

## Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-PUR/M12FS SH - 1500897

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-gray RAL 7021, shielded, Plug straight M12, A-coded, on Socket straight M12, A-coded, Cable length: 0.6 m

### Product Features

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Our standard: robust halogen-free PUR cable
- ✓ Reliable signal transmission – 360° shielding in environments with electromagnetic interference



### Key commercial data

|                                      |           |
|--------------------------------------|-----------|
| Packing unit                         | 1 1       |
| Weight per Piece (excluding packing) | 58.78 GRM |
| Custom tariff number                 | 85444290  |
| Country of origin                    | Poland    |

### Technical data

#### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 0.6 m |
|-----------------|-------|

#### Ambient conditions

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

#### General

|                       |          |
|-----------------------|----------|
| Rated current at 40°C | 4 A      |
| Rated voltage         | 60 V     |
| Number of positions   | 5        |
| Contact resistance    | ≤ 5 mΩ   |
| Insulation resistance | ≥ 100 MΩ |

# Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-PUR/M12FS SH - 1500897

## Technical data

### General

|                             |                               |
|-----------------------------|-------------------------------|
| Coding                      | A - standard                  |
| Standards/regulations       | M12 connector IEC 61076-2-101 |
| Status display              | No                            |
| Surge voltage category      | II                            |
| Pollution degree            | 3                             |
| Insertion/withdrawal cycles | ≥ 100                         |
| Torque                      | 0.4 Nm (M12 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, hardly inflammable, self-extinguishing |
| Material, knurls                        | Zinc die-cast, nickel-plated                |
| Sealing material                        | NBR                                         |

### Cable

|                                               |                                       |
|-----------------------------------------------|---------------------------------------|
| Cable type                                    | PUR halogen-free black shielded       |
| Cable type (abbreviation)                     | PUR                                   |
| Cable abbreviation                            | LiF9YC11Y                             |
| UL AWM style                                  | 20549                                 |
| Conductor cross section                       | 5x 0.34 mm <sup>2</sup> (signal line) |
| AWG signal line                               | 22                                    |
| Conductor structure signal line               | 42x 0.10 mm                           |
| Core diameter including insulation            | 1.27 mm ±0.02 mm (signal line)        |
| Wire colors                                   | Brown, white, blue, black, gray       |
| Overall twist                                 | 5 wires around filler to the core     |
| Shielding                                     | Tinned copper braided shield          |
| Optical shield covering                       | 85 %                                  |
| External sheath, color                        | Black RAL 9005                        |
| External cable diameter D                     | 5.9 mm ± 0.2 mm                       |
| Smallest bending radius, fixed installation   | 29.5 mm                               |
| Smallest bending radius, movable installation | 59 mm (Up to +60°C)                   |
| Number of bending cycles                      | 4000000                               |
| Bending radius                                | 59 mm                                 |
| Traversing path                               | 10 m                                  |
| Traversing rate                               | 3 m/s                                 |

# Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-PUR/M12FS SH - 1500897

## Technical data

### Cable

|                                 |                                                            |
|---------------------------------|------------------------------------------------------------|
| Acceleration                    | 10 m/s <sup>2</sup>                                        |
| Outer sheath, material          | PUR                                                        |
| Material conductor insulation   | PP                                                         |
| Conductor material              | Bare Cu litz wires                                         |
| Insulation resistance           | 70 GΩ*km (at 20 °C)                                        |
| Conductor resistance            | max. 57 Ω/km (at 20 °C)                                    |
| Nominal voltage, cable          | 300 V (at 20 °C)                                           |
| Test voltage Core/Core          | 3000 V (at 20 °C)                                          |
| Special properties              | Flexible cable conduit capable                             |
| Flame resistance                | In accordance with UL FT-2                                 |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                   |
| Other resistance                | hydrolysis and microbe resistant                           |
|                                 | partly UV-resistant in accordance with DIN EN ISO 4892-2-A |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)               |
|                                 | -25 °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 2.0 | EC000830 |
| 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 |

## Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-PUR/M12FS SH - 1500897

### Classifications

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 13.2 | 31251501 |
|-------------|----------|

### Approvals

#### Approvals

#### Approvals

UL Listed / cUL Listed / GOST / GOST / cULus Listed

#### Ex Approvals

#### Approvals submitted

### Approval details

|                                                                                               |       |
|-----------------------------------------------------------------------------------------------|-------|
| UL Listed  |       |
| Nominal current IN                                                                            | 4 A   |
| Nominal voltage UN                                                                            | 125 V |

|                                                                                                |       |
|------------------------------------------------------------------------------------------------|-------|
| cUL Listed  |       |
| Nominal current IN                                                                             | 4 A   |
| Nominal voltage UN                                                                             | 125 V |

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

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

## Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-PUR/M12FS SH - 1500897

### Approvals

cULus Listed 

### Accessories

#### Accessories

#### Conductor marking

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

## Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-PUR/M12FS SH - 1500897

### Accessories

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

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

### 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



Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

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



## Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-PUR/M12FS SH - 1500897

### Accessories

---

#### 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

---

Fuse clip - SAC-M12-EXCLIP-F - 1558991



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

---

#### Screwdriver tools

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

## Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-PUR/M12FS SH - 1500897

### Accessories

Torque screwdriver - TSD 04 SAC - 1208429



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

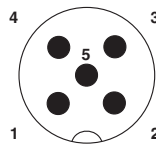
Torque screwdriver - TSD-M 1,2NM - 1212224



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

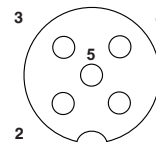
### Drawings

Schematic diagram



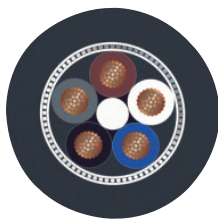
Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



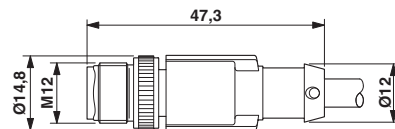
Pin assignment M12 socket, 5-pos., A-coded, socket side view

Cable cross section



PUR halogen-free black shielded [PUR]

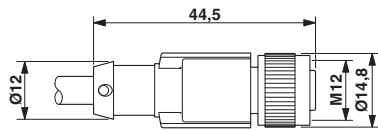
Dimensioned drawing



Plug, M12 x 1, straight, shielded

## Sensor/Actuator cable - SAC-5P-M12MS/ 0,6-PUR/M12FS SH - 1500897

Dimensioned drawing



M12 x 1 socket, straight, shielded

Circuit diagram



Contact assignment of the M12 plug and the M12 socket