#### 1641769

https://www.phoenixcontact.com/us/products/1641769

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Connector, Universal, 4-position, Plug straight M12, coding: A, Insulation displacement connection, knurl material: Plastic, external cable diameter 4 mm ... 8 mm

## Your advantages

- Safe use in the field, thanks to a high degree of protection
- · Insulation displacement connection: innovative and time-saving assembly without stripping the single wire

## Commercial data

| Item number                          | 1641769            |
|--------------------------------------|--------------------|
| Packing unit                         | 1 pc               |
| Minimum order quantity               | 1 pc               |
| Sales key                            | BF31               |
| Product key                          | BF2CCA             |
| Catalog page                         | Page 20 (C-2-2019) |
| GTIN                                 | 4017918921880      |
| Weight per piece (including packing) | 12.94 g            |
| Weight per piece (excluding packing) | 11.5 g             |
| Customs tariff number                | 85366990           |
| Country of origin                    | DE                 |

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## Technical data

#### Notes General NOTE: Observe the permissible bending radii when laying conductors, since the degree of protection may be put in jeopardy if the bending forces are too high. Alleviate mechanical loads upstream of the connector, e.g. by using cable ties. Mounting Assembly instructions AWG 18 wire cross section upon request **Product properties** Product type Circular connector (cable-side) Sensor type Universal Number of positions 4 No. of cable outlets 1 Shielded no Coding А Cable outlet straight Insulation characteristics Overvoltage category Ш Degree of pollution 3

### Dimensions

| Dimensional drawing                     |           |
|---|-----------|
| Length                                  | 55 mm     |
| Wrench size, union nut                  | 15 mm     |
| Wrench size, counter nut                | 15 mm     |
| External dimensions<br>Outside diameter | 4 mm 8 mm |
| Housing                                 |           |
| Diameter housing                        | 18.4 mm   |
| Material specifications                 |           |
| Flammability rating according to UL 94  | V0        |
| Seal material                           | NBR       |
| Material of grip body                   | PA 6      |
| Contact material                        | CuSn      |



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| Contact surface material      | Ni/Au                  |
|-------------------------------|------------------------|
| Contact carrier material      | TPU                    |
| Material for screw connection | Plastic                |
| Wire insulation material      | PVC / PE / PP / rubber |

## Connection data

| Conductor connection         |   |
|------------------------------|---|
| Connection method            | Insulation displacement connection        |
| Connection cross section     | 0.34 mm <sup>2</sup> 0.75 mm <sup>2</sup> |
| Connection cross section AWG | 22 18                                     |
| Tightening torque            | 0.4 Nm (M12 knurl)                        |
|                              | 1.5 Nm (Pressure nut)                     |

#### Pin assignment

|  | Contact   Color (signal designation)   Contact (optional) | 1 = BN |
|--|---|--------|
|  |   | 2 = WH |
|  |   | 3 = BU |
|  |   | 4 = BK |

## **Electrical properties**

| Rated surge voltage            | 4 kV     |
|--------------------------------|----------|
| Contact resistance             | ≤ 5 mΩ   |
| Insulation resistance          | ≥ 100 MΩ |
| Nominal voltage U <sub>N</sub> | 250 V AC |
|                                | 250 V DC |
| Nominal current I <sub>N</sub> | 4 A      |

#### Mechanical properties

#### Mechanical data

| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|-------|
|-----------------------------|-------|

## Connector

| Connection 1      |          |
|-------------------|----------|
| Head design       | Plug     |
| Head cable outlet | straight |
| Head thread type  | M12      |
| Coding            | A        |

### Cable/line

| Signal type/category       | Universal |
|----------------------------|-----------|
| External cable diameter () | 4 mm 8 mm |

#### Environmental and real-life conditions

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Ambient conditions

| Degree of protection            | IP65                          |
|---------------------------------|-------------------------------|
|                                 | IP67                          |
| Ambient temperature (operation) | -25 °C 80 °C (Plug / socket)  |
| Ambient temperature (assembly)  | -5 °C 50 °C (During assembly) |

### Standards and regulations

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



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# Classifications

### ECLASS

| ECLASS-11.0 | 27440102 |
|-------------|----------|
| ECLASS-12.0 | 27440116 |
| ECLASS-13.0 | 27440116 |

## ETIM

|        | ETIM 9.0    | EC002635 |  |
|--------|-------------|----------|--|
| UNSPSC |             |          |  |
|        | UNSPSC 21.0 | 39121400 |  |



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## Environmental product compliance

| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|------------|---|
|            | No hazardous substances above threshold values          |

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