

## Sensor/actuator cable - SAC-4P-M12MS/ 2,0-186 - 1509445

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Sensor/actuator cable, 4-position, PUR, black-gray RAL 7021, Plug straight M12, coding: A, on free cable end, cable length: 2 m

### Your advantages

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ High-performance: connectors and cables with a large conductor cross section for power supply

RoHS

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 017918 899080 |
| GTIN         | 4017918899080                                                                                           |

### Technical data

#### Dimensions

|                                            |       |
|--------------------------------------------|-------|
| Length of cable                            | 2 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                             |
|                                 | IP67                             |
|                                 | IP68                             |

#### General

|                       |          |
|-----------------------|----------|
| Rated current at 40°C | 4 A      |
| Rated voltage         | 250 V AC |
|                       | 250 V DC |
| Number of positions   | 4        |
| Insulation resistance | ≥ 100 MΩ |

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## Technical data

### General

|                              |              |
|------------------------------|--------------|
| Coding                       | A - standard |
| Status display               | No           |
| Protective circuit/component | unwired      |
| Overvoltage category         | II           |
| Degree of pollution          | 3            |
| Insertion/withdrawal cycles  | ≥ 100        |
| Torque                       | 0.4 Nm       |

### Material

|                                        |                                             |
|----------------------------------------|---------------------------------------------|
| Flammability rating 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                |

### Standards and Regulations

|                                        |    |
|----------------------------------------|----|
| Flammability rating according to UL 94 | HB |
|----------------------------------------|----|

### Cable

|                                               |                                |
|-----------------------------------------------|--------------------------------|
| Cable type                                    | PUR POWER 0.75 mm² black       |
| Cable type (abbreviation)                     | 186                            |
| Cable abbreviation                            | LiY11Y                         |
| UL AWM style                                  | 20549 / 1061 (80°C/300 V)      |
| Conductor cross section                       | 4x 0.75 mm² (power line)       |
| AWG signal line                               | 18                             |
| Conductor structure signal line               | 42x 0.15 mm                    |
| Core diameter including insulation            | 1.75 mm ±0.05 mm               |
| Thickness, insulation                         | ≥ 0.23 mm (Core insulation)    |
|                                               | ≥ 0.76 mm (Outer cable sheath) |
| Wire colors                                   | brown, white, blue, black      |
| Overall twist                                 | 4 wires, twisted               |
| External sheath, color                        | black-gray RAL 7021            |
| External cable diameter D                     | 5.9 mm ±0.15 mm                |
| Smallest bending radius, movable installation | 59 mm                          |
| Minimum bending radius, fixed installation    | 5 x D                          |
| Minimum bending radius, flexible installation | 10 x D                         |
| Number of bending cycles                      | 2000000                        |
| Bending radius                                | 59 mm                          |
| Traversing path                               | 5 m                            |
| Traversing rate                               | 3 m/s                          |
| Acceleration                                  | 5 m/s²                         |

## Sensor/actuator cable - SAC-4P-M12MS/ 2,0-186 - 1509445

### Technical data

#### Cable

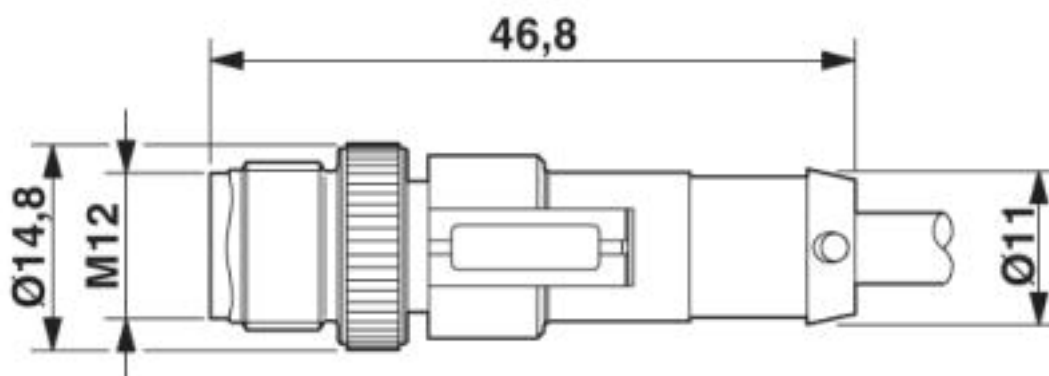
|                                 |                                                     |
|---------------------------------|-----------------------------------------------------|
| Cable weight                    | 57 kg/km                                            |
| Outer sheath, material          | PUR                                                 |
| Material conductor insulation   | PVC                                                 |
| Conductor material              | Bare Cu litz wires                                  |
| Insulation resistance           | $\geq 1 \text{ M}\Omega \cdot \text{km}$ (at 20 °C) |
| Conductor resistance            | max. 26 $\Omega/\text{km}$ (at 20 °C)               |
| Nominal voltage, cable          | $\leq 300 \text{ V}$                                |
| Test voltage, cable             | $\geq 3000 \text{ V}$                               |
| Flame resistance                | according to UL 758/1581 (horizontal)               |
|                                 | in accordance with UL 758/1581 FT2                  |
| Resistance to oil               | According to DIN EN 60811-2-1, 168 h at 100°C       |
| Other resistance                | hydrolysis and microbe resistant                    |
|                                 | Low adhesion                                        |
|                                 | abrasion-resistant                                  |
|                                 | Resistant to salt water                             |
| Ambient temperature (operation) | -25 °C ... 80 °C (cable, fixed installation)        |
|                                 | -5 °C ... 80 °C (cable, flexible installation)      |

#### Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

### Drawings

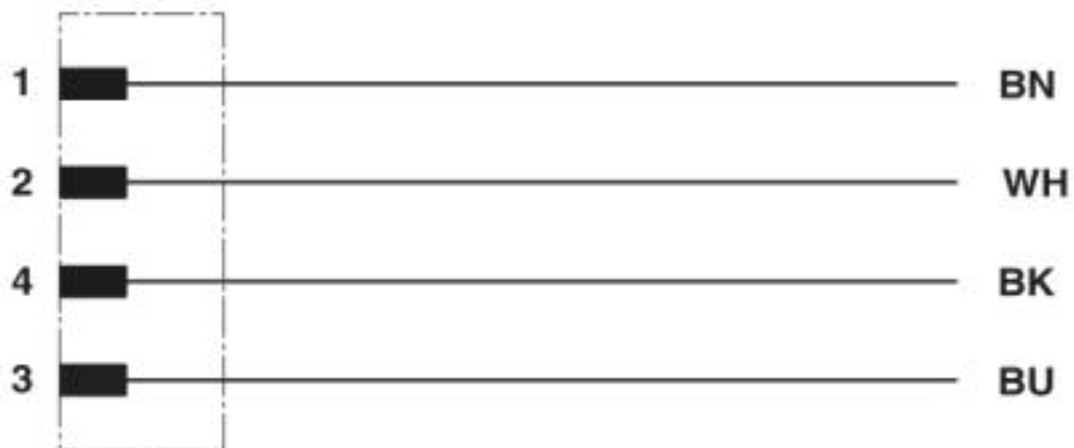
Dimensional drawing



Plug, M12 x 1, straight, shielded

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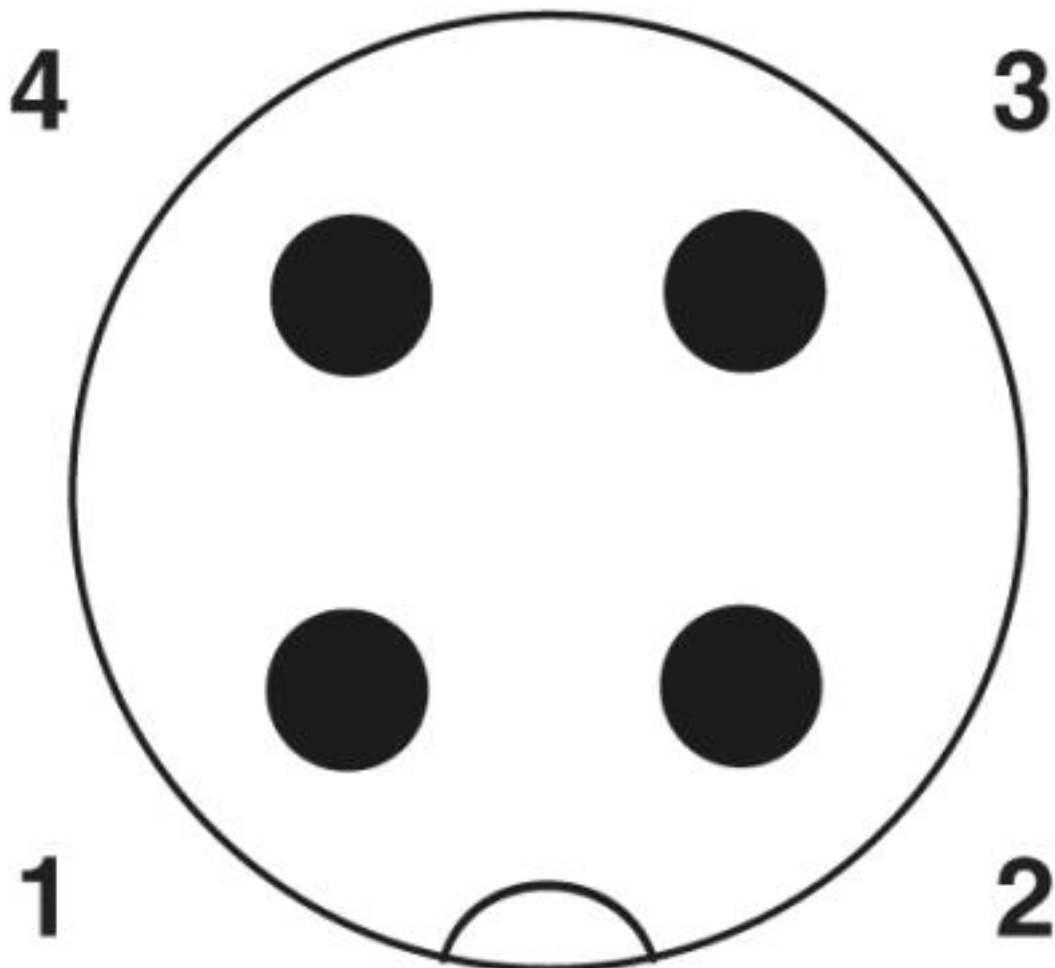
Circuit diagram



Contact assignment of M12 plugs / sockets bridged

## Sensor/actuator cable - SAC-4P-M12MS/ 2,0-186 - 1509445

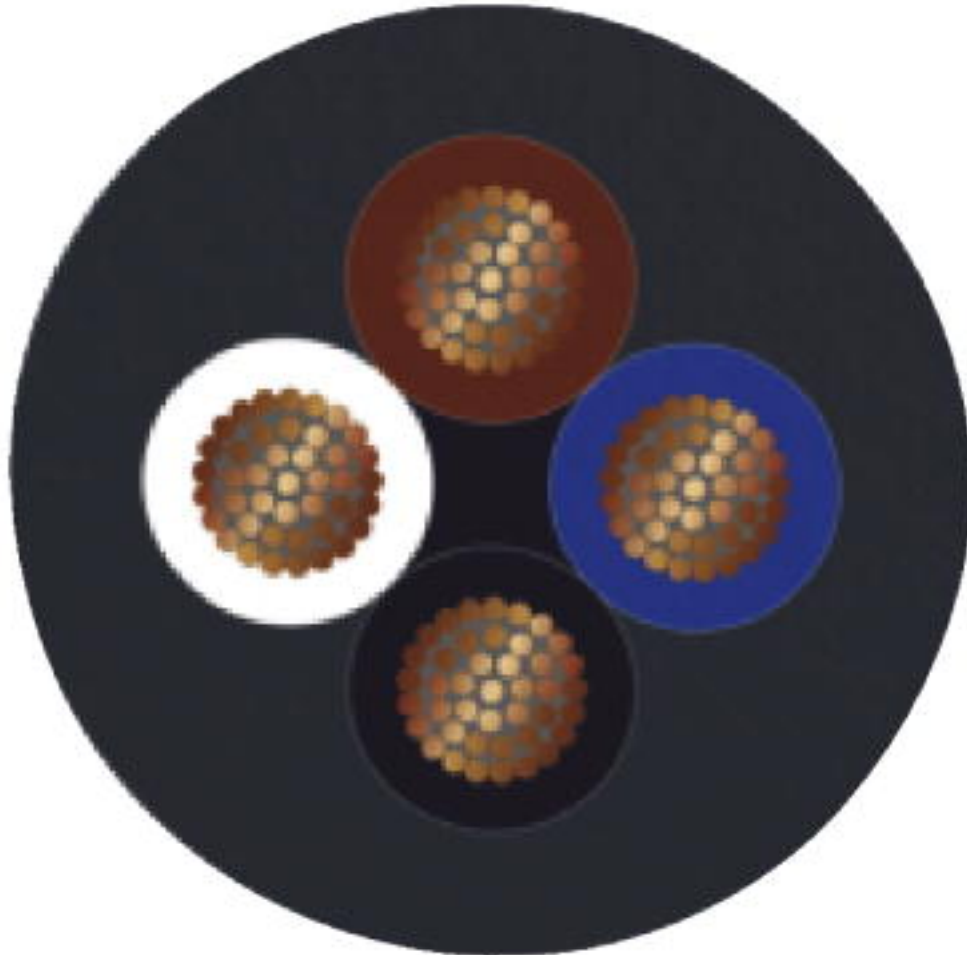
Schematic diagram



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

## Sensor/actuator cable - SAC-4P-M12MS/ 2,0-186 - 1509445

Cable cross section



PUR POWER 0.75 mm<sup>2</sup> black [186]

### Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27060311 |
| eCl@ss 4.0    | 27060300 |
| eCl@ss 4.1    | 27060300 |
| eCl@ss 5.0    | 27061800 |
| eCl@ss 5.1    | 27061800 |
| eCl@ss 6.0    | 27279200 |
| eCl@ss 7.0    | 27279218 |
| eCl@ss 8.0    | 27279218 |
| eCl@ss 9.0    | 27060311 |

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## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000830 |
| ETIM 3.0 | EC001855 |
| ETIM 4.0 | EC001855 |
| ETIM 5.0 | EC001855 |
| ETIM 6.0 | EC001855 |
| ETIM 7.0 | EC001855 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |
| UNSPSC 19.0   | 31251501 |
| UNSPSC 20.0   | 31251501 |
| UNSPSC 21.0   | 31251501 |

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / cULus Listed

#### Ex Approvals

### Approval details

|                    |                                                                                     |                                                                                                                                                       |               |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Listed          |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 221474 |
| Nominal voltage UN | 300 V                                                                               |                                                                                                                                                       |               |
| Nominal current IN | 4 A                                                                                 |                                                                                                                                                       |               |

|                    |                                                                                     |                                                                                                                                                       |               |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| cUL Listed         |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 221474 |
| Nominal voltage UN | 300 V                                                                               |                                                                                                                                                       |               |

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### Approvals

|                                |     |
|--------------------------------|-----|
|                                |     |
| Nominal current I <sub>N</sub> | 4 A |

cULus Listed



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