

# SAC-3P-M12MS/ 1,5-802/B-1L-Z - Sensor/actuator cable



1454710

<https://www.phoenixcontact.com/us/products/1454710>

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Sensor/actuator cable, 3-position, PUR halogen-free, resistant to welding sparks, highly flexible, gray RAL 7001, Plug straight M12, coding: A, with 1 LED, on Valve connector B (10 mm), with 1 LED, Wiring: Z diode, cable length: 1.5 m

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1454710       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Product key                          | AF1DLA        |
| GTIN                                 | 4046356578141 |
| Weight per piece (including packing) | 22.22 g       |
| Weight per piece (excluding packing) | 22.22 g       |
| 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  |
| Coding               | A  |

### Insulation characteristics

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

### Material specifications

|  |                              |
|--|------------------------------|
| Flammability rating according to UL 94 | HB                           |
| Seal material                          | TPU                          |
| 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 | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage $U_N$ | 24 V AC                    |
|                       | 24 V DC                    |
| Nominal current $I_N$ | 4 A                        |

### 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 B (10 mm) |
| Number of positions | 3                         |

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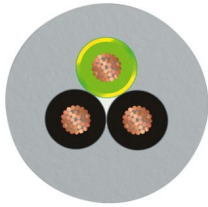
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|                    |                          |
|--------------------|--------------------------|
| Material           | CuSn (Contact)           |
|                    | Sn (Contact surface)     |
|                    | PA 6.6 (Contact carrier) |
|                    | TPU (Housing)            |
| Protective circuit | Z diode                  |

## Cable/line

|              |       |
|--------------|-------|
| Cable length | 1.5 m |
|--------------|-------|

PUR, halogen-free, highly stranded, resistant to welding sparks, gray [800]

|                     |   |
|---------------------|---|
| Dimensional drawing |  |
|---------------------|---|

|   |  |
|---|--|
| Note  | Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments. |
| Cable weight                                  | 31 kg/km   |
| UL AWM Style                                  | 20549  |
| Number of positions                           | 3  |
| Shielded                                      | no   |
| Cable type                                    | PUR, halogen-free, highly stranded, resistant to welding sparks, gray [800]                      |
| Conductor structure signal line               | 28x 0.15 mm  |
| AWG signal line                               | 20   |
| Conductor cross-section                       | 3x 0.5 mm <sup>2</sup> (Signal line)   |
| 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                        | gray RAL 7001  |
| Conductor material                            | Bare Cu litz wires   |
| Material wire insulation                      | PP   |
| Single wire, color                            | black 1, black 2, green/yellow   |
| Overall twist                                 | Wires twisted in layers  |
| Max. conductor resistance                     | 39 Ω/km (at 20 °C)   |
| Insulation resistance                         | ≥ 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   | 23 mm  |
| Smallest bending radius, movable installation | 45 mm  |

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|                                 |   |
|---------------------------------|---|
| 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/s <sup>2</sup> |
| Dynamic load capacity (torsion) | Torsion: ±360 °/m   |
| Halogen-free                    | The cable is halogen-free   |
| Flame resistance                | in accordance with UL 758/1581 FT2  |
| Resistance to oil               | in accordance with DIN EN 60811-2-1   |
| Other resistance                | Highly resistant to acids, alkaline solutions and solvents  |
| Special properties              | Cable jacket is welding spark-resistant, recyclable, matt, low-adhesion, abrasion-resistant, flame-retardant, and self-extinguishing    |
|                                 | Free from silicone and cadmium  |
|                                 | Free of substances which would hinder coating with paint or varnish   |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)  |
|                                 | -25 °C ... 80 °C (Cable, flexible installation)   |

## 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 connector) |

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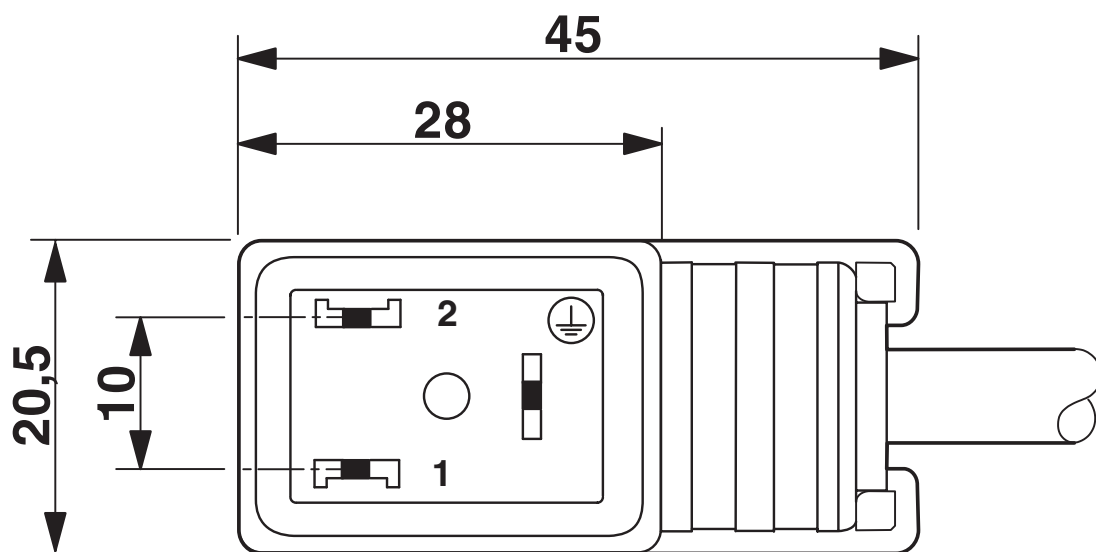
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing

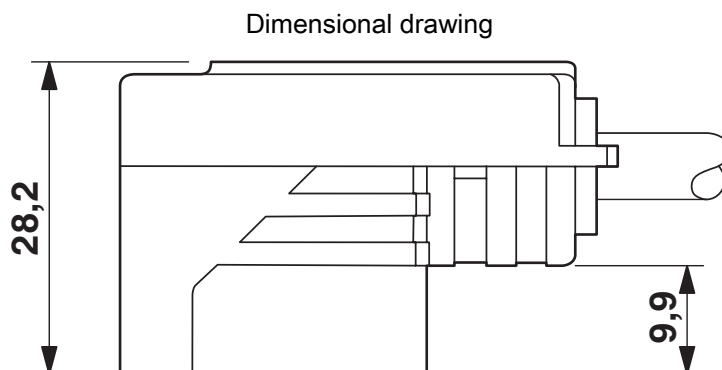


Valve connector, type B

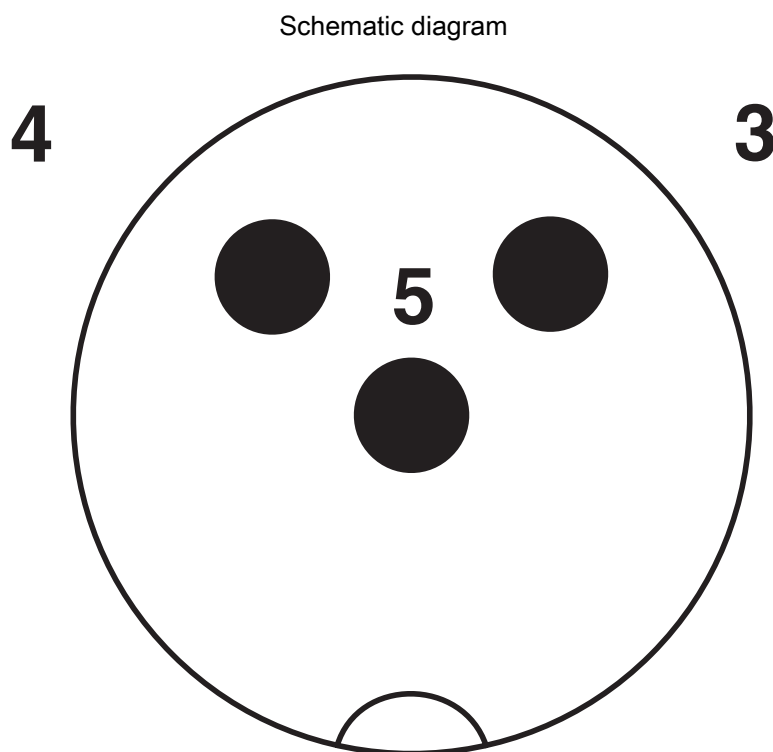
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Valve connector, type B, side view

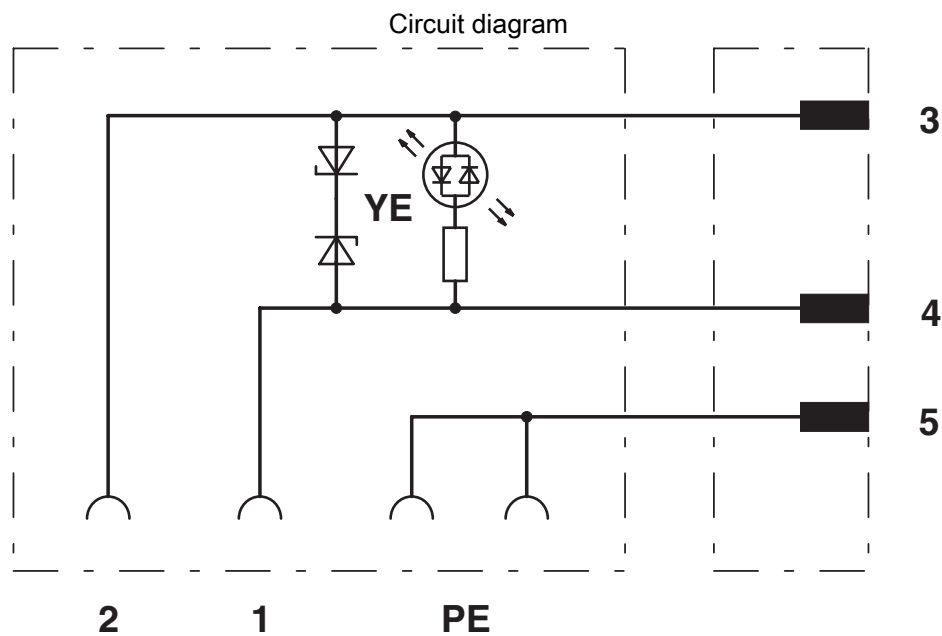


Pin assignment M12 plug, 3-pos., valve connector

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Contact assignment of M12 plug and valve connector

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## Classifications

### ECLASS

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

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## Environmental product compliance

### China RoHS

|  |  |
|--|--|
| Environment friendly use period (EFUP) | EFUP-50<br>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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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