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# Injector - INJ 1000 - 2703005

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PoE injector, 30 W, two RJ45 sockets, 10/100/1000 Mbps, DIN rail mounting, IP20

## Product Description

The midspan injectors connect Ethernet devices without PoE (e.g., switches) to PoE-capable end devices (e.g., IP cameras). As power sourcing equipment (PSE), the injector supplies the required power to a powered device (PD) via the data cable. The injector and end device negotiate the electrical power requirements autonomously.

## Your advantages

☑ Extended supply voltage range of 18 V DC ... 57 V DC, redundant

☑ Safe shield connection to ground potential

☑ Mounting on a DIN rail

☑ 10/100/1000 Mbps

**RoHS**
COMPLETE line

## Key Commercial Data

| Packing unit | 1 pc |
|---|---|
| GTIN | 4 055626 462936 |
| GTIN | 4055626462936 |
| Weight per Piece (excluding packing) | 396.600 g |
| Custom tariff number | 85176200 |
| Country of origin | Taiwan |

## Technical data

### Note

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

### Dimensions

| Width | 30.2 mm |
|---|---|
| Height | 130 mm |
| Depth | 120 mm |

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## Technical data

### Ambient conditions

| | |
|---|---|
| Ambient temperature (operation) | 0 °C ... 60 °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 (With UL approval) |
| Degree of protection | IP20 (Non-certificated by UL) |

### General

| | |
|---|---|
| External cable diameter | 5.5 mm ... 6.5 mm |
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Mounting position | vertical |
| Net weight | 396.6 g |
| Housing material | Plastic |
| Color | gray |
| MTTF | 110 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%) |

### Power supply

| | |
|---|---|
| Nominal supply voltage | 24 V DC |
| | 48 V DC |
| Supply voltage range | 18 V DC ... 57 V DC (Ordinary locations) |
| | 24 V DC ... 48 V DC (Hazardous locations) |
| Max. current consumption | 2.1 A |
| | 1.4 A (24 V DC) |
| | 0.7 A (48 V DC) |
| Power consumption | ≤ 75 W |
| Protective circuit | Reverse polarity protection |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm² ... 2.5 mm² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm² ... 2.5 mm² |
| Conductor cross section flexible max. | 2.50 mm² |
| Conductor cross section flexible min. | 0.20 mm² |
| Conductor cross section solid max. | 2.50 mm² |
| Conductor cross section solid min. | 0.20 mm² |
| Conductor cross section AWG max. | 12 |
| Conductor cross section AWG min. | 20 |

### Interfaces

| | |
|---|---|
| Interface 1 | Ethernet |
| Connection method | RJ45 socket |
| Transmission length | 100 m (including patch cables) |
| Pin assignment | 1:1 |
| Basic functions | PSE/Midspan, compliant with IEEE 802.3af, at |

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## Technical data

### Interfaces

| | |
|---|---|
| Serial transmission speed | 10/100/1000 Mbps |
| Output nominal voltage | 54 V DC (PoE) |
| Output power | 30 W |
| Interface 2 | Ethernet |
| Connection method | RJ45 CAT5e |

### Conformance/approvals

| | |
|---|---|
| Designation | CE |
| Identification | CE-compliant |
| Designation | EAC |
| Identification | EAC |
| Designation | UL, USA/Canada |
| Identification | Class I, Div. 2, Groups A, B, C, D T4 |
| Designation | Corrosive gas test |
| Identification | ISA-S71.04-1985 G3 Harsh Group A |

### 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) |
| | ± 2 kV (I/O cable on field side only, asymmetric) |
| Standards/regulations | EN 61000-6-4 |
| | EN 61000-4-6 |
| Frequency range | 0.15 MHz ... 80 MHz |

### Environmental Product Compliance

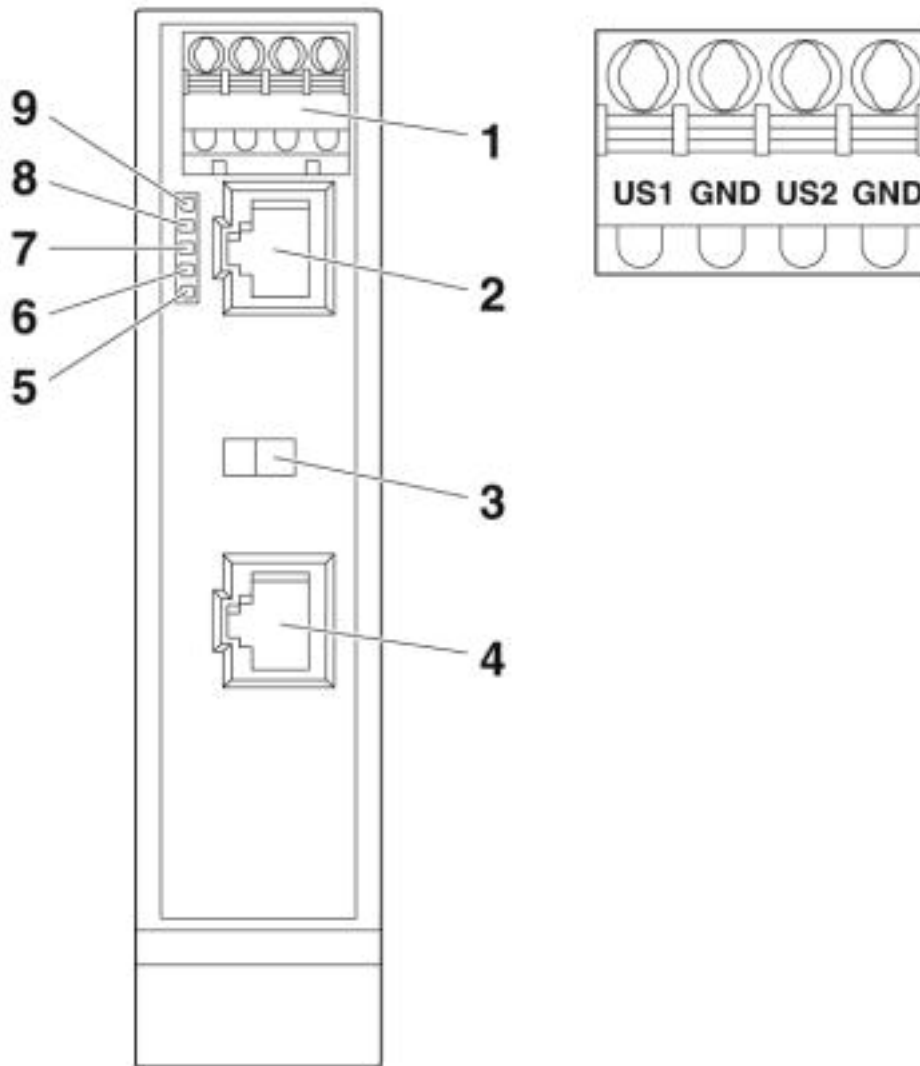| | |
|---|---|
| REACh SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 10; |

# Injector - INJ 1000 - 2703005

## Technical data

### Environmental Product Compliance

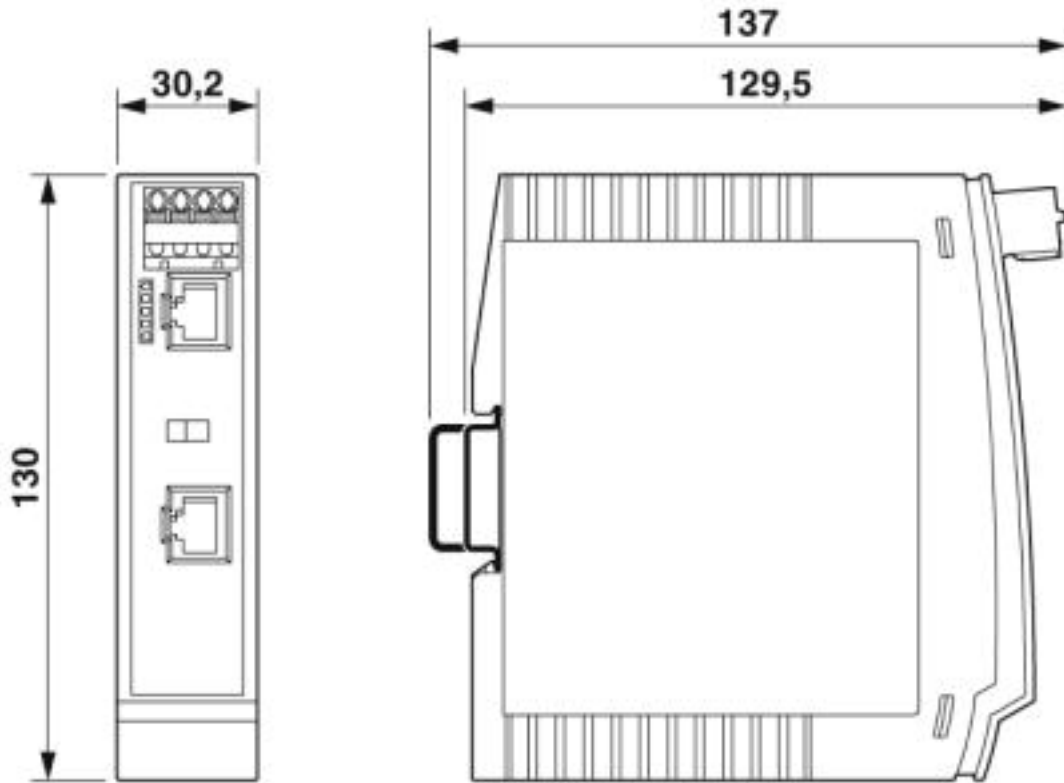| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |
|---|---|

## Drawings

Schematic diagram

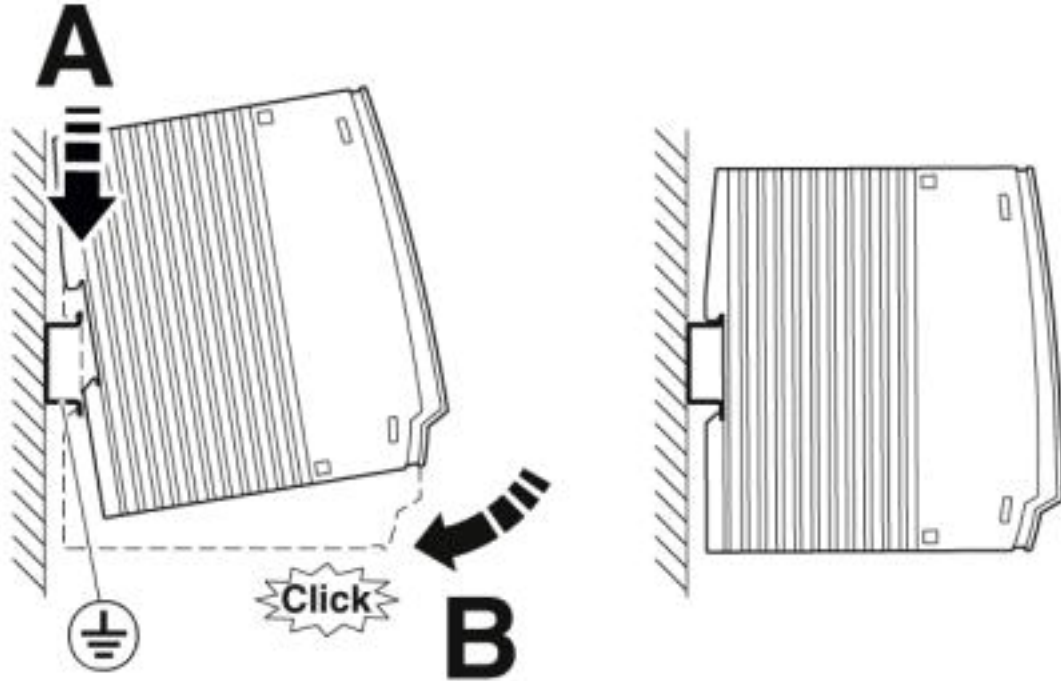US1 GND US2 GND

Front view

# Injector - INJ 1000 - 2703005

Dimensional drawing

30,2

137

129,5

130

# Injector - INJ 1000 - 2703005
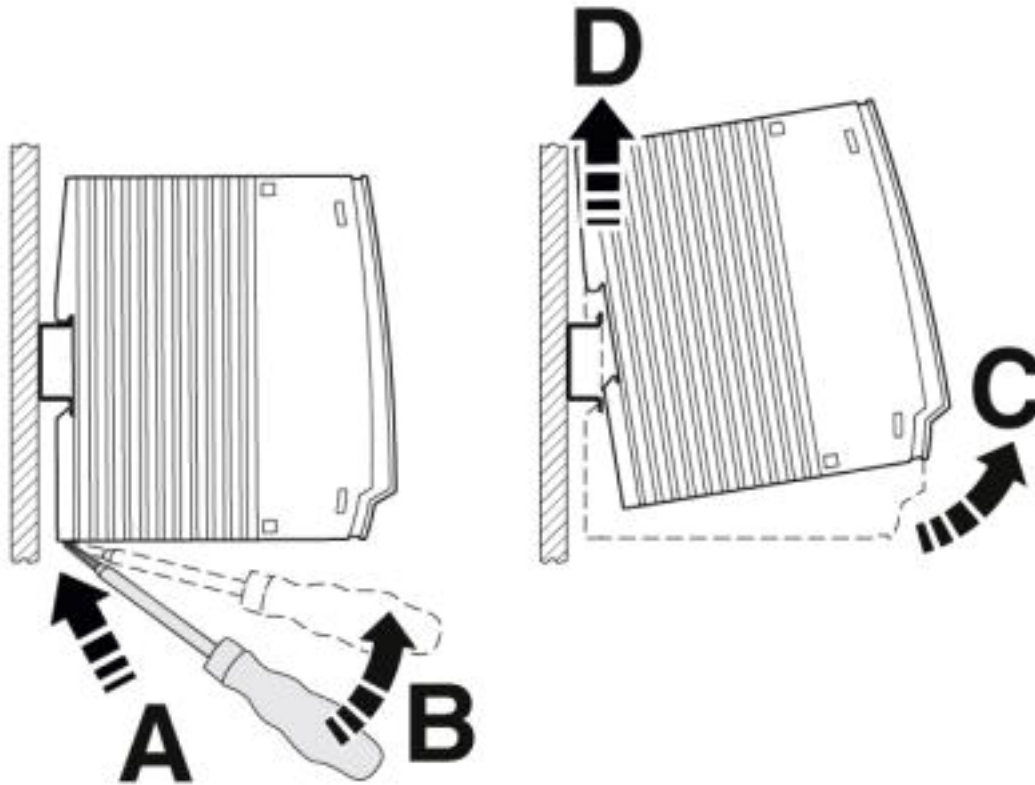
Schematic diagram

A

Click

B

Mounting

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Schematic diagram



Removal

## Classifications

### eCl@ss

| eCl@ss 6.0 | 19170100 |
|---|---|
| eCl@ss 7.0 | 19170112 |
| 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

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Approvals

UL Listed / cUL Listed / EAC / EAC / cULus Listed

# Injector - INJ 1000 - 2703005

## Approvals

Ex Approvals

UL Listed / cUL Listed / cULus Listed

## Approval details

| | | | |
|---|---|---|---|
| UL Listed | (UL) LISTED | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |

| | | | |
|---|---|---|---|
| cUL Listed | c(UL) LISTED | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |

| | | |
|---|---|---|
| EAC | EHC | EAC-Zulassung |

| | | |
|---|---|---|
| EAC | EHC | RU *-DE.A*30.B.03171 |

| | |
|---|---|
| cULus Listed | c(UL)us LISTED |

## Accessories

Accessories

Data cable by the meter

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

https://www.phoenixcontact.com/gb/products/2703005

# Injector - INJ 1000 - 2703005

## Accessories

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

## Data plug

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

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## Accessories

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

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.

# Injector - INJ 1000 - 2703005

## Accessories

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

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

# Injector - INJ 1000 - 2703005

## Accessories

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 cable - FL CAT6 PATCH 0,3 - 2891181

Patch cable, CAT6, pre-assembled, 0.3 m

Patch cable - FL CAT6 PATCH 0,5 - 2891288

Patch cable, CAT6, pre-assembled, 0.5 m

Patch cable - FL CAT6 PATCH 1,0 - 2891385

Patch cable, CAT6, pre-assembled, 1.0 m

# Injector - INJ 1000 - 2703005

## Accessories

Patch cable - FL CAT6 PATCH 1,5 - 2891482

Patch cable, CAT6, pre-assembled, 1.5 m

Patch cable - FL CAT6 PATCH 2,0 - 2891589

Patch cable, CAT6, pre-assembled, 2.0 m

Patch cable - FL CAT6 PATCH 3,0 - 2891686

Patch cable, CAT6, pre-assembled, 3.0 m

Patch cable - FL CAT6 PATCH 5,0 - 2891783

Patch cable, CAT6, pre-assembled, 5.0 m

Patch cable - FL CAT6 PATCH 7,5 - 2891880

Patch cable, CAT6, pre-assembled, 7.5 m

# Injector - INJ 1000 - 2703005

## Accessories

Patch cable - FL CAT6 PATCH 10 - 2891877

Patch cable, CAT6, pre-assembled, 10 m

Patch cable - FL CAT6 PATCH 12,5 - 2891369

Patch cable, CAT6, pre-assembled, 12.5 m

Patch cable - FL CAT6 PATCH 15,0 - 2891372

Patch cable, CAT6, pre-assembled, 15.0 m

Patch cable - FL CAT6 PATCH 20,0 - 2891576

Patch cable, CAT6, pre-assembled, 20.0 m

Patch panel

Patch panels - PP-RJ-RJ - 2703015

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

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## Accessories

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

Patch panels - PP-RJ-RJ-F - 2703020

Patch panel, two RJ45 sockets, 10/100/1000 Mbps, DIN rail mounting, IP20, shield current monitoring, surge protection

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

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

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# Injector - INJ 1000 - 2703005

## Accessories

Patch panels - PP-RJ-SCC-F - 2703022

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

Patch panels - PP-RJ-IDC-F - 2703023

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

## Power supply

Power supply unit - UNO-PS/1AC/24DC/ 60W - 2902992

Primary-switched UNO POWER power supply for DIN rail mounting, input: 1-phase, output: 24 V DC/60 W

Power supply unit - TRIO-PS-2G/1AC/24DC/3/C2LPS - 2903147

Primary-switched TRIO POWER power supply with push-in connection for DIN rail mounting, input: 1-phase, output: 24 V DC/3 A C2LPS

Power supply unit - QUINT4-PS/1AC/24DC/2.5/PT - 2909576

Primary-switched power supply unit, QUINT POWER, Push-in connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 2.5 A

## Screwdriver tools

# Injector - INJ 1000 - 2703005

## 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