#### 1424670

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**PHŒNIX** CONTACT

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Data connector, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, 5-position, shielded, Plug straight M12, A, Push-lock spring connection, knurl material: Zinc die-cast, nickel-plated, external cable diameter 4 mm ... 8 mm

# Your advantages

- Time-saving Push-Lock connection: Tool-free connection and disconnection of conductors by opening the contact levers
- · Intuitive connection: Easy assignment of individual litz wires with color-coded and numerical identification of the contact levers
- · Integrated Push-in Technology: Wire rigid and pretreated conductors easily by means of simple, direct insertion
- · Shock- and vibration-resistant connection: Proven spring-cage technology guarantees secure and reliable contacting
- Safely shielded: Reliable 360° shield connection even under extreme mechanical strain

# **Commercial Data**

| Item number                          | 1424670             |
|--------------------------------------|---------------------|
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales Key                            | BF2                 |
| Product Key                          | BF2CFD              |
| Catalog Page                         | Page 423 (C-2-2019) |
| GTIN                                 | 4055626375977       |
| Weight per Piece (including packing) | 37.4 g              |
| Weight per Piece (excluding packing) | 37.4 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<br>conductors, since the degree of protection may be put in<br>jeopardy if the bending forces are too high. Alleviate mechanical<br>loads upstream of the connector, e.g. by using cable ties. |
|----------------------------|--|
| ounting                    |  |
| Assembly instructions      | The wires can be connected both with ferrules and without ferrules   |
| Connection method          | Push-lock spring connection  |
| oduct properties           |  |
| Product type               | Circular connector (cable-side)  |
| Number of positions        | 5  |
| Sensor type                | CANopen <sup>®</sup>   |
| Application                | Data   |
| No. of cable outlets       | 1  |
| Shielded                   | yes  |
| Coding                     | A  |
| Cable outlet               | straight   |
| Insulation characteristics |  |
| Overvoltage category       | II   |
| Degree of pollution        | 3  |

#### Dimensions

| Dimensional drawing                    |           |
|--|-----------|
| Length                                 | 50 mm     |
| External dimensions                    |           |
| Outside diameter                       | 4 mm 8 mm |
| Housing                                |           |
| Diameter housing                       | 19 mm     |
| Material specifications                |           |
| Material                               | TPE-U     |
|  | PA 6      |
| Flammability rating according to UL 94 | V0        |
| Seal material                          | NBR       |



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| Material of grip body         | Zinc die-cast, nickel-plated  |
|-------------------------------|---|
| Contact material              | CuSn  |
| Contact surface material      | Ni/Au   |
| Contact carrier material      | PA 6.6  |
| Material for screw connection | Zinc die-cast, nickel-plated  |
| Standards/regulations         | PA 6.6: Fire protection in rail vehicles - requirement sets R22,<br>R23, R24, R25, and R26 acc. to DIN EN 45545-2 (Risk level HL1<br>- HL3) |
|                               | PA 6: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)                   |

#### Connection data

Conductor connection

| Connection method                       | Push-lock spring connection                                 |
|---|---|
| Connection cross section                | 0.14 mm <sup>2</sup> 0.75 mm <sup>2</sup> (without ferrule) |
|   | 0.08 mm <sup>2</sup> 0.5 mm <sup>2</sup> (with ferrule)     |
|   | 0.14 mm² 0.75 mm² (solid)                                   |
| Connection cross section AWG            | 26 18 (without ferrule)                                     |
|   | 28 20 (with ferrule)  |
| Stripping length of the individual wire | 7 mm  |
| Tightening torque                       | 0.4 Nm (M12 knurl)  |
|   | 0.8 Nm (Connector with coupling sleeve)                     |
|   | 3 Nm (Pressure nut with coupling sleeve)                    |

#### Pin assignment

| Contact   Color (signal designation)   Contact (optional) | 1 = GY (shield) |
|---|-----------------|
|   | 2 = RD          |
|   | 3 = BK          |
|   | 4 = WH          |
|   | 5 = BU          |

### Electrical properties

| Rated surge voltage            | 1.5 kV   |
|--------------------------------|--|
| Contact resistance             | ≤ 5 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 (2 A when using 0.14 mm <sup>2</sup> conductors) |

### Mechanical properties

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

### Connector

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

#### Cable/line

| Signal type/category                    | CANopen <sup>®</sup> |
|---|----------------------|
|   | DeviceNet™           |
| Stripping length of the individual wire | 7 mm                 |

#### Environmental and real-life conditions

| Ambient conditions              |                              |
|---------------------------------|------------------------------|
| Degree of protection            | IP65                         |
|                                 | IP67                         |
| Ambient temperature (operation) | -40 °C 85 °C (Plug / socket) |

#### Standards and regulations

| Testing                  |   |
|--------------------------|---|
| Standards/regulations    | PA 6.6: Fire protection in rail vehicles - requirement sets R22,<br>R23, R24, R25, and R26 acc. to DIN EN 45545-2 (Risk level HL1<br>- HL3) |
|                          | PA 6: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)                   |
| Standards/specifications | IEC 61076-2-101   |
| Standards/specifications | EN 50155:2001   |

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