

# Sensor/Actuator cable - SAC-4P-M12MS/0,6-PUR/M 8FS - 1693076

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Sensor/Actuator cable, 4-position, PUR halogen-free, Black-gray RAL 7021, Plug straight M12, A-coded, on Socket straight M8, Cable length: 0.6 m

## Product Features

- Easy and safe: 100% electrically tested plug-in components
- Our standard: robust halogen-free PUR cable

## Key commercial data

|                         |               |
|-------------------------|---------------|
| <b>package_quantity</b> | 1             |
| <b>GTIN</b>             | 4017918187064 |

## Technical data

### Dimensions

|                        |       |
|------------------------|-------|
| <b>Length of cable</b> | 0.6 m |
|------------------------|-------|

### Ambient conditions

|  |                                  |
|--|----------------------------------|
| <b>Ambient temperature (operation)</b> | -25 °C ... 90 °C (Plug / socket) |
| <b>Degree of protection</b>            | IP65                             |
| <b>Degree of protection</b>            | IP67                             |
| <b>Degree of protection</b>            | IP68                             |

### General

|                                     |                               |
|-------------------------------------|-------------------------------|
| <b>Rated current at 40°C</b>        | 4 A                           |
| <b>Rated voltage</b>                | 30 V                          |
| <b>Number of positions</b>          | 4                             |
| <b>Contact resistance</b>           | ≤ 5 mΩ                        |
| <b>Insulation resistance</b>        | ≥ 100 MΩ                      |
| <b>Coding</b>                       | A - standard                  |
| <b>Standards/regulations</b>        | M12 connector IEC 61076-2-101 |
| <b>Standards/regulations</b>        | M8 connector IEC 61076-2-104  |
| <b>Status display</b>               | No                            |
| <b>Protective circuit/component</b> | Unwired                       |
| <b>Surge voltage category</b>       | II                            |
| <b>Pollution degree</b>             | 3                             |

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## Technical data

### General

|                             |                        |
|-----------------------------|------------------------|
| Insertion/withdrawal cycles | ≥ 100                  |
| Torque                      | 0.4 Nm (M12 connector) |
| Torque                      | 0.2 Nm (M8 connectors) |

### 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                            | Li9Y11Y-HF                            |
| Conductor cross section                       | 4x 0.25 mm <sup>2</sup> (signal line) |
| AWG signal line                               | 24                                    |
| Conductor structure signal line               | 32x 0.10 mm                           |
| Core diameter including insulation            | 1.17 mm ±0.02 mm (signal line)        |
| Thickness, insulation                         | ≥ 0.21 mm (Core insulation)           |
| Thickness, insulation                         | approx. 0.7 mm (Outer cable sheath)   |
| Wire colors                                   | brown, white, blue, black             |
| Overall twist                                 | 4 wires, twisted                      |
| External sheath, color                        | RAL 9005 (black gray)                 |
| External cable diameter D                     | 4.4 mm ±0.15 mm                       |
| Smallest bending radius, fixed installation   | 22 mm                                 |
| Smallest bending radius, movable installation | 44 mm                                 |
| Number of bending cycles                      | 4000000                               |
| Bending radius                                | 44 mm                                 |
| Traversing path                               | 10 m                                  |
| Traversing rate                               | 3 m/s                                 |
| Acceleration                                  | 5 m/s <sup>2</sup>                    |
| Cable weight                                  | 25 kg/km                              |
| Outer sheath, material                        | PUR                                   |
| Material conductor insulation                 | PP                                    |
| Conductor material                            | Bare Cu litz wires                    |
| Insulation resistance                         | ≥ 100 GΩ*km (at 20 °C)                |
| Conductor resistance                          | max. 78 Ω/km (at 20 °C)               |
| Nominal voltage, cable                        | ≤ 300 V                               |

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## Technical data

### Cable

|  |   |
|--|---|
| <b>Test voltage, cable</b>             | ≥ 3000 V  |
| <b>Special properties</b>              | Flexible cable conduit capable                                      |
| <b>Special properties</b>              | Silicone-free   |
| <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

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UL Listed / cUL Listed / GOST / cULus Listed /

# Sensor/Actuator cable - SAC-4P-M12MS/0,6-PUR/M 8FS - 1693076

## approvals

### Approval details

|                            |       |
|----------------------------|-------|
| UL Listed                  |       |
| Nominal voltage UN         | 125 V |
| Nominal current IN         | 4 A   |
| mm <sup>2</sup> /AWG/kcmil |       |

|                            |       |
|----------------------------|-------|
| cUL Listed                 |       |
| Nominal voltage UN         | 125 V |
| Nominal current IN         | 4 A   |
| mm <sup>2</sup> /AWG/kcmil |       |

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

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

## accessories

### Protective cap

PROT-M12 FS-PA-CHAIN - 1430873



PROT-M 8 MS-PA-CHAIN - 1430860



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accessories

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## Safety locking

SAC-M12-EXCLIP-M - 1558988



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## Conductor marking

PABA WH/15 - 1013151



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PABA YE/15 - 1013698



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PABA RD/15 - 1013944



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## Marker carrier cable

## Sensor/Actuator cable - SAC-4P-M12MS/0,6-PUR/M 8FS - 1693076

### accessories

PATO 2/15 - 1013122



PATO 3/15 - 1013135



PATO 4/15 - 1013148



### Marker pen

B-STIFT - 1051993



### Torque tool

TSD 02 SAC - 1208487



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## accessories

TSD 04 SAC - 1208429



TSD-M 1,2NM - 1212224



## Screwdriver tools

SAC BIT M8-D10 - 1208461



TSD-M SAC-BIT ADAPTER - 1212600



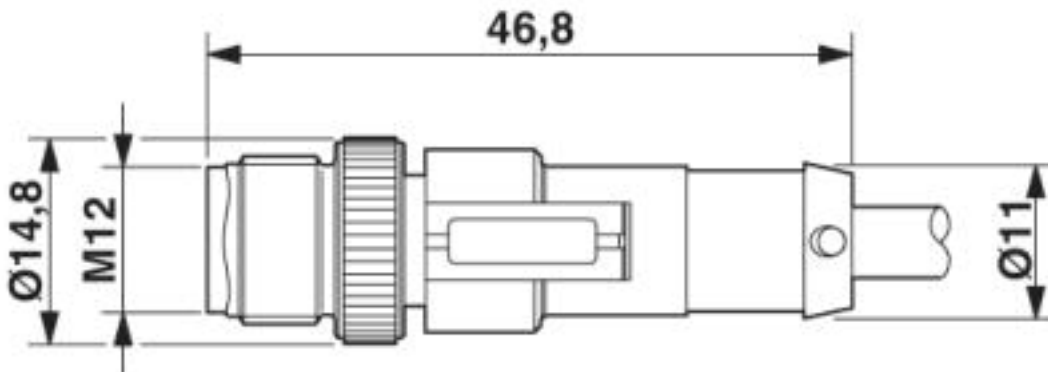
SAC BIT M12-D15 - 1208432



## Drawings

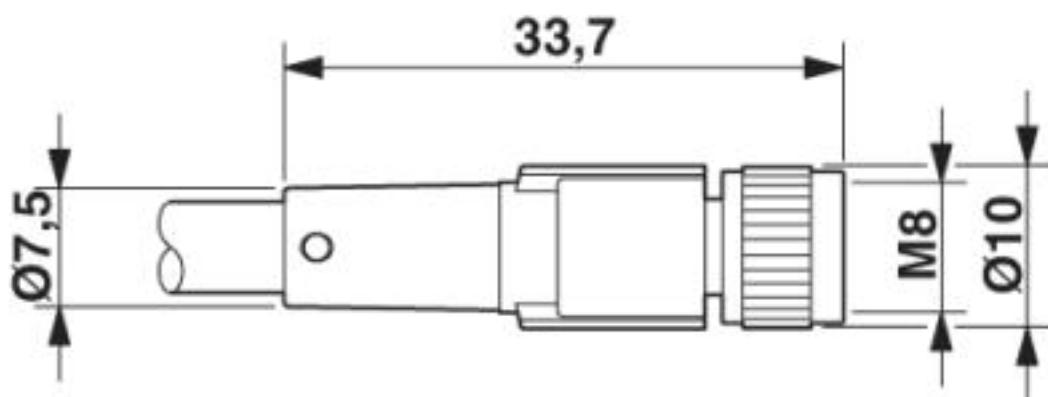
# Sensor/Actuator cable - SAC-4P-M12MS/0,6-PUR/M 8FS - 1693076

Dimensioned drawing



M12 x 1 plug, straight

Dimensioned drawing

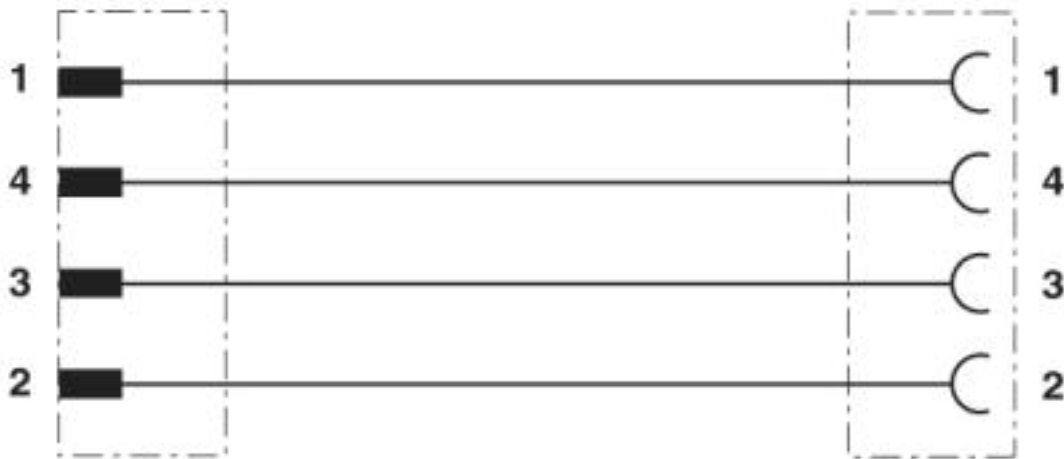


Socket M8 x 1, straight



# Sensor/Actuator cable - SAC-4P-M12MS/0,6-PUR/M 8FS - 1693076

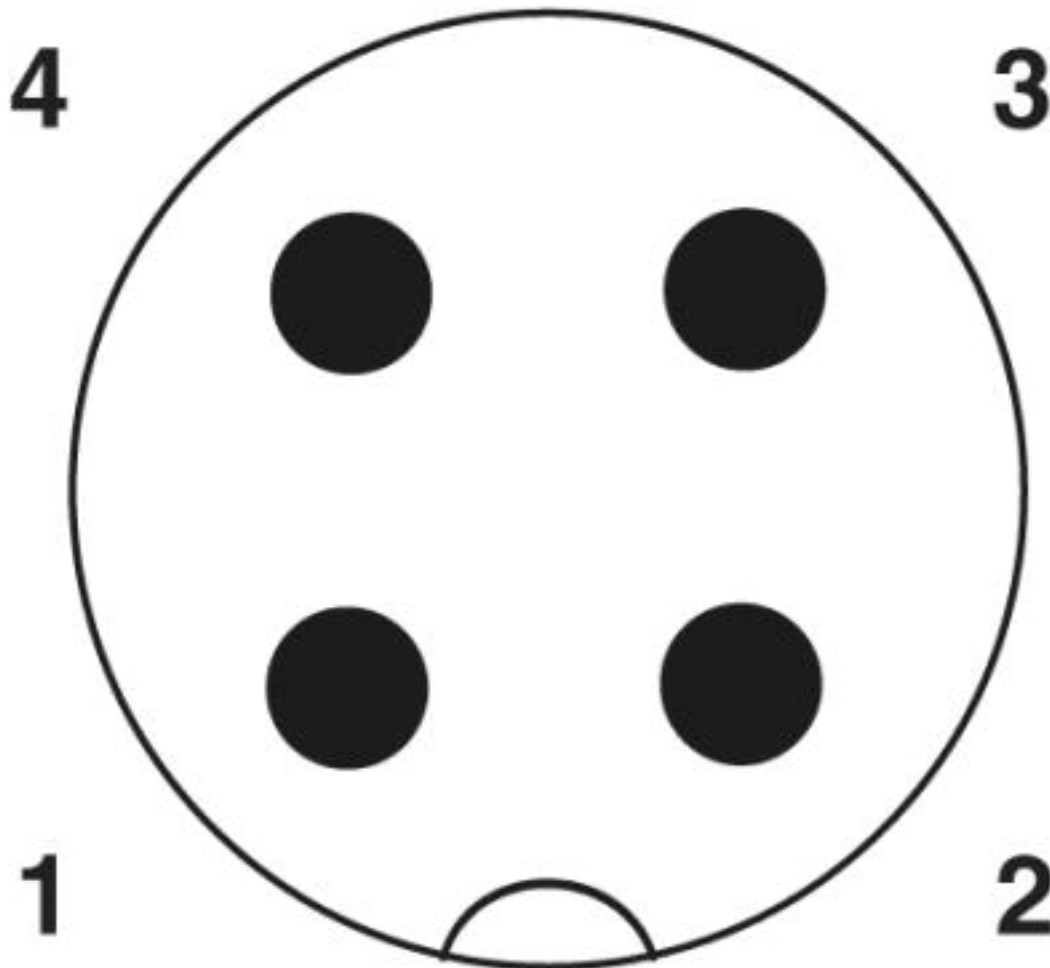
Circuit diagram



Contact assignment of M12 plugs / M8 sockets

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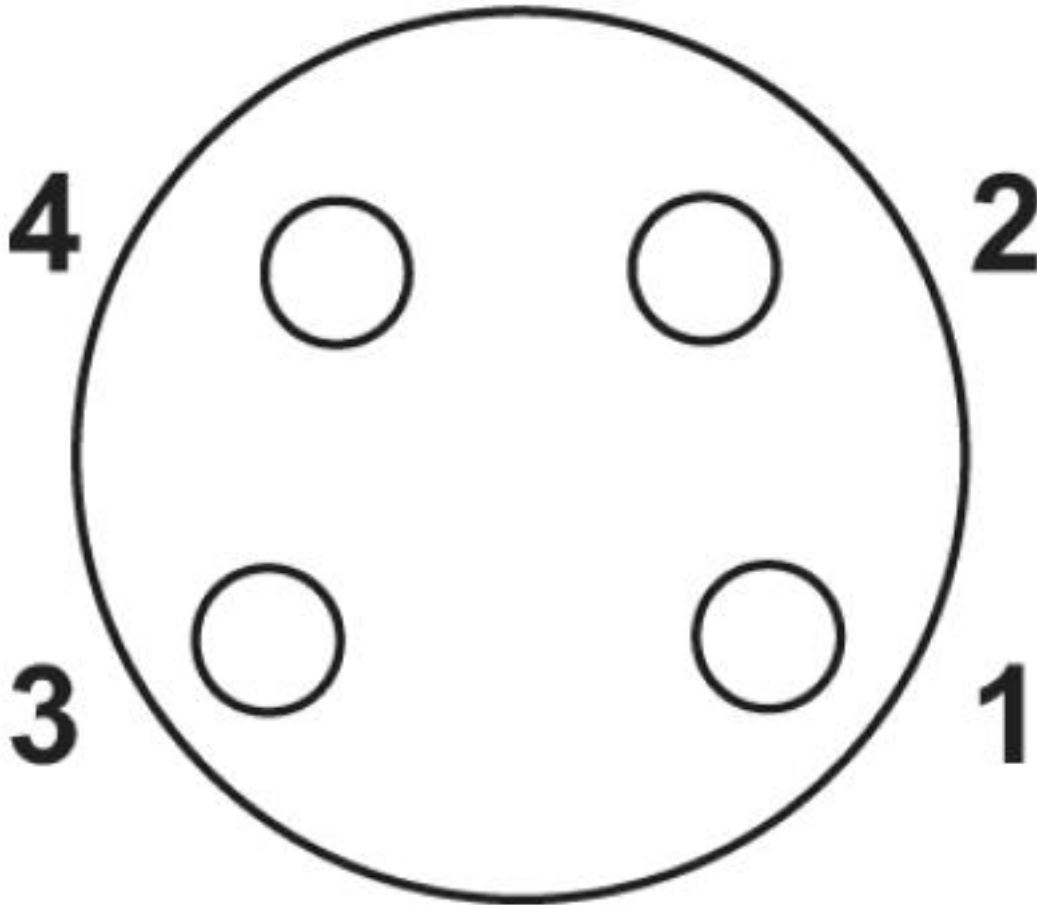
Schematic diagram



Pin assignment M12 plug, 4-pos., A-coded, view plug side

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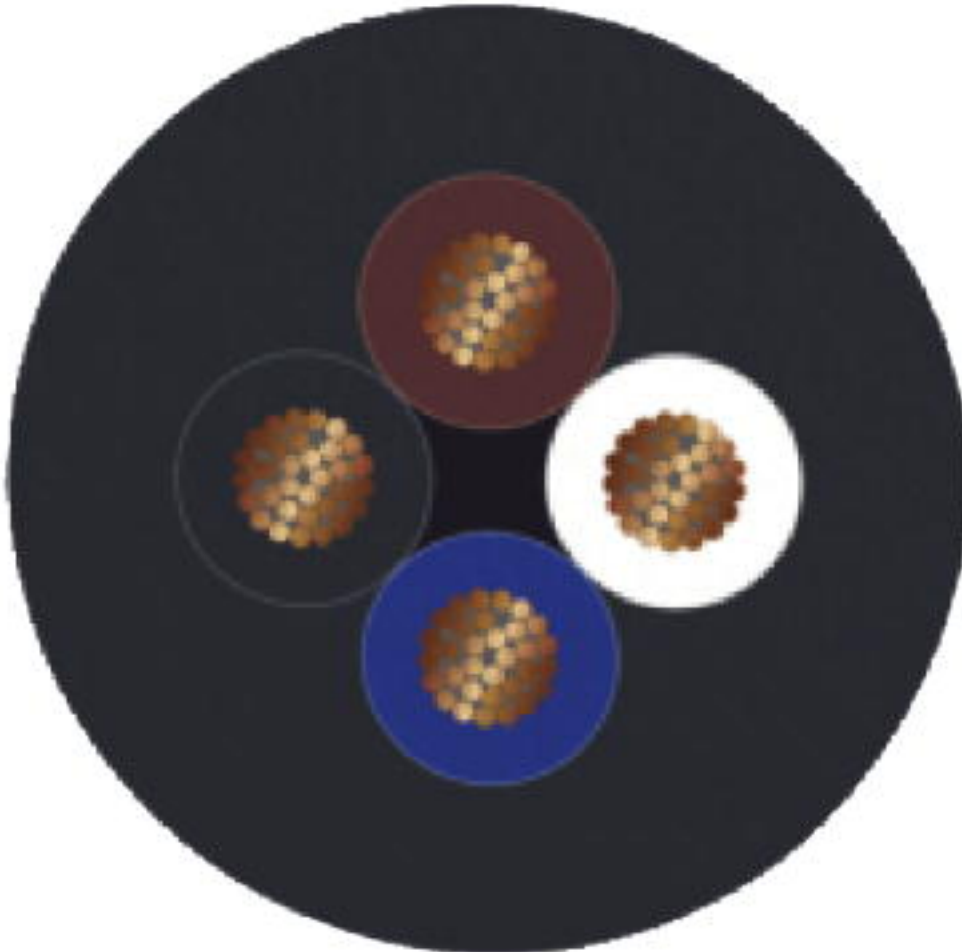
Schematic diagram



Pin assignment M8 socket, 4-pos., view female side

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Cable cross section



PUR halogen-free black [PUR]

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