

## Sensor/actuator cable - SAC-4P-M 8MR/1,5-PUR/M 8FS - 1682249

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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M8, on Socket straight M8, cable length: 1.5 m

### Your advantages

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

RoHS

### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 017918 158903 |
| GTIN         | 4017918158903                                                                                           |
| Sales Key    | 02                                                                                                      |

### Technical data

#### Dimensions

|                 |       |
|-----------------|-------|
| Length of cable | 1.5 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         | 48 V AC  |
|                       | 60 V DC  |
| Number of positions   | 4        |
| Insulation resistance | ≥ 100 MΩ |

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## Technical data

### General

|                              |                              |
|------------------------------|------------------------------|
| Coding                       | A - standard                 |
| Standards/regulations        | M8 connector IEC 61076-2-104 |
| Status display               | No                           |
| Protective circuit/component | Unwired                      |
| Overvoltage category         | II                           |
| Degree of pollution          | 3                            |
| Insertion/withdrawal cycles  | ≥ 100                        |
| Torque                       | 0.2 Nm (M8 connectors)       |

### 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                   | M8 connector    |
| Standards/regulations                  | IEC 61076-2-104 |
| Flammability rating according to UL 94 | HB              |

### Cable

|                                               |                                     |
|-----------------------------------------------|-------------------------------------|
| Cable type                                    | PUR halogen-free black              |
| Cable type (abbreviation)                     | PUR                                 |
| Cable abbreviation                            | Li9Y11Y-HF                          |
| Conductor cross section                       | 4x 0.25 mm² (Signal line)           |
| AWG signal line                               | 24                                  |
| Conductor structure signal line               | 32x 0.10 mm                         |
| Core diameter including insulation            | 1.17 mm ±0.02 mm (Signal line)      |
| Thickness, insulation                         | ≥ 0.21 mm (Core insulation)         |
|                                               | approx. 0.5 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                     | 3.95 mm ±0.15 mm                    |
| Smallest bending radius, fixed installation   | 20 mm                               |
| Smallest bending radius, movable installation | 40 mm                               |
| Number of bending cycles                      | 10000000                            |
| Bending radius                                | 44 mm                               |
| Traversing path                               | 10 m                                |

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### Technical data

#### Cable

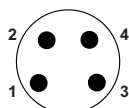
|                                 |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| Traversing rate                 | 3 m/s                                                               |
| Acceleration                    | 5 m/s <sup>2</sup>                                                  |
| Cable weight                    | 23 kg/km                                                            |
| Outer sheath, material          | PUR                                                                 |
| Material conductor insulation   | PP                                                                  |
| Conductor material              | Bare Cu litz wires                                                  |
| Insulation resistance           | ≥ 100 GΩ*km (at 20 °C)                                              |
| Conductor resistance            | max. 78 Ω/km (at 20 °C)                                             |
| 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 |
| 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                            |
| 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          |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)                        |
|                                 | -25 °C ... 80 °C (cable, flexible installation)                     |

#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                                                                      |
| China RoHS | Environmentally Friendly Use Period = 50                                                            |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

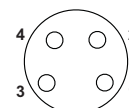
### Drawings

Schematic diagram



Pin assignment M8 plug, 4-pos., view male side

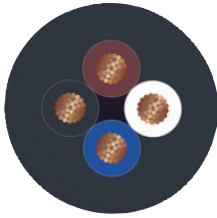
Schematic diagram



Pin assignment M8 socket, 4-pos., view female side

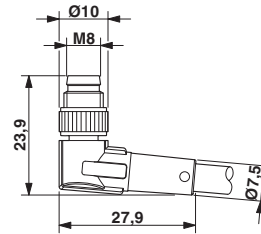
# Sensor/actuator cable - SAC-4P-M 8MR/1,5-PUR/M 8FS - 1682249

Cable cross section



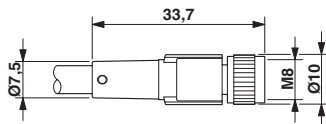
PUR halogen-free black [PUR]

Dimensional drawing



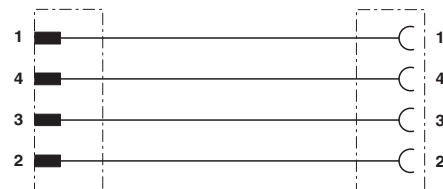
M8 x 1 male plug, angled version

Dimensional drawing



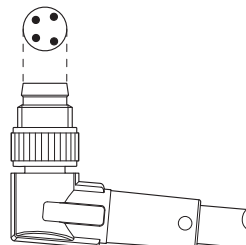
Socket M8 x 1, straight

Circuit diagram



Contact assignment of M8 plugs/sockets

Schematic diagram



Layout of connector pin assignments

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals

## Sensor/actuator cable - SAC-4P-M 8MR/1,5-PUR/M 8FS - 1682249

### 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 |                                                                                   | 30 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 |                                                                                   | 30 V                                                                                                                                                  |               |
| Nominal current IN |                                                                                   | 4 A                                                                                                                                                   |               |

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

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

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