

1662285

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Connector, Universal, 5-position, Plug straight M12, coding: A, Screw connection, knurl material: Plastic, cable gland Pg11-DUO, external cable diameter 2.1 mm ... 3 mm / 4 mm ... 5.2 mm

### Your advantages

- Safe use in the field, thanks to a high degree of protection
- Screw connection: proven connection technology for a large selection of different conductors
- · Save space: connect two sensors to one connector with a multiple grommet

#### Commercial data

| Item number                          | 1662285       |
|--------------------------------------|---------------|
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF30          |
| Product key                          | AF2CAA        |
| GTIN                                 | 4017918100438 |
| Weight per piece (including packing) | 24.98 g       |
| Weight per piece (excluding packing) | 24.98 g       |
| Customs tariff number                | 85366990      |
| Country of origin                    | HU            |



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### Technical data

#### Notes

| cables, since the degree of protection may be at risk if the bending forces are too high. Reduce mechanical loads upstream of the connector, e.g., by using cable ties. | Assembly note | NOTE: Observe the permissible bending radii when routing      |
|---|---------------|---|
|   |               | bending forces are too high. Reduce mechanical loads upstream |

### Mounting

| Assembly note | This connector includes one seal for small and one seal for large |
|---------------|---|
|               | outer cable diameters.  |

### Product properties

| Product type               | Circular connector (cable-side) |
|----------------------------|---------------------------------|
| Sensor type                | Universal                       |
| Number of positions        | 5                               |
| No. of cable outlets       | 2                               |
| Shielded                   | no                              |
| Coding                     | A                               |
| Cable outlet               | straight                        |
| Pg screw connection        | Pg11                            |
| Insulation characteristics |                                 |
| Overvoltage category       | II                              |
| Degree of pollution        | 3                               |

### Dimensions

| Dimensional drawing | 63  |
|---------------------|---|
| Width               | 20 mm   |
| Height              | 20 mm   |
| Length              | 63 mm   |
| External dimensions |   |
| Outside diameter    | 2x 2.1 mm 3 mm (when using the seal for small outer cable diameters)  |
|                     | 2x4 mm $5.2$ mm (when using the seal for large outer cable diameters) |
| Housing             |   |
| Diameter housing    | 20 mm   |

### Material specifications



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| Seal material                 | NBR     |
|-------------------------------|---------|
| Material of grip body         | PA      |
| Contact material              | CuZn    |
| Contact surface material      | CuSnZn  |
| Contact carrier material      | PA      |
| Material for screw connection | Plastic |

#### Connection data

#### Conductor connection

| Connection method                       | Screw connection   |
|---|--|
| Connection cross section                | 0.25 mm² 0.75 mm² (without ferrule)                      |
|   | 0.14 mm <sup>2</sup> 0.75 mm <sup>2</sup> (with ferrule) |
|   | 0.25 mm² 0.75 mm² (solid)                                |
| Connection cross section AWG            | 24 18 (without ferrule)                                  |
|   | 26 20 (with ferrule)                                     |
| Stripping length of the individual wire | 5 mm   |
| Tightening torque                       | 0.4 Nm (M12 knurl)                                       |
|   | 0.8 Nm 1 Nm  |
|   | 0.2 Nm (Screw terminal blocks)                           |

### Electrical properties

| Rated surge voltage            | 1.5 kV   |
|--------------------------------|----------|
| Contact resistance             | ≤ 8 mΩ   |
| Insulation resistance          | ≥ 100 MΩ |
| Nominal voltage U <sub>N</sub> | 48 V AC  |
|                                | 60 V DC  |
| Nominal current I <sub>N</sub> | 4 A      |

### Mechanical properties

#### Mechanical data

| Insertion/withdrawal cycles | ≥ 50 |
|-----------------------------|------|

### Connector

### Connection 1

| Head design       | Plug     |
|-------------------|----------|
| Head cable outlet | straight |
| Head thread type  | M12      |
| Coding            | A        |

### Cable/line

| Signal type/category                    | Universal |
|---|-----------|
| Stripping length of the individual wire | 5 mm      |



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### Environmental and real-life conditions

#### Ambient conditions

| Degree of protection  | IP67                         |
|---|------------------------------|
| Ambient temperature (operation) (male connector/female connector) | -40 °C 85 °C (Plug / socket) |

### Standards and regulations

| Standard designation     | M12 connector   |  |
|--------------------------|-----------------|--|
| Standards/specifications | IEC 61076-2-101 |  |

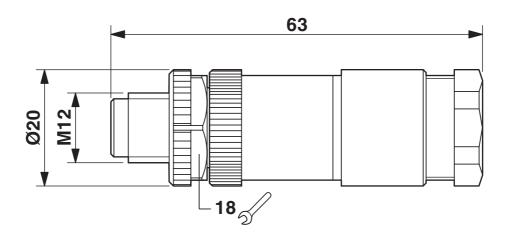


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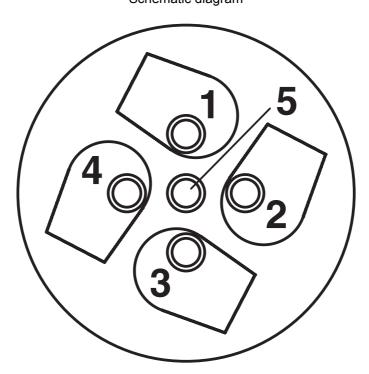
## Drawings

### Dimensional drawing



Plug, M12 x 1, straight

Schematic diagram

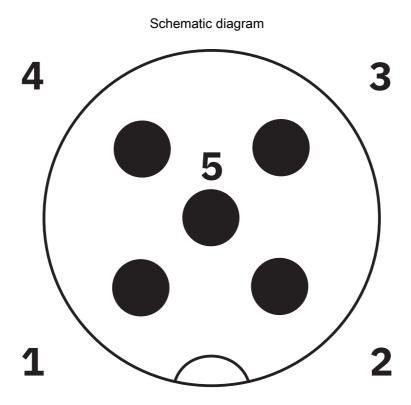


Cable connection side M12 (screw connection)



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Pin assignment M12 male connector, 5-pos., A-coded, male side



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### **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1662285

| . <b>7.1</b> | cUL Recognized Approval ID: FILE E 221474 |   |                   |                               |
|--------------|---|---|-------------------|-------------------------------|
|              | Nominal voltage l                         | J <sub>N</sub> Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine        |   |   |                   |                               |
|              | 60 V                                      | 4 A   | -                 | -                             |

| <b>7.1</b> | UL Recognized Approval ID: FILE E 221474 |                                |                                |                   |                               |
|------------|--|--------------------------------|--------------------------------|-------------------|-------------------------------|
|            |  | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine      |  |                                |                                |                   |                               |
|            |  | 60 V                           | 4 A                            | -                 | -                             |



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## Classifications

### **ECLASS**

|    | ECLASS-13.0 | 27440116 |
|----|-------------|----------|
|    | ECLASS-15.0 | 27440116 |
| ΕT | ⁻IM         |          |
|    | ETIM 9.0    | EC002635 |
| UN | NSPSC       |          |
|    | 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: n/a)  |
| SCIP                                    | 90e95e15-66ee-4c9c-9d69-3228e6adcf23  |
| EF3.0 Climate Change                    |   |
| CO2e kg                                 | 0.775 kg CO2e   |
|   |   |

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