

INJ 1100-T - Injector



2703009

<https://www.phoenixcontact.com/de/produkte/2703009>

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PoE injector, 30 W, two RJ45 jacks, 10/100/1000 Mbps, DIN rail mounting, IP20, expanded temperature range of -40°C ... 75°C, potential separation

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 temperature range of -40 °C ... +75 °C
- Extended supply voltage range of 18 V DC ... 57 V DC, redundant
- Electrical isolation of the internal power supply unit for protection against short circuits on the PoE side
- 10/100/1000 Mbps

Commercial data

| | |
|--------------------------------------|----------------------|
| Item number | 2703009 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | M2 - Netzwerktechnik |
| Product key | DNC351 |
| Catalog page | Page 345 (C-6-2019) |
| GTIN | 4055626462974 |
| Weight per piece (including packing) | 458,3 g |
| Weight per piece (excluding packing) | 438,4 g |
| Customs tariff number | 85176200 |
| Country of origin | DE |

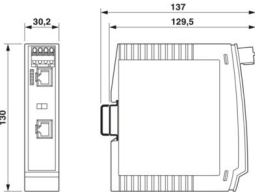
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Technical data

Dimensions

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

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. |
|------------|---|

Material specifications

| | |
|--|-----------------------|
| Color (Housing) | light grey (RAL 7035) |
| Material Housing | Plastic |
| Flammability rating according to UL 94 | V0 |

Mounting

| | |
|-------------------|-------------------|
| Mounting type | DIN rail mounting |
| Mounting position | vertical |

Interfaces

| | |
|-----------------|--|
| Basic functions | PSE/Midspan, compliant with IEEE 802.3af, at |
|-----------------|--|

Data: Power over Ethernet

| | |
|---------------------------|--------------------------------|
| Serial transmission speed | 10/100/1000 Mbps |
| Frequency range | 125 MHz |
| Connection method | RJ45 jack |
| No. of channels | 1 |
| Pin assignment | 1:1 |
| Transmission length | 100 m (including patch cables) |
| Output nominal voltage | 54 V DC (PoE) |
| Output power | 30 W |
| Maximum output power | 40 W (UL) |

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Data: Ethernet

| | |
|-------------------|-----------|
| Connection method | RJ45 jack |
|-------------------|-----------|

Product properties

| | |
|--------------|--|
| Product type | Injector |
| MTTF | 2342 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) |
| | 1167 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) |
| | 467 Years (SN 29500 standard, temperature 40°C, operating cycle 100%) |

Electrical properties

| | |
|---|---------------------------|
| Electrical isolation | VCC // FE // PoE |
| Maximum power dissipation for nominal condition | 7 W (at 18 V DC) |
| | 5 W (24 V DC ... 48 V DC) |
| Test voltage data interface/power supply | 500 V (50 Hz, 1 min.) |

Supply

| | |
|--------------------------|---|
| Supply voltage range | 18 V DC ... 57 V DC |
| Nominal supply voltage | 24 V DC (SELV/PELV, restrictions for ATEX applications) |
| | 48 V DC |
| Max. current consumption | 2.1 A |
| | 1.4 A (24 V DC, Ex areas in accordance with UL-HazLoc) |
| | 0.7 A (48 V DC, Ex areas in accordance with UL-HazLoc) |
| Power consumption | ≤ 40 W |
| Protective circuit | Reverse polarity protection |

Function

| | |
|---------|-------|
| Current | ≤ 2 A |
|---------|-------|

Connection data

Supply

| | |
|---|--|
| Connection method | Push-in connection |
| Conductor cross section flexible, with ferrule without plastic sleeve | 0.25 mm ² ... 2.5 mm ² |
| Conductor cross section, flexible, with ferrule, with plastic sleeve | 0.25 mm ² ... 2.5 mm ² |
| Single conductor/terminal point, rigid | 0.2 mm ² ... 2.5 mm ² |
| Single-wire/terminal point, flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section, flexible [AWG] | 20 ... 12 |

Environmental and real-life conditions

Ambient conditions

| | |
|---------------------------------|-------------------------------------|
| Degree of protection | IP20 (Manufacturer's declaration) |
| Ambient temperature (operation) | -40 °C ... 75 °C (observe derating) |

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| | |
|---|--|
| 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) |
| Air pressure (operation) | 80 kPa ... 110 kPa (Restrictions for ATEX applications) |

Approvals

CE

| | |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

ATEX

| | |
|----------------|---|
| Identification | ⊕ II 3G Ex ec nC IIC T4 Gc |
| Certificate | PxCIF19ATEX2703009X |
| 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 |
|----------------|----------------------------------|

Power over Ethernet

| | |
|----------------|--------------|
| Identification | IEEE 802.3af |
| | IEEE 802.3at |

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 |

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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) ± 2 kV (I/O cable on field side only, asymmetric) |
| Comments | Criterion B |

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. |

System properties

Functionality

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Basic functions

PSE/Midspan, compliant with IEEE 802.3af, at

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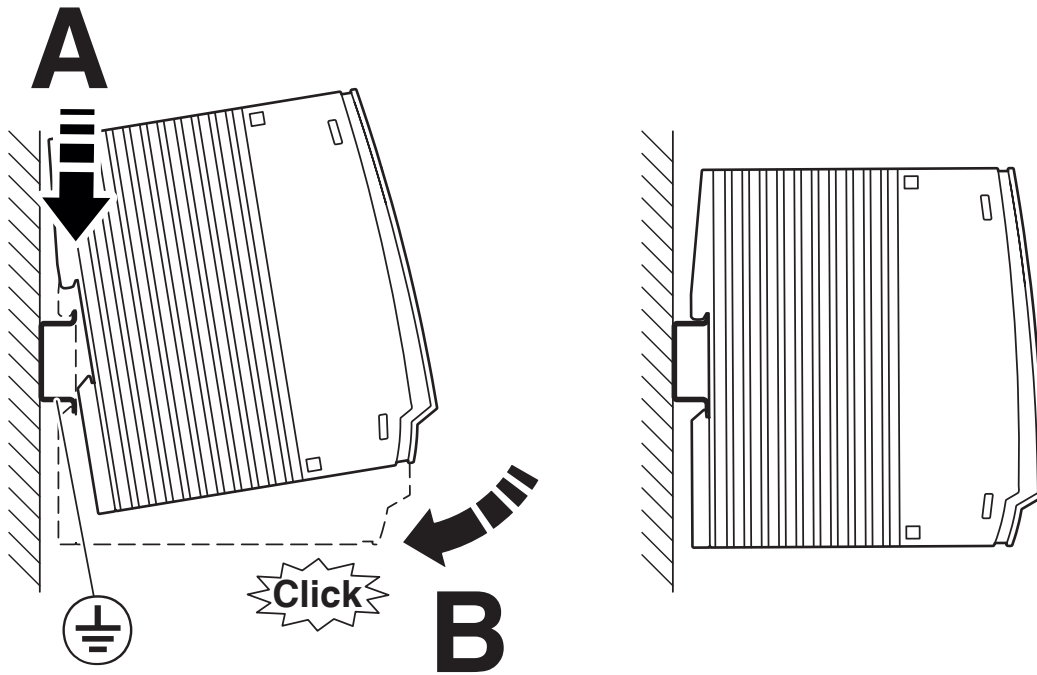
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Drawings

Schematic diagram



Mounting

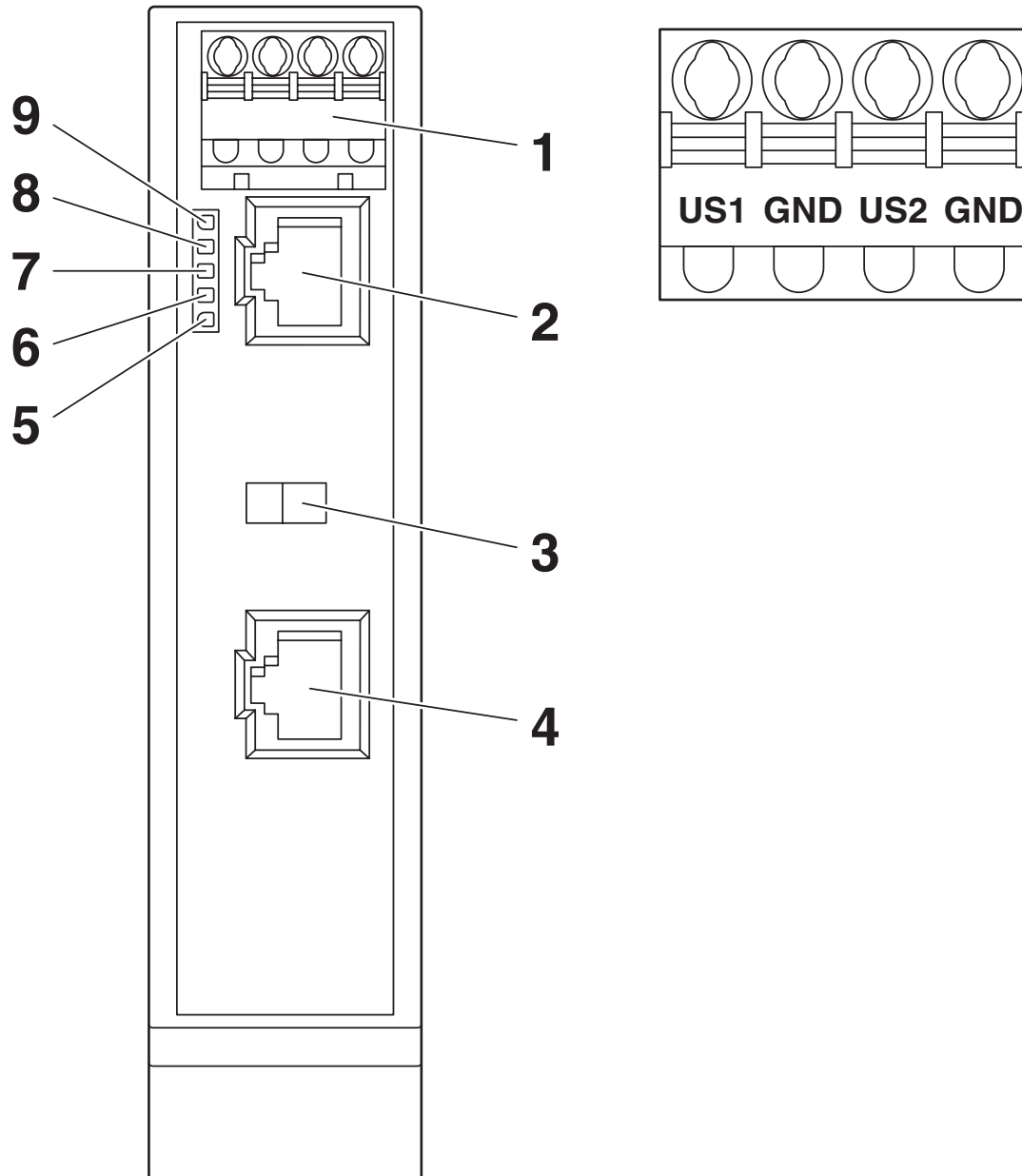
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Schematic diagram



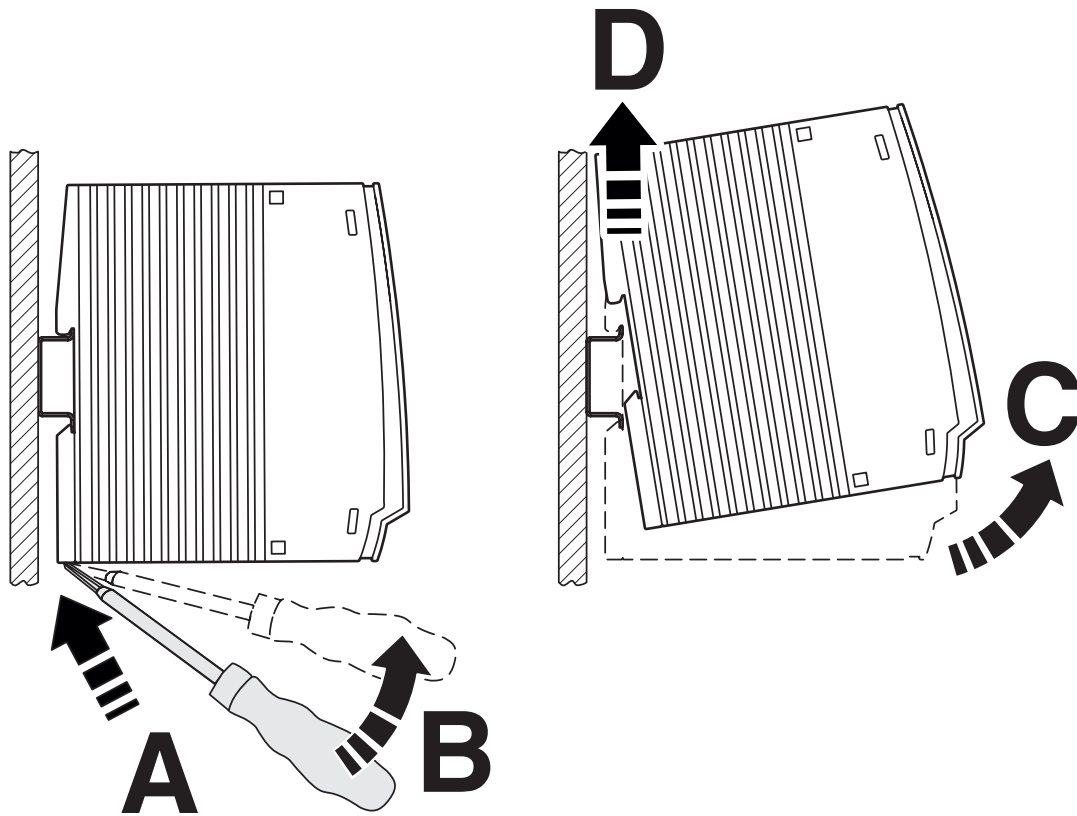
Front view

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Schematic diagram



Removal

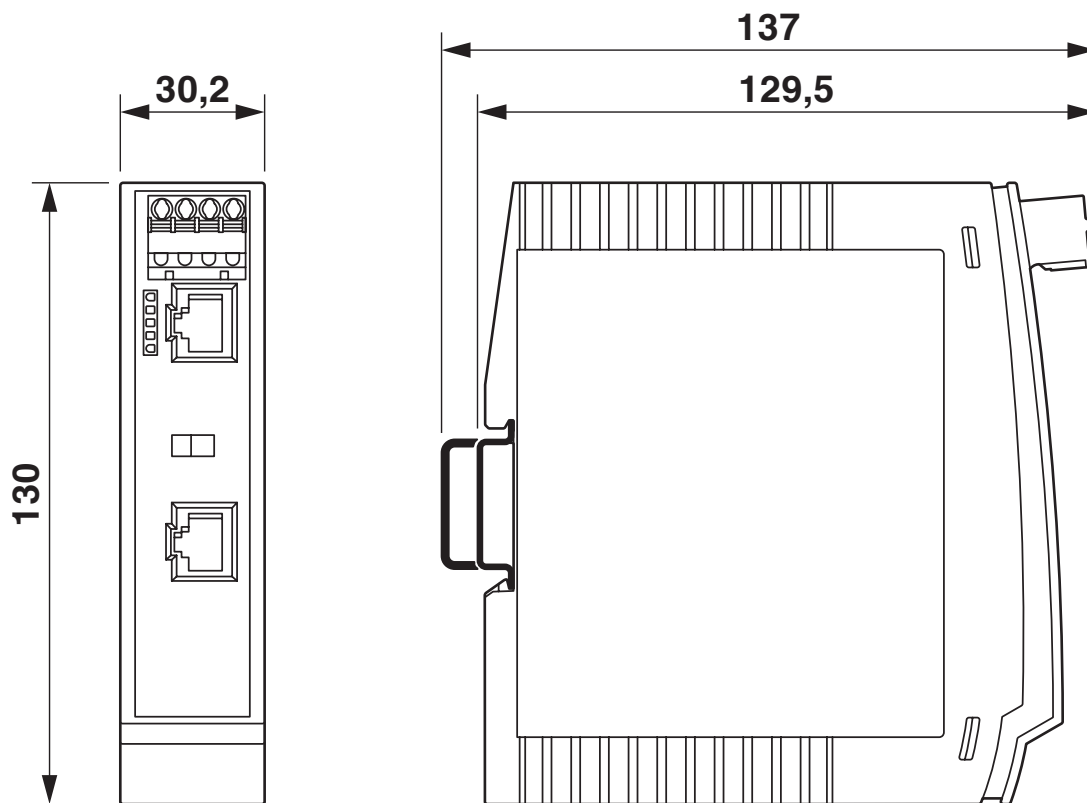
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Dimensional drawing



Housing dimensions

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/de/produkte/2703009>



UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705



ATEX

Approval ID: PxCIF19ATEX2703009X



cUL Listed

Approval ID: FILE E 366272



UL Listed

Approval ID: FILE E 366272

cULus Listed

cULus Listed

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Classifications

ECLASS

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

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC002697 |
|----------|----------|

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

FL CRIMPTOOL - Assembly tool

2744869

<https://www.phoenixcontact.com/de/produkte/2744869>

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



FL ISOLATOR 100-RJ/RJ - Network isolator

2313931

<https://www.phoenixcontact.com/de/produkte/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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FL ISOLATOR 1000-RJ/RJ - Network isolator

2313915

<https://www.phoenixcontact.com/de/produkte/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.

FL ISOLATOR 100-M12 - Network isolator

2902985

<https://www.phoenixcontact.com/de/produkte/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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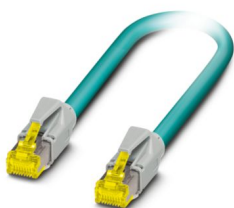
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NBC-R4AC-R4AC-IE8A/.../... - Patch cable

1411854

<https://www.phoenixcontact.com/de/produkte/1411854>

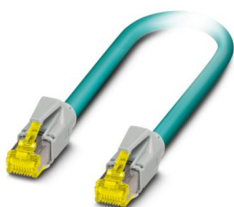


Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6_A, cable outlet: straight, Ethernet

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

1408360

<https://www.phoenixcontact.com/de/produkte/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

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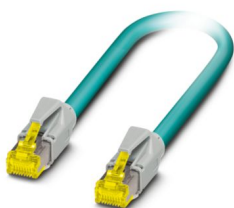
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NBC-R4AC/10G-R4AC/10G-94F/3,0 - Patch cable

1408365

<https://www.phoenixcontact.com/de/produkte/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

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

1408968

<https://www.phoenixcontact.com/de/produkte/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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NBC-R4AC/2,0-93B/R4AC - Patch cable

1408969

<https://www.phoenixcontact.com/de/produkte/1408969>



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

FL CAT5 PATCH 0,3 - Patch cable

2832250

<https://www.phoenixcontact.com/de/produkte/2832250>



Patch cable, CAT5, assembled, 0.3 m

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FL CAT5 PATCH 0,5 - Patch cable

2832263

<https://www.phoenixcontact.com/de/produkte/2832263>

Patch cable, CAT5, assembled, 0.5 m



FL CAT5 PATCH 1,0 - Patch cable

2832276

<https://www.phoenixcontact.com/de/produkte/2832276>

Patch cable, CAT5, assembled, 1 m



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FL CAT5 PATCH 1,5 - Patch cable

2832221

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Patch cable, CAT5, assembled, 1.5 m



FL CAT5 PATCH 2,0 - Patch cable

2832289

<https://www.phoenixcontact.com/de/produkte/2832289>

Patch cable, CAT5, assembled, 2 m



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FL CAT5 PATCH 3,0 - Patch cable

2832292

<https://www.phoenixcontact.com/de/produkte/2832292>



Patch cable, CAT5, assembled, 3 m

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

1419001

<https://www.phoenixcontact.com/de/produkte/1419001>



RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6_A, material: Plastic, connection method: Insulation displacement connection, connection cross section: AWG 26- 24, cable outlet: straight, color: black, Ethernet

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

1658435

<https://www.phoenixcontact.com/de/produkte/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

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

1656725

<https://www.phoenixcontact.com/de/produkte/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/de/produkte/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

VS-CABLE-STRIP-VARIO - Stripping tool

1657407

<https://www.phoenixcontact.com/de/produkte/1657407>

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



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SZF 0-0,4X2,5 - Screwdriver

1204504

<https://www.phoenixcontact.com/de/produkte/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

MICROFOX-SP - Diagonal cutter

1212488

<https://www.phoenixcontact.com/de/produkte/1212488>



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

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<https://www.phoenixcontact.com/de/produkte/2703009>



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

1417359

<https://www.phoenixcontact.com/de/produkte/1417359>



Data cable, Ethernet CAT6_A (10 Gbps), 8-position, PUR halogen-free, water blue RAL 5021, shielded (Tinned copper braided shield), free cable end, on free cable end, cable length: Free entry (0.5 ... 400 m)

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