

# Patch panels - PP-RJ-SC-F

2703021

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

Serial transmission speed	10/100/1000 Mbps
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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 mm <sup>2</sup>
Conductor cross section flexible min.	0.14 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section solid 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, solid AWG max.	16
Single-wire/terminal point, solid AWG min.	28
Stripping length	5 mm
Maximum output power	60 W
Maximum output current	725 mA (PoE)
Current carrying capacity	≤ 1.5 A (≤ 60 W (PoE+))

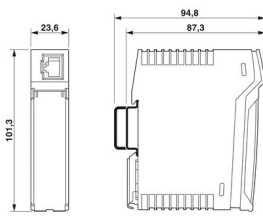
Data: Ethernet interface, 10/100/1000Base-T(X) in accordance with IEEE 802.3

Connection method	RJ45 jack
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## LED 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

Color	gray
Material	Plastic (Housing)
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

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## 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
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### ATEX

Identification	<input type="checkbox"/> 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

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)

Input	± 0.5 kV
Signal	± 1 kV (Data line, asymmetrical)

## 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
Criterion A	Normal operating behavior within the specified limits.
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

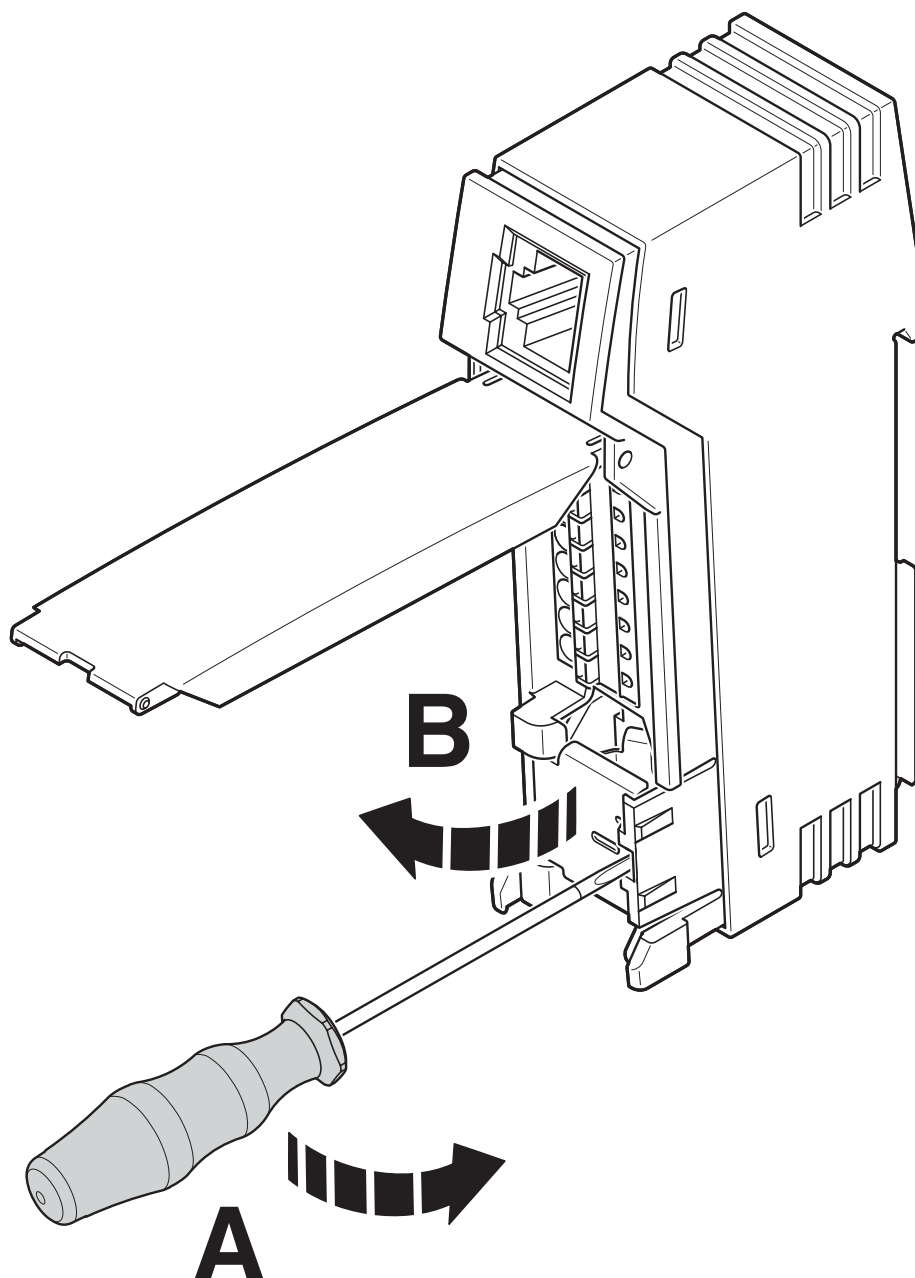
## Mounting

Mounting type

DIN rail mounting, stationary

## Drawings

Schematic diagram



Open shield contact spring

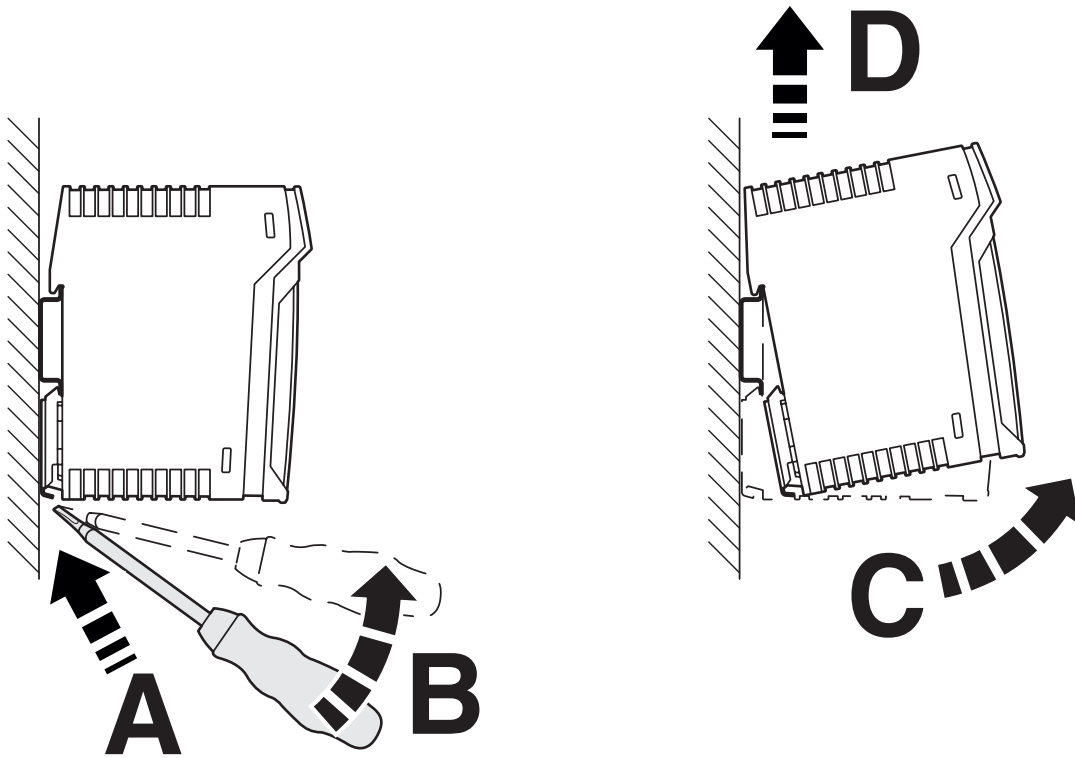
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Schematic diagram



Removal



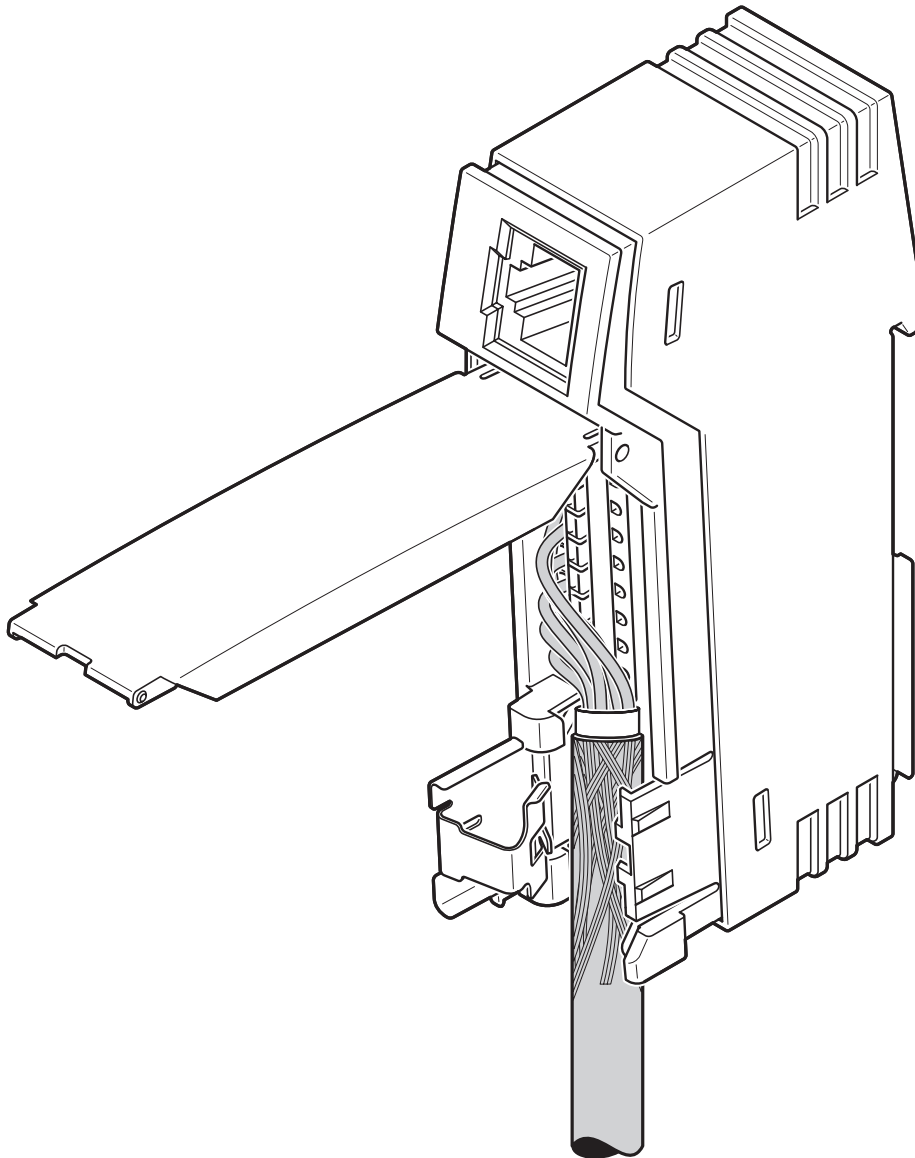
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## Schematic diagram



Inserting the cable

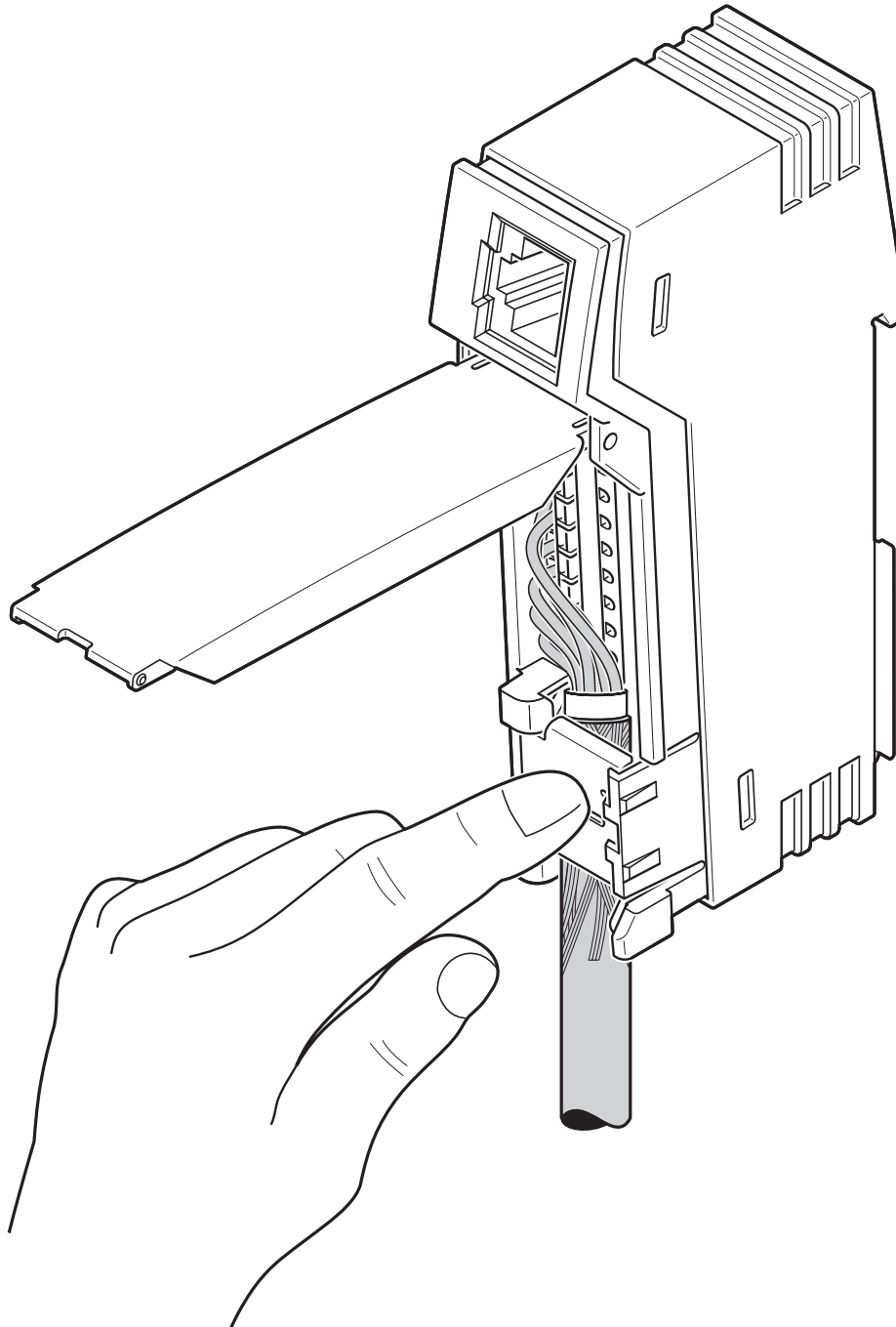
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Schematic diagram



Close shield contact spring

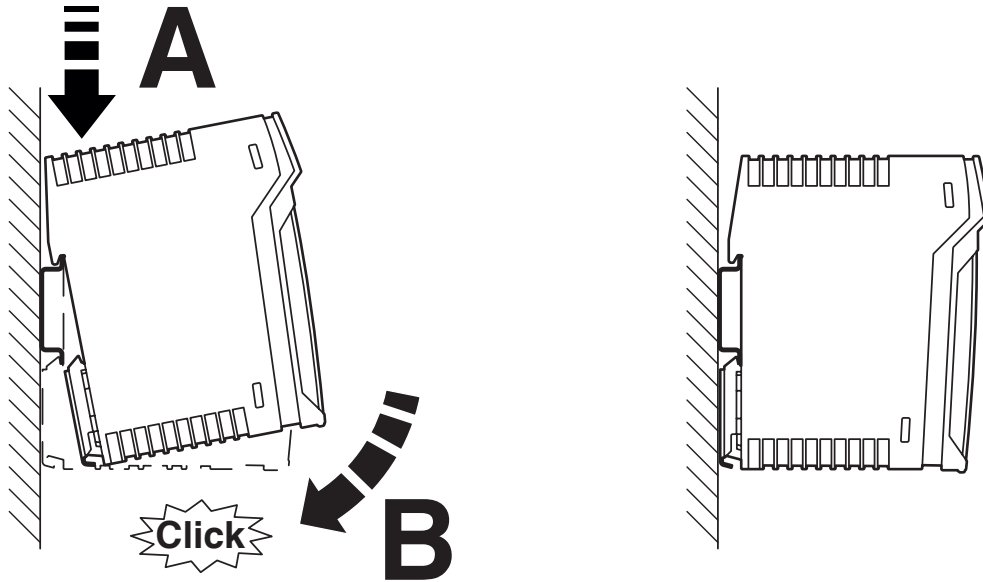
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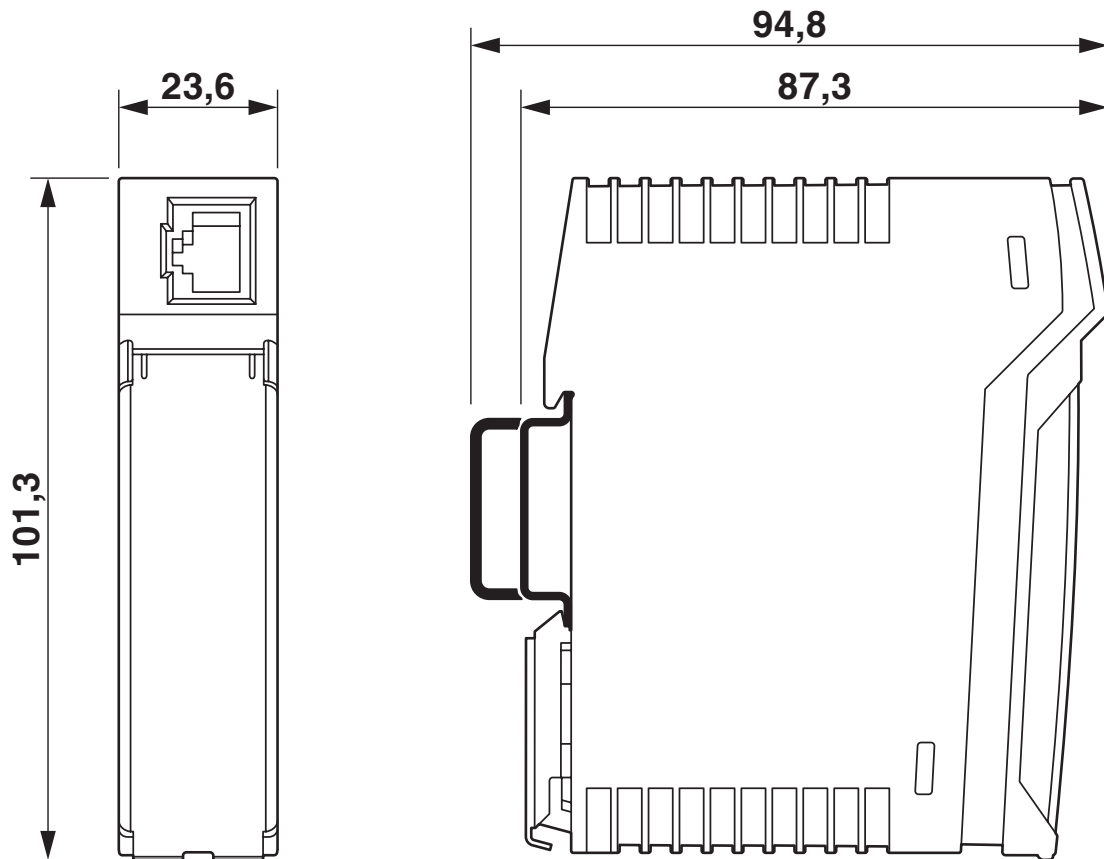


Schematic diagram



Mounting on a DIN rail

Dimensional drawing



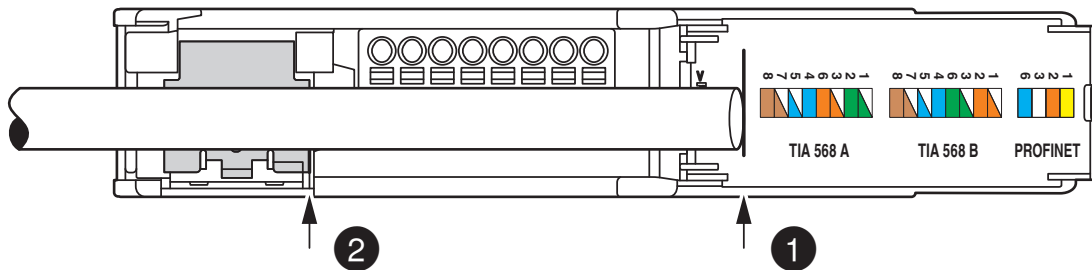
Housing dimensions

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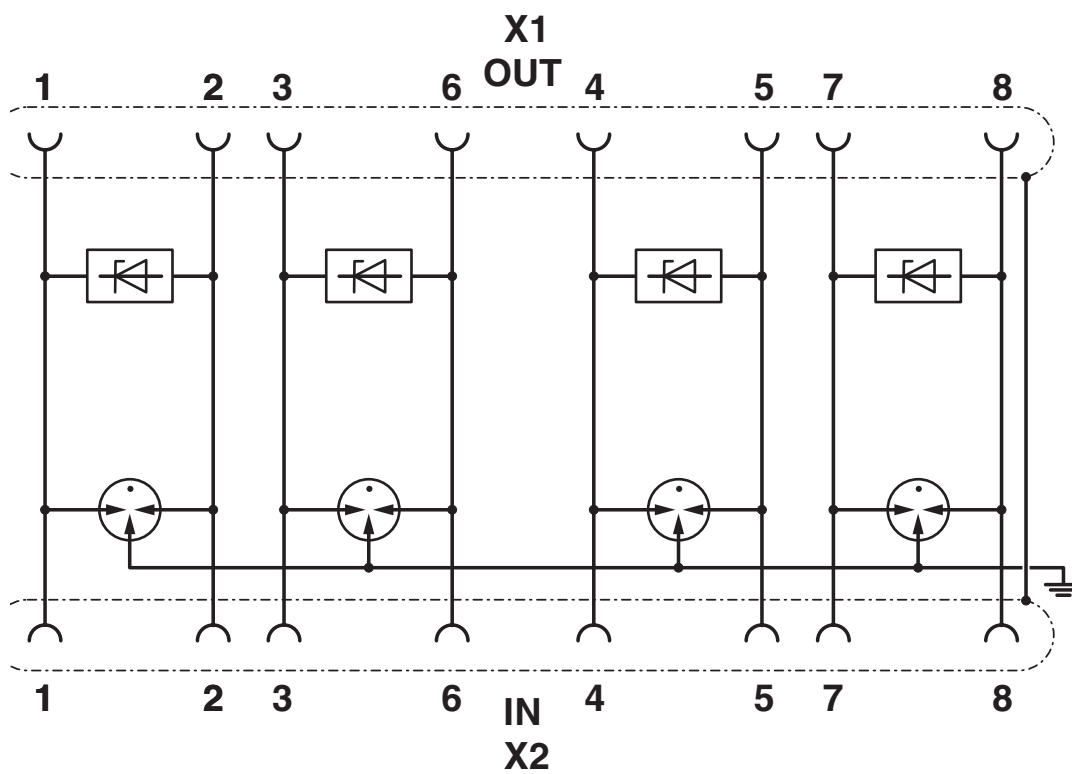
<https://www.phoenixcontact.com/pc/products/2703021>

Schematic diagram



Stripping length

Circuit diagram



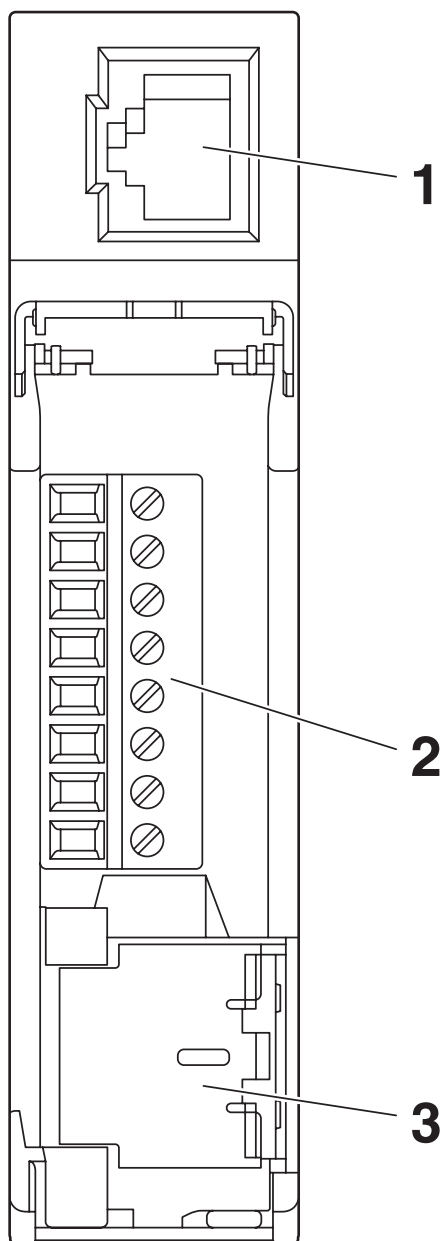
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<https://www.phoenixcontact.com/pc/products/2703021>



Schematic diagram



Front view

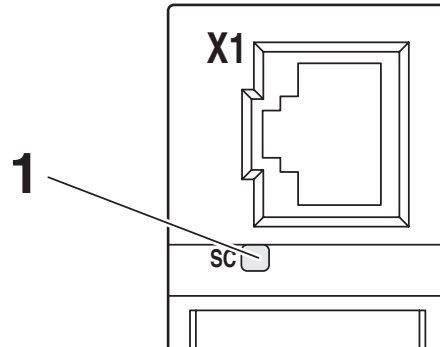
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Schematic diagram



Shield current monitoring


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## Approvals

 <b>DNV GL</b> Approval ID: TAA00001KR				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $mm^2$
			-	-

 <b>UL Listed</b> Approval ID: FILE E 238705				
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 <b>cUL Listed</b> Approval ID: FILE E 238705				
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 <b>ATEX</b> Approval ID: PxCIF18ATEX2703020X				
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<b>cULus Listed</b>				
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## Classifications

### ECLASS

ECLASS-9.0	19170112
ECLASS-10.0.1	19170112
ECLASS-11.0	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

### Patch panels

Patch panels - PP-RJ-RJ - 2703015

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



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

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### Patch panels

Patch panels - PP-RJ-SC - 2703016

<https://www.phoenixcontact.com/pc/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 - PP-RJ-SC-F

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## Patch panels

Patch panels - PP-RJ-SCC - 2703018

<https://www.phoenixcontact.com/pc/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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## Patch panels

Patch panels - PP-RJ-IDC - 2703019

<https://www.phoenixcontact.com/pc/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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## Assembly tool

Assembly tool - FL CRIMPTOOL - 2744869

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

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



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## Network isolator

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

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



# Patch panels - PP-RJ-SC-F

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



## Network isolator

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

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

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## Network isolator

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

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

# Patch panels - PP-RJ-SC-F

2703021

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



## Network isolator

Network isolator - FL ISOLATOR 100-M12 - 2902985

<https://www.phoenixcontact.com/pc/products/2902985>



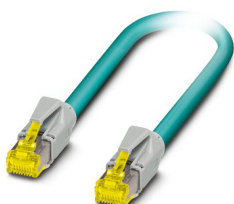
Passive network isolator for electrical isolation in Ethernet networks. For the protection of Ethernet devices against potential differences of up to 4 kV. Can be used for transmission speeds of up to 100 Mbps. Ethernet connection via two M12 sockets (D-coded).

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## Patch cable

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

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



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

# Patch panels - PP-RJ-SC-F

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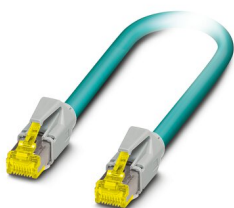
<https://www.phoenixcontact.com/pc/products/2703021>



## Patch cable

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

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



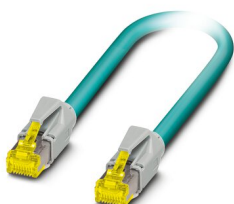
Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

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## Patch cable

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

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

# Patch panels - PP-RJ-SC-F

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## Patch cable

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

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



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

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## Patch cable

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

<https://www.phoenixcontact.com/pc/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 panels - PP-RJ-SC-F

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



## Patch cable

Patch cable - FL CAT5 PATCH 0,3 - 2832250

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



Patch cable, CAT5, assembled, 0.3 m

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## Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263

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



Patch cable, CAT5, assembled, 0.5 m

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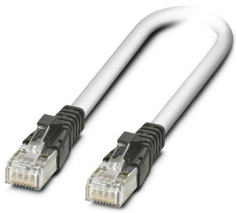
<https://www.phoenixcontact.com/pc/products/2703021>



## Patch cable

Patch cable - FL CAT5 PATCH 1,0 - 2832276

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



Patch cable, CAT5, assembled, 1 m

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## Patch cable

Patch cable - FL CAT5 PATCH 1,5 - 2832221

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



Patch cable, CAT5, assembled, 1.5 m

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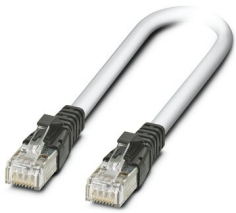
<https://www.phoenixcontact.com/pc/products/2703021>



## Patch cable

Patch cable - FL CAT5 PATCH 2,0 - 2832289

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



Patch cable, CAT5, assembled, 2 m

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## Patch cable

Patch cable - FL CAT5 PATCH 3,0 - 2832292

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



Patch cable, CAT5, assembled, 3 m

# Patch panels - PP-RJ-SC-F

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## RJ45 connector

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

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



RJ45 connector, IP20, CAT6<sub>A</sub>, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color: black

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## RJ45 connector

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

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



RJ45 connector, type: RJ45, 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, PROFINET

# Patch panels - PP-RJ-SC-F

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## Stripping tool

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

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

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



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## RJ45 connector

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

<https://www.phoenixcontact.com/pc/products/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, Ethernet

# Patch panels - PP-RJ-SC-F

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## RJ45 connector

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

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



RJ45 connector, type: RJ45, 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, Ethernet

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## Screwdriver

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

<https://www.phoenixcontact.com/pc/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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## Diagonal cutter

Diagonal cutter - MICROFOX-SP - 1212488

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



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

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## Network cable

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

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



Network 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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## Patch panels

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

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

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## Patch panels

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

<https://www.phoenixcontact.com/pc/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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## Patch panels

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

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