

## Sensor/actuator cable - SAC-4P- 1,0-PUR/M12FS - 1400420

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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M12, A-coded, cable length: 1 m

RoHS

### Key Commercial Data

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit           | 1 pc                                                                                                    |
| Minimum order quantity | 25 pc                                                                                                   |
| GTIN                   | <br>4 046356 496469 |
| GTIN                   | 4046356496469                                                                                           |

### Technical data

#### Dimensions

|                                            |       |
|--------------------------------------------|-------|
| Length of cable                            | 1 m   |
| Stripping length of the free conductor end | 50 mm |

#### Ambient conditions

|                      |      |
|----------------------|------|
| 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           |
| Protective circuit/component | unwired      |
| Overvoltage category         | II           |

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## Technical data

### General

|                             |       |
|-----------------------------|-------|
| Degree of pollution         | 3     |
| Insertion/withdrawal cycles | ≥ 100 |

### 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                  |

## Sensor/actuator cable - SAC-4P- 1,0-PUR/M12FS - 1400420

### Technical data

#### Cable

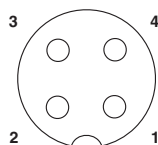
|                                 |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| Conductor resistance            | ≤ 58 Ω/km                                                           |
| 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 |
|                                 | 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          |

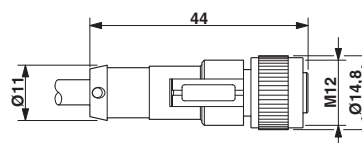
### Drawings

Schematic diagram



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

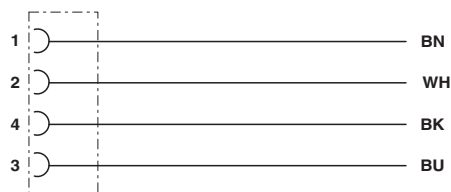
Dimensional drawing



M12 x 1 socket, straight

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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

|                    |                                                                                     |                                                                                                                                                       |               |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 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                                                                                                                                                   |               |

|     |                                                                                     |                          |  |
|-----|-------------------------------------------------------------------------------------|--------------------------|--|
| EAC |  | RU C-<br>DE.AI30.B.01102 |  |
|-----|-------------------------------------------------------------------------------------|--------------------------|--|

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

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