

## Sensor/actuator cable - SAC-3P-M8Y/2X 5,0-PUR - 1458648

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M8, on free cable end and free cable end, cable length: 5 m

RoHS

### Key Commercial Data

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                 |
| GTIN         |  |
| GTIN         | 4046356637992                                                                        |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 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   | 3                            |
| Insulation resistance | ≥ 100 MΩ                     |
| Coding                | A - standard                 |
| Standards/regulations | M8 connector IEC 61076-2-104 |
| Status display        | No                           |
| Overvoltage category  | II                           |
| Degree of pollution   | 3                            |

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## Technical data

### General

|        |                   |
|--------|-------------------|
| Torque | 0.2 Nm (M8 knurl) |
|--------|-------------------|

### 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

|                                        |                              |
|----------------------------------------|------------------------------|
| Standards/specifications               | M8 connector 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                  |
| UL AWM style                                  | 20549 / 10493 (80°C/300 V)  |
| Conductor cross section                       | 3x 0.25 mm²                 |
| AWG signal line                               | 24                          |
| Conductor structure signal line               | 32x 0.10 mm                 |
| Core diameter including insulation            | 1.17 mm ±0.02 mm            |
| Thickness, insulation                         | ≥ 0.21 mm (Core insulation) |
| Wire colors                                   | brown, blue, black          |
| Overall twist                                 | 3 wires, twisted            |
| Length of twist, overall twist                | 40 mm                       |
| External sheath, color                        | black-gray RAL 7021         |
| Outer sheath thickness                        | approx. 0.5 mm              |
| External cable diameter D                     | 3.6 mm ±0.15 mm             |
| Smallest bending radius, fixed installation   | 18 mm                       |
| Smallest bending radius, movable installation | 36 mm                       |
| Number of bending cycles                      | 10000000                    |
| Bending radius                                | 44 mm                       |
| Traversing path                               | 10 m                        |
| Traversing rate                               | 3 m/s                       |
| Acceleration                                  | 10 m/s²                     |
| Cable weight                                  | 18 kg/km                    |
| Outer sheath, material                        | PUR                         |
| Material conductor insulation                 | PP                          |
| Conductor material                            | Bare Cu litz wires          |

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### Technical data

#### Cable

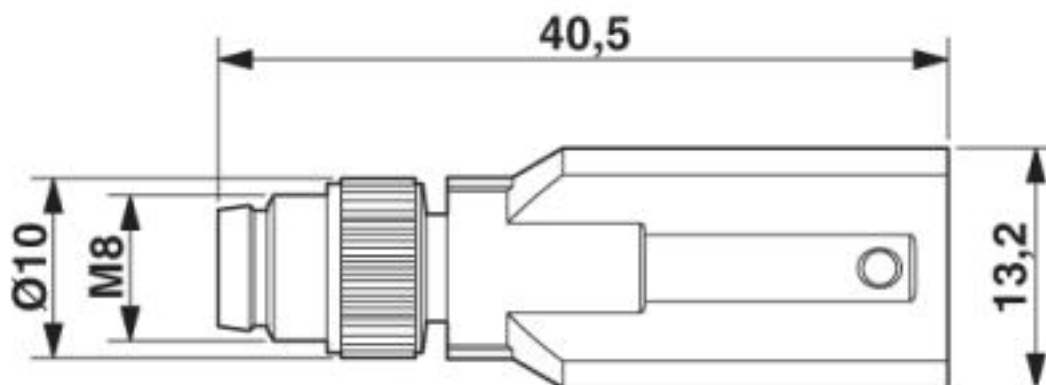
|                                 |                                                                     |
|---------------------------------|---------------------------------------------------------------------|
| Insulation resistance           | $\geq 100 \text{ G}\Omega \cdot \text{km}$ (at 20 °C)               |
| Conductor resistance            | $\leq 78 \text{ }\Omega/\text{km}$ (at 20 °C)                       |
| Nominal voltage, cable          | $\leq 300 \text{ V}$                                                |
| Test voltage, cable             | $\geq 3000 \text{ V}$                                               |
| 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                | hydrolysis and microbe resistant                                    |
|                                 | Highly resistant to acids, alkaline solutions and solvents          |
|                                 | Resistant to salt water                                             |
|                                 | 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 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

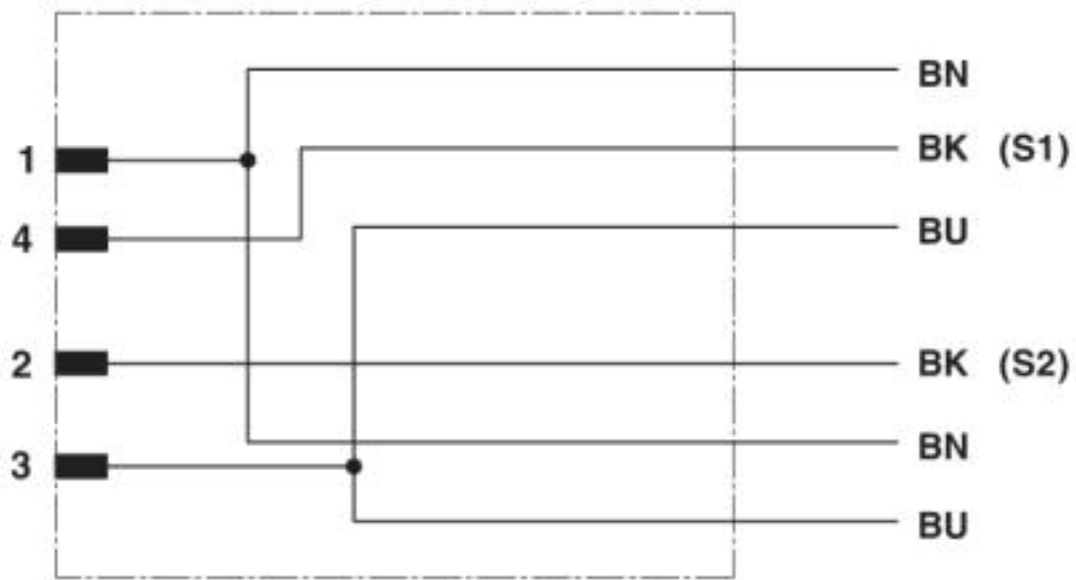
Dimensional drawing



Plug M8 x 1, Y-distributor

## Sensor/actuator cable - SAC-3P-M8Y/2X 5,0-PUR - 1458648

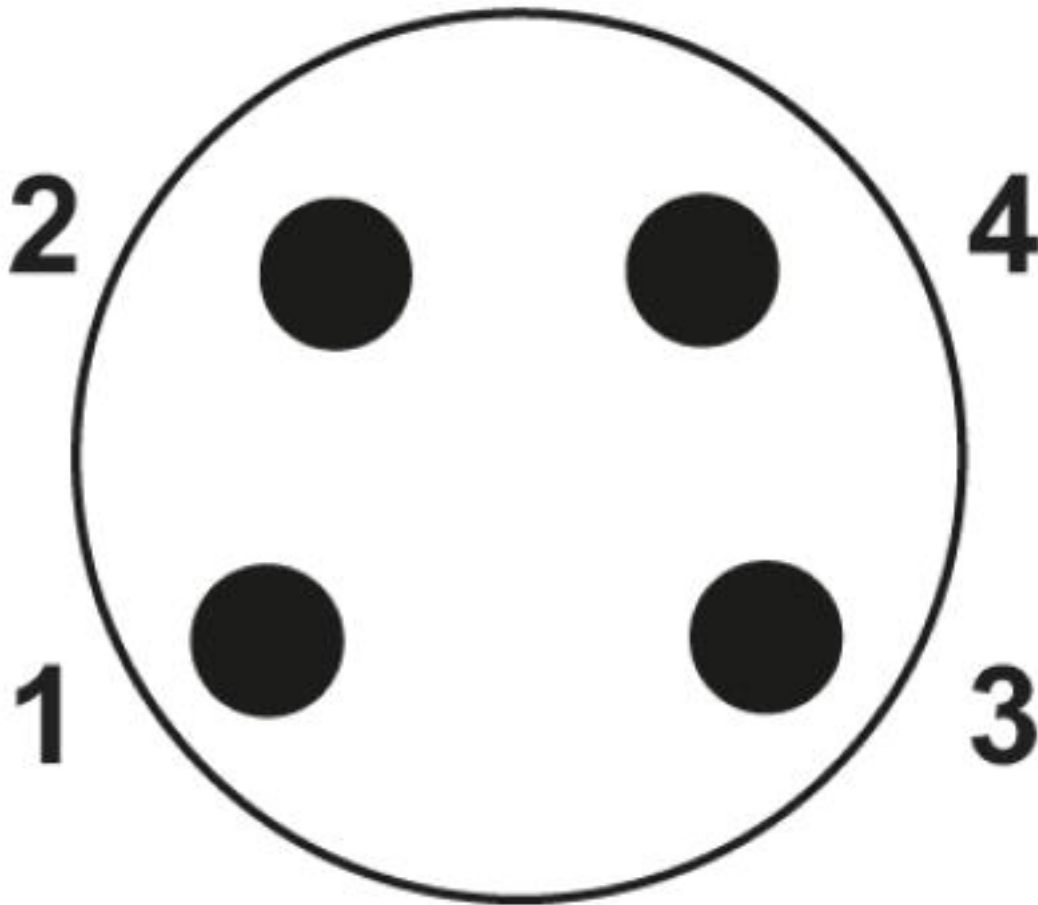
Circuit diagram



Contact assignment of the M8 Y distributor

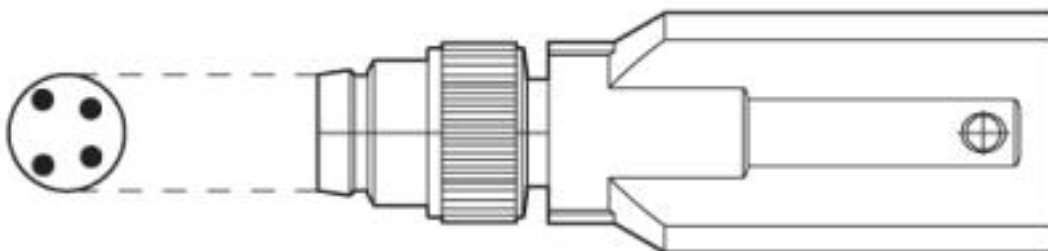
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Schematic diagram



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

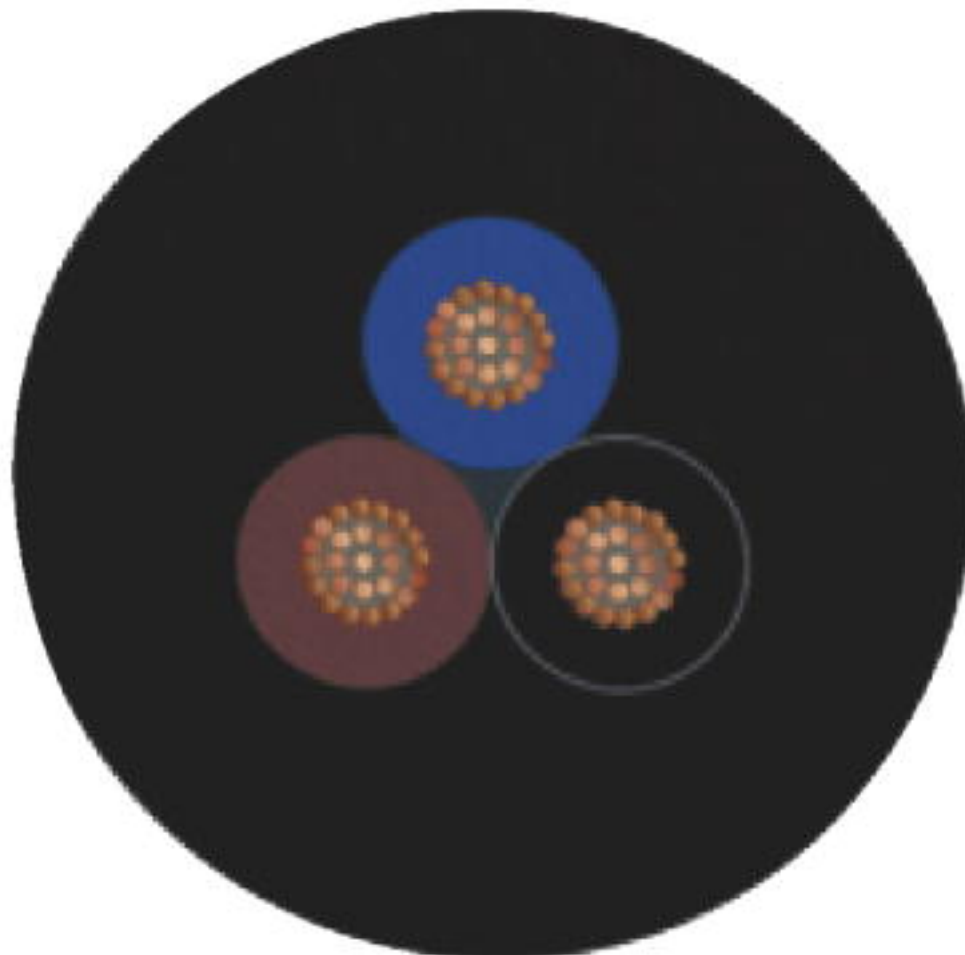
Schematic diagram



Alignment of the connector pin assignment

## Sensor/actuator cable - SAC-3P-M8Y/2X 5,0-PUR - 1458648

Cable cross section



PUR halogen-free black [PUR]

### 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 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 | 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                                                                                 |                                                                                                                                                       |               |

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### Approvals

cULus Listed



### Accessories

#### Accessories

#### Conductor marking

Insert label - PABA WH/15 - 1013151



Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 0.6 ... 50 mm, lettering field size: 15 x 4 mm, Number of individual labels: 20

Insert label - PABA YE/15 - 1013698



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 0.6 ... 50 mm, lettering field size: 15 x 4 mm, Number of individual labels: 20

Insert label - PABA RD/15 - 1013944



Insert label, Strip, red, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 0.6 ... 50 mm, lettering field size: 15 x 4 mm, Number of individual labels: 20

#### Labeled conductor marker

Cable marker - PABA WH/15 CUS - 0824444



Cable marker, can be ordered: Strip, white, labeled according to customer specifications, mounting type: thread on, cable diameter range: 0.6 ... 50 mm, lettering field size: 15 x 4 mm

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### Accessories

Cable marker - PABA YE/15 CUS - 0824447



Cable marker, can be ordered: Strip, yellow, labeled according to customer specifications, mounting type: thread on, cable diameter range: 0.6 ... 50 mm, lettering field size: 15 x 4 mm

Cable marker - PABA RD/15 CUS - 0824442



Cable marker, can be ordered: Strip, red, labeled according to customer specifications, mounting type: thread on, cable diameter range: 0.6 ... 50 mm, lettering field size: 15 x 4 mm

Cable marker - PABA BU/15 CUS - 0824441



Cable marker, can be ordered: Strip, blue, labeled according to customer specifications, mounting type: thread on, cable diameter range: 0.6 ... 50 mm, lettering field size: 15 x 4 mm

### Screwdriver tools

Tool - SAC BIT M8-D10 - 1208461



Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive

### Torque tool

Torque screwdriver - TSD 02 SAC - 1208487



Torque screwdriver, with preset torque of 0.2 Nm and 4 mm hexagonal drive for M8 connectors

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