

1411604

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Device connector rear mounting, Power, 4-position, Pin, straight, M12-Standard, T-coding, on free cable end, Individual wires, cable length: 0.5 m, 1.31 mm<sup>2</sup>, 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                          | 1411604       |
|--------------------------------------|---------------|
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | AB24          |
| Product key                          | ABQCGG        |
| GTIN                                 | 4046356936187 |
| Weight per piece (including packing) | 59.8 g        |
| Weight per piece (excluding packing) | 47.05 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  |
| General            | Contact connection method: Crimp connection  |

#### Mounting

| Mounting type     | Rear mounting (M16 x 1.5, XL version, with flat nut, tightening limitation) |
|-------------------|---|
| Tightening torque | 1.5 Nm 2 Nm (Installation-side)   |

### Product properties

| Circular connectors (device side) |
|-----------------------------------|
| Power                             |
| Power                             |
| 4                                 |
| 1                                 |
| 4                                 |
| no                                |
| Т                                 |
| M12                               |
|                                   |

#### Insulation characteristics

| 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



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

#### Connection data

#### Conductor connection

| Connection method       | Individual wires                |
|-------------------------|---------------------------------|
| Contact connection type | Pin                             |
| Conductor cross-section | 1.31 mm²                        |
| Tightening torque       | 1.5 Nm 2 Nm (Installation-side) |

### Mechanical properties

#### Mechanical data

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

#### Connector

#### Connection 1

| Head design       | Pin      |
|-------------------|----------|
| 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       |



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| Ambient temperature (operation) | -40 °C 85 °C (without mechanical actuation)  |
|---------------------------------|--|
|                                 | -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 |  |

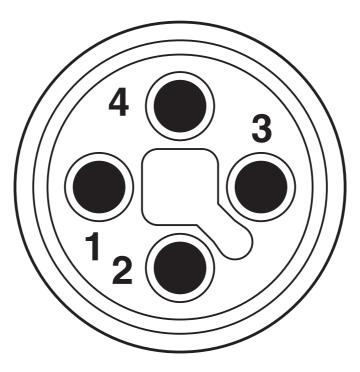


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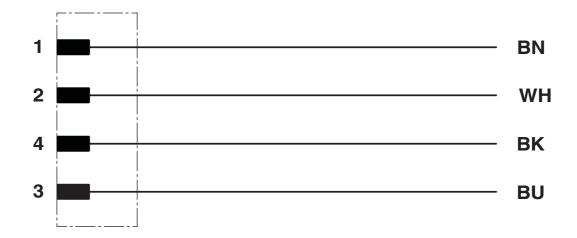
# Drawings





Connector pin assignment of M12 plug, 4-pos., T-coded, view of pin side

Circuit diagram



Contact assignment of the M12 plug



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# Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1411604

| . <b>91</b> | cUL Recognized Approval ID: E468743-20190917 |                                |                                |                   |                               |
|-------------|--|--------------------------------|--------------------------------|-------------------|-------------------------------|
|             |  | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine       |  |                                |                                |                   |                               |
|             |  | 63 V                           | 12 A                           | 16                | -                             |

| <b>7.1</b> | UL Recognized Approval ID: E468743-20190917 |                                |                                |                   |                               |
|------------|---|--------------------------------|--------------------------------|-------------------|-------------------------------|
|            |   | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine      |   |                                |                                |                   |                               |
|            |   | 63 V                           | 12 A                           | 16                | -                             |



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# Classifications

# **ECLASS**

| 202.100 |             |          |  |
|---------|-------------|----------|--|
|         | ECLASS-13.0 | 27440103 |  |
|         | ECLASS-15.0 | 27440103 |  |
| ETIM    |             |          |  |
|         | ETIM 9.0    | EC003570 |  |
| UNSPSC  |             |          |  |

UNSPSC 21.0 39121400



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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                                    | 603de193-be14-4081-a69c-3f644c9a4b3c  |

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