

## Sensor/actuator cable - SAC-8P-M 8MR/ 3,0-PUR - 1404186

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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, Plug angled M8, on free cable end, cable length: 3 m

### Your advantages

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Our standard: robust halogen-free PUR cable
- ✓ Save space – with high-pos. connectors

RoHS

### Key Commercial Data

|              |                                                                                      |
|--------------|--------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                 |
| GTIN         |  |
| GTIN         | 4046356681087                                                                        |

### Technical data

#### Dimensions

|                 |     |
|-----------------|-----|
| Length of cable | 3 m |
|-----------------|-----|

#### Ambient conditions

|                                 |                                  |
|---------------------------------|----------------------------------|
| Ambient temperature (operation) | -25 °C ... 85 °C (Plug / socket) |
| Degree of protection            | IP65                             |
|                                 | IP67                             |
|                                 | IP68                             |

#### General

|                       |          |
|-----------------------|----------|
| Rated current at 40°C | 1.5 A    |
| Rated voltage         | 30 V AC  |
|                       | 30 V DC  |
| Number of positions   | 8        |
| 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                      |
| 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                |

### Standards and Regulations

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

### Cable

|                                               |                                                    |
|-----------------------------------------------|----------------------------------------------------|
| Cable abbreviation                            | Li9Y11Y                                            |
| UL AWM style                                  | 20549                                              |
| Conductor cross section                       | 8x 0.14 mm <sup>2</sup> (Signal line)              |
| AWG signal line                               | 26                                                 |
| Conductor structure signal line               | 18x 0.10 mm                                        |
| Core diameter including insulation            | 1 mm ±0.02 mm (Signal line)                        |
| Thickness, insulation                         | ≥ 0.21 mm (Signal line)                            |
|                                               | ≥ 0.38 mm (Outer cable sheath)                     |
| Wire colors                                   | white, brown, green, yellow, gray, pink, blue, red |
| Overall twist                                 | 8 wires around filler to the core                  |
| Length of twist, overall twist                | 58 mm                                              |
| External sheath, color                        | black-gray RAL 7021                                |
| External cable diameter D                     | 5.1 mm ±0.15 mm                                    |
| Smallest bending radius, fixed installation   | 25.5 mm                                            |
| Smallest bending radius, movable installation | 51 mm                                              |
| Number of bending cycles                      | 4000000                                            |
| Bending radius                                | 51 mm                                              |
| Traversing path                               | 10 m                                               |
| Traversing rate                               | 3 m/s                                              |
| Acceleration                                  | 10 m/s <sup>2</sup>                                |
| Outer sheath, material                        | PUR                                                |

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### Technical data

#### Cable

|                                 |                                                            |
|---------------------------------|------------------------------------------------------------|
| Material, filler                | PE                                                         |
| Material conductor insulation   | PP                                                         |
| Conductor material              | Bare Cu litz wires                                         |
| Insulation resistance           | 1 GΩ*km (at 20 °C)                                         |
| Conductor resistance            | 139 Ω/km (at 20 °C)                                        |
| Nominal voltage, cable          | ≤ 300 V AC                                                 |
| Test voltage, cable             | ≥ 3000 V AC (Spark test)                                   |
| 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               | According to DIN EN 60811-2-1, 168 h at 100°C              |
| Other resistance                | hydrolysis and microbe resistant                           |
|                                 | Resistant to salt water                                    |
|                                 | Low adhesion                                               |
|                                 | abrasion-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)            |

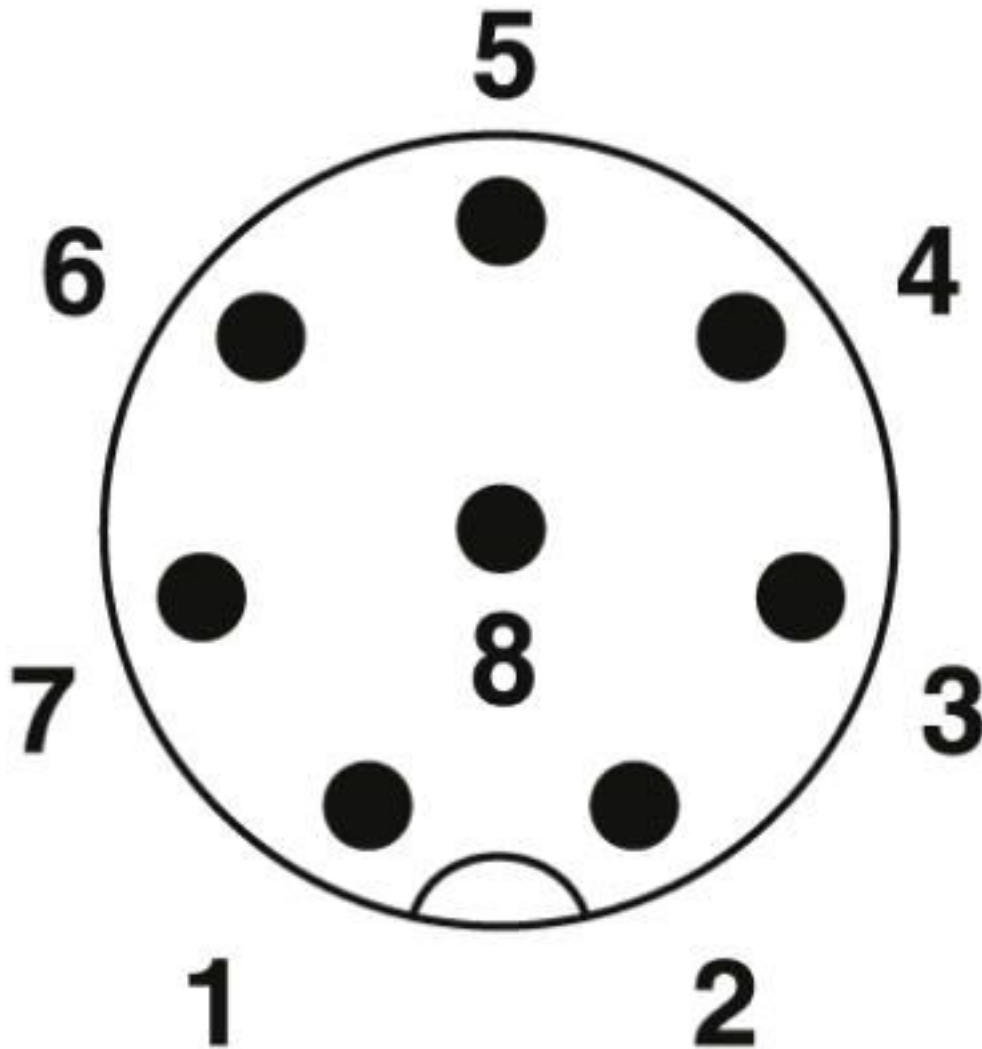
#### Environmental Product Compliance

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

### Drawings

## Sensor/actuator cable - SAC-8P-M 8MR/ 3,0-PUR - 1404186

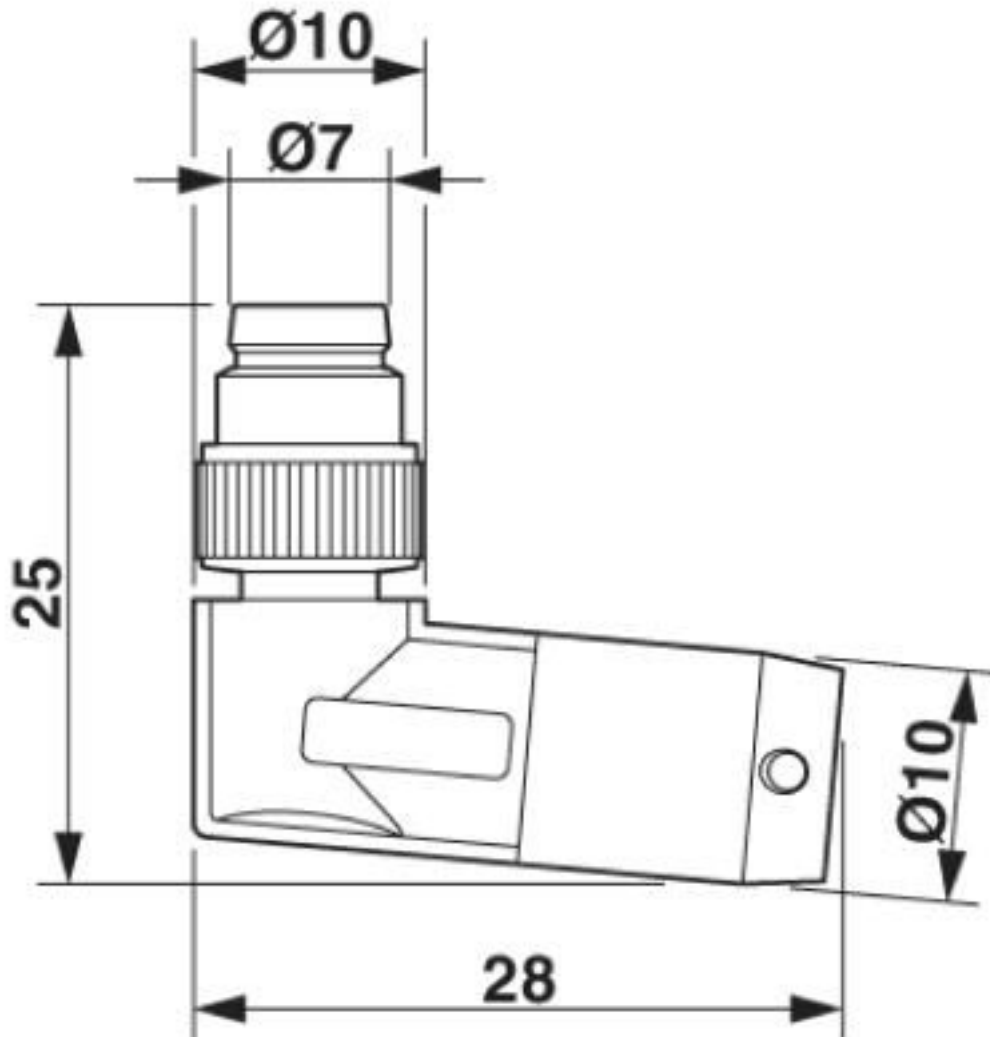
Schematic diagram



M8 plug pin assignment, 8-pos., view of pin side

## Sensor/actuator cable - SAC-8P-M 8MR/ 3,0-PUR - 1404186

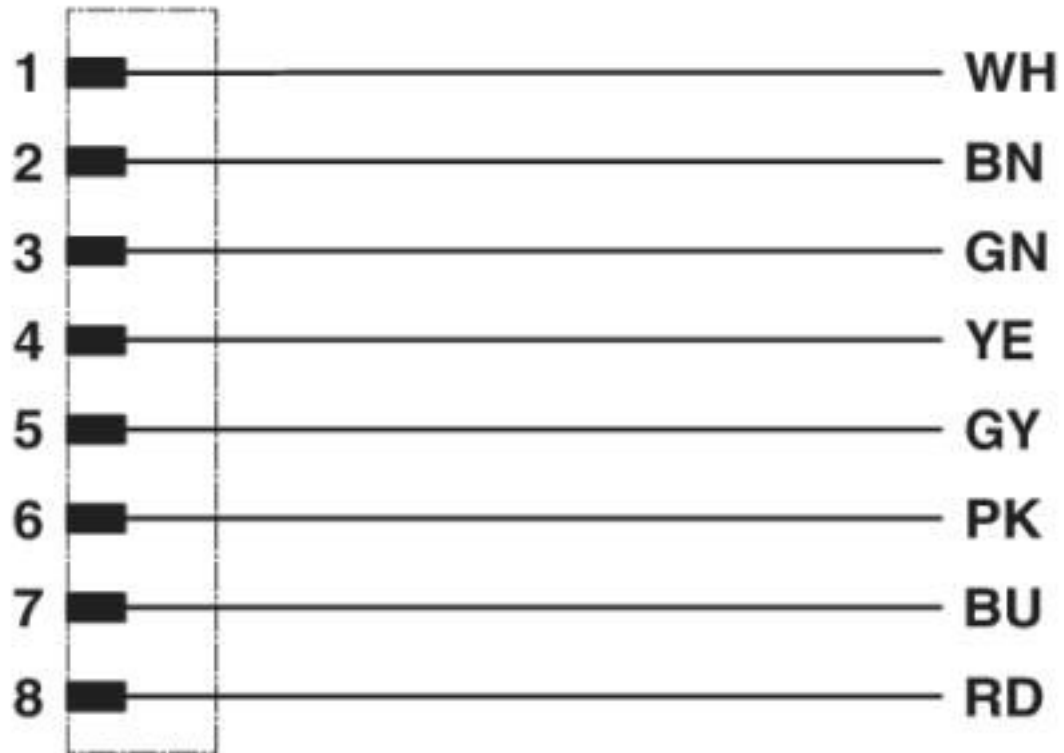
Dimensional drawing



M8 x 1 male plug, angled version

## Sensor/actuator cable - SAC-8P-M 8MR/ 3,0-PUR - 1404186

Circuit diagram



Contact assignment of the M8 plug

## Sensor/actuator cable - SAC-8P-M 8MR/ 3,0-PUR - 1404186

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 3.0 | EC001855 |
| 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

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UL Listed / cUL Listed / EAC-RoHS / 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 | 30 V                                                                                |                                                                                                                                                       |               |
| Nominal current IN | 1.5 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 | 1.5 A                                                                               |                                                                                                                                                       |               |



## Sensor/actuator cable - SAC-8P-M 8MR/ 3,0-PUR - 1404186

### Approvals

|          |                                                                                   |                          |
|----------|-----------------------------------------------------------------------------------|--------------------------|
| EAC-RoHS |  | RU D-<br>DE.HB35.B.00387 |
|----------|-----------------------------------------------------------------------------------|--------------------------|

|     |                                                                                   |                          |
|-----|-----------------------------------------------------------------------------------|--------------------------|
| EAC |  | RU C-<br>DE.BL08.B.00286 |
|-----|-----------------------------------------------------------------------------------|--------------------------|

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

### Accessories

#### Accessories

#### Conductor marking

Insert label - PABA WH/23 - 1013779



Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

Insert label - PABA YE/23 - 1013782



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: thread on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

#### Corrugated pipe

Protective hose - WP-PA HF 13,0 BK - 3240681



Polyamide protective hose, inflammability class V0, UV resistant

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### Accessories

Protective hose - WP-PA HF-HB 13,0 BK - 3240839



Polyamide protective hose, inflammability class HB, UV resistant

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### Cutting tools

Diagonal cutter - CUTFOX-S VDE - 1212207



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

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### Marker pen

Marker pen - B-STIFT - 1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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### Protective cap

Sealing cap - PROT-M 8 FS-PA-CHAIN - 1430857



M8 sealing cap made of plastic with fixing band for sensor cables, for M8 plugs

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### 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

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### Accessories

#### Stripping tool

Stripping tool - WIREFOX SAC-1 - 1212757



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 3.2 to 4.4 mm, any stripping length

Stripping tool - WIREFOX SAC - 1212623



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 4.4 to 7 mm, any stripping length

Stripping tool - WIREFOX 10 - 1212150



Stripping tool, for cables and conductors from 0.02 - 10 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

#### 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

Protective hose adapter - WP-CTA POM 13,0 BK - 1422884



Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 x 13), corrugated in parallel

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