

1411599

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Device connector rear mounting, Power, 4-position, Socket, straight, M12-Standard, T-coding, on free cable end, Individual wires, cable length: 0.5 m, 1.31 mm², UL/cUL stranded hook-up wire, potted, this item is expected to be lead-free from Q2 2026 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

Your advantages

- · For compact devices: transmit high power in a confined space
- Easy-to-install, optimized XL housing contour with wrench size 19
- · Mechanical tightening limitation for long-term-stable gasket
- · Preassembled with litz wires for immediate use
- · Customer-specific assemblies and litz wire lengths available
- · Sealed on the litz wire side for optimum leak-tightness
- For high transmission safety: shield connection to the housing with optional EMC nut

Commercial data

| Item number | 1411599 |
|--------------------------------------|---------------|
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB24 |
| Product key | ABQCHG |
| GTIN | 4046356936064 |
| Weight per piece (including packing) | 58.4 g |
| Weight per piece (excluding packing) | 46.589 g |
| Customs tariff number | 85444290 |
| Country of origin | DE |



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Technical data

Notes

| Notes on operation | The electrical and mechanical data specified assume that the connector pair is correctly locked and mounted. If the connector is unlocked and if there is a danger of contamination, the connector must be sealed using a protective cap > IP54. Influences arising from litz wires, cables or PCB assembly must also be taken into consideration. |
|--------------------|--|
| Order information: | Lock nut is included in the scope of delivery |

Mounting

| Mounting type | Rear mounting (M16 x 1.5, XL version, with flat nut, tightening limitation) |
|-------------------|---|
| Tightening torque | 0.8 Nm 1.3 Nm (Installation-side) |

Product properties

| Product type | Circular connectors (device side) |
|-----------------------|-----------------------------------|
| Application | Power |
| Sensor type | Power |
| Number of positions | 4 |
| No. of cable outlets | 1 |
| No. of power contacts | 4 |
| Shielded | no |
| Coding | Т |
| Thread type | M12 |

| Overvoltage category | III |
|----------------------|-----|
| Degree of pollution | 3 |

Material specifications

| Material Housing | GD-Zn |
|--|--------------------|
| Material Housing surface | Ni |
| Material Molding compound | PUR (potted) |
| Flammability rating according to UL 94 | V0 |
| Seal material | FKM |
| Contact material | CuZn |
| Contact surface material | Au |
| Contact carrier material | PA |
| Conductor material | Bare Cu litz wires |

Electrical properties

| Rated surge voltage | 1.5 kV |
|---------------------|--------|
|---------------------|--------|



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| Rated surge voltage | 1.5 kV AC/DC |
|--------------------------------|--------------|
| Contact resistance | ≤ 3 mΩ |
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage U _N | 63 V DC |
| Nominal current I _N | 12 A |
| Test voltage | 1.5 kV |

Connection data

Conductor connection

| Connection method | Individual wires |
|-------------------------|-----------------------------------|
| Contact connection type | Socket |
| Conductor cross-section | 1.31 mm² |
| Tightening torque | 0.8 Nm 1.3 Nm (Installation-side) |

Mechanical properties

Mechanical data

| Insertion/withdrawal cycles > 100 |
|-----------------------------------|
|-----------------------------------|

Connector

Connection 1

| Head design | Socket |
|-------------------|----------|
| Head cable outlet | straight |
| Head thread type | M12 |
| Head locking type | Standard |
| Coding | Т |

Connection 2

| Head design | free cable end |
|-------------|----------------|

Cable/line

| Cable length | 0.5 m |
|--------------------------------|---|
| Cable type | UL/cUL stranded hook-up wire |
| Signal type/category | Power |
| Wire diameter incl. insulation | 2 mm |
| Single wire, color | black, brown, blue, white |
| Cable cross section | 1.31 mm² |
| Conductor material | Bare Cu litz wires |
| AWG signal line | 16 |
| Material wire insulation | mPPE |
| Halogen-free | yes |
| Flame resistance | in acc. to UL 1581 VW1 |
| | -40 °C 85 °C (without mechanical actuation) |



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| Ambient temperature (operation) | -40 °C 85 °C (without mechanical actuation) | |
|---------------------------------|--|--|
| | -25 °C 105 °C (Cable, flexible installation) | |

Environmental and real-life conditions

Ambient conditions

| Degree of protection | IP65 |
|---|--|
| | IP67 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C 85 °C (Plug / socket) |
| Ambient temperature (operation) (Cable, fixed installation) | -40 °C 85 °C (without mechanical actuation) |
| Ambient temperature (operation) (Cable, flexible installation) | -25 °C 105 °C (Cable, flexible installation) |
| Ambient temperature (operation) (Cable, fixed installation) | -40 °C 105 °C (cable, fixed installation) |
| UL Type Rating | Type 4 (indoor use only) |

Standards and regulations

| Flame resistance | in acc. to UL 1581 VW1 | |
|--------------------------|------------------------------|--|
| Standard designation | M12 circular connector | |
| Standards/specifications | according to IEC 61076-2-111 | |

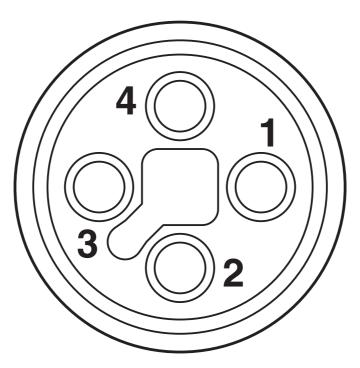


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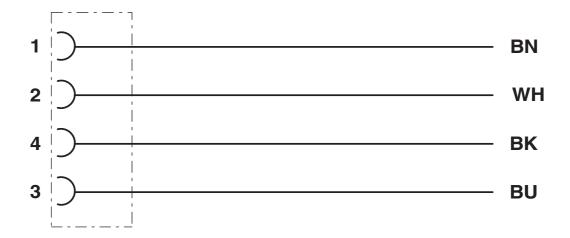
Drawings





Pin assignment of M12 socket, 4-pos., T-coded, socket side view

Circuit diagram



Contact assignment of the M12 socket



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1411599

| cUL Recognized Approval ID: E468743-20190917 | | | | | |
|--|--|--------------------------------|--------------------------------|-------------------|-------------------------------|
| | | Nominal voltage U _N | Nominal current I _N | Cross section AWG | Cross section mm ² |
| keine | | | | | |
| | | 63 V | 12 A | 16 | - |

| 7.1 | UL Recognized Approval ID: E468743-20190917 | | | | |
|------------|---|--------------------------------|--------------------------------|-------------------|-------------------------------|
| | | Nominal voltage U _N | Nominal current I _N | Cross section AWG | Cross section mm ² |
| keine | | | | | |
| | | 63 V | 12 A | 16 | - |



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Classifications

UNSPSC 21.0

ECLASS

| | ECLASS-13.0 | 27440103 | |
|------|-------------|----------|--|
| | ECLASS-15.0 | 27440103 | |
| ETIM | | | |
| | ETIM 9.0 | EC003570 | |
| UN | ISPSC | | |

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Environmental product compliance

EU RoHS

| Fulfills EU RoHS substance requirements | Yes |
|---|---|
| Exemption | 6(c) |
| China RoHS | |
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |
| EU REACH SVHC | |
| REACH candidate substance (CAS No.) | Lead(CAS: 7439-92-1) |
| SCIP | fb5ec3a5-7274-4b9f-b443-7a48e18b422f |

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