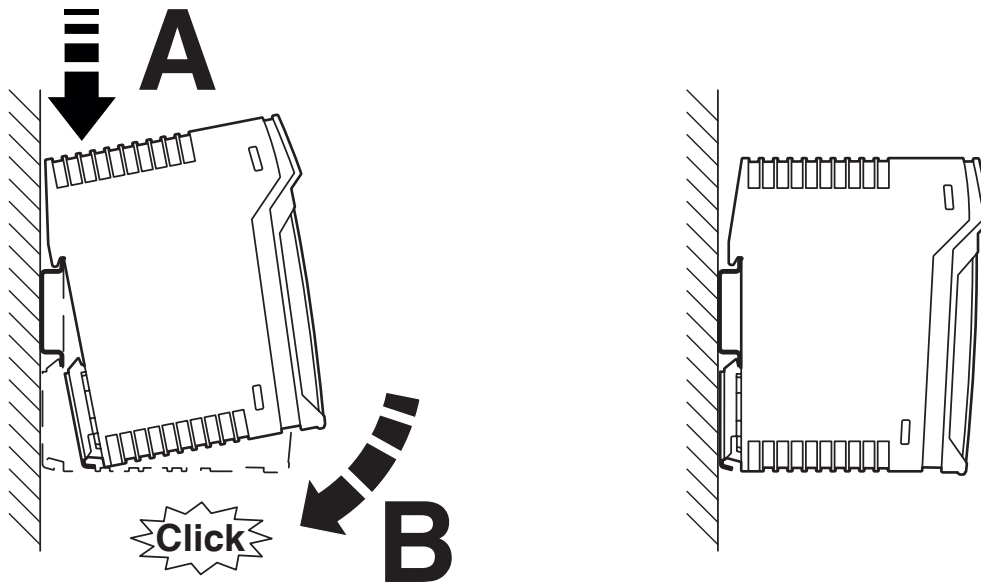
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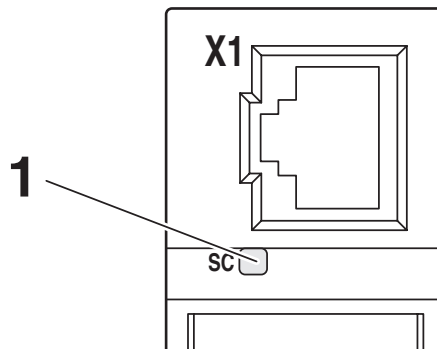
## Drawings

Schematic diagram



Mounting on a DIN rail

Schematic diagram



Shield current monitoring

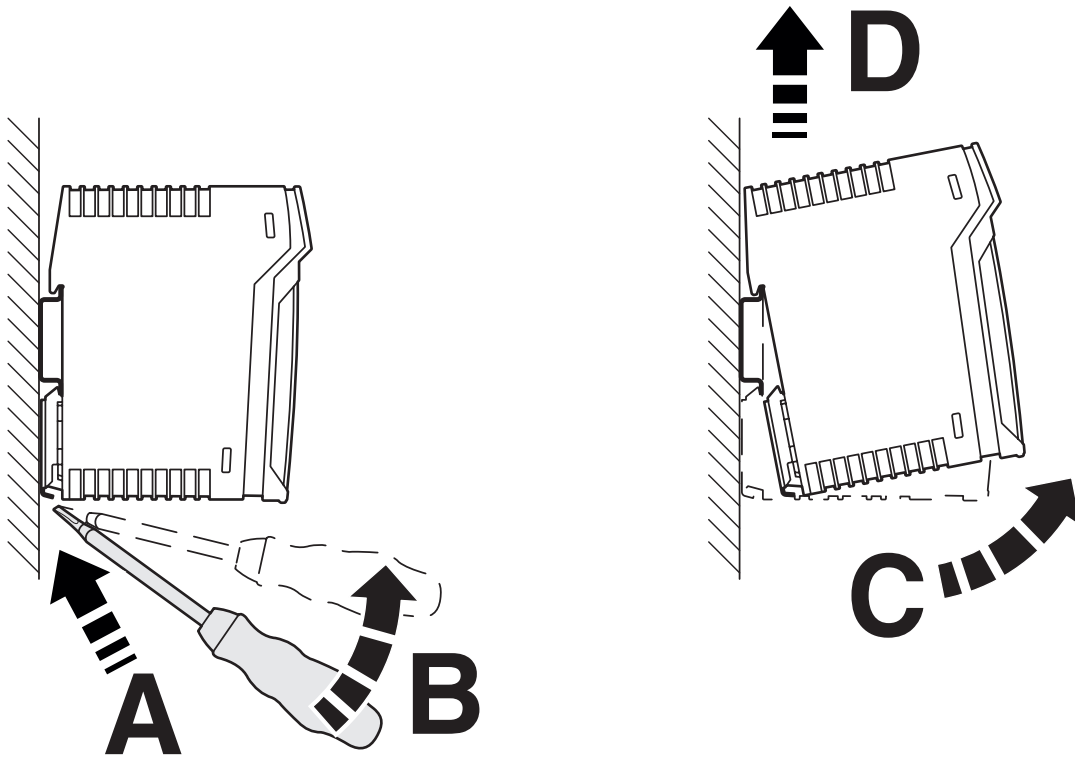
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Schematic diagram



Removal



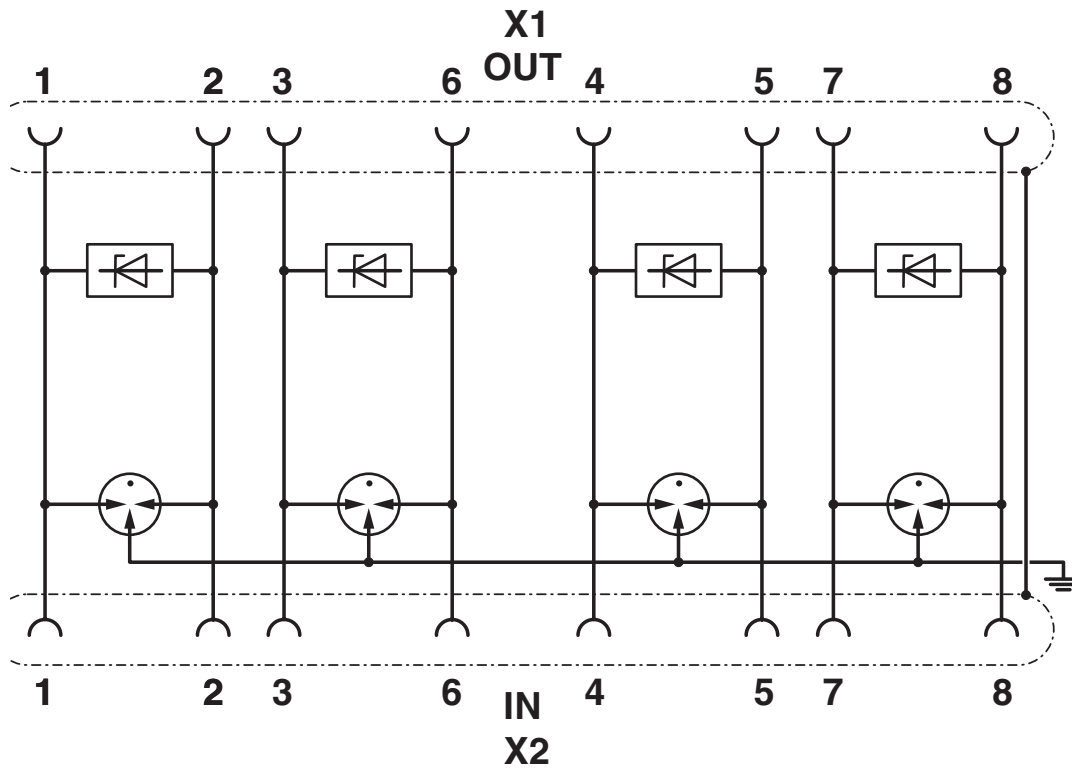
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Circuit diagram



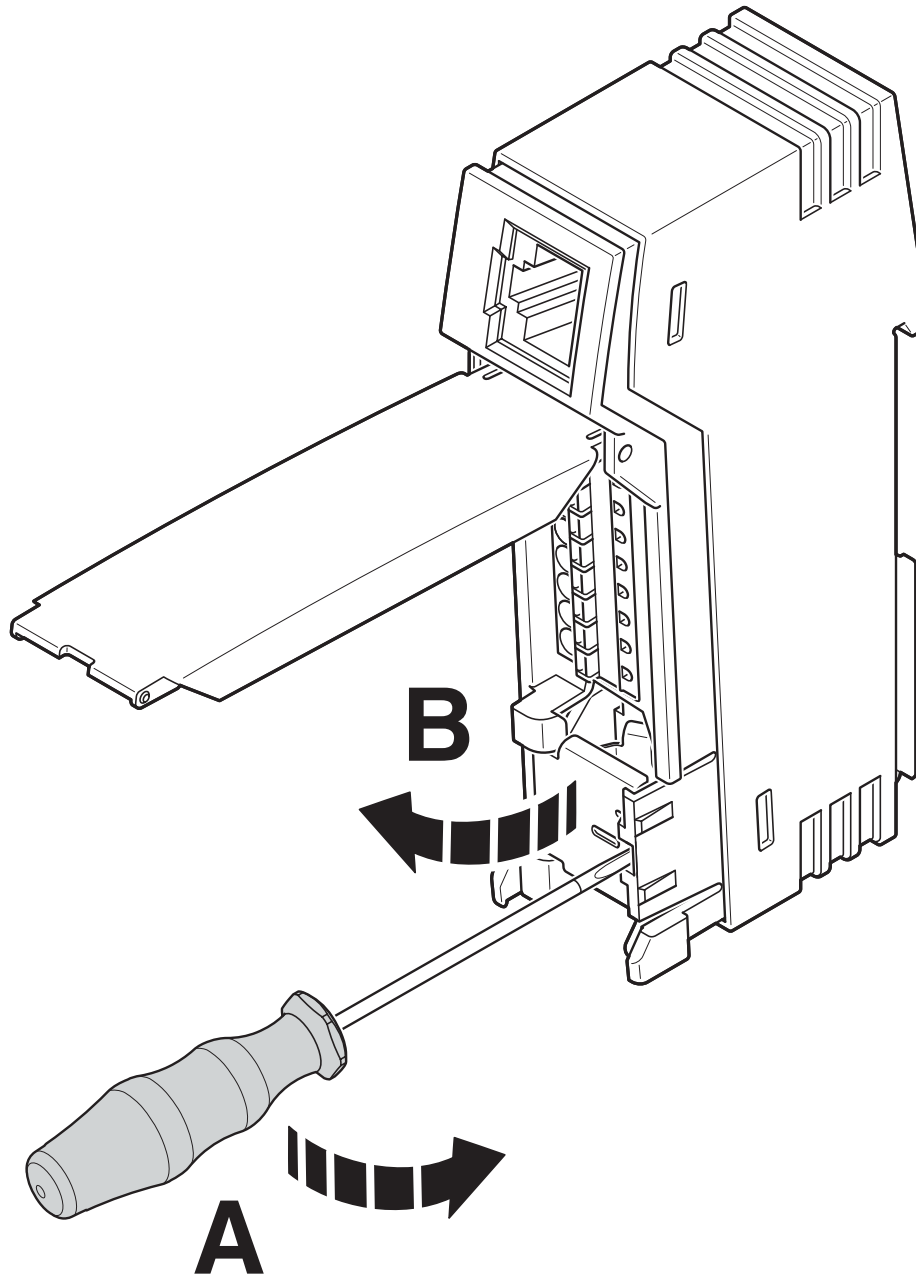
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Schematic diagram



Open shield contact spring

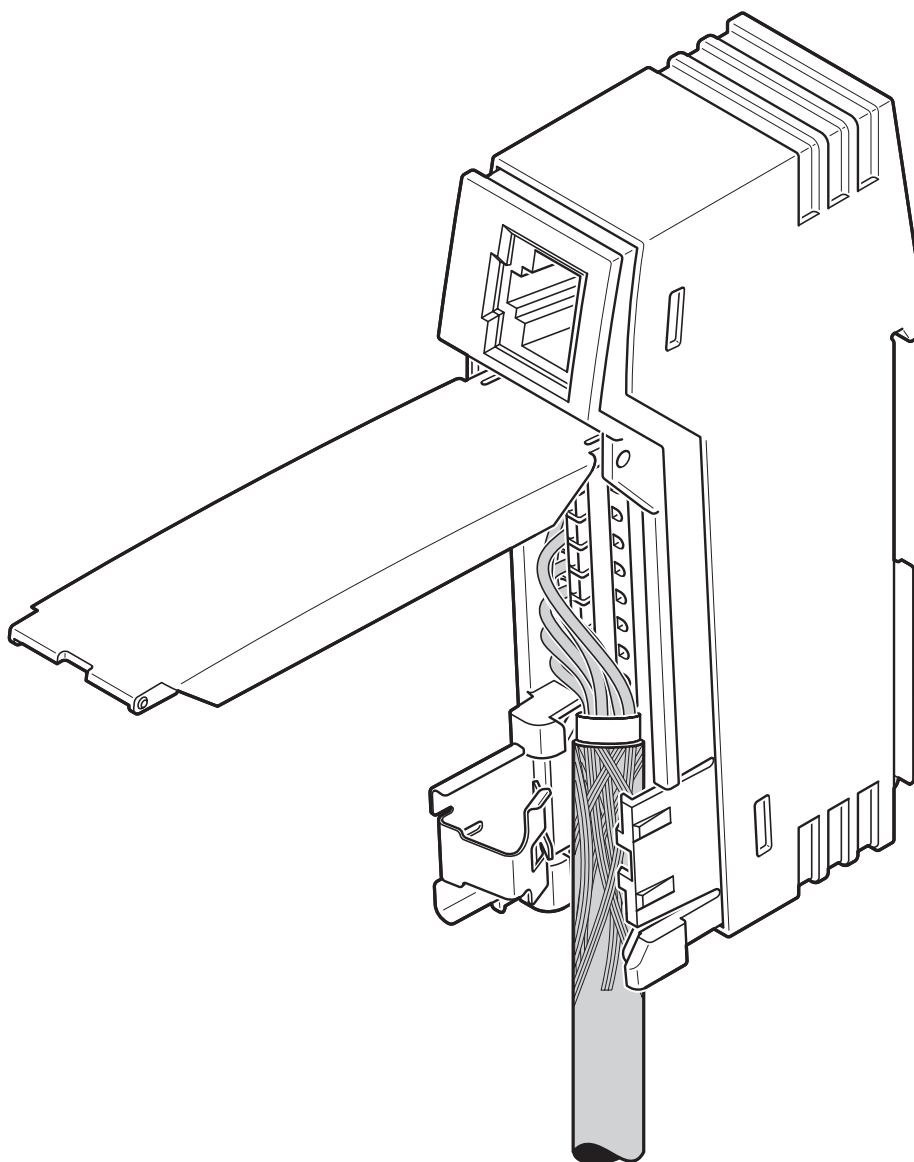
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## Schematic diagram



Inserting the cable

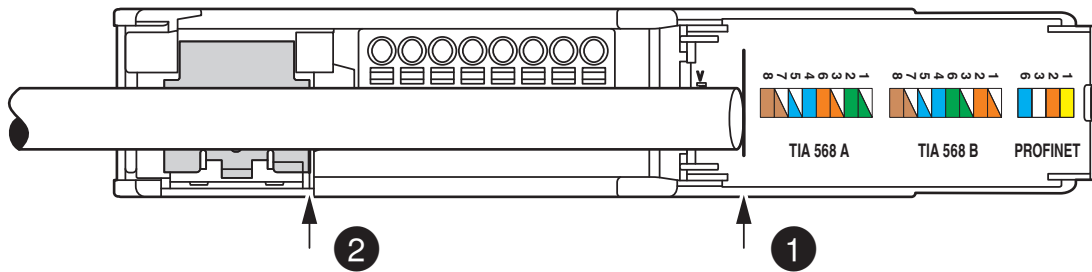
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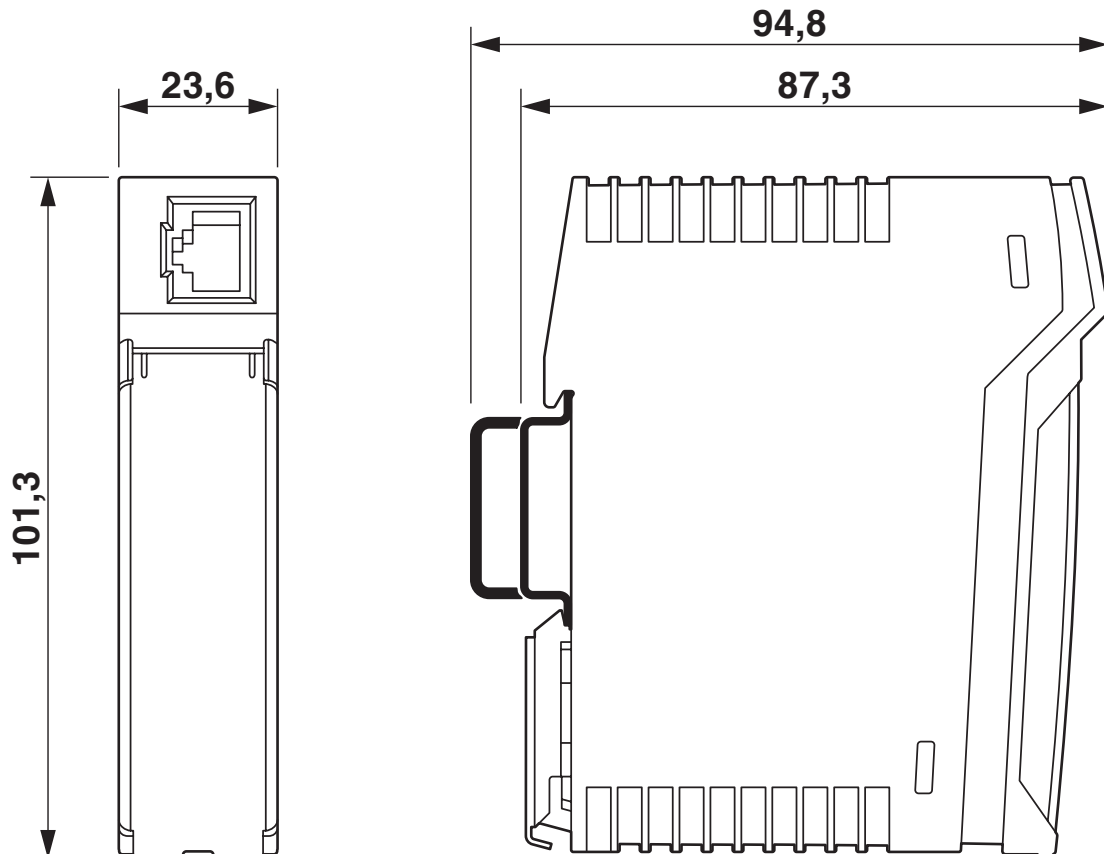
<https://www.phoenixcontact.com/gb/products/2703021>

Schematic diagram



Stripping length

Dimensional drawing



Housing dimensions

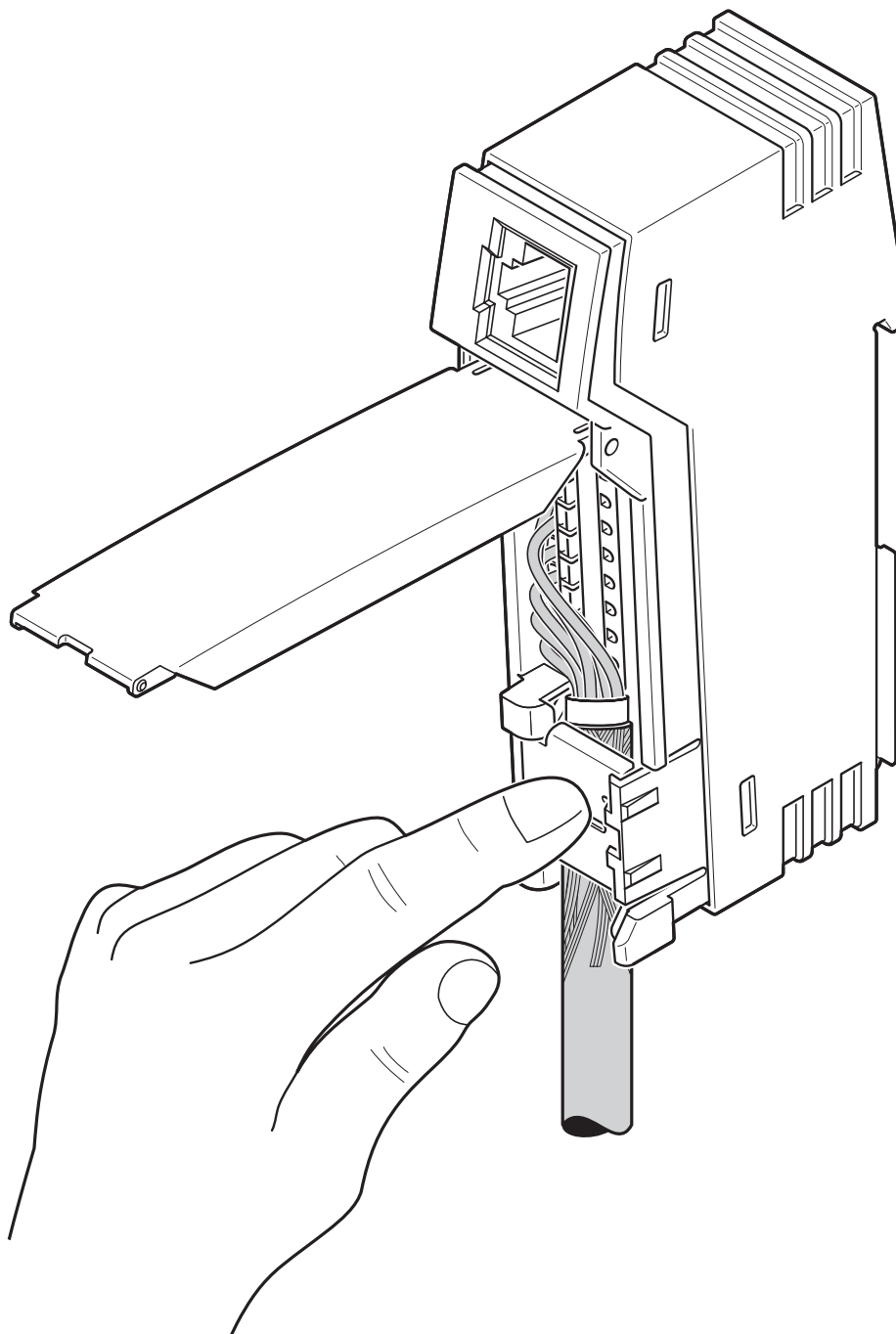
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Schematic diagram



Close shield contact spring

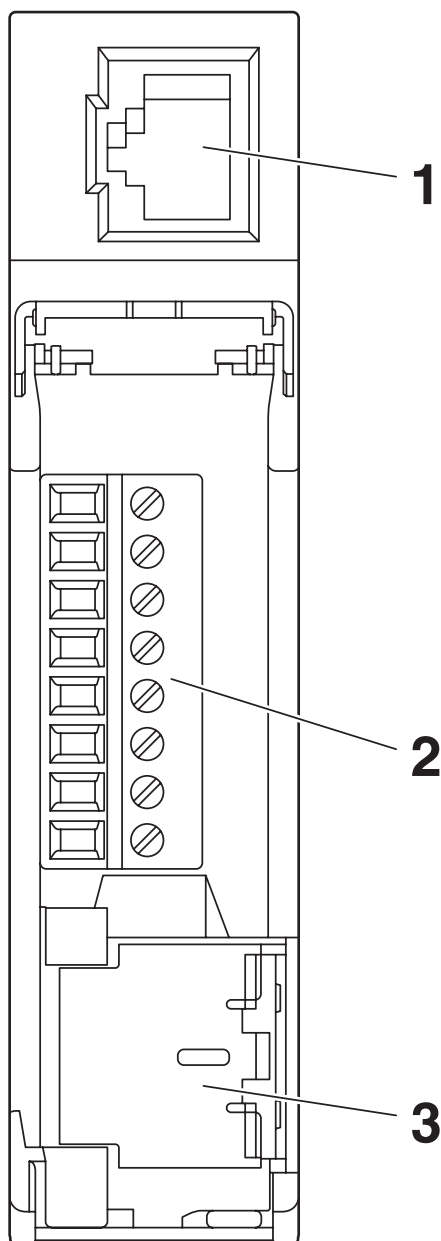
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Schematic diagram



Front view

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2703021>



**DNV GL**

Approval ID: TAA00001KR



**UL Listed**

Approval ID: FILE E 238705



**cUL Listed**

Approval ID: FILE E 238705



**ATEX**

Approval ID: PxCIF18ATEX2703020X

**cULus Listed**

# PP-RJ-SC-F - Patch panels



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## Classifications

### ECLASS

ECLASS-11.0	19170112
ECLASS-12.0	19170112
ECLASS-13.0	19170112

### ETIM

ETIM 8.0	EC002697
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### UNSPSC

UNSPSC 21.0	43223300
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## 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"

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## Accessories

### PP-RJ-RJ - Patch panels

2703015

<https://www.phoenixcontact.com/gb/products/2703015>



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

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### PP-RJ-SC - Patch panels

2703016

<https://www.phoenixcontact.com/gb/products/2703016>



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

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## PP-RJ-SCC - Patch panels

2703018

<https://www.phoenixcontact.com/gb/products/2703018>



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

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## PP-RJ-IDC - Patch panels

2703019

<https://www.phoenixcontact.com/gb/products/2703019>



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

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## FL CRIMPTOOL - Assembly tool

2744869

<https://www.phoenixcontact.com/gb/products/2744869>

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



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

2313931

<https://www.phoenixcontact.com/gb/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.



# PP-RJ-SC-F - Patch panels

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<https://www.phoenixcontact.com/gb/products/2703021>



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

2313915

<https://www.phoenixcontact.com/gb/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.

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## FL ISOLATOR 100-M12 - Network isolator

2902985

<https://www.phoenixcontact.com/gb/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).

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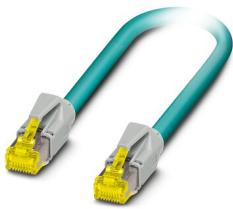
<https://www.phoenixcontact.com/gb/products/2703021>



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

1411854

<https://www.phoenixcontact.com/gb/products/1411854>



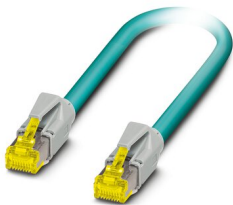
Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight, Ethernet

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

1408360

<https://www.phoenixcontact.com/gb/products/1408360>



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

# PP-RJ-SC-F - Patch panels

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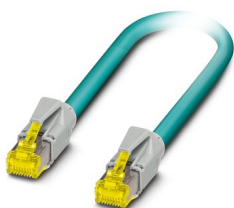
<https://www.phoenixcontact.com/gb/products/2703021>



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

1408365

<https://www.phoenixcontact.com/gb/products/1408365>



Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

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

1408968

<https://www.phoenixcontact.com/gb/products/1408968>



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

# PP-RJ-SC-F - Patch panels

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

1408969

<https://www.phoenixcontact.com/gb/products/1408969>



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

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## FL CAT5 PATCH 0,3 - Patch cable

2832250

<https://www.phoenixcontact.com/gb/products/2832250>



Patch cable, CAT5, assembled, 0.3 m



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## FL CAT5 PATCH 0,5 - Patch cable

2832263

<https://www.phoenixcontact.com/gb/products/2832263>

Patch cable, CAT5, assembled, 0.5 m



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## FL CAT5 PATCH 1,0 - Patch cable

2832276

<https://www.phoenixcontact.com/gb/products/2832276>

Patch cable, CAT5, assembled, 1 m



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## FL CAT5 PATCH 1,5 - Patch cable

2832221

<https://www.phoenixcontact.com/gb/products/2832221>

Patch cable, CAT5, assembled, 1.5 m



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## FL CAT5 PATCH 2,0 - Patch cable

2832289

<https://www.phoenixcontact.com/gb/products/2832289>

Patch cable, CAT5, assembled, 2 m



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## FL CAT5 PATCH 3,0 - Patch cable

2832292

<https://www.phoenixcontact.com/gb/products/2832292>



Patch cable, CAT5, assembled, 3 m

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

1419001

<https://www.phoenixcontact.com/gb/products/1419001>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 24, cable outlet: straight, color: black, Ethernet

# PP-RJ-SC-F - Patch panels

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<https://www.phoenixcontact.com/gb/products/2703021>



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

1658435

<https://www.phoenixcontact.com/gb/products/1658435>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 4, 100 Mbps, CAT5, material: Plastic, connection method: Insulation displacement connection, cable outlet: straight, color: traffic grey A RAL 7042, PROFINET

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## VS-CABLE-STRIP-VARIO - Stripping tool

1657407

<https://www.phoenixcontact.com/gb/products/1657407>

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



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

1656725

<https://www.phoenixcontact.com/gb/products/1656725>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 23, cable outlet: straight, color: traffic grey A RAL 7042, Ethernet

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

1658008

<https://www.phoenixcontact.com/gb/products/1658008>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 23, cable outlet: straight, color: black, Ethernet

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

1204504

<https://www.phoenixcontact.com/gb/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

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## MICROFOX-SP - Diagonal cutter

1212488

<https://www.phoenixcontact.com/gb/products/1212488>



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

## PP-RJ-SC-F - Patch panels

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

1417359

<https://www.phoenixcontact.com/gb/products/1417359>



Data cable, Ethernet CAT6<sub>A</sub> (10 Gbps), 8-position halogen-free, shielded, free cable end, on free cable end, cable length: Free entry (0.5 ... 400 m)

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### FL-PP-RJ45-SC - Patch panels

2901643

<https://www.phoenixcontact.com/gb/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

# PP-RJ-SC-F - Patch panels

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## FL-PP-RJ45-LSA - Patch panels

2901645

<https://www.phoenixcontact.com/gb/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

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## FL-PP-RJ45/RJ45 - Patch panels

2901646

<https://www.phoenixcontact.com/gb/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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