

## Sensor/actuator cable - SAC-8P-MS/ 1,5-PUR SH SCO - 1407812

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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12 SPEEDCON, coding: A, on free cable end, cable length: 1.5 m

### Your advantages

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Save time, thanks to installation with SPEEDCON fast locking system
- ✓ Our standard: robust halogen-free PUR cable
- ✓ Reliable signal transmission – 360° shielding in environments with electromagnetic interference



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 046356 790635 |
| GTIN         | 4046356790635                                                                                           |

### 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                             |

#### General

|                       |          |
|-----------------------|----------|
| Rated current at 40°C | 2 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        | 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                       | CuZn                                        |
| 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               | M12 connector IEC 61076-2-101 |
| Flammability rating according to UL 94 | HB                            |

### Cable

|                                                 |                                                    |
|-------------------------------------------------|----------------------------------------------------|
| Cable type                                      | PUR halogen-free black                             |
| Cable type (abbreviation)                       | PUR                                                |
| Cable abbreviation                              | LiF9YC11Y                                          |
| UL AWM style                                    | 20549 / 10493 (80°C/300 V)                         |
| Conductor cross section                         | 8x 0.25 mm <sup>2</sup> (Signal line)              |
| AWG signal line                                 | 24                                                 |
| Conductor structure signal line                 | 32x 0.10 mm                                        |
| Core diameter including insulation              | 1.17 mm ±0.02 mm                                   |
| Thickness, insulation                           | approx. 0.2 mm                                     |
| Wire colors                                     | Brown, white, green, yellow, gray, pink, blue, red |
| Overall twist                                   | 8 wires around filler to the core                  |
| Shielding                                       | Tinned copper braided shield                       |
| Optical shield covering                         | 85 %                                               |
| External sheath, color                          | black-gray RAL 7021                                |
| Outer sheath thickness                          | approx. 0.5 mm                                     |
| External cable diameter D                       | 5.9 mm ±0.2 mm                                     |
| Minimum bending radius, fixed installation      | 5 x D                                              |
| Minimum bending radius, flexible installation   | 10 x D                                             |
| Number of bending cycles                        | 2000000                                            |
| Minimum bending radius, drag chain applications | 10 x D                                             |

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### Technical data

#### Cable

|                                 |                                                            |
|---------------------------------|------------------------------------------------------------|
| Traversing path                 | 10 m                                                       |
| Traversing rate                 | 3 m/s                                                      |
| Acceleration                    | 10 m/s <sup>2</sup>                                        |
| Cable weight                    | 53 kg/km                                                   |
| Outer sheath, material          | PUR                                                        |
| Material conductor insulation   | PP                                                         |
| Conductor material              | Bare Cu litz wires                                         |
| Insulation resistance           | ≥ 1 GΩ*km (at 20 °C)                                       |
| Conductor resistance            | ≤ 78 Ω/km (at 20 °C)                                       |
| Nominal voltage, cable          | ≤ 300 V AC                                                 |
| Test voltage, cable             | ≥ 3000 V AC (Spark test)                                   |
| Test voltage Core/Shield        | ≥ 2000 V AC (for 60 s)                                     |
| Special properties              | Flexible cable conduit capable                             |
| Flame resistance                | in acc. with UL FT-2                                       |
|                                 | according to UL 758/1581 (horizontal)                      |
|                                 | in accordance with UL 758/1581 FT2                         |
|                                 | According to 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                        |
| Other resistance                | hydrolysis and microbe resistant                           |
|                                 | Resistant to salt water                                    |
|                                 | Low adhesion                                               |
|                                 | Low adhesion                                               |
|                                 | 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)            |

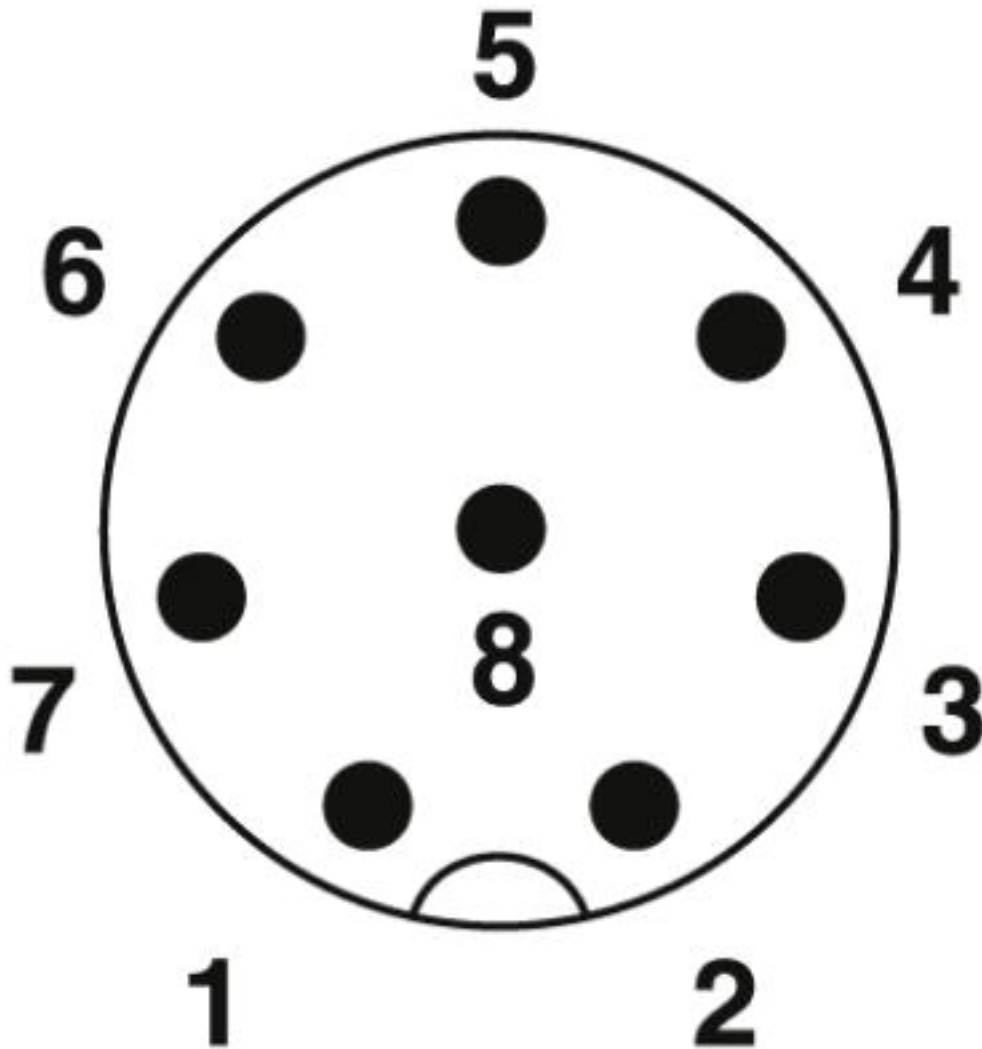
#### Environmental Product Compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| REACH SVHC | Lead 7439-92-1                                          |
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

### Drawings

## Sensor/actuator cable - SAC-8P-MS/ 1,5-PUR SH SCO - 1407812

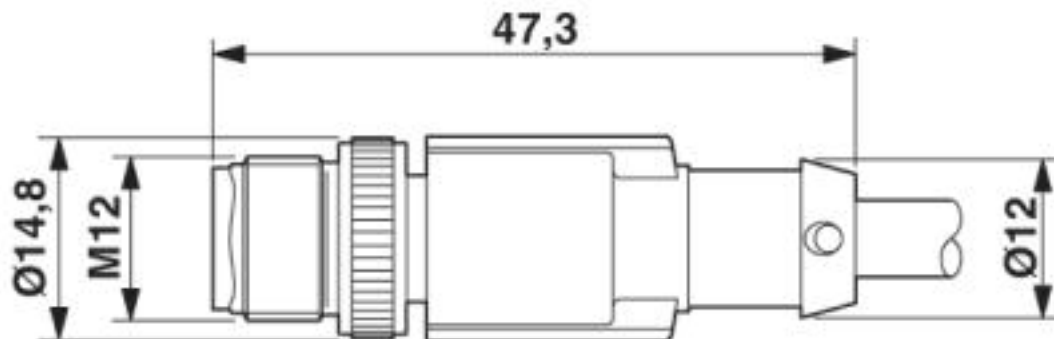
Schematic diagram



Pin assignment M12 plug, 8-pos., view plug side

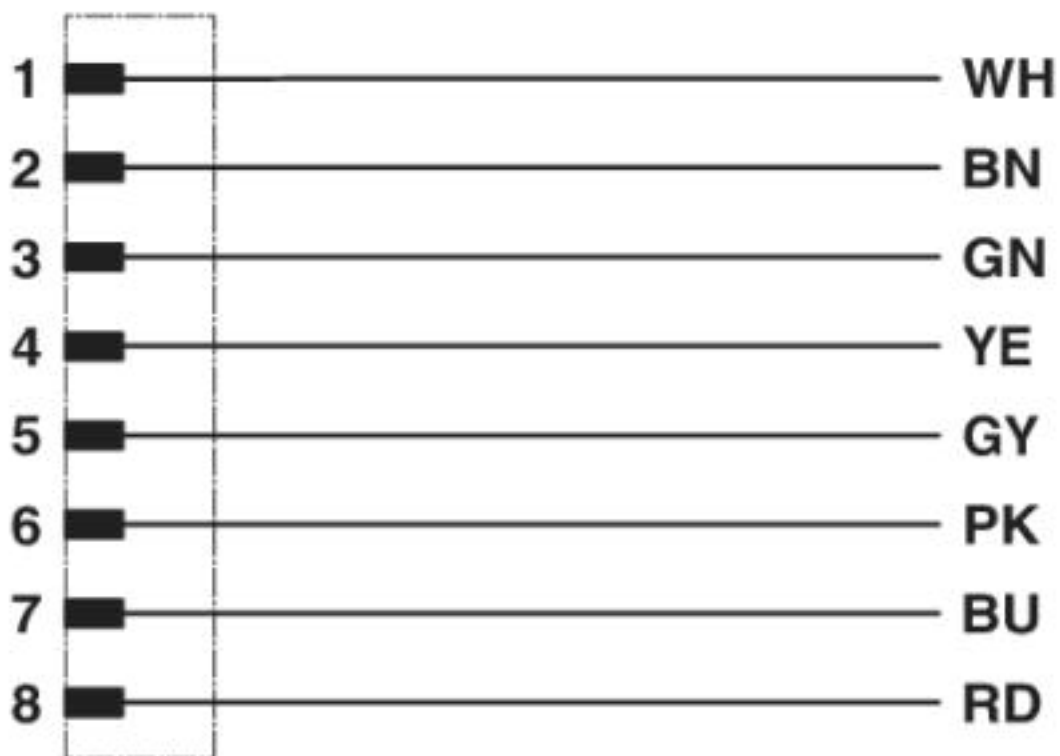
## Sensor/actuator cable - SAC-8P-MS/ 1,5-PUR SH SCO - 1407812

Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



Contact assignment of the M12 plug

## Sensor/actuator cable - SAC-8P-MS/ 1,5-PUR SH SCO - 1407812

Cable cross section



PUR halogen-free black [PUR]

### Classifications

eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27060306 |
| eCl@ss 4.1 | 27060306 |
| eCl@ss 5.0 | 27061801 |
| 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 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 31251501 |
| UNSPSC 7.0901 | 31251501 |
| UNSPSC 11     | 31251501 |
| UNSPSC 12.01  | 31251501 |
| UNSPSC 13.2   | 31251501 |
| UNSPSC 19.0   | 31251501 |

### Approvals

#### Approvals

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Approvals

EAC

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Ex Approvals

#### Approval details

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

### 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

## Sensor/actuator cable - SAC-8P-MS/ 1,5-PUR SH SCO - 1407812

### Accessories

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

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### Corrugated pipe

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



Polyamide protective hose, inflammability class V0, UV resistant

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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



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### Accessories

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



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### Safety locking

Locking clip - SAC-M12-EXCLIP-M - 1558988



Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools

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### Screwdriver tools

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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Tool - SAC BIT M12-D15 - 1208432



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

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### 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

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### Accessories

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

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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

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### Torque tool

Torque screwdriver - TSD 04 SAC - 1208429



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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Torque screwdriver - TSD-M 1,2NM - 1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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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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