

# Sensor/Actuator cable - SAC-4P-M12MS/10,0-PUR/M12FS - 1500402

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Sensor/Actuator cable, 4-position, PUR halogen-free, Black-gray RAL 7021, Plug straight M12, A-coded, on Socket straight M12, A-coded, Cable length: 10 m

## Key commercial data

|                  |               |
|------------------|---------------|
| package_quantity | 1             |
| GTIN             | 4017918592509 |

## Technical data

### Dimensions

|                 |      |
|-----------------|------|
| Length of cable | 10 m |
|-----------------|------|

### Ambient conditions

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

### General

|                             |              |
|-----------------------------|--------------|
| Rated current at 40°C       | 4 A          |
| Rated voltage               | 250 V        |
| Number of positions         | 4            |
| Contact resistance          | ≤ 5 mΩ       |
| Insulation resistance       | ≥ 100 MΩ     |
| Coding                      | A - standard |
| Status display              | No           |
| Surge voltage category      | II           |
| Pollution degree            | 3            |
| Insertion/withdrawal cycles | ≥ 100        |

### Material

|   |        |
|---|--------|
| Inflammability class according to UL 94 | HB     |
| Contact material                        | CuSn   |
| Contact surface material                | Ni/Au  |
| Contact carrier material                | TPU GF |

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## Technical data

### Material

|                              |   |
|------------------------------|---|
| <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  |
| <b>Cable type (abbreviation)</b>                       | PUR   |
| <b>Cable abbreviation</b>                              | Li9Y11Y-HF  |
| <b>UL AWM style</b>                                    | 20549 / 10493 (80°C/300 V)  |
| <b>Conductor cross section</b>                         | 4x 0.34 mm <sup>2</sup>   |
| <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  |
| <b>Thickness, insulation</b>                           | ≥ 0.21 mm   |
| <b>Wire colors</b>                                     | brown, white, blue, black   |
| <b>Overall twist</b>                                   | 4 wires, twisted  |
| <b>External sheath, color</b>                          | Black-gray RAL 7021   |
| <b>Outer sheath thickness</b>                          | approx. 0.8 mm  |
| <b>External cable diameter D</b>                       | 4.7 mm ±0.15 mm   |
| <b>Minimum bending radius, fixed installation</b>      | 5 x D   |
| <b>Minimum bending radius, flexible installation</b>   | 10 x D  |
| <b>Number of bending cycles</b>                        | 4000000   |
| <b>Minimum bending radius, drag chain applications</b> | 10 x D  |
| <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>                                    | 30 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>                           | ≥ 1 GΩ*km   |
| <b>Conductor resistance</b>                            | ≤ 58 Ω/km   |
| <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   |
| <b>Special properties</b>                              | Free of substances which would hinder coating with paint or varnish |
| <b>Special properties</b>                              | Flexible  |
| <b>Flame resistance</b>                                | in accordance with DIN UL-Style 20549                               |
| <b>Flame resistance</b>                                | in accordance with FT1 as per UL 758                                |

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## Technical data

### Cable

|  |  |
|--|--|
| <b>Halogen-free</b>                    | in accordance with DIN VDE 0472 part 815                   |
| <b>Halogen-free</b>                    | in accordance with DIN EN 50267-2-1                        |
| <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>Other resistance</b>                | Low adhesion   |
| <b>Other resistance</b>                | abrasion-resistant   |
| <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 / cULus Listed /

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### Approval details

# Sensor/Actuator cable - SAC-4P-M12MS/10,0-PUR/ M12FS - 1500402

## approvals

|                            |       |
|----------------------------|-------|
| <b>UL Listed</b>           |       |
| Nominal voltage UN         | 300 V |
| Nominal current IN         | 4 A   |
| mm <sup>2</sup> /AWG/kcmil |       |

|                            |       |
|----------------------------|-------|
| <b>cUL Listed</b>          |       |
| Nominal voltage UN         | 300 V |
| Nominal current IN         | 4 A   |
| mm <sup>2</sup> /AWG/kcmil |       |

|                     |  |
|---------------------|--|
| <b>cULus Listed</b> |  |
|---------------------|--|

## accessories

### Protective cap

PROT-M12 FS-PA-CHAIN - 1430873



PROT-M12 MS-PA-CHAIN - 1430899



### Safety locking

## Sensor/Actuator cable - SAC-4P-M12MS/10,0-PUR/ M12FS - 1500402

### accessories

SAC-M12-EXCLIP-M - 1558988



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SAC-M12-EXCLIP-F - 1558991



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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/10,0-PUR/ M12FS - 1500402

### accessories

PATO 2/15 - 1013122



PATO 3/15 - 1013135



PATO 4/15 - 1013148



### Marker pen

B-STIFT - 1051993



### Torque tool

TSD 04 SAC - 1208429



# Sensor/Actuator cable - SAC-4P-M12MS/10,0-PUR/ M12FS - 1500402

accessories

TSD-M 1,2NM - 1212224



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## Screwdriver tools

TSD-M SAC-BIT ADAPTER - 1212600



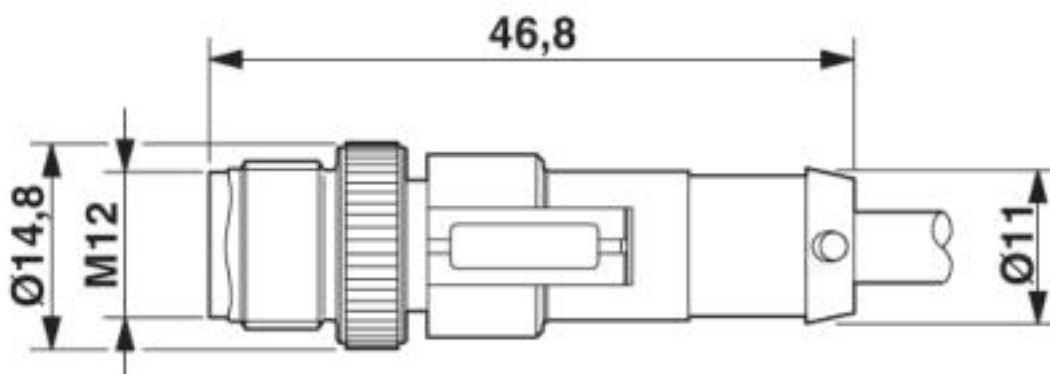
SAC BIT M12-D15 - 1208432



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## Drawings

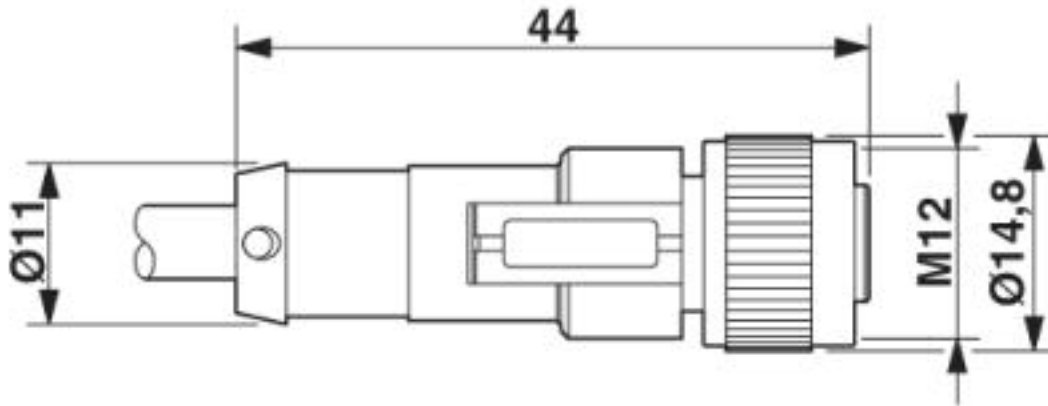
Dimensioned drawing



M12 x 1 plug, straight

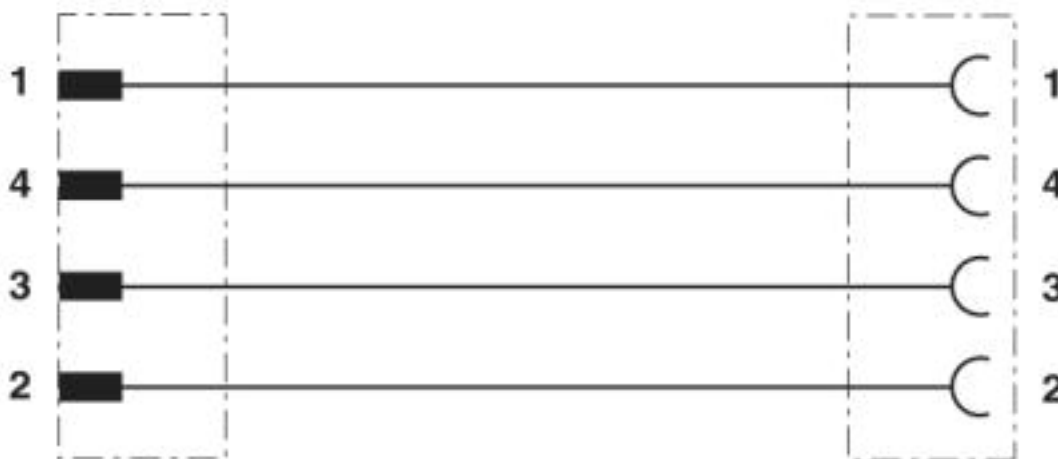
# Sensor/Actuator cable - SAC-4P-M12MS/10,0-PUR/ M12FS - 1500402

Dimensioned drawing



M12 x 1 socket, straight

Circuit diagram

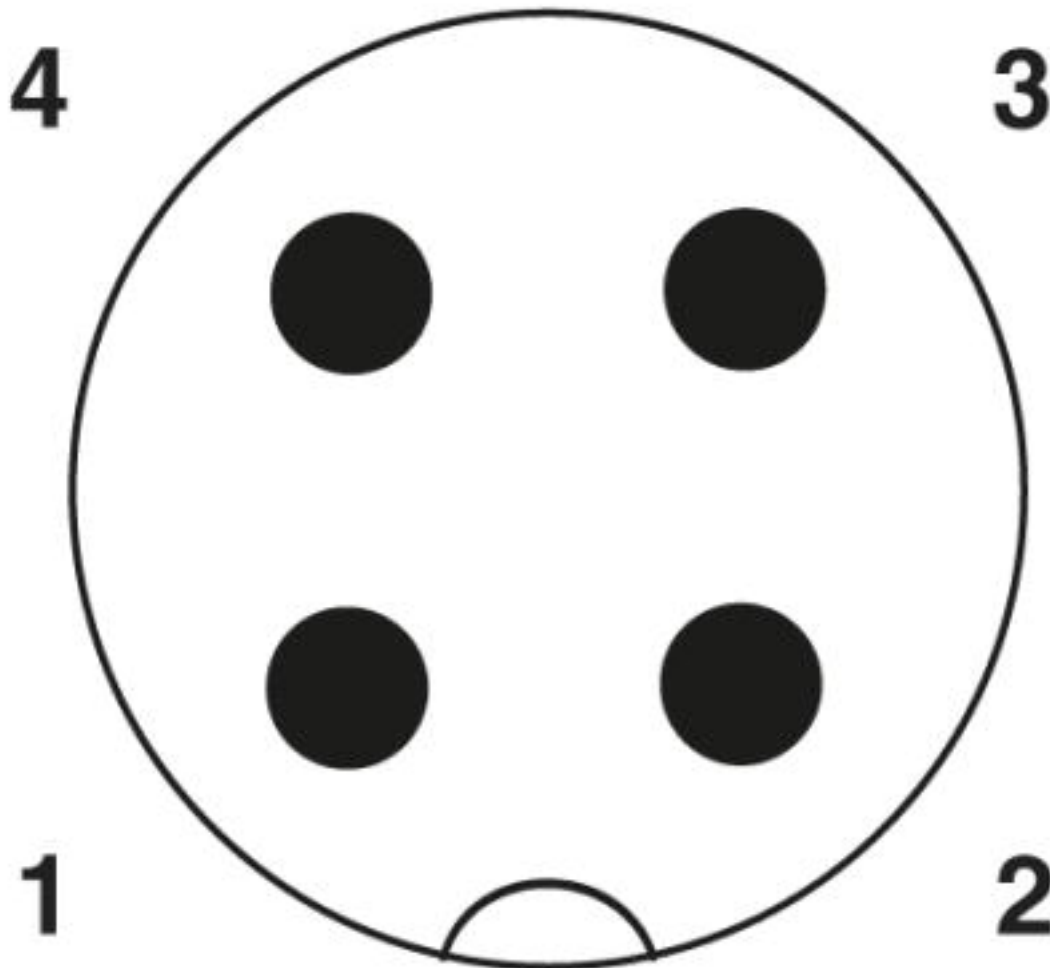


Contact assignment of the M12 plug and the M12 socket



# Sensor/Actuator cable - SAC-4P-M12MS/10,0-PUR/ M12FS - 1500402

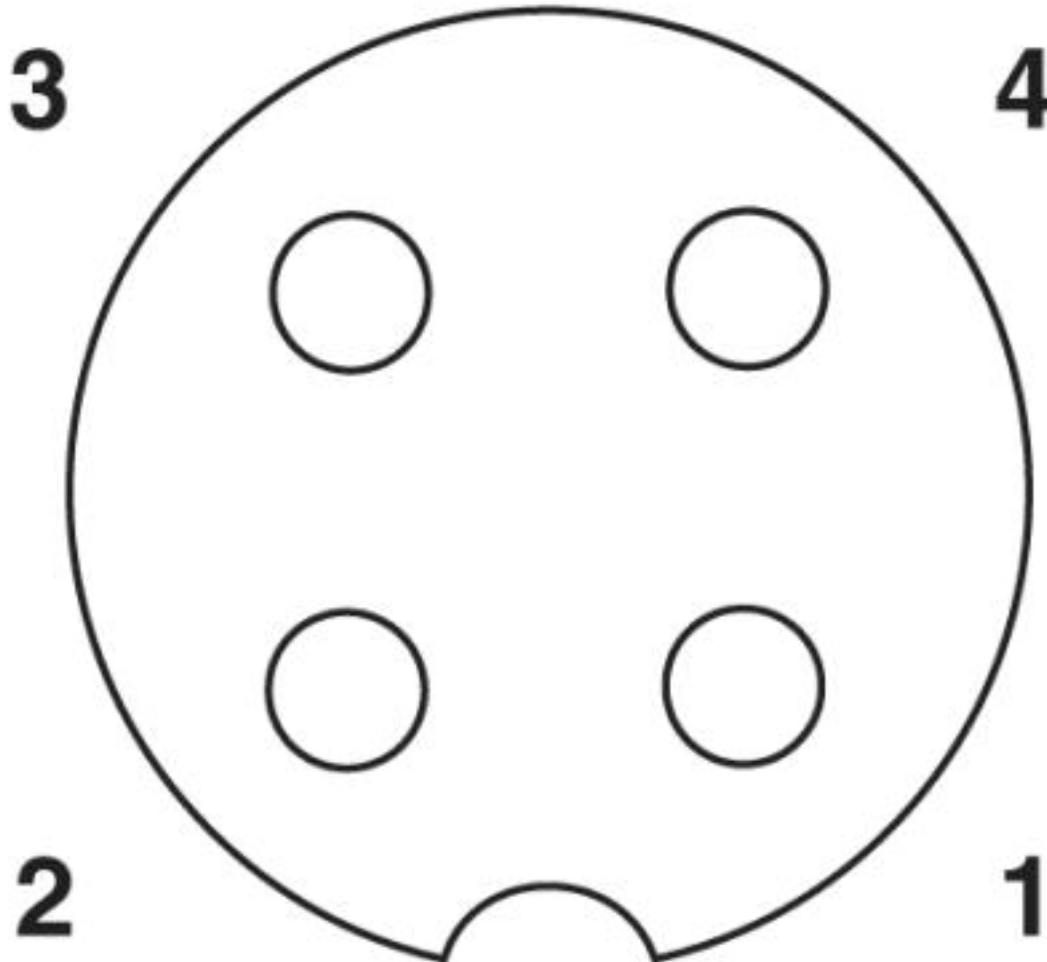
Schematic diagram



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

# Sensor/Actuator cable - SAC-4P-M12MS/10,0-PUR/ M12FS - 1500402

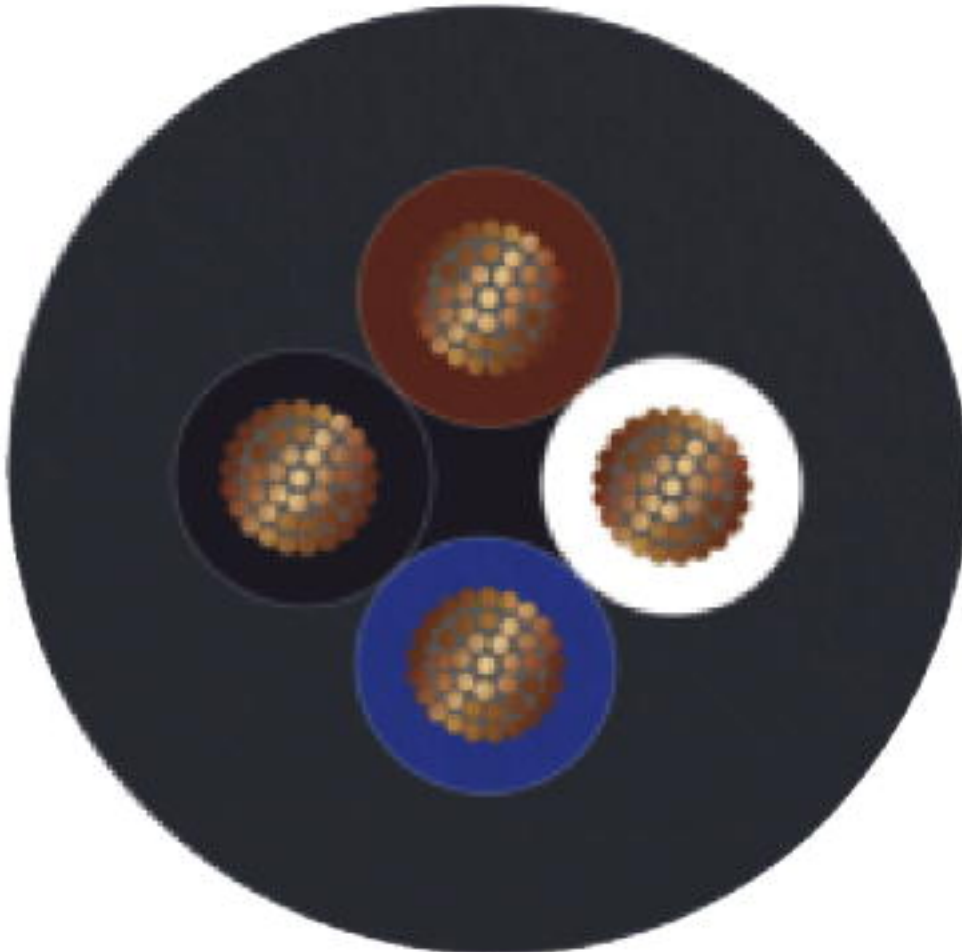
Schematic diagram



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

## Sensor/Actuator cable - SAC-4P-M12MS/10,0-PUR/ M12FS - 1500402

Cable cross section



PUR halogen-free black [PUR]

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