

1222105

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Device connector rear mounting, 4-position, PUR, black-gray RAL 7021, Socket, straight, M12-Push-Pull, coding: A, on free cable end, Rear mounting, M16 x 1.5, Individual wires, cable length: 2 m, PUR halogen-free black

Your advantages

- · Preassembled with cables in various standard lengths for immediate use
- · Customer-specific assemblies and cable lengths can be supplied
- · Sealed on the cable side for optimum tightness of seal
- · Established M12 standard for secure transmission of signals, data, and power
- · Manufacturer-independent M12 push-pull locking system for maximum availability
- · Reliable shield connection even under extreme mechanical strain
- · Compatible with connectors with screw or push-in connection

Commercial data

| Item number | 1222105 |
|--------------------------------------|---------------|
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | AB25 |
| Product key | ABQDCG |
| GTIN | 4063151310981 |
| Weight per piece (including packing) | 22.22 g |
| Weight per piece (excluding packing) | 22.22 g |
| Customs tariff number | 85444290 |
| Country of origin | DE |



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Technical data

| General | 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. |
| Safety note | |
| Safety note | WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property. |
| | WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible. |
| | WARNING: Only electrically qualified personnel may install an operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product. |
| | The products are suitable for applications in plant, controller, and electrical device engineering. |
| | When operating the connectors in outdoor applications, they must be separately protected against environmental influences. |
| | Assembled products may not be manipulated or improperly opened. |
| | Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at phoenixcontact.com/products). |
| | When using the product in direct connection with third-party manufacturers, the user is responsible. |
| | For operating voltages > 50 V AC, conductive connector housings must be grounded |
| | Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards. |
| | Observe the corresponding technical data. You will find information: o On the product |
| | o On the packing label o In the supplied documentation o Online at phoenixcontact.com/products under the product |
| | Only use tools recommended by Phoenix Contact |
| | Use a protective cap to protect connectors that are not in use. The suitable accessories are available online in the accessory section of the product at phoenixcontact.com/products |



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• Ensure that the protective or functional ground has been properly connected.

 \bullet VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector

• The connector warms up in normal operation. Depending on the ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12).

Mounting

| Mounting type | Rear mounting M16 x 1.5 With flat nut |
|-----------------------|---------------------------------------|
| Assembly instructions | With flat nut |

Product properties

| Product type | Circular connectors (device side) |
|----------------------|-----------------------------------|
| Number of positions | 4 |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | A |
| Thread type | M12 |

Insulation characteristics

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

Material specifications

| Material | Brass, nickel-plated |
|--|----------------------|
| Flammability rating according to UL 94 | VO |
| Seal material | FKM |
| Material of grip body | Brass, nickel-plated |
| Contact material | CuZn |
| Contact surface material | Au |
| Contact carrier material | PA 6.6 |
| Material for screw connection | Brass, nickel-plated |
| Outer sheath, material | PUR |

Electrical properties

| Rated surge voltage | 2.5 kV |
|--------------------------------|--|
| Contact resistance | ≤ 3 mΩ |
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage U _N | 250 V |
| Nominal current I _N | 4 A (Plug/socket in accordance with IEC 61076-2-101, cable technical data is to be observed) |
| Transmission medium | Copper |



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Connection data

| Connection method | Individual wires |
|-------------------------|-------------------------------|
| Contact connection type | Socket |
| Tightening torque | 3 Nm 4 Nm (Installation-side) |

Mechanical properties

| Mechanical data | |
|-----------------------------|---------|
| Insertion/withdrawal cycles | > 100 |
| Max. bending cycles | 2000000 |

Connector

| Connection 1 | |
|-------------------|----------------|
| Head design | Socket |
| Head cable outlet | straight |
| Head thread type | M12 |
| Head locking type | Push-Pull |
| Coding | A |
| Connection 2 | |
| Head design | free cable end |
| Cable/line | |
| Cable length | 2 m |

С

| Cable length | 2 m |
|--------------|-----|

PUR halogen-free black [PUR]

Dimensional drawing



| Cable weight | 36 kg/km |
|---------------------------------|------------------------------|
| UL AWM Style | 20549 / 10493 (80°C/300 V) |
| Number of positions | 4 |
| Shielded | yes |
| Cable type | PUR halogen-free black [PUR] |
| Conductor structure signal line | 42x 0.10 mm |
| AWG signal line | 22 |



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| Conductor cross section | 4x 0.34 mm² (Signal line) |
|---|---|
| Wire diameter incl. insulation | 1.27 mm ±0.02 mm (Signal line) |
| External cable diameter | 4.95 mm ±0.2 mm |
| Outer sheath, material | PUR |
| External sheath, color | black-gray RAL 7021 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PP |
| Single wire, color | brown, white, blue, black |
| Thickness, insulation | ≥ 0.21 mm |
| Thickness, outer sheath | approx. 0.50 mm |
| Overall twist | 4 wires, twisted |
| Optical shield covering | 80 % |
| Max. conductor resistance | max. 58 Ω/km (at 20 °C) |
| Insulation resistance | ≥ 100 GΩ*km (at 20 °C) |
| Wave impedance | ≥ 62 Ω (f = 10 MHz) |
| Cable capacity | ≤ 80 pF/m (Conductor-Conductor) |
| | ≤ 135 pF/m (Wire/shield) |
| Nominal voltage, cable | ≤ 300 V |
| Test voltage | ≥ 3000 V |
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Smallest bending radius, fixed installation | 25 mm |
| Smallest bending radius, movable installation | 50 mm |
| Max. bending cycles | 1000000 |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| | in accordance with DIN EN 50267-2-1 |
| Flame resistance | in accordance with UL 758/1581 FT2 |
| | DIN EN 60332-2-2 (20 s) |
| Resistance to oil | in accordance with DIN EN 60811-2-1 |
| Other resistance | Highly resistant to acids, alkaline solutions and solvents |
| | hydrolysis and microbe resistant |
| | Resistant to salt water |
| | partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) |
| | abrasion-resistant |
| Special properties | Flexible cable conduit capable |
| | Silicone-free |
| | Free of substances which would hinder coating with paint or varnish |
| | Low adhesion surface |
| Ambient temperature (operation) | -40 °C 80 °C (cable, fixed installation) |
| | -25 °C 80 °C (Cable, flexible installation) |

Environmental and real-life conditions



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Ambient conditions

| Degree of protection | IP67 (When plugged in) |
|---------------------------------|---|
| | IP65 (When plugged in) |
| | IP65/IP67 |
| Ambient temperature (operation) | -25 °C 85 °C (Plug / socket) |
| | -40 °C 85 °C (without mechanical actuation) |

Standards and regulations

| M12 | | |
|--------------------------|--------------------|--|
| Standard designation | M12 connector | |
| Standards/specifications | IEC 61076-2-010 | |
| Note | Push-pull (type 2) | |



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Classifications

ECLASS

| | ECLASS-11.0 | 27440103 | |
|--------|-------------|----------|--|
| | ECLASS-12.0 | 27440103 | |
| | ECLASS-13.0 | 27440103 | |
| ETIM | | | |
| | ETIM 9.0 | EC003570 | |
| UNSPSC | | | |
| | UNSPSC 21.0 | 39121400 | |



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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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Phoenix Contact USA 586 Fulling Mill Road Middletown, PA 17057, United States (+717) 944-1300 info@phoenixcon.com