

## Sensor/actuator cable - SAC-4P-M12MS/ 0,3-PUR/M12FR - 1668470

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 angled M12, A-coded, Cable length: 0.3 m

### Why buy this product

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



### Key Commercial Data

|              |   |
|--------------|---|
| Packing unit | 1 STK   |
| GTIN         | <br>4 017918 137199 |
| GTIN         | 4017918137199   |
| Sales Key    | 02  |

### Technical data

#### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 0.3 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        |
| Number of positions   | 4            |
| Insulation resistance | ≥ 10 MΩ      |
| Coding                | A - standard |

# Sensor/actuator cable - SAC-4P-M12MS/ 0,3-PUR/M12FR - 1668470

## Technical data

### General

|                              |                               |
|------------------------------|-------------------------------|
| Standards/regulations        | M12 connector IEC 61076-2-101 |
| Status display               | No                            |
| Protective circuit/component | Unwired                       |
| Overvoltage category         | II                            |
| Degree of pollution          | 3                             |
| Insertion/withdrawal cycles  | ≥ 100                         |
| Torque                       | 0.4 Nm (M12 connector)        |

### 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

|  |                 |
|--|-----------------|
| Standard designation                   | M12 connector   |
| Standards/regulations                  | IEC 61076-2-101 |
| 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. 0.8 mm             |
| External cable diameter D                     | 4.7 mm ±0.15 mm            |
| Smallest bending radius, fixed installation   | 23.5 mm                    |
| Smallest bending radius, movable installation | 47 mm                      |
| Minimum bending radius, fixed installation    | 5 x D                      |
| Minimum bending radius, flexible installation | 10 x D                     |
| Number of bending cycles                      | 4000000                    |

## Sensor/actuator cable - SAC-4P-M12MS/ 0,3-PUR/M12FR - 1668470

### Technical data

#### Cable

|   |   |
|---|---|
| Bending radius                                  | 47 mm   |
| 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                                      |
|   | Silicone-free   |
|   | Free of substances which would hinder coating with paint or varnish |
|   | stranded  |
| Flame resistance                                | according to UL 758/1581 (horizontal)                               |
|   | in accordance with UL 758/1581 FT2                                  |
| 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)                     |

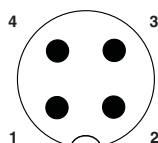
#### Environmental Product Compliance

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

#### Drawings

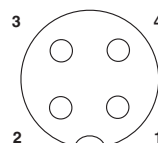
# Sensor/actuator cable - SAC-4P-M12MS/ 0,3-PUR/M12FR - 1668470

Schematic diagram



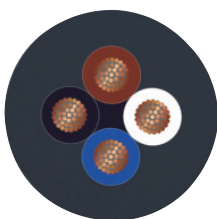
Pin assignment M12 plug, 4-pos., A-coded, view plug side

Schematic diagram



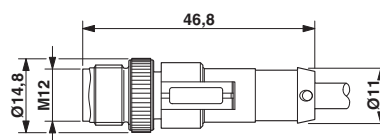
Pin assignment M12 socket, 4-pos., A-coded, view female side

Cable cross section



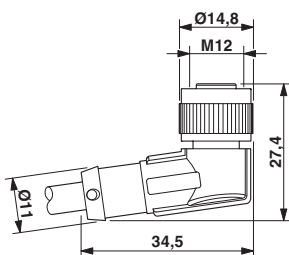
PUR halogen-free black [PUR]

Dimensional drawing



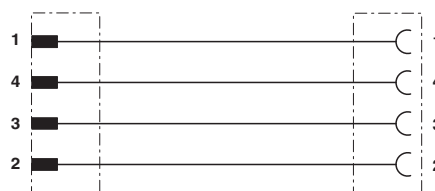
Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, angled

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

## Approvals

### Approvals

Approvals


UL Listed / cUL Listed / EAC / cULus Listed


Ex Approvals

### Approval details


# Sensor/actuator cable - SAC-4P-M12MS/ 0,3-PUR/M12FR - 1668470

## Approvals

|                    |   |   |               |
|--------------------|---|---|---------------|
| 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 current IN | 4 A   |   |               |
| Nominal voltage UN | 300 V   |   |               |

|                    |   |   |               |
|--------------------|---|---|---------------|
| 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 current IN | 4 A   |   |               |
| Nominal voltage UN | 300 V   |   |               |

|     |  |               |
|-----|--|---------------|
| EAC |  | EAC-Zulassung |
|-----|--|---------------|

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

Phoenix Contact 2017 © - all rights reserved  
<http://www.phoenixcontact.com>

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