**PHŒNIX CONTACT**

# Sensor/actuator cable - SAC-4P-M 8MR/ 5,0-PUR SH - 1521889

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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug angled M8, on free cable end, cable length: 5 m

## Why buy this product

☑ Easy and safe: 100% electrically tested plug-in components

☑ Our standard: robust halogen-free PUR cable

☑ Reliable signal transmission – 360° shielding in environments with electromagnetic interference

**RoHS**

## Key Commercial Data

| Packing unit | 1 STK |
|---|---|
| GTIN | |
| GTIN | 4017918968854 |
| Weight per Piece (excluding packing) | 183.000 g |
| Custom tariff number | 85444290 |
| Country of origin | Poland |
| Note | Made to Order (non-returnable) |

## Technical data

### Dimensions

| Length of cable | 5 m |
|---|---|
| Stripping length of the free conductor end | 50 mm |

### Ambient conditions

| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
|---|---|
| Degree of protection | IP65 |
| | IP67 |

### General

| Rated current at 40°C | 4 A |
|---|---|

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## Technical data

### General

| | |
|---|---|
| Rated voltage | 48 V AC |
| | 60 V DC |
| Number of positions | 4 |
| Insulation resistance | $\geq$ 100 M$\Omega$ |
| 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 | $\geq$ 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

| | |
|---|---|
| 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 | LiF9YC11Y |
| UL AWM style | 20549 |
| 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 | $\geq$ 0.21 mm (Core insulation) |
| | approx. 0.5 mm (Outer cable sheath) |
| Wire colors | brown, white, blue, black |
| Overall twist | 4 wires, twisted |
| Shielding | Braided copper wires |
| Optical shield covering | 80 % |
| External sheath, color | black-gray RAL 7021 |

# Sensor/actuator cable - SAC-4P-M 8MR/ 5,0-PUR SH - 1521889

## Technical data

### Cable

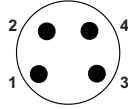| | |
|---|---|
| External cable diameter D | 4.7 mm ±0.15 mm |
| Smallest bending radius, fixed installation | 24 mm |
| Smallest bending radius, movable installation | 48 mm |
| Number of bending cycles | 10000000 |
| Bending radius | 48 mm |
| Traversing path | 10 m |
| Traversing rate | 3 m/s |
| Acceleration | 10 m/s² |
| Cable weight | 31 kg/km |
| Outer sheath, material | PUR |
| Material conductor insulation | PP |
| Conductor material | Bare Cu litz wires |
| Insulation resistance | $\geq$ 100 GΩ*km (at 20 °C) |
| Conductor resistance | max. 78 Ω/km (at 20 °C) |
| Nominal voltage, cable | $\leq$ 300 V |
| Test voltage, cable | $\geq$ 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 | 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

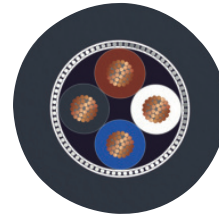| | |
|---|---|
| REACh SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 |
| | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Drawings

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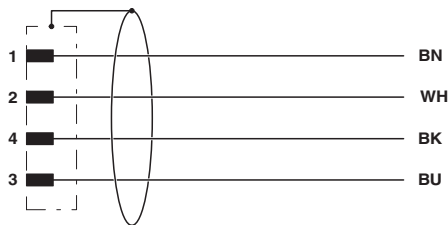
# Sensor/actuator cable - SAC-4P-M 8MR/ 5,0-PUR SH - 1521889

Schematic diagram

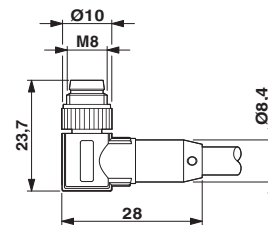Pin assignment M8 plug, 4-pos., view male side

Cable cross section

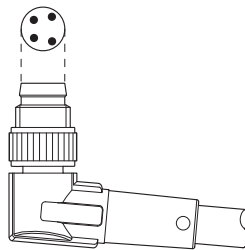PUR halogen-free black [PUR]

Circuit diagram

| 1 | | BN |
| 2 | | WH |
| 4 | | BK |
| 3 | | BU |

Contact assignment of M8 plugs/sockets

Dimensional drawing

Ø10
M8
23,7
Ø8,4
28

Plug M8 x 1, angled, shielded

Schematic diagram

Layout of connector pin assignments

## Approvals

### Approvals

Approvals

EAC / UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

# Sensor/actuator cable - SAC-4P-M 8MR/ 5,0-PUR SH - 1521889

## Approvals

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

| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 221474 |
|---|---|---|---|

| | |
|---|---|
| Nominal voltage UN | 30 V |
| Nominal current IN | 4 A |

| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 221474 |
|---|---|---|---|

| | |
|---|---|
| Nominal voltage UN | 30 V |
| Nominal current IN | 4 A |

| 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

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

# Sensor/actuator cable - SAC-4P-M 8MR/ 5,0-PUR SH - 1521889

## Accessories

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

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

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

## Corrugated pipe

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

Polyamide protective hose, inflammability class V0, UV resistant

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

Polyamide protective hose, inflammability class HB, UV resistant

## Cutting tools

# Sensor/actuator cable - SAC-4P-M 8MR/ 5,0-PUR SH - 1521889

## Accessories

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 carrier cable

Conductor marker carrier - PATG 2/15 - 1013038

Conductor marker carrier, transparent, unlabeled, mounting type: slide on, cable diameter range: 2 - 4 mm, lettering field size: 15 x 4 mm

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Conductor marker carrier - PATG 3/15 - 1013041

Conductor marker carrier, transparent, unlabeled, mounting type: slide on, cable diameter range: 4 - 7 mm, lettering field size: 15 x 4 mm

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Conductor marker carrier - PATG 4/15 - 1013054

Conductor marker carrier, transparent, unlabeled, mounting type: slide on, cable diameter range: 6 - 10 mm, lettering field size: 15 x 4 mm

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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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# Sensor/actuator cable - SAC-4P-M 8MR/ 5,0-PUR SH - 1521889

## Accessories

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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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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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 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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Torque tool

# Sensor/actuator cable - SAC-4P-M 8MR/ 5,0-PUR SH - 1521889

## Accessories

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