

# Sensor/actuator cable - SAC-3P-MS/ 0,6-PUR/A-1L-Z SCO



1434895

<https://www.phoenixcontact.com/de/produkte/1434895>

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, coding: A, on Valve connector A, with 1 LED, connected with Z diode, cable length: 0.6 m

## Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Save time, thanks to installation with SPEEDCON fast locking system
- Convenient: increased machine availability thanks to quick and easy diagnostics
- Our standard: robust halogen-free PUR cable

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## Commercial Data

|                                      |                         |
|--------------------------------------|-------------------------|
| Item number                          | 1434895                 |
| Packing unit                         | 1 pc                    |
| Minimum order quantity               | 1 pc                    |
| Sales Key                            | C1 - Sensor-Aktor-Kabel |
| Product Key                          | BF1DJA                  |
| Catalog Page                         | Page 228 (C-2-2019)     |
| GTIN                                 | 4046356413299           |
| Weight per Piece (including packing) | 52,8 g                  |
| Weight per Piece (excluding packing) | 50,3 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  |
| Application          | Standard                                   |
| 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 (M12 connector) |
|-----------------------------|-----------------------|

### Header 1

|                   |          |
|-------------------|----------|
| Head design       | Plug     |
| Head cable outlet | straight |

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

## Head 2

|                       |                 |
|-----------------------|-----------------|
| Head design           | Valve connector |
| Head thread type      | A               |
| Status indicator head | 1 LED           |

## Cable / line

|   |   |
|---|---|
| Cable length                                | 0.6 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 mm <sup>2</sup>  |
| 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<br>According to DIN EN 50265-2-1                                      |
| Resistance to oil                           | in accordance with DIN EN 60811-2-1   |
| Other resistance                            | largely oil-resistant<br>partly UV-resistant in accordance with DIN EN ISO 4892-2-A             |
| Ambient temperature (operation)             | -40 °C ... 80 °C (cable, fixed installation)<br>-20 °C ... 80 °C (Cable, flexible installation) |

## Cable structure

|                         |                        |
|-------------------------|------------------------|
| Cable type              | PUR halogen-free black |
| External cable diameter | 4.50 mm                |

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|                                 |                                |
|---------------------------------|--------------------------------|
| Outer sheath, material          | PUR                            |
| External sheath, color          | black-gray RAL 7021            |
| Conductor material              | Bare Cu litz wires             |
| Conductor structure signal line | 28x 0.15 mm                    |
| AWG signal line                 | 20                             |
| Material wire insulation        | PP                             |
| Single wire, color              | black 1, black 2, green/yellow |
| Overall twist                   | 3 concentrically twisted wires |

## Ambient conditions

|                                 |   |
|---------------------------------|---|
| Ambient temperature (operation) | -15 °C ... 80 °C (Cable, flexible installation) |
|                                 | -40 °C ... 80 °C (cable, fixed 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 plug)                   |
|                                 | -40 °C ... 80 °C (cable, fixed installation)    |
|                                 | -15 °C ... 80 °C (Cable, flexible installation) |

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standards/specifications | IEC 61076-2-101 |
| Standards/specifications | EN 175301-803   |

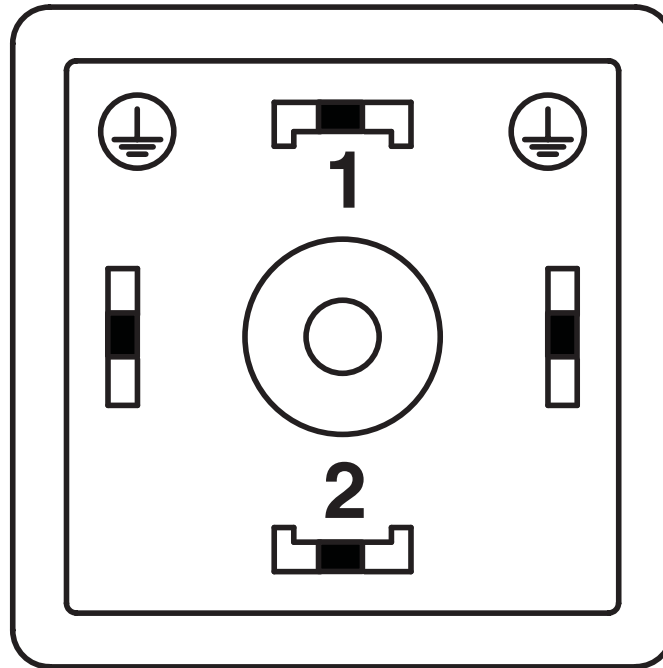
# Sensor/actuator cable - SAC-3P-MS/ 0,6-PUR/A-1L-Z SCO

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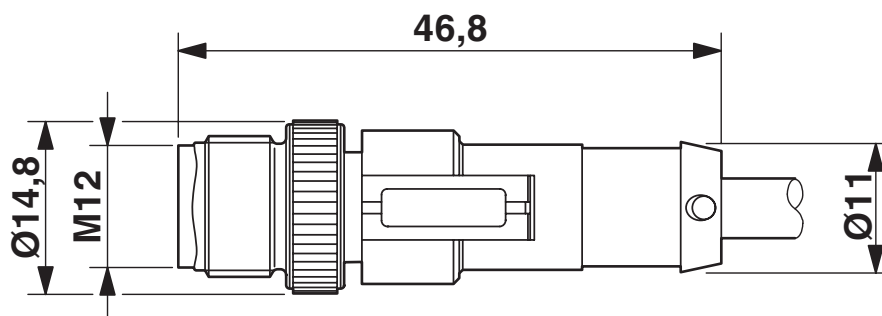
## Drawings

Schematic diagram



Valve connector pin assignment, type A

Dimensional drawing



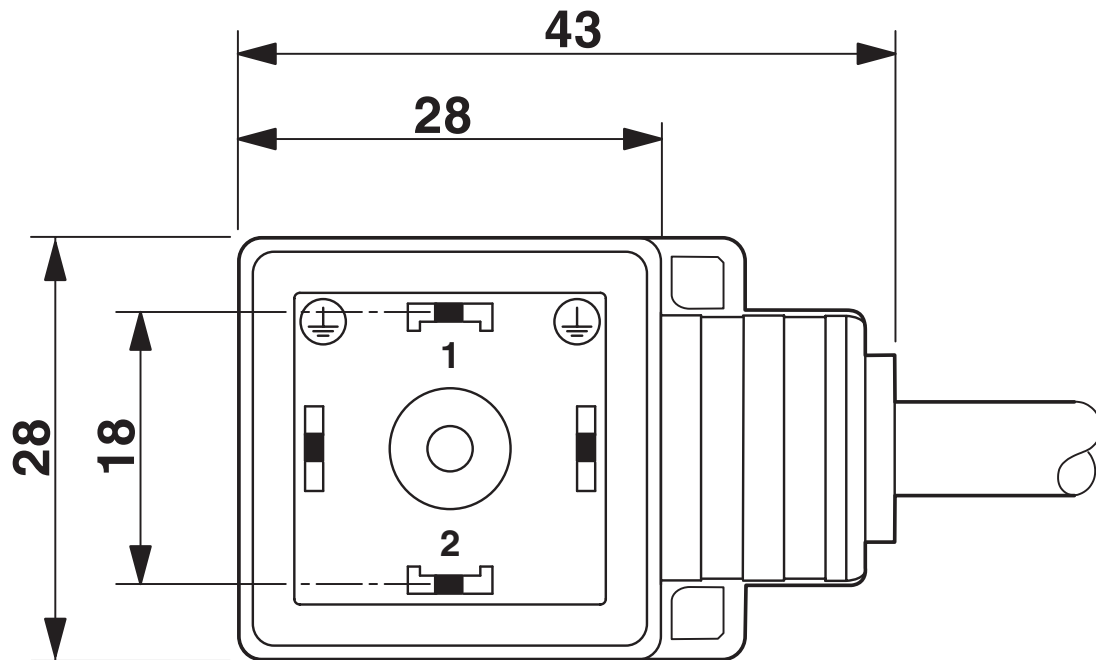
Plug, M12 x 1, straight, shielded

# Sensor/actuator cable - SAC-3P-MS/ 0,6-PUR/A-1L-Z SCO

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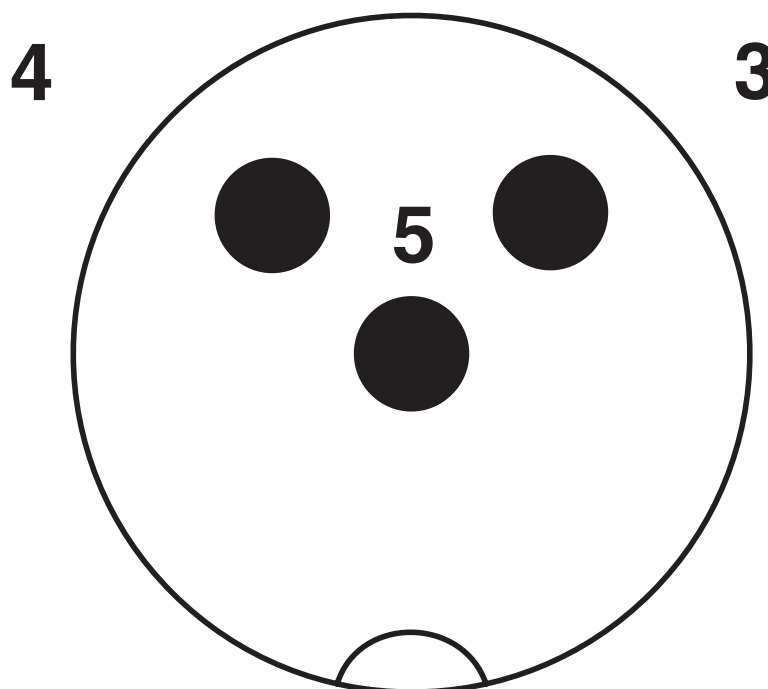
<https://www.phoenixcontact.com/de/produkte/1434895>

Dimensional drawing



Valve connector, type A

Schematic diagram

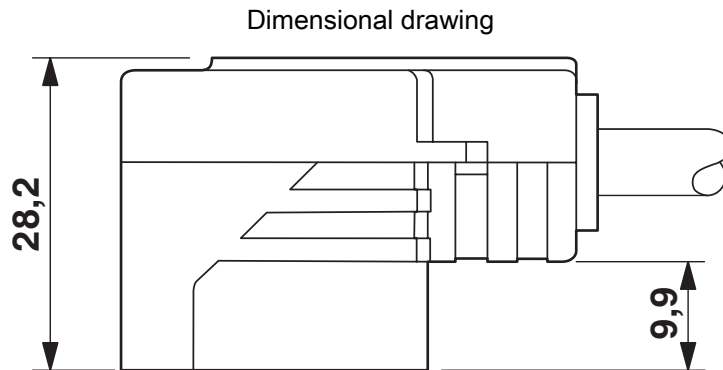


Pin assignment M12 plug, 3-pos., valve connector

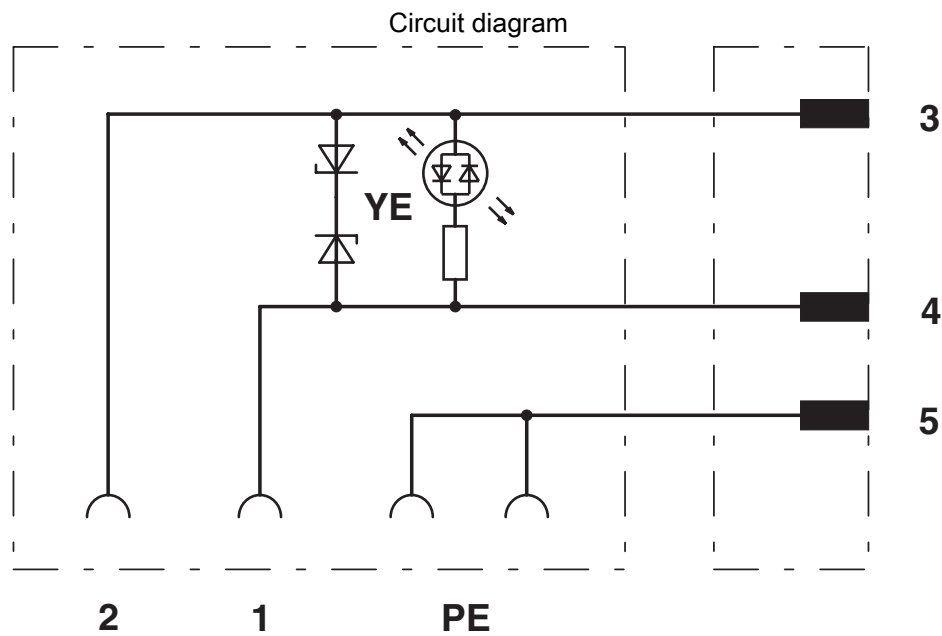
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Valve connector, type A, side view



Contact assignment of M12 plug and valve connector




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## Approvals

|  |                       |                       |                   |                             |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  <b>CSA</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|  | 24 V                  | 4 A                   | -                 | -                           |

|   |  |  |  |  |
|---|--|--|--|--|
|  <b>EAC</b><br>Approval ID: RU C-DE.BL08.B.00286 |  |  |  |  |
|---|--|--|--|--|

|   |  |  |  |  |
|---|--|--|--|--|
|  <b>EAC</b><br>Approval ID: RU D-DE.HB35.B.00387 |  |  |  |  |
|---|--|--|--|--|

|   |                       |                       |                   |                             |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
|  <b>CSAus</b><br>Approval ID: 13631 |                       |                       |                   |                             |
|   | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|   | 24 V                  | 4 A                   | -                 | -                           |

|               |  |  |  |  |
|---------------|--|--|--|--|
| <b>cCSAus</b> |  |  |  |  |
|---------------|--|--|--|--|

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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/de/produkte/1403779>

Fillister head screw with plastic knurl, M3 x 40



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### Sealing cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

<https://www.phoenixcontact.com/de/produkte/1430873>

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



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<https://www.phoenixcontact.com/de/produkte/1434895>

## Screw insert

Screw insert - SF-BIT-PH 1-70 - 1212582

<https://www.phoenixcontact.com/de/produkte/1212582>



Screw bit, PH crosshead, E6.3-1/4" drive, size: PH 1 x 70 mm, hardened, suitable for holder according to DIN 3126-F6.3/ISO 1173

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## Locking clip

Locking clip - SAC-M12-EXCLIP-M - 1558988

<https://www.phoenixcontact.com/de/produkte/1558988>



Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

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## Insert label

Insert label - PABA WH/23 - 1013779

<https://www.phoenixcontact.com/de/produkte/1013779>



Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

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## Insert label

Insert label - PABA YE/23 - 1013782

<https://www.phoenixcontact.com/de/produkte/1013782>



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

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## Marker pen

Marker pen - B-STIFT - 1051993

<https://www.phoenixcontact.com/de/produkte/1051993>



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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## Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/de/produkte/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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<https://www.phoenixcontact.com/de/produkte/1434895>

## Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

<https://www.phoenixcontact.com/de/produkte/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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## Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

<https://www.phoenixcontact.com/de/produkte/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits



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## Tool

Tool - SAC BIT M12-D15 - 1208432

<https://www.phoenixcontact.com/de/produkte/1208432>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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