

## Sensor/Actuator cable - SAC-5P-MS/ 3,0-PUR/AD-2L SCO - 1435069

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



Sensor/Actuator cable, 5-position, PUR halogen-free, Black RAL 9005, Plug straight M12 SPEEDCON, A-coded, on Valve connector AD (pressure switch), with 2 LEDs, Cable length: 3 m

### Product Features

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Robust valve connector without protective circuit
- ✓ Save time, thanks to installation with SPEEDCON rapid interlock system
- ✓ Our standard: robust halogen-free PUR cable



### Key commercial data

|                                      |           |
|--------------------------------------|-----------|
| Packing unit                         | 1 1       |
| Weight per Piece (excluding packing) | 160.0 GRM |
| 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                             |

#### General

|                       |      |
|-----------------------|------|
| Rated current at 40°C | 4 A  |
| Rated voltage         | 24 V |

## Sensor/Actuator cable - SAC-5P-MS/ 3,0-PUR/AD-2L SCO - 1435069

### Technical data

#### General

|                              |                               |
|------------------------------|-------------------------------|
| Number of positions          | 5                             |
| Contact resistance           | ≤ 5 mΩ                        |
| Insulation resistance        | ≥ 100 MΩ                      |
| Coding                       | A - standard                  |
| Standards/regulations        | M12 connector IEC 61076-2-101 |
| Status display               | 2 LEDs                        |
| Protective circuit/component | Unwired                       |
| Surge voltage category       | II                            |
| Pollution degree             | 3                             |
| Insertion/withdrawal cycles  | ≥ 100 (M12 connector)         |
| Torque                       | 0.4 Nm (M12 connector)        |
|                              | 0.6 Nm (Valve connector)      |

#### Material

|   |                              |
|---|------------------------------|
| Inflammability class according to UL 94 | V0                           |
| 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                         |
| 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            | 5x 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, black 3, black 4, green/yellow |
| Overall twist                      | 5 cores, twisted                                 |
| External sheath, color             | Black-gray RAL 7021                              |

## Sensor/Actuator cable - SAC-5P-MS/ 3,0-PUR/AD-2L SCO - 1435069

### Technical data

#### Cable

|   |   |
|---|---|
| External cable diameter D                     | 5.3 mm ±0.02 mm   |
| Smallest bending radius, fixed installation   | 26.5 mm   |
| Smallest bending radius, movable installation | 53 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  |
| Special properties                            | Flexible cable conduit capable                                      |
|   | Silicone-free   |
|   | Free of substances which would hinder coating with paint or varnish |
| Flame resistance                              | in accordance with DIN UL-Style 20549                               |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815                            |
| Resistance to oil                             | in accordance with DIN EN 60811-2-1                                 |
| Other resistance                              | Highly resistant to acids, alkaline solutions and solvents          |
|   | hydrolysis and microbe resistant                                    |
|   | 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 |

# Sensor/Actuator cable - SAC-5P-MS/ 3,0-PUR/AD-2L SCO - 1435069

## Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 8.0 | 27061801 |
|------------|----------|

## ETIM

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

---

Approvals

GOST

---


Ex Approvals

---

Approvals submitted

---

### Approval details

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

## Accessories

Accessories

Conductor marking

## Sensor/Actuator cable - SAC-5P-MS/ 3,0-PUR/AD-2L SCO - 1435069

### 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

---

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

---

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

---

### 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

---

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

---

## Sensor/Actuator cable - SAC-5P-MS/ 3,0-PUR/AD-2L SCO - 1435069

### 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

---

### 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

---

### Mounting material

Screw - SAC-V-SCREW-M3-29 KNURL - 1403779



Fillister head screw with plastic knurl, M3 x 40

---

### 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



### Safety locking

## Sensor/Actuator cable - SAC-5P-MS/ 3,0-PUR/AD-2L SCO - 1435069

### Accessories

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

---

### Screwdriver tools

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

---

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

# Sensor/Actuator cable - SAC-5P-MS/ 3,0-PUR/AD-2L SCO - 1435069

## Accessories

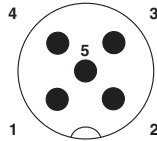
Torque screwdriver - TSD-M 1,2NM - 1212224



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

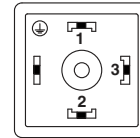
## Drawings

Schematic diagram



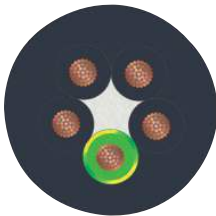
Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



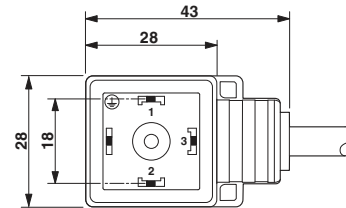
Valve plug connector pin assignment, type AD

Cable cross section



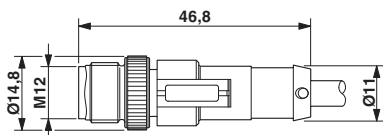
PUR halogen-free black [PUR]

Dimensioned drawing



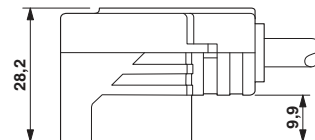
Valve connector, type AD

Dimensioned drawing



M12 SPEEDCON plug, straight

Dimensioned drawing

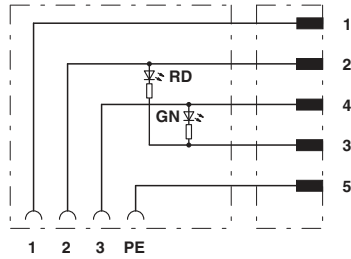


Valve connector, type AD, side view



## Sensor/Actuator cable - SAC-5P-MS/ 3,0-PUR/AD-2L SCO - 1435069

Circuit diagram



Contact assignment of M12 plug and valve connector