

PP-RJ DIN Rail Patch Panels with Surge Protection

 [perle.com/products/patch-panels/din-rail-pp-rj-f.shtml](https://www.perle.com/products/patch-panels/din-rail-pp-rj-f.shtml)

Easily connect field and control cabinet cabling

- 10/100/1000 Mbps
- RJ45 to RJ45, IDC, Push-in or Screw Terminal Block
- Wiring space covered with front panel cover
- Tool-free shield contacting with strain relief
- Compact design with quick and easy mounting
- Extended temperature range of -40°C to +75°C
- Integrated surge protection to ensure high system availability



Ethernet patch panels make the connection between field cabling and control cabinet cabling quick and easy. In environments vulnerable to voltage surges, a **PP-RJ-F DIN Rail Patch Panel** is ideal for installation inside control panels and distribution cabinets where **one-to-one simplified connections** need to be made in environments. A standard Ethernet patch cable is used between the patch panel and the control cabinet equipment, such as switches, PLCs and routers. Through ICD, Push-in, Screw or RJ45 connectors, field wiring is easily connected to the patch panel and protected inside a covered wiring space. The cable shielding is connected quickly and easily, without tools, while simultaneously ensuring strain relief. This simplifies installation of the field cable and saves a great deal of time during installation. PP-RJ DIN Rail Patch Panels provide the perfect mix of density and flexibility to decrease network risk and improve cable organization in scalable deployments with constricted spaces.

Ideal applications for PP-RJ-F DIN Rail Patch Panels

- Inside equipment cabinets with DIN rails
- Alongside Industrial Ethernet switches and RJ45 (Ethernet or Serial) PLCs
- Alongside other DIN Rail RJ45 (Ethernet or Serial) control devices
- Where growth from one to many ports is needed to support high-density installations. Multiple one port DIN Rail Patch Panels can installed side-by-side to grow, as required by the customer application.

Benefits of PP-RJ-F DIN Rail Patch Panels

Integrated Surge Protection	The integrated surge protection protects the devices and the application against sudden high voltages in the field data cables.
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Shield current monitoring The cable shield current monitoring can be used for diagnostics. An LED indicates if there are differences in potential or other shield currents caused by EMC.

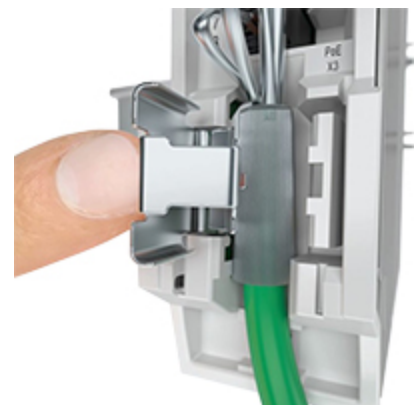


Multiple connection technologies For greater flexibility and time savings during installation you can choose between IDC, Push-in, Screw, and RJ45 connections.

- **RJ45** – standard RJ45 Ethernet type connector
- **IDC Terminal Block** – due to the tool used, it offers increased productivity and security
- **Push-in Terminal Block** – wires can be pushed-in, no tool required
- **Screw Terminal Block** – used for tight connections

Covered cable wiring space A hinged cover protects the wiring space on the field cable side with connection terminal blocks and shield contacting. This ensures a uniform installation pattern. In addition to this visual extra, the sensitive connection wires are protected from external influences.

Quick tool-free shield connection with no loose parts The cable shielding can be connected to the device quickly and easily without tools – with strain relief assured at the same time. Simply lay the cable in the shaft provided, close the shroud and, you're done.



DIN Rail Enclosure	Easily mount on a DIN rail or inside distribution boxes using native DIN Rail enclosure with grounding clip. No need for add-on brackets.			
Low profile design	The low-profile design minimizes cable bend radius in shallow enclosures where space is a premium as well as providing secure cable strain relief.			
	PP-RJ-RJ-F 27030208	PP-RJ-SC-F 27030218	PP-RJ-SCC-F 27030228	PP-RJ-IDC-F 27030238

Serial interface

Interface 1	Ethernet interface, 10/100/1000Base-T(X) according to IEEE 802.3u			
Connection method	RJ45 socket	Screw terminal block	Push-in connection	IDC connection
Transmission length	100 m (including patch cables)			
Pin assignment	1:1			
Serial transmission speed	10/100/1000 Mbps			
Maximum output current	725 mA (PoE)			
Current carrying capacity	$\leq 1.5 \text{ A}$ ($\leq 60 \text{ W}$ (PoE+))			
Maximum output power	60 W			
Interface 2	Ethernet interface, 10/100/1000Base-T(X) according to IEEE 802.3u			
Connection method	RJ45 CAT5e			
Conductor cross section solid min.		0.14 mm ²	0.2 mm ²	0.14 mm ²
Conductor cross section solid max.		1.5 mm ²		0.34 mm ²
Conductor cross section flexible min.		0.14 mm ²	0.2 mm ²	0.14 mm ²

Conductor cross section flexible max.	1.5 mm ²	0.34 mm ²
Conductor cross section AWG min.	28	26
Conductor cross section AWG max.	16	22
Torque	0.22 Nm ... 0.25 Nm	
Stripping length	5 mm	8 mm
Wire diameter incl. insulation		1.6 mm (Terminal block is tested with PVC insulation - other insulation materials available on request)

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 manufacturer's declaration) / 2000 m (ATEX approval)
Degree of protection	IP20 (Manufacturer's declaration)

General

Electrical isolation	FE // Ethernet
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Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU		
Net weight	124.2 g		
Housing material	Plastic		
Color	Gray		
MTTF	3281 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))	3268 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))	3281 Years (SN 29500 standard, temperature 25 °C, operating cycle 21 % (5 days a week, 8 hours a day))
	1245 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25 % (5 days a week, 12 hours a day))	1238 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25 % (5 days a week, 12 hours a day))	1245 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	472 Years (SN 29500 standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))	468 Years (SN 29500 standard, temperature 40 °C, operating cycle 100 % (7 days a week, 24 hours a day))	472 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		
Conformance	CE-compliant		
ATEX	☐ II 3 G Ex nA nC IIC T4 Gc X (Please follow the special installation instructions in the documentation!)		
UL, USA	UL 60079-0 Ed. 6 / UL 60079-15 Ed. 4		
UL, USA/Canada	Class I, Zone 2, AEx nA IIC T4, Ex nA IIC Gc X T4 / Class I, Div. 2, Groups A, B, C, D		
UL, Canada	CSA 22.2 No. 60079-0 Ed. 3 / CSA 22.2 No. 60079-15:16		

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
Conformance	CE-compliant
ATEX	<input type="checkbox"/> II 3 G Ex nA nC IIC T4 Gc X

UL, USA	UL 60079-0 Ed. 6 / UL 60079-15 Ed. 4
UL, USA/Canada	Class I, Zone 2, AEx nA IIC T4, Ex nA IIC Gc X T4 / Class I, Div. 2, Groups A, B, C, D
UL, Canada	CSA 22.2 No. 60079-0 Ed. 3 / CSA 22.2 No. 60079-15:16
Noxious gas test	ISA-S71.04-1985 G3 Harsh Group A

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

Dimensions

Width	23.8 mm
Height	101.3 mm
Depth	86 mm

Note

Utilization restriction	1
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Power supply

Supply voltage range	36 V DC ... 52 V DC <input type="checkbox"/> 10 % (via PoE (for shield current monitoring))	36 V DC ... 52 V DC 10 % (via PoE)
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42 V DC ... 57 V DC (With UL approval)

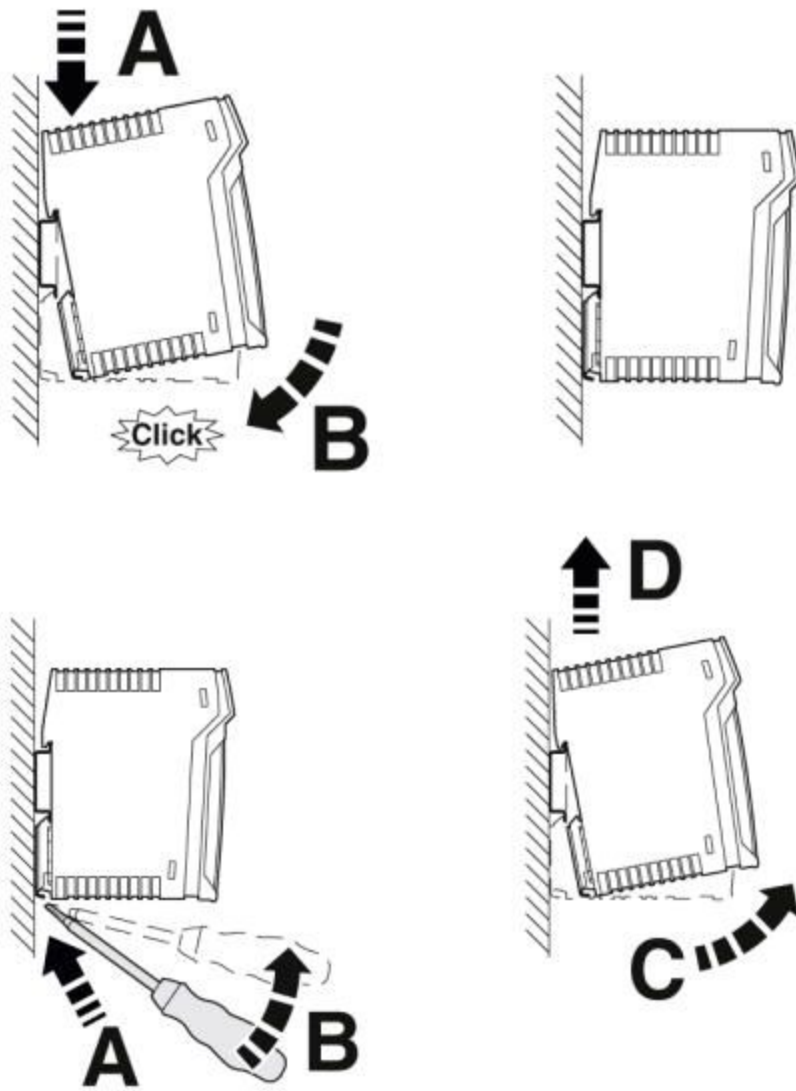
Approvals

- cULus Listed
 - cUL Listed
 - UL Listed
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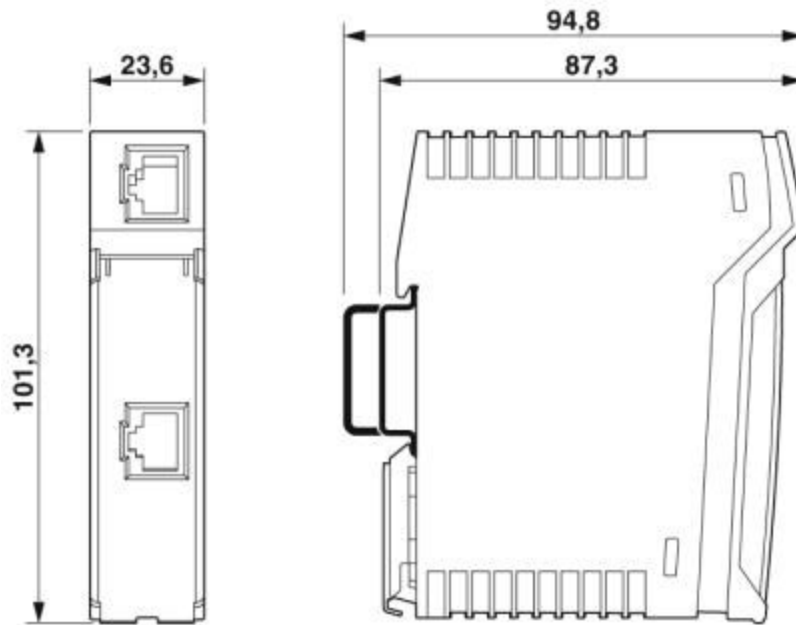
Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e	Environmentally Friendly Use Period = 50	Environmentally friendly use period: unlimited = EFUP-e
REACH SVHC		Lead 7439-92-1	

Easily Mount your Patch Panel on a DIN Rail

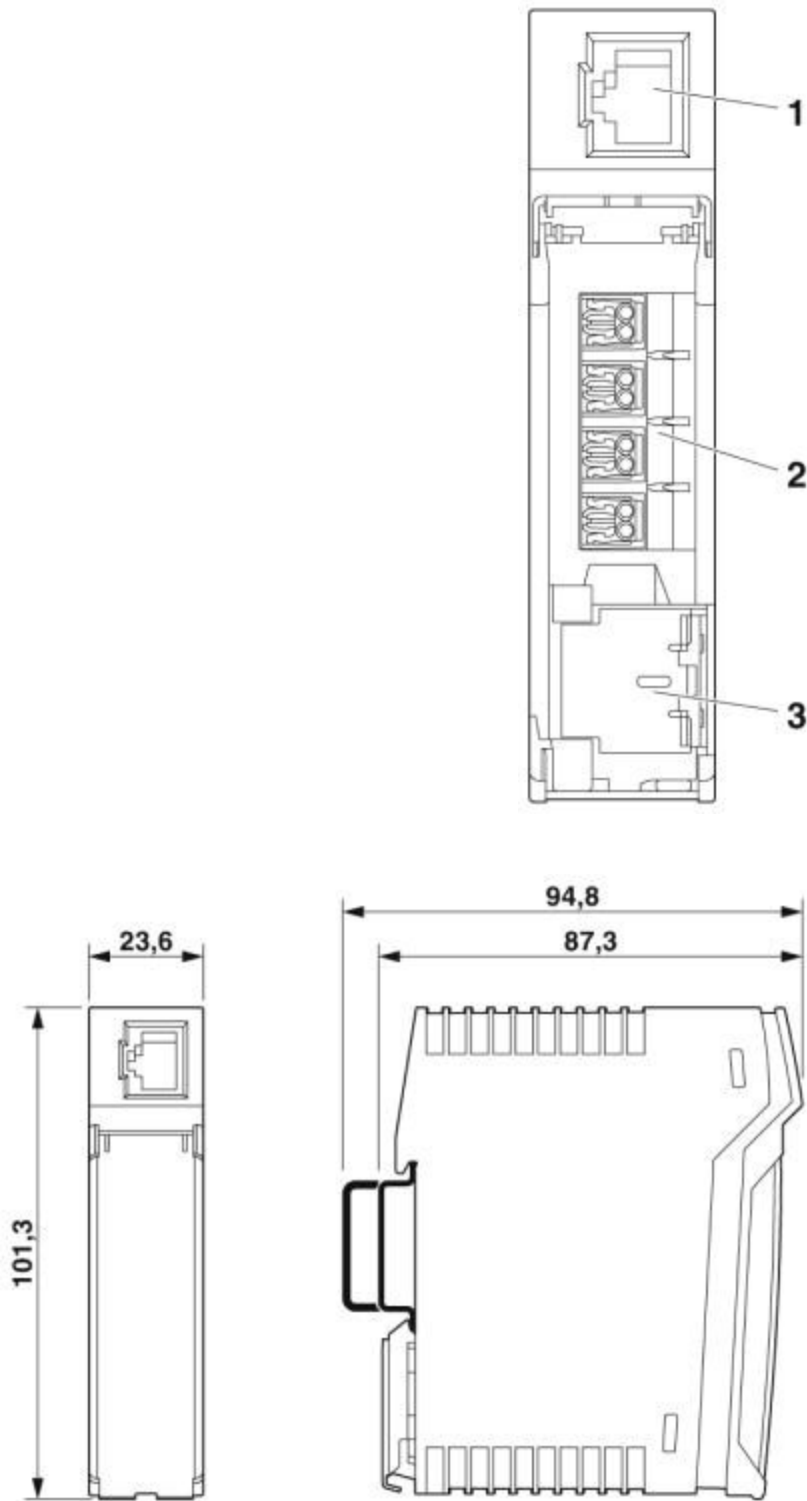


PP-RJ-RJ-F Patch Panel Dimensional drawing of Compact housing

Two RJ45 Sockets

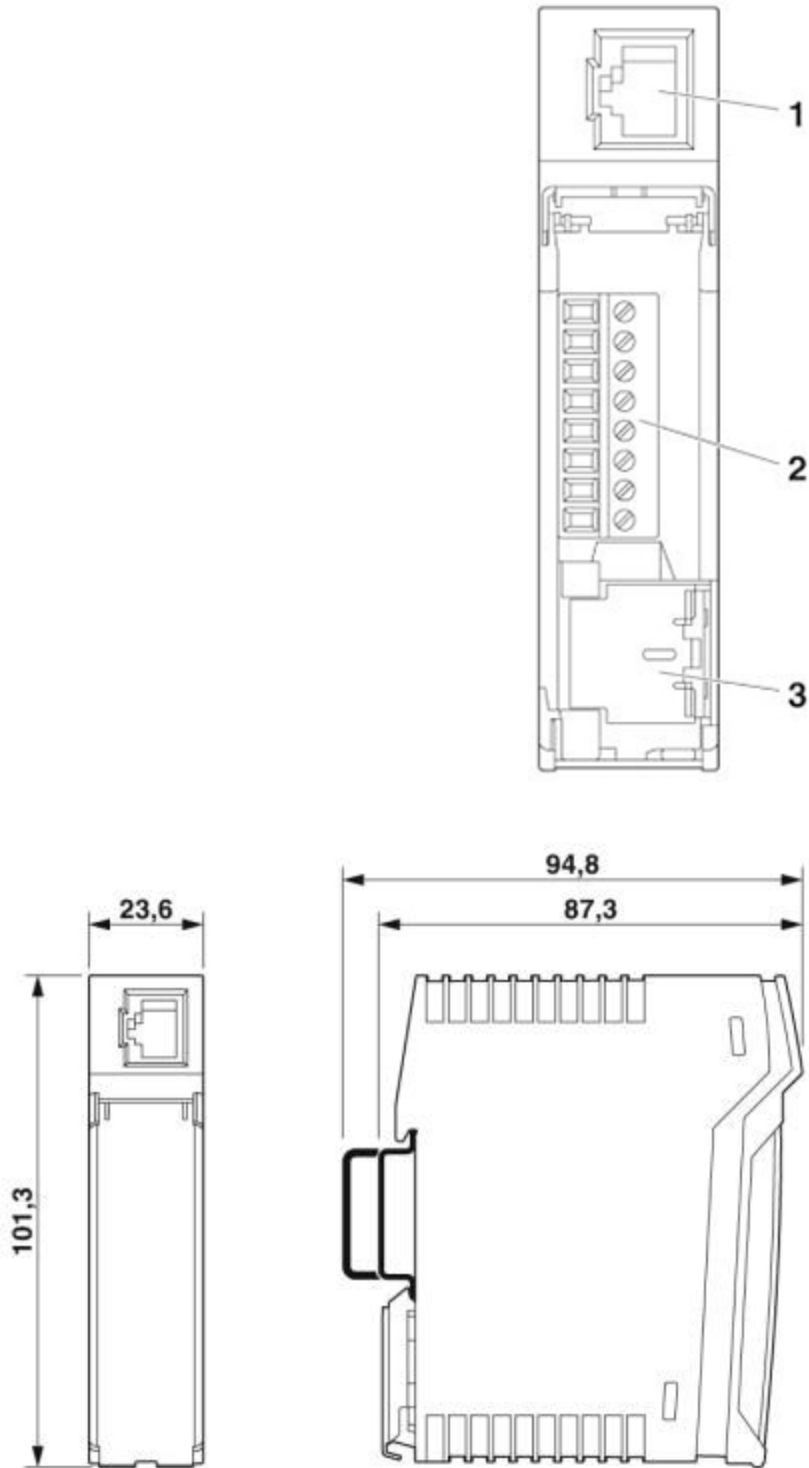
PP-RJ-IDC-F Patch Panel Dimensional drawing of Compact housing

1 x RJ45 socket and 1 x IDC terminal block



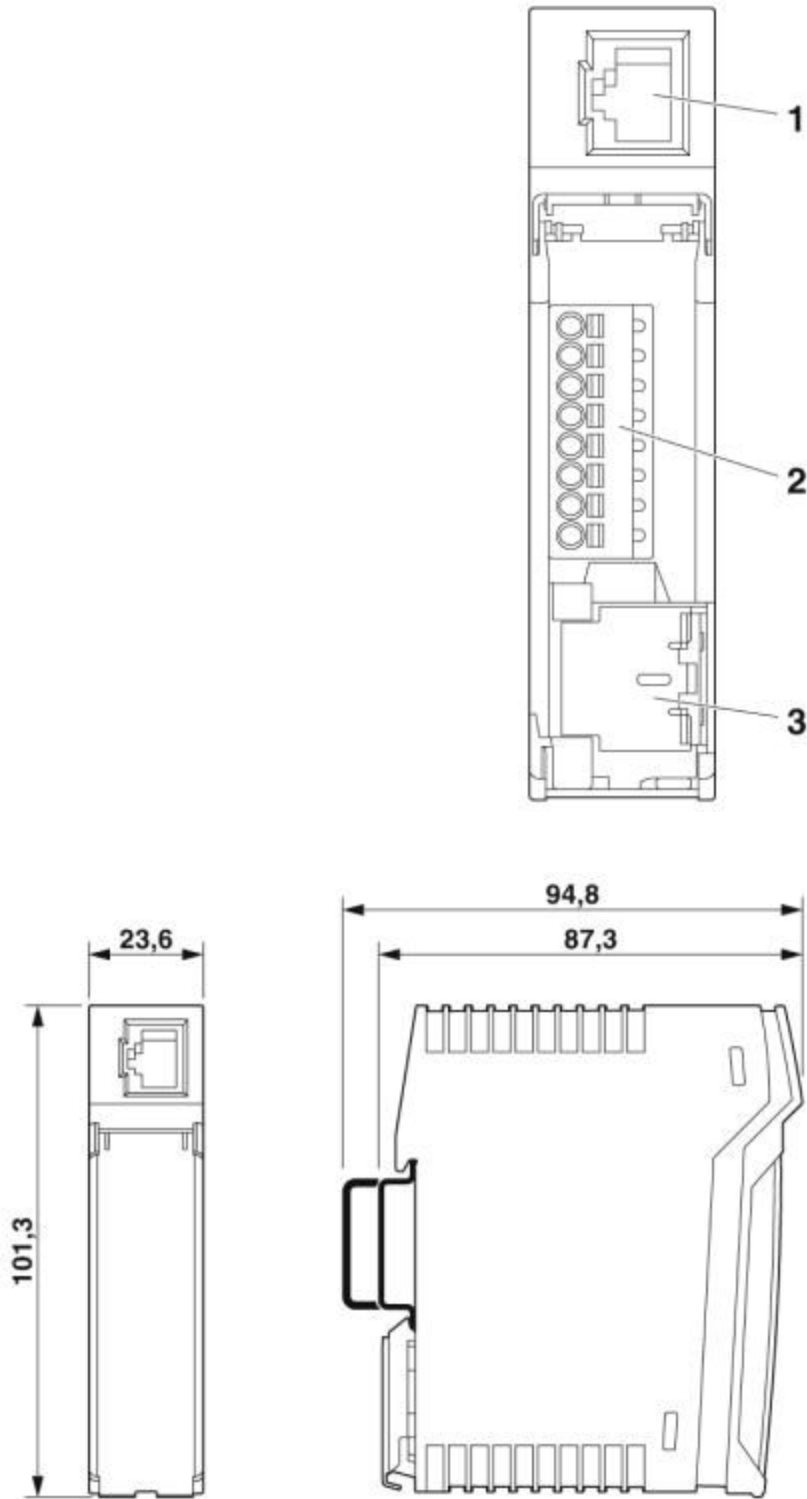
PP-RJ-SC-F Patch Panel Dimensional drawing of Compact housing

1 x RJ45 socket and 1 x screw terminal block



PP-RJ-SCC-F Patch Panel Dimensional drawing of Compact housing

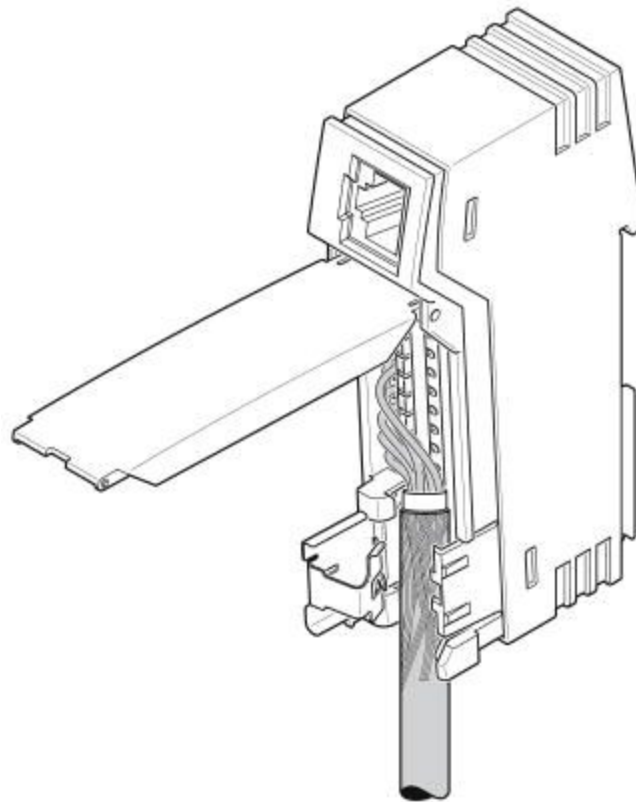
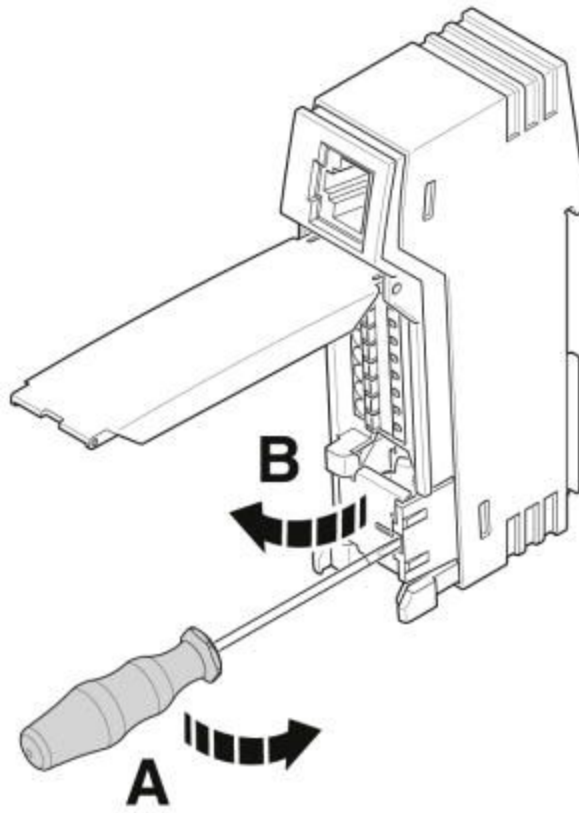
1 x RJ45 socket and 1 x Push-in terminal block



Shield Connection with strain relief

Open shield contact spring

Close shield contact
spring



Insert the cable

