


**SAC-4P-M12MS/5,0-28X/M12FS OD**

Order No.: 1454118

<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=1454118>

Sensor/Actuator cable, 4-position, PE-X halogen-free, Black-gray RAL 7021, Plug, straightLink:M12, A - standard, on Socket, straight M12, A - standard, Cable length: 5 m

**Commercial data**

|                          |  |
|--------------------------|--|
| GTIN (EAN)               | <br>4 046356 568722 |
| sales group              | D111   |
| Pack                     | 1 pcs.   |
| Customs tariff           | 85444290   |
| Catalog page information | Page 219 (PC-2011)   |

**Product notes**

WEEE/RoHS-compliant since:  
03/04/2010



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**Technical data****General data**

|                       |        |
|-----------------------|--------|
| Rated current at 40°C | 4 A    |
| Rated voltage         | 250 V  |
| Number of positions   | 4      |
| Volume resistance     | ≤ 5 mΩ |

|                                 |                   |
|---------------------------------|-------------------|
| Insulation resistance           | ≥ 100 MΩ          |
| Length of cable                 | 5 m               |
| Ambient temperature (operation) | -40 °C ... 105 °C |

#### General characteristics

|                             |                               |
|-----------------------------|-------------------------------|
| Standards/regulations       | M12 connector IEC 61076-2-101 |
| Coding                      | A - standard                  |
| Pollution degree            | 3                             |
| Degree of protection        | IP65/IP68/IP69K               |
| Insertion/withdrawal cycles | ≥ 100                         |
| Torque                      | 0.4 Nm (M12 connector)        |
| Contact material            | CuSn                          |
| Contact surface material    | Ni/Au                         |
| Contact carrier material    | PP                            |
| Material of grip body       | PP                            |
| Material, knurls            | High-grade steel              |
| Sealing material            | FPM                           |
| Status display              | No                            |

#### Conductor data

|                                    |   |
|------------------------------------|---|
| Cable type                         | PE-X black  |
| Cable type (abbreviation)          | 28X   |
| Cable abbreviation                 | Li2X2X  |
| Conductor cross section            | 0.5 mm <sup>2</sup>   |
| AWG signal line                    | 20  |
| Conductor structure signal line    | 28x 0.15 mm   |
| Core diameter including insulation | 1.6 mm ±0.05 mm   |
| Thickness, insulation              | ~ 0.3 mm (Core insulation)<br>~ 0.6 mm (Outer cable sheath) |
| External cable diameter            | 5.2 mm ± 0.2 mm   |
| Wire colors                        | Brown, white, blue, black                                   |
| External sheath, color             | Black-gray RAL 7021   |
| Insulation resistance              | ≥ 100 MΩ*km (at 20°C)                                       |
| Conductor resistance               | max. 39 Ω/m (at 20°C)                                       |
| Nominal voltage, conductor         | ≤ 300 V (AC)  |
| Test voltage, conductor            | ≥ 3000 V (AC)   |

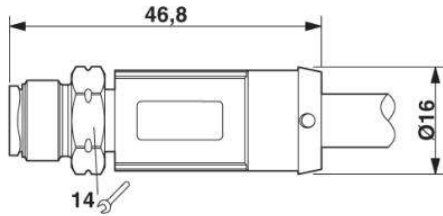
|   |   |
|---|---|
| Overall twist                                 | 4 wires, twisted  |
| Length of twist, overall twist                | 61.6 mm   |
| Outer sheath, material                        | PE-X  |
| Material conductor insulation                 | PE-X  |
| Conductor material                            | Bare Cu litz wires  |
| Cable weight                                  | 44 kg/km  |
| Smallest bending radius, fixed installation   | 26 mm   |
| Smallest bending radius, movable installation | 52 mm   |
| Number of bending cycles                      | 2000000   |
| Bending radius                                | 52 mm   |
| Traversing path                               | 10 m  |
| Traversing rate                               | 3 m/s   |
| Acceleration                                  | 10 m/s <sup>2</sup>   |
| Ambient temperature (operation)               | -40 °C ... 105 °C (cable, fixed installation)<br>-15 °C ... 105 °C (cable, flexible installation) |
| Flame resistance                              | According to DIN 60332-1-2<br>According to DIN EN 50266-2-5                                       |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815  |
| Resistance to oil                             | in accordance with DIN EN 60811-2-1   |
| Other resistance                              | UV resistant According to DIN VDE 0276-605  |

### Accessories

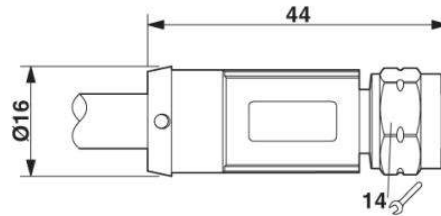
| Item         | Designation     | Description   |
|--------------|-----------------|---|
| <b>Tools</b> |                 |   |
| 1212513      | SAC BIT M12-W14 | SAC nut, for assembling M12 connectors with hexagonal high-grade steel knurl, with 4 mm hexagonal drive |
| 1208429      | TSD 04 SAC      | Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors            |

## Diagrams/Drawings

### Dimensioned drawing

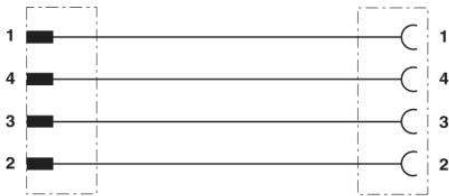


M12 x 1 male connector, straight



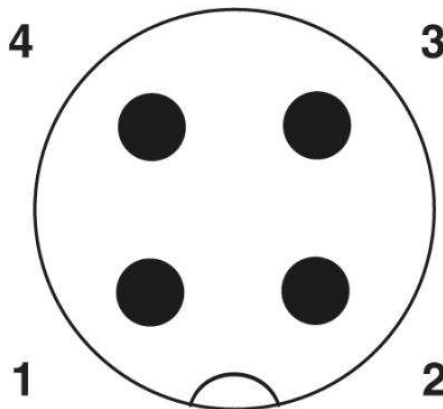
M12 x 1 female connector, straight

### Circuit diagram

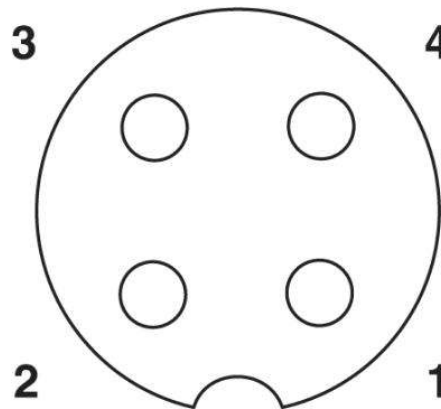


Contact assignment of the M12 connector and the M12 socket

### Schematic diagram



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



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

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