

## Sensor/actuator cable - SAC-3P-M12MS/1,5-PUR/A-1L-Z - 1400770

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, A-coded, on Valve connector A, with 1 LED, connected with Z diode, cable length: 1.5 m

The figure shows the SPEEDCON version



### Key Commercial Data

|              |               |
|--------------|---------------|
| Packing unit | 1 pc          |
| GTIN         |               |
| GTIN         | 4046356509527 |

### Technical data

#### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 1.5 m |
|-----------------|-------|

#### Ambient conditions

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

#### General

|                       |                               |
|-----------------------|-------------------------------|
| Rated current at 40°C | 4 A                           |
| Rated voltage         | 24 V AC                       |
|                       | 24 V DC                       |
| Number of positions   | 3                             |
| Insulation resistance | ≥ 100 MΩ                      |
| Coding                | A - standard                  |
| Standards/regulations | M12 connector IEC 61076-2-101 |
|                       | Valve connector EN 175301-803 |

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## Technical data

### General

|                              |                          |
|------------------------------|--------------------------|
| Status display               | 1 LED                    |
| Protective circuit/component | Z diode                  |
| Overvoltage category         | III                      |
| Degree of pollution          | 3                        |
| Insertion/withdrawal cycles  | ≥ 100 (M12 connector)    |
| Torque                       | 0.4 Nm (M12 connector)   |
|                              | 0.6 Nm (Valve connector) |

### Material

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

### Standards and Regulations

|  |                 |
|--|-----------------|
| Standard designation                   | M12 connector   |
| Standards/regulations                  | IEC 61076-2-101 |
| Standard designation                   | Valve connector |
| Standards/regulations                  | EN 175301-803   |
| Flammability rating according to UL 94 | HB              |

### Cable

|   |                                |
|---|--------------------------------|
| Cable type                                  | PUR halogen-free black         |
| Cable type (abbreviation)                   | PUR                            |
| Cable abbreviation                          | Li9Y11Y-HF                     |
| UL AWM style                                | 20549                          |
| Conductor cross section                     | 3x 0.5 mm <sup>2</sup>         |
| AWG signal line                             | 20                             |
| Conductor structure signal line             | 28x 0.15 mm                    |
| Core diameter including insulation          | 1.5 mm ±0.05 mm (Signal line)  |
| Wire colors                                 | black 1, black 2, green/yellow |
| Overall twist                               | 3 wires, twisted               |
| External sheath, color                      | black-gray RAL 7021            |
| External cable diameter D                   | 4.5 mm ±0.2 mm                 |
| Smallest bending radius, fixed installation | 22.5 mm                        |

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## Technical data

### Cable

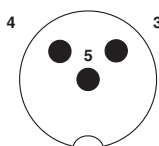
|                                 |  |
|---------------------------------|--|
| Number of bending cycles        | 15000000   |
| Bending radius                  | 50 mm  |
| Traversing path                 | 0.9 m  |
| Traversing rate                 | 5 m/s  |
| Acceleration                    | 30 m/s <sup>2</sup>  |
| Outer sheath, material          | PUR  |
| Material conductor insulation   | PP   |
| Conductor material              | Bare Cu litz wires   |
| Insulation resistance           | min. 20 MΩ*km  |
| Conductor resistance            | 39 Ω/km (at 20 °C)   |
| Nominal voltage, cable          | ≤ 300 V  |
| Test voltage, cable             | ≥ 1200 V   |
| Flame resistance                | according to DIN VDE 0482                                  |
|                                 | According to DIN EN 50265-2-1                              |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                   |
| 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 Product Compliance

|            |   |
|------------|---|
| China RoHS | Environmentally Friendly Use Period = 50  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

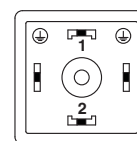
## Drawings

Schematic diagram



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

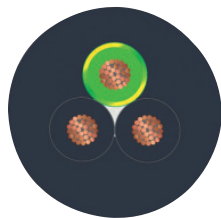
Schematic diagram



Valve connector pin assignment, type A

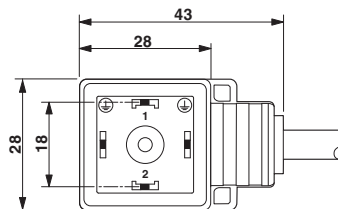
# Sensor/actuator cable - SAC-3P-M12MS/1,5-PUR/A-1L-Z - 1400770

Cable cross section



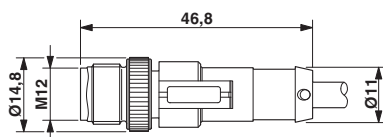
PUR halogen-free black [PUR]

Dimensional drawing



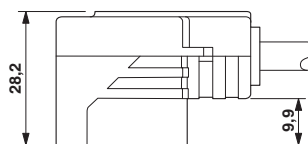
Valve connector, type A

Dimensional drawing



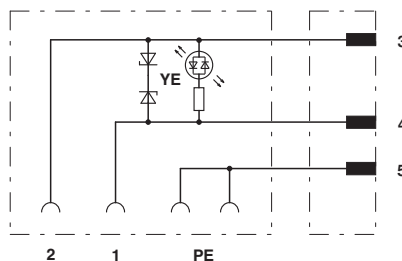
Plug, M12 x 1, straight, shielded

Dimensional drawing



Valve connector, type A, side view

Circuit diagram



Contact assignment of M12 plug and valve connector

## Approvals

Approvals

Approvals

CSA / CSAus / cCSAus

Ex Approvals

Approval details

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## Approvals

|                    |  |   |       |
|--------------------|--|---|-------|
| CSA                |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
| Nominal voltage UN |  | 24 V  |       |
| Nominal current IN |  | 4 A   |       |

|                    |  |   |       |
|--------------------|--|---|-------|
| CSAus              |  | <a href="http://www.csagroup.org/services-industries/product-listing/">http://www.csagroup.org/services-industries/product-listing/</a> | 13631 |
| Nominal voltage UN |  | 24 V  |       |
| Nominal current IN |  | 4 A   |       |

|        |  |  |  |
|--------|--|--|--|
| cCSAus |  |  |  |
|--------|--|--|--|

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