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# Sensor/actuator cable - SAC-3P-M12MS/0,3-PUR/BI-1L-Z

1400772

https://www.phoenixcontact.com/gb/products/1400772

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, on Valve connector BI (11 mm), with 1 LED, connected with Z diode, cable length: 0.3 m

## Commercial Data

| | |
|---|---|
| Item number | 1400772 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales Key | BF1DMA |
| Product Key | BF1DMA |
| GTIN | 4046356511490 |
| Weight per Piece (including packing) | 38.6 g |
| Weight per Piece (excluding packing) | 38.3 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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## Technical Data

### Product properties

| | |
|---|---|
| Product type | Sensor/actuator cable with valve connector |
| Number of positions | 3 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A - standard |

Insulation characteristics

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

### Electrical properties

| | |
|---|---|
| Contact resistance | ≤ 5 mΩ |
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 24 V AC |
| | 24 V DC |
| Nominal current $I_N$ | 4 A |
| Protective circuit | Z diode |

### LED signaling

| | |
|---|---|
| Status display | 1 LED |
| Status display present | yes |

### Material specifications

| | |
|---|---|
| Flammability rating according to UL 94 | HB |
| Sealing material | TPU (Seal molded) |
| Material housing valve plug | TPU |
| Material of grip body | TPU |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Contact material | CuSn |
| Valve plug contact insert material | PA 6.6 |
| Contact surface material | Sn |
| Cable gland material | Zinc die-cast, nickel-plated |

### Connector

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

Header 1

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

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| | |
|---|---|
| Coding | A |

Head 2

| | |
|---|---|
| Head design | Valve connector |
| Head thread type | BI (11 mm) |
| Status indicator head | 1 LED |

## Cable / line

| | |
|---|---|
| Cable length | 0.3 m |
| Cable weight | 30 kg/km |
| UL AWM Style | 20549 |
| Number of positions | 3 |
| Shielded | no |
| Cable type | PUR halogen-free black [PUR] |
| Conductor structure signal line | 28x 0.15 mm |
| AWG signal line | 20 |
| Conductor cross section | 3x 0.5 mm² |
| Wire diameter incl. insulation | 1.5 mm ±0.05 mm (Signal line) |
| External cable diameter | 4.5 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 | black 1, black 2, green/yellow |
| Overall twist | 3 wires, twisted |
| Max. conductor resistance | 39 Ω/km (at 20 °C) |
| Insulation resistance | min. 20 MΩ*km |
| Nominal voltage, cable | ≤ 300 V |
| Test voltage | ≥ 1200 V |
| Smallest bending radius, fixed installation | 22.5 mm |
| Max. bending cycles | 15000000 |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| Flame resistance | according to DIN VDE 0482 |
| | According to DIN EN 50265-2-1 |
| Resistance to oil | in accordance with DIN EN 60811-2-1 |
| Other resistance | largely oil-resistant |
| | partly UV-resistant in accordance with DIN EN ISO 4892-2-A |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -20 °C ... 80 °C (Cable, flexible installation) |

Cable structure

| | |
|---|---|
| Cable type | PUR halogen-free black |
| External cable diameter | 4.50 mm |
| Outer sheath, material | PUR |
| External sheath, color | black-gray RAL 7021 |

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| | |
|---|---|
| Conductor material | Bare Cu litz wires |
| Conductor structure signal line | 28x 0.15 mm |
| AWG signal line | 20 |
| Single wire, color | black 1, black 2, green/yellow |
| Overall twist | 3 concentrically twisted wires |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | IP65 |
| | IP67 |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| | -20 °C ... 85 °C (valve plug) |

## Standards and regulations

M12

| | |
|---|---|
| Standards/specifications | IEC 61076-2-101 |

M12

| | |
|---|---|
| Standards/specifications | EN 175301-803 |

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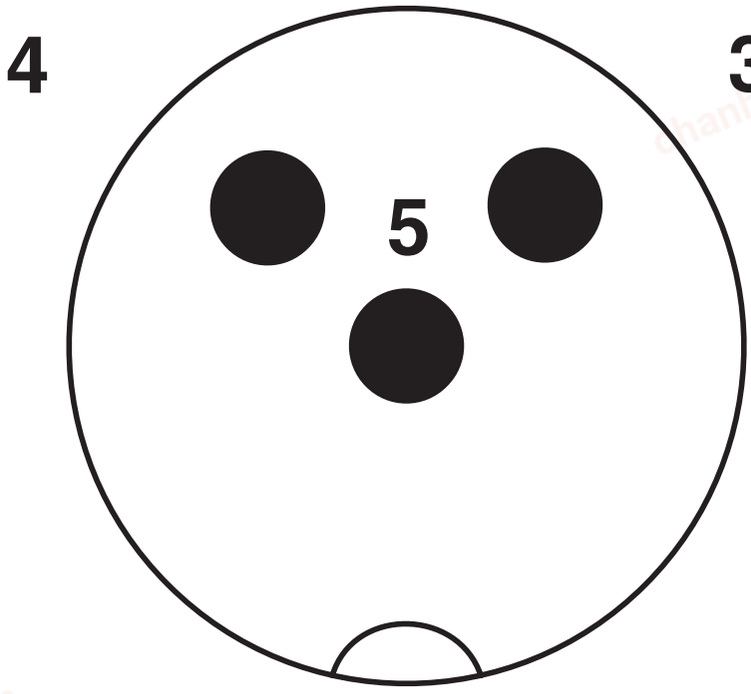
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## Drawings

Schematic diagram




Pin assignment M12 plug, 3-pos., valve connector

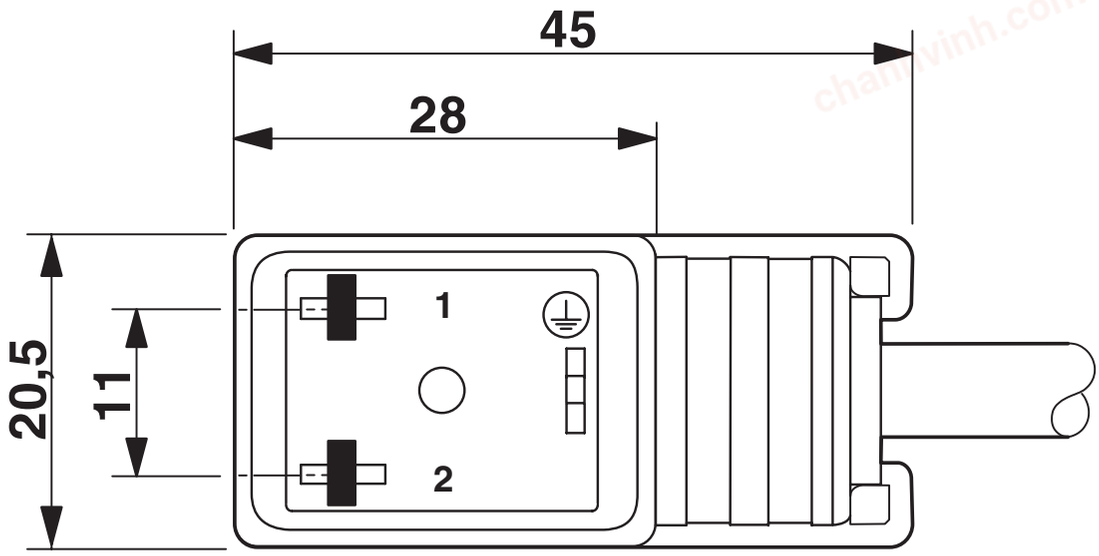
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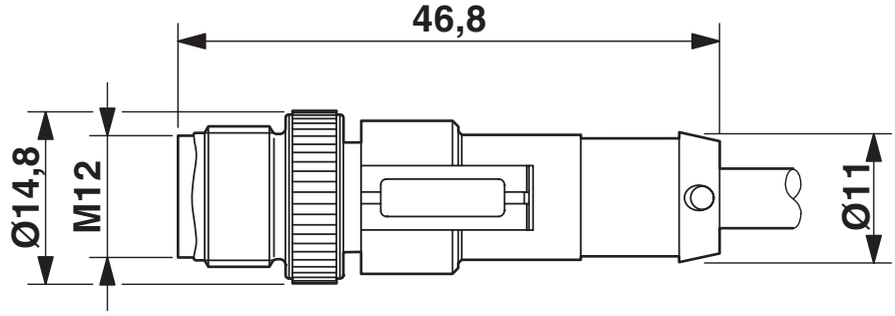
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Dimensional drawing




Valve connector, type BI

Dimensional drawing




Plug, M12 x 1, straight, shielded

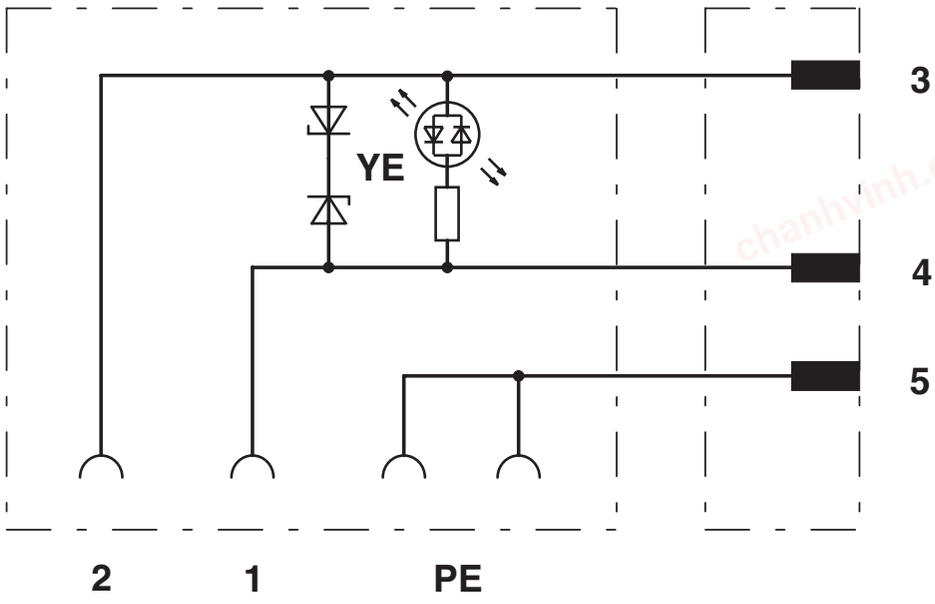
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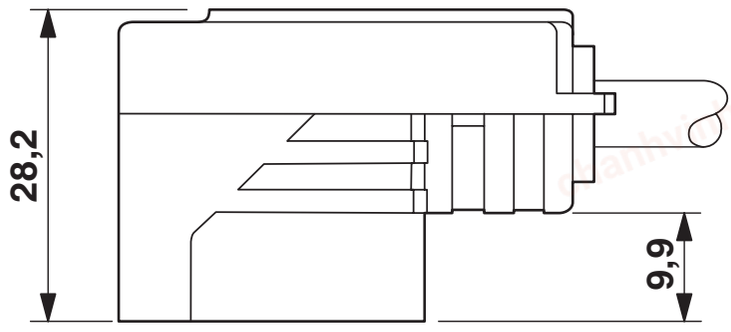
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Circuit diagram




Contact assignment of M12 plug and valve connector

Dimensional drawing




Valve connector, type BI, side view

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## Approvals

EAC

CSAus

| | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $mm^2$ |
|---|---|---|---|---|
| | 24 V | 4 A | - | - |

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# Sensor/actuator cable - SAC-3P-M12MS/0,3-PUR/BI-1L-Z

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## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-9.0 | 27060312 |
| ECLASS-10.0.1 | 27060312 |
| ECLASS-11.0 | 27060312 |

### ETIM

| | |
|---|---|
| ETIM 8.0 | EC001855 |

### UNSPSC

| | |
|---|---|
| UNSPSC 21.0 | 31251500 |

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## Environmental Product Compliance

| | |
|---|---|
| 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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## Accessories

### Screw

Screw - SAC-V-SCREW-M3-29 KNURL - 1403779

https://www.phoenixcontact.com/gb/products/1403779



Fillister head screw with plastic knurl, M3 x 40

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