

## Sensor/Actuator cable - SAC-3P-10,0-PUR/M12FS SH - 1500680

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Sensor/Actuator cable, 3-position, PUR halogen-free, Black-gray RAL 7021, shielded, Free cable end, on Socket straight M12, A-coded, Cable length: 10 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

|                  |               |
|------------------|---------------|
| package_quantity | 10            |
| GTIN             | 4017918610814 |

### Technical data

#### Dimensions

|                                            |       |
|--------------------------------------------|-------|
| Length of cable                            | 10 m  |
| Stripping length of the free conductor end | 50 mm |

#### Ambient conditions

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

#### General

|                              |                               |
|------------------------------|-------------------------------|
| Rated current at 40°C        | 4 A                           |
| Rated voltage                | 250 V                         |
| Number of positions          | 3                             |
| Contact resistance           | ≤ 5 mΩ                        |
| Insulation resistance        | ≥ 100 MΩ                      |
| Coding                       | A - standard                  |
| 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)        |

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## Technical data

### Material

|                                                |                                             |
|------------------------------------------------|---------------------------------------------|
| <b>Inflammability class according to UL 94</b> | HB                                          |
| <b>Contact material</b>                        | CuSn                                        |
| <b>Contact surface material</b>                | Ni/Au                                       |
| <b>Contact carrier material</b>                | TPU GF                                      |
| <b>Material of grip body</b>                   | TPU, hardly inflammable, self-extinguishing |
| <b>Material, knurls</b>                        | Zinc die-cast, nickel-plated                |
| <b>Sealing material</b>                        | NBR                                         |

### Cable

|                                                      |                                       |
|------------------------------------------------------|---------------------------------------|
| <b>Cable type</b>                                    | PUR halogen-free black shielded       |
| <b>Cable type (abbreviation)</b>                     | PUR                                   |
| <b>Cable abbreviation</b>                            | Li9Y-VI-C-VI-11Y                      |
| <b>UL AWM style</b>                                  | 20549                                 |
| <b>Conductor cross section</b>                       | 3x 0.34 mm <sup>2</sup> (signal line) |
| <b>AWG signal line</b>                               | 22                                    |
| <b>Conductor structure signal line</b>               | 42x 0.10 mm                           |
| <b>Core diameter including insulation</b>            | 1.27 mm ±0.02 mm (signal line)        |
| <b>Thickness, insulation</b>                         | ≥ 0.21 mm (Core insulation)           |
| <b>Thickness, insulation</b>                         | approx. 1.1 mm (Outer cable sheath)   |
| <b>Wire colors</b>                                   | brown, blue, black                    |
| <b>Overall twist</b>                                 | 3 wires, twisted                      |
| <b>Shielding</b>                                     | Braided copper wires                  |
| <b>Optical shield covering</b>                       | 85 %                                  |
| <b>External sheath, color</b>                        | Black-gray RAL 7021                   |
| <b>External cable diameter D</b>                     | 5.9 mm ±0.15 mm                       |
| <b>Smallest bending radius, fixed installation</b>   | 29.5 mm                               |
| <b>Smallest bending radius, movable installation</b> | 59 mm                                 |
| <b>Number of bending cycles</b>                      | 4000000                               |
| <b>Bending radius</b>                                | 59 mm                                 |
| <b>Traversing path</b>                               | 10 m                                  |
| <b>Traversing rate</b>                               | 3 m/s                                 |
| <b>Acceleration</b>                                  | 10 m/s <sup>2</sup>                   |
| <b>Cable weight</b>                                  | 44 kg/km                              |
| <b>Outer sheath, material</b>                        | PUR                                   |
| <b>Material conductor insulation</b>                 | PP                                    |
| <b>Conductor material</b>                            | Bare Cu litz wires                    |
| <b>Insulation resistance</b>                         | ≥ 100 GΩ*km (at 20 °C)                |
| <b>Conductor resistance</b>                          | max. 58 Ω/km (at 20 °C)               |
| <b>Nominal voltage, cable</b>                        | ≤ 300 V                               |
| <b>Test voltage, cable</b>                           | ≥ 3000 V                              |
| <b>Special properties</b>                            | Flexible cable conduit capable        |
| <b>Special properties</b>                            | Silicone-free                         |

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## Technical data

### Cable

|                                        |                                                                     |
|----------------------------------------|---------------------------------------------------------------------|
| <b>Special properties</b>              | Free of substances which would hinder coating with paint or varnish |
| <b>Flame resistance</b>                | in accordance with DIN UL-Style 20549                               |
| <b>Halogen-free</b>                    | in accordance with DIN VDE 0472 part 815                            |
| <b>Resistance to oil</b>               | in accordance with DIN EN 60811-2-1                                 |
| <b>Other resistance</b>                | Highly resistant to acids, alkaline solutions and solvents          |
| <b>Other resistance</b>                | hydrolysis and microbe resistant                                    |
| <b>Other resistance</b>                | partly UV-resistant in accordance with DIN EN ISO 4892-2-A          |
| <b>Ambient temperature (operation)</b> | -40 °C ... 80 °C (cable, fixed installation)                        |
| <b>Ambient temperature (operation)</b> | -25 °C ... 80 °C (cable, flexible installation)                     |

## classifications

### eCl@ss

|                   |          |
|-------------------|----------|
| <b>eCl@ss 4.0</b> | 27060306 |
| <b>eCl@ss 4.1</b> | 27060306 |
| <b>eCl@ss 5.0</b> | 27061801 |
| <b>eCl@ss 5.1</b> | 27061801 |
| <b>eCl@ss 6.0</b> | 27061801 |
| <b>eCl@ss 7.0</b> | 27061801 |
| <b>eCl@ss 8.0</b> | 27061801 |

### ETIM

|                 |          |
|-----------------|----------|
| <b>ETIM 2.0</b> | EC000830 |
| <b>ETIM 3.0</b> | EC001855 |
| <b>ETIM 4.0</b> | EC001855 |
| <b>ETIM 5.0</b> | EC001855 |

### UNSPSC

|                      |          |
|----------------------|----------|
| <b>UNSPSC 6.01</b>   | 31251501 |
| <b>UNSPSC 7.0901</b> | 31251501 |
| <b>UNSPSC 11</b>     | 31251501 |
| <b>UNSPSC 12.01</b>  | 31251501 |
| <b>UNSPSC 13.2</b>   | 31251501 |

## approvals

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

## Approval details

## Sensor/Actuator cable - SAC-3P-10,0-PUR/M12FS SH - 1500680

### approvals

|                                                                                             |       |
|---------------------------------------------------------------------------------------------|-------|
| UL Listed  |       |
|                                                                                             |       |
| Nominal voltage UN                                                                          | 300 V |
| Nominal current IN                                                                          | 4 A   |
| mm²/AWG/kcmil                                                                               |       |

|                                                                                              |       |
|----------------------------------------------------------------------------------------------|-------|
| cUL Listed  |       |
|                                                                                              |       |
| Nominal voltage UN                                                                           | 300 V |
| Nominal current IN                                                                           | 4 A   |
| mm²/AWG/kcmil                                                                                |       |

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

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

|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
| cULus Listed  |
|--------------------------------------------------------------------------------------------------|

### accessories

#### Conductor marking

PABA WH/15 - 1013151



## Sensor/Actuator cable - SAC-3P-10,0-PUR/M12FS SH - 1500680

### accessories

PABA YE/15 - 1013698



PABA RD/15 - 1013944



### Marker carrier cable

PATG 2/15 - 1013038



PATG 3/15 - 1013041



PATG 4/15 - 1013054



### Marker pen

## Sensor/Actuator cable - SAC-3P-10,0-PUR/M12FS SH - 1500680

accessories

B-STIFT - 1051993



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### Cutting tools

CUTFOX-S VDE - 1212207



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### Stripping tool

WIREFOX SAC - 1212623



WIREFOX 10 - 1212150



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### Protective cap

PROT-M12 MS-PA-CHAIN - 1430899



## Sensor/Actuator cable - SAC-3P-10,0-PUR/M12FS SH - 1500680

accessories

### Safety locking

SAC-M12-EXCLIP-F - 1558991



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### Torque tool

TSD 04 SAC - 1208429



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TSD-M 1,2NM - 1212224



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### Screwdriver tools

TSD-M SAC-BIT ADAPTER - 1212600



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SAC BIT M12-D15 - 1208432



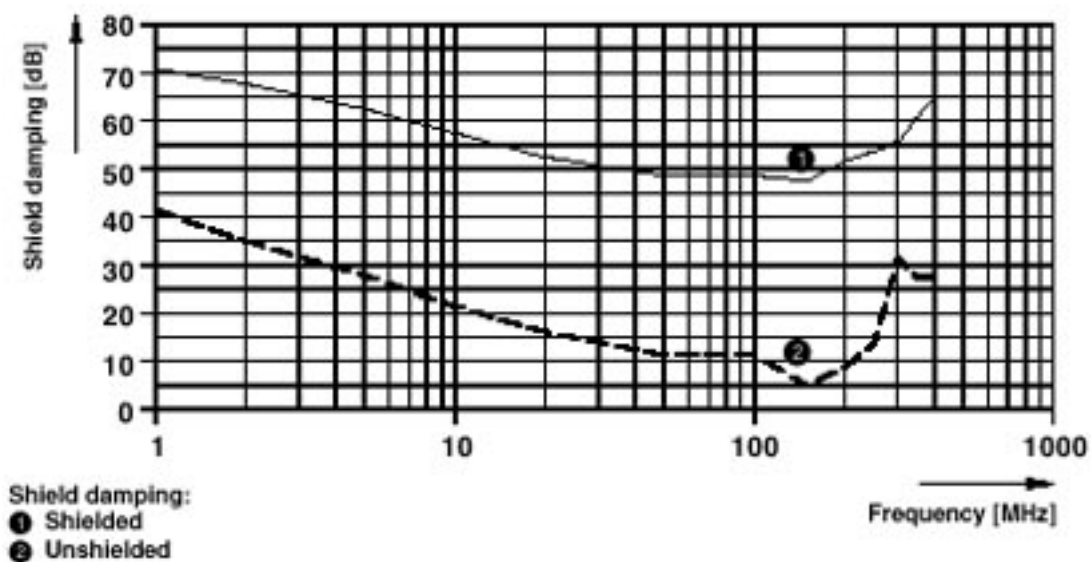
## Sensor/Actuator cable - SAC-3P-10,0-PUR/M12FS SH - 1500680

accessories

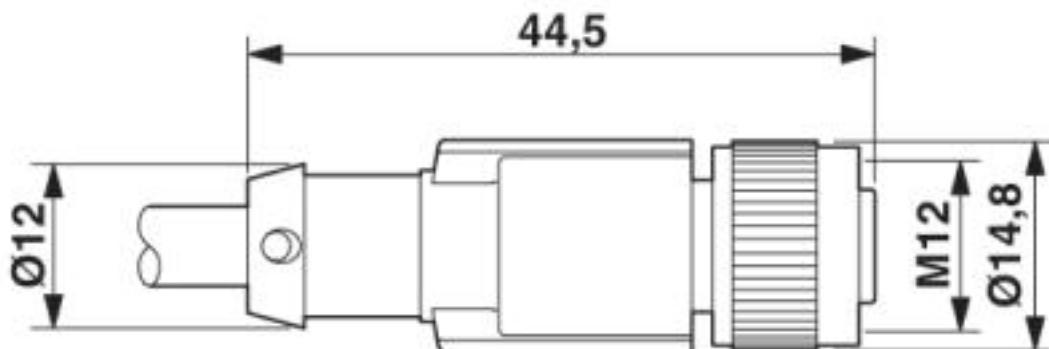
WIREFOX SAC-1 - 1212757

### Drawings

Diagram



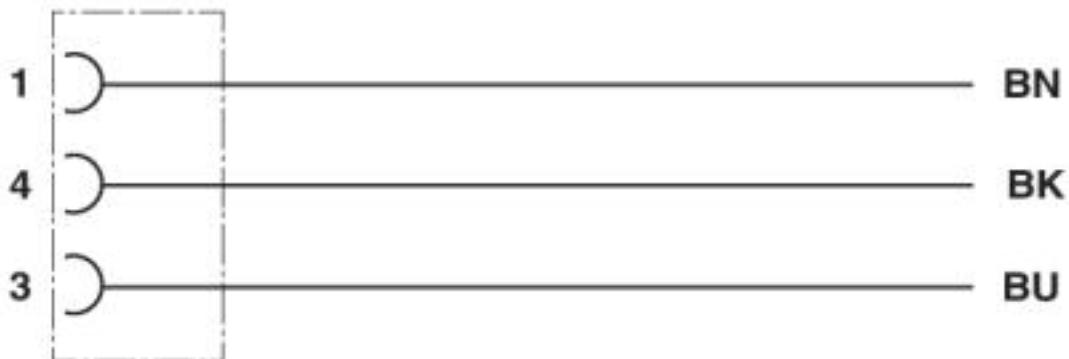
Dimensioned drawing



M12 x 1 socket, straight, shielded

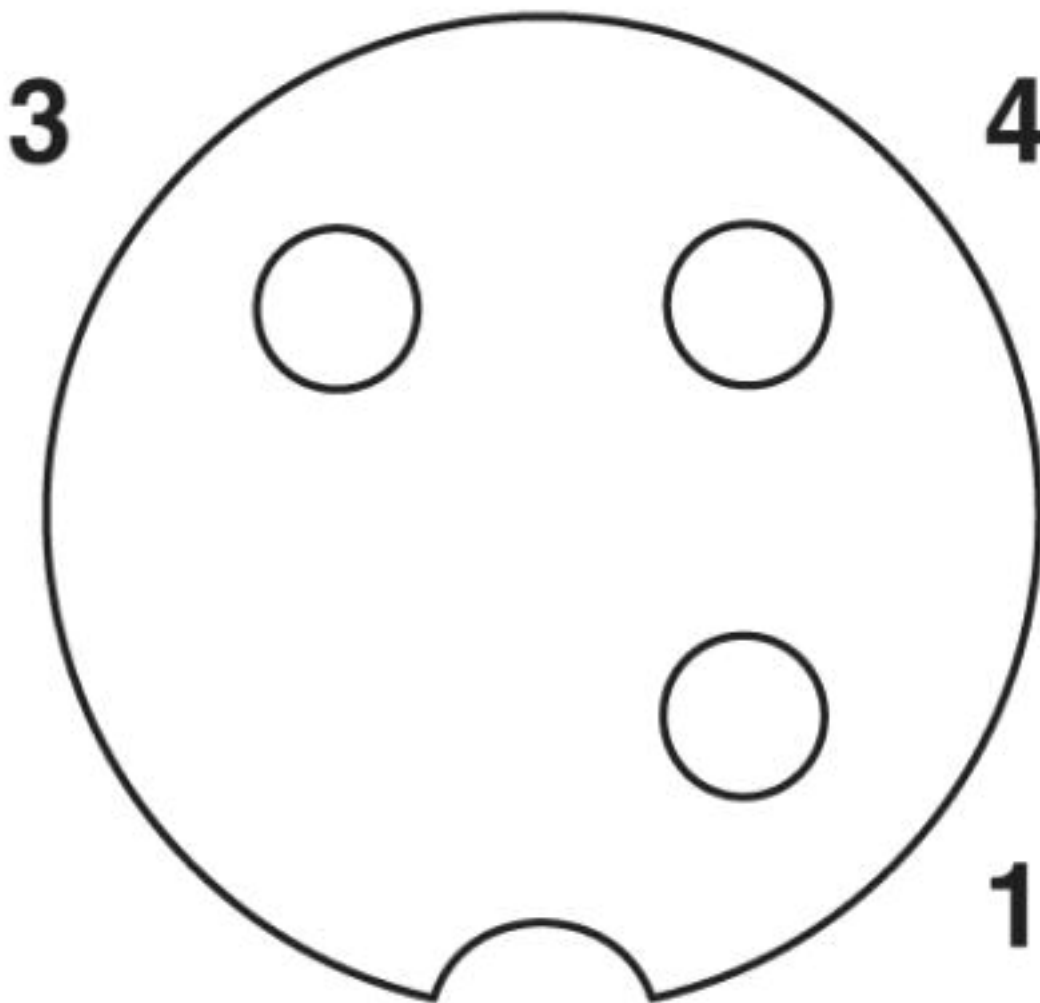
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Circuit diagram



Contact assignment of the M12 socket

Schematic diagram



Pin assignment M12 socket, 3-pos., A-coded, view female side

## Sensor/Actuator cable - SAC-3P-10,0-PUR/M12FS SH - 1500680

Cable cross section



PUR halogen-free black shielded [PUR]

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