

## Sensor/Actuator cable - SAC-3P-MR/ 3,0-PUR/C-1L-Z SCO - 1435519

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Sensor/Actuator cable, 3-position, PUR halogen-free, Black-gray RAL 7021, Plug angled M12 SPEEDCON, A-coded, on Valve connector C (8 mm), with 1 LED, connected with Z diode, Cable length: 3 m

### Product Features

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Robust valve connector with Zener diode as protective circuit
- ✓ Save time, thanks to installation with SPEEDCON rapid interlock system
- ✓ Convenient: increased machine availability thanks to quick and easy diagnostics
- ✓ Our standard: robust halogen-free PUR cable



### Key commercial data

|                      |          |
|----------------------|----------|
| Packing unit         | 1 1      |
| Custom tariff number | 85444290 |
| Country of origin    | Poland   |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 3 m |
|-----------------|-----|

#### Ambient conditions

|                                 |                                  |
|---------------------------------|----------------------------------|
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
|                                 | -20 °C ... 85 °C (valve plug)    |
| Degree of protection            | IP65                             |
|                                 | IP67                             |
|                                 | IP68                             |

#### General

|                       |     |
|-----------------------|-----|
| Rated current at 40°C | 4 A |
|-----------------------|-----|

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### Technical data

#### General

|                              |  |
|------------------------------|--|
| Rated voltage                | 24 V   |
| Number of positions          | 3  |
| Contact resistance           | ≤ 5 mΩ   |
| Insulation resistance        | ≥ 100 MΩ   |
| Coding                       | A - standard   |
| Standards/regulations        | M12 connector IEC 61076-2-101<br>Valve connector EN 175301-803 |
| Status display               | 1 LED  |
| Protective circuit/component | Z diode  |
| Surge voltage category       | III  |
| Pollution degree             | 3  |
| Insertion/withdrawal cycles  | ≥ 100 (M12 connector)  |
| Torque                       | 0.4 Nm (M12 connector)<br>0.6 Nm (Valve connector)             |

#### Material

|   |                              |
|---|------------------------------|
| Inflammability class 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 66                        |
| Material housing valve plug             | TPU                          |
| Material, knurls                        | Zinc die-cast, nickel-plated |
| Sealing material                        | TPU (Seal molded)            |

#### 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 |

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### Technical data

#### Cable

|   |  |
|---|--|
| 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  |
| 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)            |

### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27060306 |
| eCl@ss 4.1 | 27060306 |
| eCl@ss 5.0 | 27061801 |
| eCl@ss 5.1 | 27061801 |
| eCl@ss 6.0 | 27061801 |
| eCl@ss 7.0 | 27061801 |
| eCl@ss 8.0 | 27061801 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 3.0 | EC001855 |
|----------|----------|

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## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |

## Approvals

### Approvals

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Approvals

GOST

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Ex Approvals

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Approvals submitted

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### Approval details

|  |
|--|
| GOST  |
|--|

## Accessories

Accessories

Conductor marking

## Sensor/Actuator cable - SAC-3P-MR/ 3,0-PUR/C-1L-Z SCO - 1435519

### Accessories

Insert label - PABA WH/15 - 1013151



Insert label, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

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Insert label - PABA YE/15 - 1013698



Insert label, Strip, yellow, Unlabeled, Can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

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Insert label - PABA RD/15 - 1013944



Insert label, Strip, red, Unlabeled, Can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

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### Marker carrier cable

Conductor marker carrier - PATO 2/15 - 1013122



Conductor marker carrier, transparent, Unlabeled, Mounting type: Clip on, Cable diameter: 2.8-4.4 mm, Lettering field: 4 x 15 mm

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Conductor marker carrier - PATO 3/15 - 1013135



Conductor marker carrier, transparent, Unlabeled, Mounting type: Clip on, Cable diameter: 4.4-6.7 mm, Lettering field: 4 x 15 mm

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## Sensor/Actuator cable - SAC-3P-MR/ 3,0-PUR/C-1L-Z SCO - 1435519

### Accessories

Conductor marker carrier - PATO 4/15 - 1013148



Conductor marker carrier, transparent, Unlabeled, Mounting type: Clip on, Cable diameter: 6.7-10 mm, Lettering field: 4 x 15 mm

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### Marker pen

Marker pen - B-STIFT - 1051993



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

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### Protective cap

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

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



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### Safety locking

Fuse clip - SAC-M12-EXCLIP-M - 1558988



Fuse clip for the pin side of various M12 sensor/actuator connectors prevents plug-in connections being interrupted without using a tool

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### Screwdriver tools

## Sensor/Actuator cable - SAC-3P-MR/ 3,0-PUR/C-1L-Z SCO - 1435519

### Accessories

Screw insert - SF-BIT-PH 2-70 - 1212583



Screw bit, PH crosshead, E6.3-1/4" drive, size: PH 2 x 70 mm, suitable for holder according to DIN 3126-F6.3/ISO 1173

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



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

Tool - SAC BIT M12-D15 - 1208432



Nut for assembling sensor/actuator cables with M12 connector and for M12 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive

### Torque tool

Torque screwdriver - TSD 04 SAC - 1208429



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

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

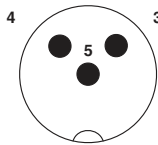


Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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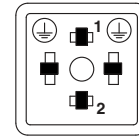
## Drawings

Schematic diagram



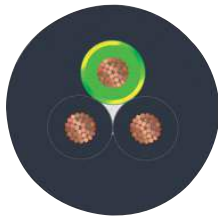
Pin assignment M12 plug, 3-pos., valve connector

Schematic diagram



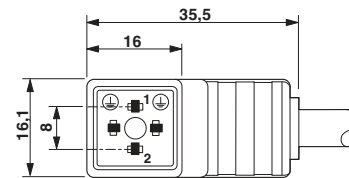
Valve connector connector pin assignment, type C

Cable cross section



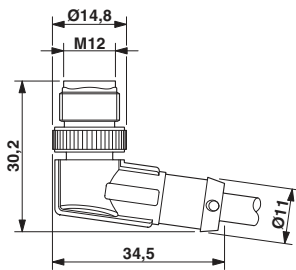
PUR halogen-free black [PUR]

Dimensioned drawing



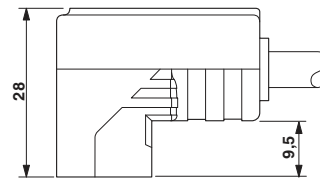
Valve connector, type C

Dimensioned drawing



M12 x 1 male plug, angled

Dimensioned drawing

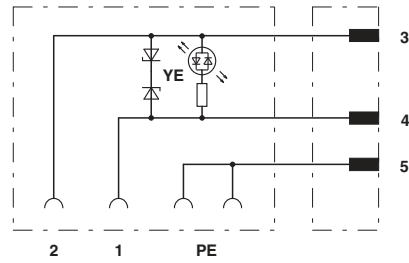


Valve connector, type C, side view



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Circuit diagram



Contact assignment of M12 plug and valve connector