

1424652

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Connector, Universal, 5-position, unshielded, Socket straight M12, coding: 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

#### Commercial data

| Item number                          | 1424652       |
|--------------------------------------|---------------|
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF33          |
| Product key                          | AF2CEA        |
| GTIN                                 | 4055626374994 |
| Weight per piece (including packing) | 27.45 g       |
| Weight per piece (excluding packing) | 26.4 g        |
| Customs tariff number                | 85366990      |
| Country of origin                    | DE            |



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### Technical data

#### Notes

| Assembly note | NOTE: Observe the permissible bending radii when routing   |
|---------------|--|
|               | 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.   |

### Mounting

| Assembly note | The wires can be connected both with ferrules and without |
|---------------|---|
|               | ferrules  |

### Product properties

| Product type         | Circular connector (cable-side) |
|----------------------|---------------------------------|
| Sensor type          | Universal                       |
| Number of positions  | 5                               |
| No. of cable outlets | 1                               |
| Shielded             | no                              |
| Coding               | A                               |
| Cable outlet         | straight                        |

#### Insulation characteristics

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

#### **Dimensions**

| ca. 5/                  |    |  |
|-------------------------|----|--|
| Length 58 mm            |    |  |
| External dimensions     |    |  |
| Outside diameter 4 mm 8 | mm |  |
| Housing                 |    |  |
| Diameter housing 19 mm  |    |  |

### Material specifications

| Material                               | PBT (Pressure nut, weight: 2.36 g) |
|--|------------------------------------|
|  | PA 6 (Actuation lever)             |
| Flammability rating according to UL 94 | V0                                 |
| Seal material                          | NBR                                |
| Material of grip body                  | PA 6.6                             |
| Contact material                       | CuSn                               |



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| 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                       |
|                               | PA 6                         |
|                               | PBT                          |

### 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 mm <sup>2</sup> 0.75 mm <sup>2</sup> (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)  |
|   | 0.4 Nm (Connector with coupling sleeve)                     |
|   | 1.5 Nm (Pressure nut with coupling sleeve)                  |

#### Connection assignment

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

### 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 mm² conductors) |

### Mechanical properties

#### Mechanical data

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

#### Connector

#### Connection 1

| Head design       | Socket   |
|-------------------|----------|
| Head cable outlet | straight |



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| Head thread type | M12 |
|------------------|-----|
| Coding           | A   |

#### Cable/line

| Signal type/category                    | Universal |
|---|-----------|
| Stripping length of the individual wire | 7 mm      |

#### Environmental and real-life conditions

#### Ambient conditions

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

### Standards and regulations

Standard designation

Standards/specifications

#### Testing

| resurig                  |   |
|--------------------------|---|
| Standards/regulations    | PA 6.6: Fire protection in rail vehicles - requirement sets R22, R23, R24, and R26 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)        |
|                          | PA 6: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)               |
|                          | PBT: Fire protection in rail vehicles - requirement sets R22, R23, R24, and R26 acc. to DIN EN 45545-2 (Risk level HL1 - HL2, R26: HL3) |
| M12                      |   |
| Standard designation     | M12 connector   |
| Standards/specifications | IEC 61076-2-101   |
|                          |   |

Shock, vibration

EN 50155:2001

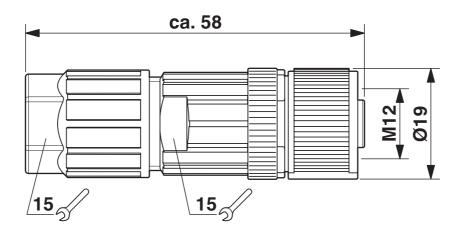
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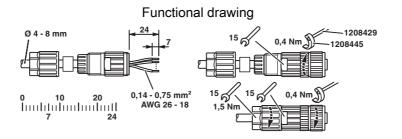


## Drawings

### Dimensional drawing



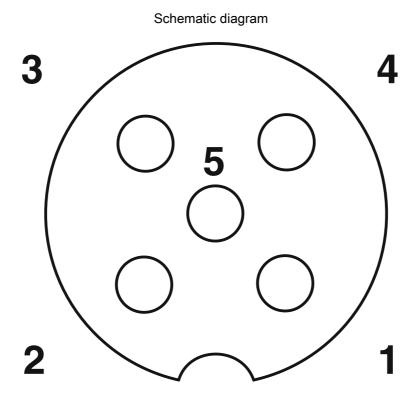
#### M12 x 1 socket, straight





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Pin assignment M12 socket, 5-pos., A-coded, socket side view



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## **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1424652

| UL Listed Approval ID: E221474 |                                |                                |                   |                               |
|--------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|                                | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                          |                                |                                |                   |                               |
|                                | 250 V                          | 4 A                            | 26 - 18           | 26 - 18                       |

| cUL Listed Approval ID: E221474 |                                |                                |                   |                               |
|---------------------------------|--------------------------------|--------------------------------|-------------------|-------------------------------|
|                                 | Nominal voltage U <sub>N</sub> | Nominal current I <sub>N</sub> | Cross section AWG | Cross section mm <sup>2</sup> |
| keine                           |                                |                                |                   |                               |
|                                 | 250 V                          | 4 A                            | 26 - 18           | -                             |



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## Classifications

UNSPSC 21.0

#### **ECLASS**

|      | ECLASS-13.0 | 27440116 |  |
|------|-------------|----------|--|
|      | ECLASS-15.0 | 27440116 |  |
| ETIM |             |          |  |
|      | ETIM 9.0    | EC002635 |  |
| UN   | ISPSC       |          |  |

39121400



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## Environmental product compliance

#### EU RoHS

| Fulfills EU RoHS substance requirements | Yes, No exemptions                       |
|---|--|
| China RoHS                              |  |
| Environment friendly use period (EFUP)  | EFUP-E                                   |
|   | No hazardous substances above the limits |
| EU REACH SVHC                           |  |
| REACH candidate substance (CAS No.)     | No substance above 0.1 wt%               |

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