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

1400772

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

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As illustrated, but without SPEEDCON

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

## Commercial data

| | |
|---|---|
| Item number | 1400772 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF07 |
| Product key | AF1DMA |
| GTIN | 4046356511490 |
| Weight per piece (including packing) | 38.4 g |
| Weight per piece (excluding packing) | 38.3 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

## 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 |

Insulation characteristics

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

### Material specifications

| | |
|---|---|
| Flammability rating according to UL 94 | HB |
| Seal 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 |
| Material for screw connection | Zinc die-cast, nickel-plated |

### Electrical properties

| | |
|---|---|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage $U_N$ | 24 V AC |
| | 24 V DC |
| Nominal current $I_N$ | 4 A |

### Mechanical properties

Mechanical data

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

### Signaling

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

### Connector

Connection 1

| | |
|---|---|
| Type | Plug straight M12 |

| | |
|---|---|
| Number of positions | 3 |
| Coding type | A |

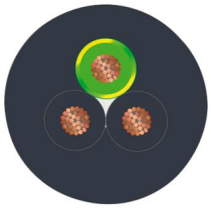
Connection 2

| | |
|---|---|
| Type | Valve connector BI (11 mm) |
| Number of positions | 3 |
| Material | CuSn (Contact) |
| | Sn (Contact surface) |
| | PA 6.6 (Contact carrier) |
| | TPU (Housing) |
| Protective circuit | Z diode |

## Cable/line

| | |
|---|---|
| Cable length | 0.3 m |

PUR halogen-free black [PUR]

| | |
|---|---|
| Dimensional drawing |  |
| 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 | 4.50 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 |
| Minimum bending radius, fixed installation | 5 x D |

| | |
|---|---|
| Minimum bending radius, flexible installation | 10 x D |
| Smallest bending radius, fixed installation | 22.5 mm |
| Smallest bending radius, movable installation | 45 mm |
| Dynamic load capacity (bending) | Max. bending cycles: 15000000, Bending radius: 50 mm, Traversing path: 0.9 m, Traversing rate: 5 m/s, Acceleration: 30 m/s² |
| 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) |

## Environmental and real-life conditions

### Ambient conditions

| | |
|---|---|
| Degree of protection | IP65 |
| | IP67 |
| Ambient temperature (operation) (male connector/female connector) | -25 °C ... 90 °C (Plug / socket) |
| Ambient temperature (operation) (Valve connector) | -20 °C ... 85 °C (Valve connector) |

## Standards and regulations

### M12

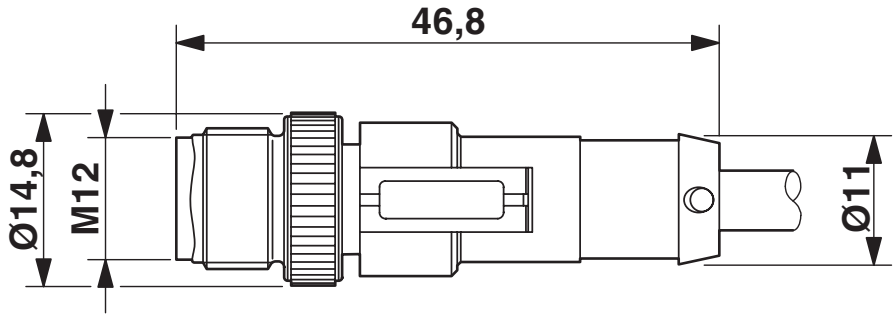
| | |
|---|---|
| Standard designation | M12 connector |
| Standards/specifications | IEC 61076-2-101 |

### Valve connector

| | |
|---|---|
| Standard designation | Valve connector |
| Standards/specifications | EN 175301-803 |

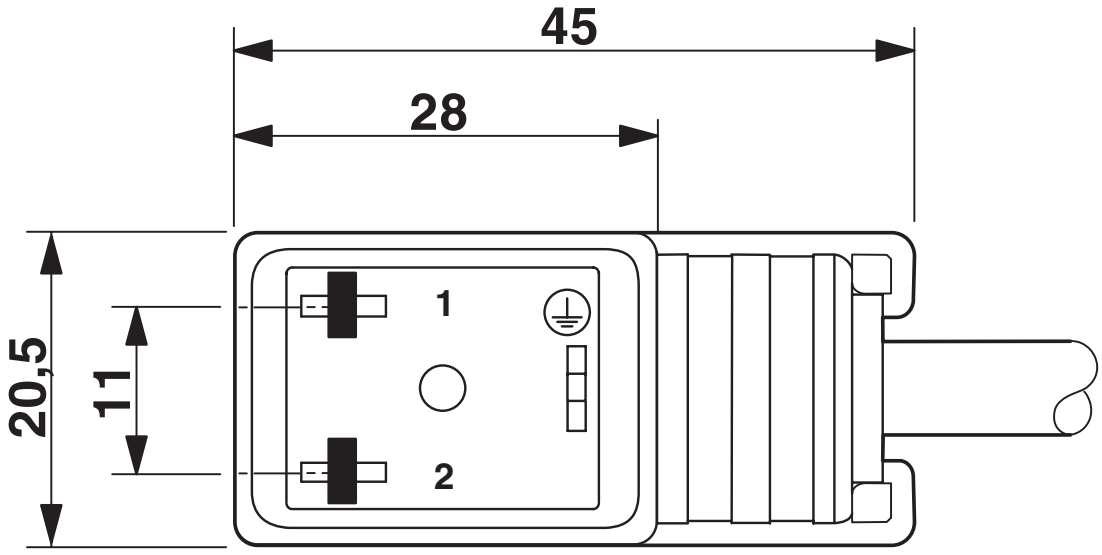
## Drawings

Dimensional drawing



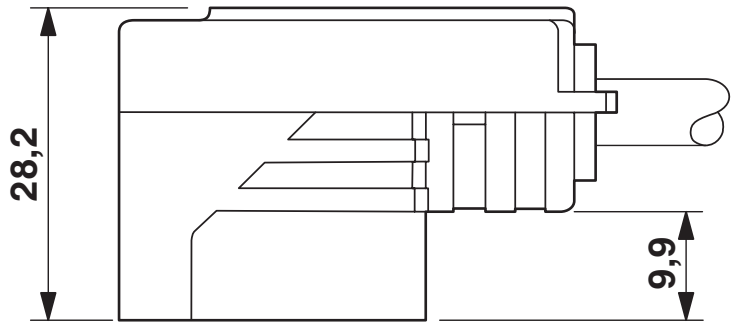

Plug, M12 x 1, straight, shielded

Dimensional drawing



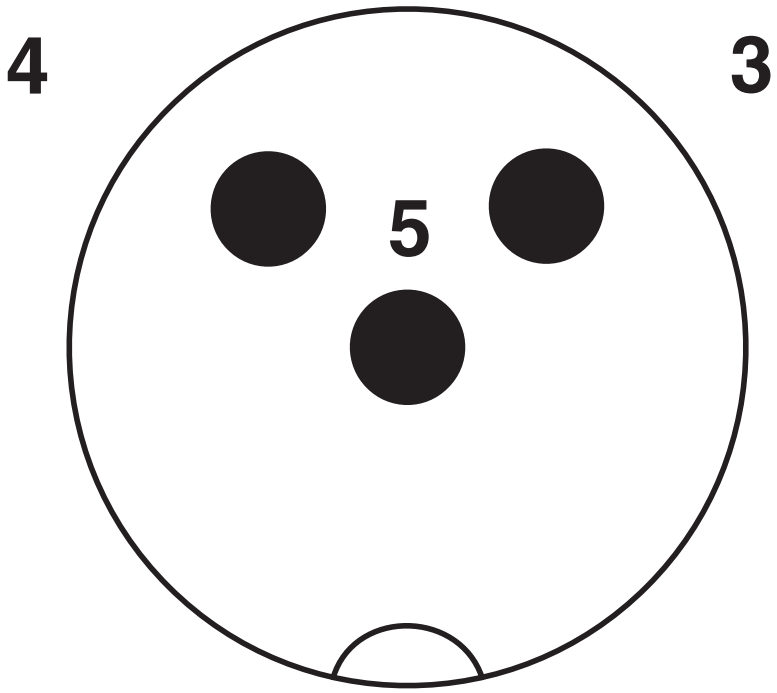

Valve connector, type BI

Dimensional drawing



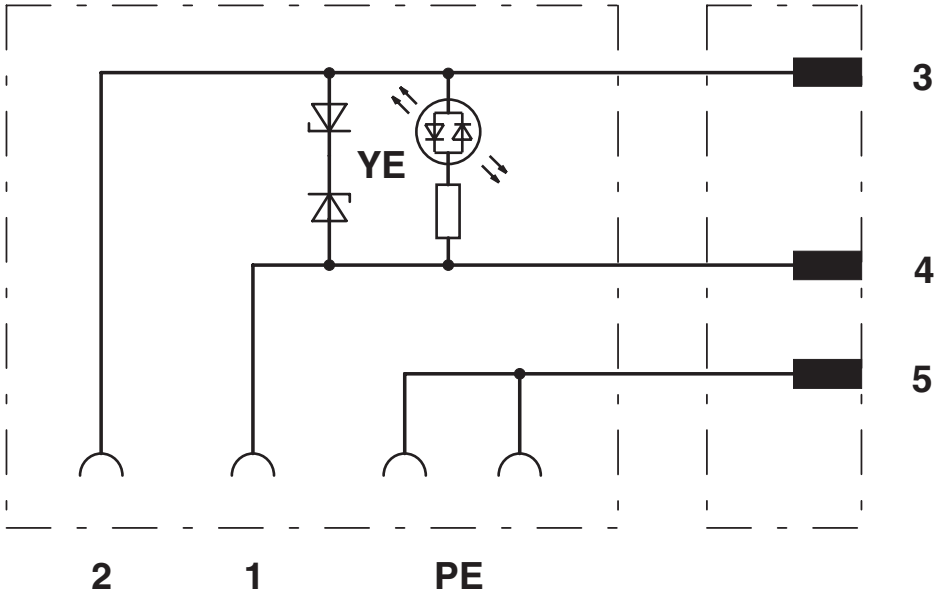

Valve connector, type BI, side view

Schematic diagram




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

Circuit diagram




Contact assignment of M12 plug and valve connector

## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1400772

**EAC-RoHS**
Approval ID: RU D-DE.HB35.B.00387

**CSAus**
Approval ID: 13631

| | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $mm^2$ |
|---|---|---|---|---|
| keine | | | | |
| | 24 V | 4 A | - | - |

## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27060312 |
| ECLASS-15.0 | 27060312 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC001855 |

### UNSPSC

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

## Environmental product compliance

EU RoHS

| | |
|---|---|
| Fulfills EU RoHS substance requirements | Yes |
| Exemption | 7(c)-I |

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.) | Diboron trioxide(CAS: 1303-86-2) |
| | Lead monoxide (lead oxide)(CAS: 1317-36-8) |
| SCIP | f800cfb4-8814-4a57-a3a2-a702e32a5a04 |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 1.534 kg CO2e |


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