

## Sensor/actuator cable - SAC-4P-M12MS/25,0-PUR/M12FS - 1545014


Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



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: 25 m

RoHS

### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 STK   |
| GTIN         | <br>4 046356 118484 |
| GTIN         | 4046356118484   |

### Technical data

#### Dimensions

|                 |      |
|-----------------|------|
| Length of cable | 25 m |
|-----------------|------|

#### 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     |
| Coding                      | A - standard |
| Status display              | No           |
| Overvoltage category        | II           |
| Degree of pollution         | 3            |
| Insertion/withdrawal cycles | ≥ 100        |

# Sensor/actuator cable - SAC-4P-M12MS/25,0-PUR/M12FS - 1545014

## Technical data

### 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                |
| Sealing material                       | NBR   |

### Standards and Regulations

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

### Cable

|   |                                |
|---|--------------------------------|
| Cable type                                      | PUR halogen-free black         |
| Cable type (abbreviation)                       | PUR                            |
| Cable abbreviation                              | Li9Y11Y-HF                     |
| UL AWM style                                    | 20549 / 10493 (80°C/300 V)     |
| Conductor cross section                         | 4x 0.34 mm <sup>2</sup>        |
| AWG signal line                                 | 22                             |
| Conductor structure signal line                 | 42x 0.10 mm                    |
| Core diameter including insulation              | 1.27 mm ±0.02 mm               |
| Thickness, insulation                           | ≥ 0.21 mm                      |
| Wire colors                                     | brown, white, blue, black      |
| Overall twist                                   | 4 wires, twisted               |
| External sheath, color                          | black-gray RAL 7021            |
| Outer sheath thickness                          | approx. 0.5 mm                 |
| External cable diameter D                       | 4.2 mm ±0.15 mm                |
| Minimum bending radius, fixed installation      | 5 x D                          |
| Minimum bending radius, flexible installation   | 10 x D                         |
| Number of bending cycles                        | 10000000                       |
| Minimum bending radius, drag chain applications | 10 x D                         |
| Traversing path                                 | 10 m                           |
| Traversing rate                                 | 3 m/s                          |
| Acceleration                                    | 10 m/s <sup>2</sup>            |
| Cable weight                                    | 30 kg/km                       |
| Outer sheath, material                          | PUR                            |
| Material conductor insulation                   | PP                             |
| Conductor material                              | Bare Cu litz wires             |
| Insulation resistance                           | ≥ 1 GΩ*km                      |
| Conductor resistance                            | ≤ 58 Ω/km                      |
| Nominal voltage, cable                          | ≤ 300 V                        |
| Test voltage, cable                             | ≥ 3000 V                       |
| Special properties                              | Flexible cable conduit capable |

# Sensor/actuator cable - SAC-4P-M12MS/25,0-PUR/M12FS - 1545014

## Technical data

### Cable

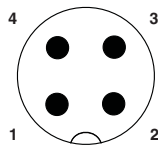
|                                 |   |
|---------------------------------|---|
|                                 | Silicone-free   |
|                                 | Free of substances which would hinder coating with paint or varnish |
|                                 | flexible  |
| Flame resistance                | in accordance with UL 758/1581 FT2                                  |
|                                 | DIN EN 60332-2-2 (20 s)   |
| Halogen-free                    | in accordance with DIN VDE 0472 part 815                            |
|                                 | in accordance with DIN EN 50267-2-1                                 |
| Resistance to oil               | in accordance with DIN EN 60811-2-1                                 |
| Other resistance                | Highly resistant to acids, alkaline solutions and solvents          |
|                                 | hydrolysis and microbe resistant                                    |
|                                 | partly UV-resistant in accordance with DIN EN ISO 4892-2-A          |
|                                 | Low adhesion  |
|                                 | abrasion-resistant  |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)                        |
|                                 | -25 °C ... 80 °C (cable, flexible installation)                     |

### Environmental Product Compliance

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

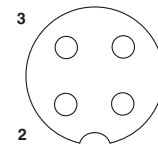
## Drawings

Schematic diagram



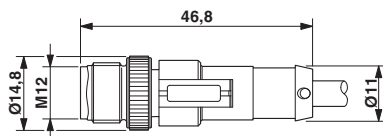
Pin assignment M12 plug, 4-pos., A-coded, view plug side

Schematic diagram



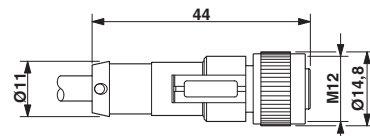
Pin assignment M12 socket, 4-pos., A-coded, view female side

Dimensional drawing



Plug, M12 x 1, straight, shielded

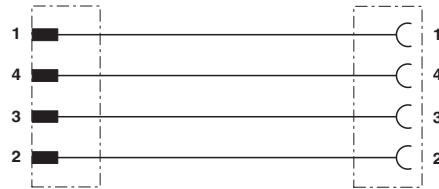
Dimensional drawing



M12 x 1 socket, straight

# Sensor/actuator cable - SAC-4P-M12MS/25,0-PUR/M12FS - 1545014

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

## 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 |   |               |
| Nominal current IN | 4 A   |   |               |

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

Phoenix Contact 2018 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>