

# Sensor/Actuator cable - SAC-5P-M12MS/ 0,3-PUR/M12FS SH - 1500884

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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: 0.3 m

## Why buy this product

- ✓ 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 pc  |
| GTIN                                 | <br>4 017918 612283 |
| Weight per Piece (excluding packing) | 44.5 g  |
| Custom tariff number                 | 85444290  |
| Country of origin                    | Poland  |

## Technical data

### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 0.3 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     |
| Coding                | A - standard |

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## Technical data

### General

|                              |                               |
|------------------------------|-------------------------------|
| Standards/regulations        | M12 connector IEC 61076-2-101 |
| Status display               | No                            |
| Protective circuit/component | Unwired                       |
| 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                |
| 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                                 |
| Acceleration                                  | 10 m/s <sup>2</sup>                   |
| Outer sheath, material                        | PUR                                   |
| Material conductor insulation                 | PP                                    |
| Conductor material                            | Bare Cu litz wires                    |

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## Technical data

### Cable

|                                 |  |
|---------------------------------|--|
| 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 acc. 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 | 27279218 |

### 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 |
| UNSPSC 13.2   | 31251501 |

## Approvals

### Approvals

# Sensor/Actuator cable - SAC-5P-M12MS/ 0,3-PUR/M12FS SH - 1500884

## Approvals

Approvals

UL Listed / cUL Listed / EAC / 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 |

EAC

|              |  |
|--------------|--|
| 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

## Sensor/Actuator cable - SAC-5P-M12MS/ 0,3-PUR/M12FS SH - 1500884

### Accessories

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

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

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### Accessories

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



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

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



### Safety locking

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



Locking clip - SAC-M12-EXCLIP-F - 1558991



### Screwdriver tools

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## Accessories

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

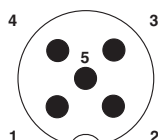
Torque screwdriver - TSD-M 1,2NM - 1212224



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

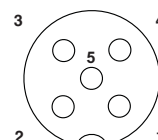
## Drawings

Schematic diagram



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

Schematic diagram



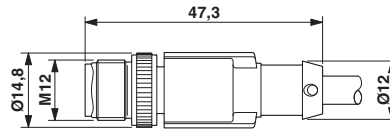
Pin assignment M12 socket, 5-pos., A-coded, socket side view

# Sensor/Actuator cable - SAC-5P-M12MS/ 0,3-PUR/M12FS SH - 1500884

Cable cross section



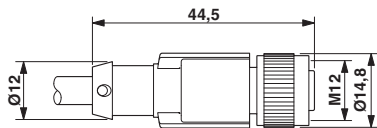
Dimensioned drawing



PUR halogen-free black [PUR]

Plug, M12 x 1, straight, shielded

Dimensioned drawing



M12 x 1 socket, straight, shielded

Circuit diagram



Contact assignment of the M12 plug and the M12 socket