

Sensor/actuator cable - SAC-4P-M 8MR/0,6-PVC/M 8FR



1415581

<https://www.phoenixcontact.com/pc/products/1415581>

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Sensor/actuator cable, 4-position, PVC, black RAL 9005, Plug angled M8, on Socket angled M8, cable length: 0.6 m

Your advantages

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

Commercial Data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1415581 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to Order (non-returnable) |
| Product Key | BF1BCA |
| Catalog Page | Page 196 (C-2-2019) |
| GTIN | 4055626049519 |
| Weight per Piece (including packing) | 27.304 g |
| Weight per Piece (excluding packing) | 19.998 g |
| Customs tariff number | 85444290 |
| Country of origin | DE |

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Technical Data

Product properties

| | |
|----------------------|-----------------------|
| Product type | Sensor/actuator cable |
| Number of positions | 4 |
| Application | Standard |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A - standard |

Insulation characteristics

| | |
|----------------------|----|
| Overvoltage category | II |
| Degree of pollution | 3 |

Material specifications

| | |
|--|---|
| Flammability rating according to UL 94 | HB |
| Sealing material | NBR |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Material for screw connection | Zinc die-cast, nickel-plated |

Electrical properties

| | |
|-----------------------|----------------------------|
| Contact resistance | $\leq 5 \text{ m}\Omega$ |
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage U_N | 48 V AC |
| | 60 V DC |
| Nominal current I_N | 4 A |
| Protective circuit | unwired |

Mechanical properties

Mechanical data

| | |
|-----------------------------|------------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|------------|

LED signaling

| | |
|------------------------|----|
| Status display | No |
| Status display present | No |

Connector

Connection 1

| | |
|-------------------|--------|
| Head design | Plug |
| Head cable outlet | angled |

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| | |
|------------------|----|
| Head thread type | M8 |
|------------------|----|


Connection 2

| | |
|-------------------|--------|
| Head design | Socket |
| Head cable outlet | angled |
| Head thread type | M8 |

Cable / line

| | |
|--------------|-------|
| Cable length | 0.6 m |
|--------------|-------|

PVC black [PVC]

| | |
|--|---|
| Dimensional drawing |  |
| Cable weight | 33 kg/km |
| UL AWM Style | 2464 / 1729 (80°C/300 V) |
| Number of positions | 4 |
| Shielded | no |
| Cable type | PVC black [PVC] |
| Conductor structure signal line | 14x 0.15 mm |
| AWG signal line | 24 |
| Conductor cross section | 4x 0.25 mm ² (Signal line) |
| Wire diameter incl. insulation | 1.17 mm ±0.05 mm |
| External cable diameter | 4.4 mm ±0.15 mm |
| Outer sheath, material | PVC |
| External sheath, color | black RAL 9005 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PVC |
| Single wire, color | brown, white, blue, black |
| Thickness, insulation | ≥ 0.23 mm (Core insulation) ≥ 0.76 mm (Outer cable sheath) |
| Overall twist | 4 wires, twisted |
| Max. conductor resistance | max. 79 Ω/km (at 20 °C) |
| Insulation resistance | ≥ 100 MΩ*km (at 20 °C) |
| Nominal voltage, cable | ≤ 300 V |
| Test voltage | ≥ 3000 V |
| Minimum bending radius, fixed installation | 5 x D |
| Flame resistance | As per UL-Style 2464 |
| Resistance to oil | EN 60811-2-1 |
| Ambient temperature (operation) | -25 °C ... 80 °C (cable, fixed installation) |

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| | |
|--|---|
| | -10 °C ... 80 °C (Cable, flexible installation) |
|--|---|

Ambient conditions

| | |
|---------------------------------|----------------------------------|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |

Standards and regulations

| | |
|--------------------------|-----------------|
| Standards/specifications | IEC 61076-2-104 |
|--------------------------|-----------------|

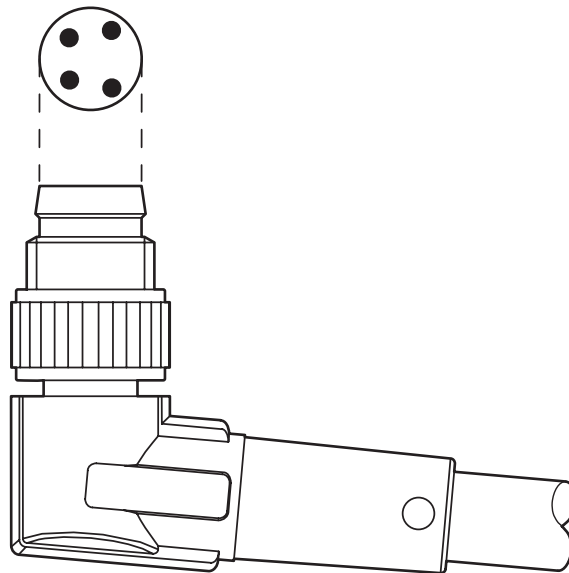
Sensor/actuator cable - SAC-4P-M 8MR/0,6-PVC/M 8FR

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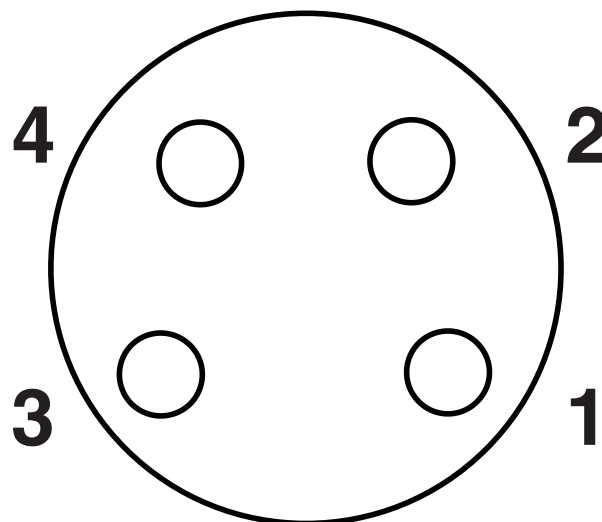
Drawings

Schematic diagram



Layout of connector pin assignments

Schematic diagram



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

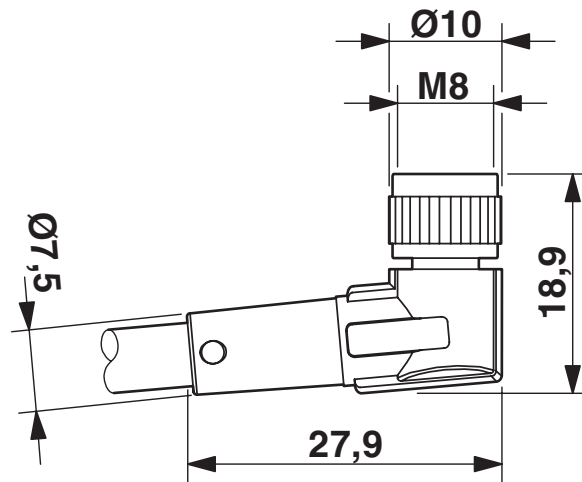
Sensor/actuator cable - SAC-4P-M 8MR/0,6-PVC/M 8FR



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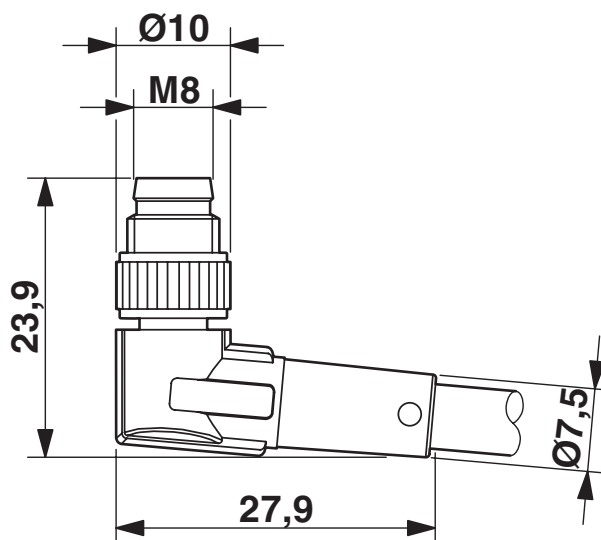
<https://www.phoenixcontact.com/pc/products/1415581>

Dimensional drawing



Socket M8 x 1, angled

Dimensional drawing



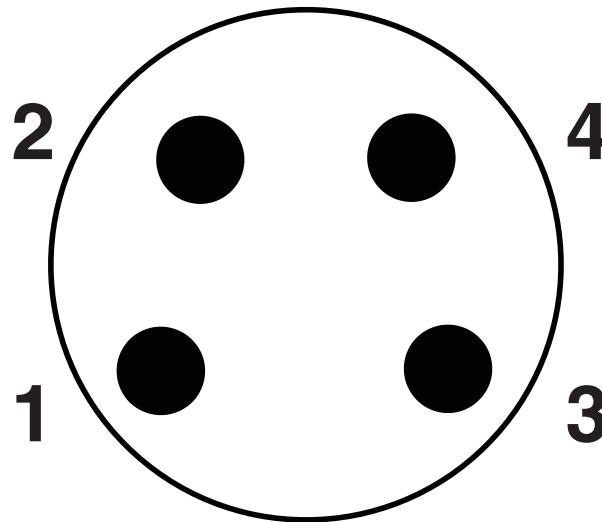
M8 x 1 male plug, angled version

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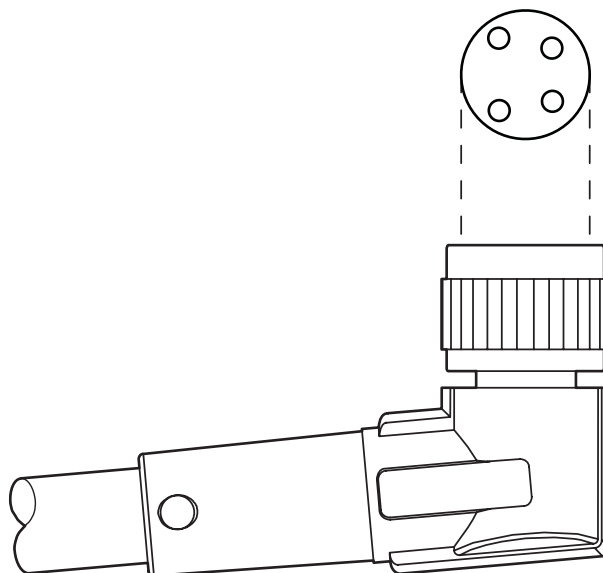
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Schematic diagram



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

Schematic diagram



Layout of connector pin assignments

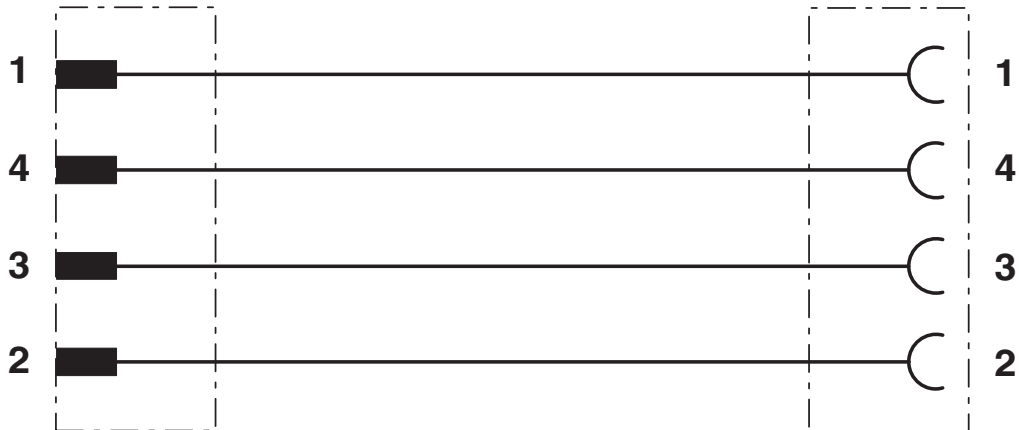
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Circuit diagram




Sensor/actuator cable - SAC-4P-M 8MR/0,6-PVC/M 8FR





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Approvals

|  UL Listed Approval ID: FILE E 221474 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| | 30 V | 4 A | - | - |

|  cUL Listed Approval ID: FILE E 221474 | | | | |
|---|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
| | 30 V | 4 A | - | - |

|  EAC Approval ID: RU D-DE.HB35.B.00387 | |
|---|--|
|---|--|

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

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Classifications

ECLASS

| | |
|---------------|----------|
| ECLASS-9.0 | 27060311 |
| ECLASS-10.0.1 | 27060311 |
| ECLASS-11.0 | 27060311 |

ETIM

| | |
|----------|----------|
| ETIM 8.0 | EC001855 |
|----------|----------|

UNSPSC

| | |
|-------------|----------|
| UNSPSC 21.0 | 26121600 |
|-------------|----------|

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Environmental Product Compliance

| | |
|------------|--|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally Friendly Use Period = 50 years |
| | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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Accessories

Sealing cap

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

<https://www.phoenixcontact.com/pc/products/1430857>

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



Insert label

Insert label - PABA WH/23 - 1013779

<https://www.phoenixcontact.com/pc/products/1013779>

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



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Insert label

Insert label - PABA YE/23 - 1013782

<https://www.phoenixcontact.com/pc/products/1013782>



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

Marker pen

Marker pen - B-STIFT - 1051993

<https://www.phoenixcontact.com/pc/products/1051993>



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

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Screw plug

Screw plug - PROT-M 8 MS-PA-CHAIN - 1430860

<https://www.phoenixcontact.com/pc/products/1430860>

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



Torque screwdriver

Torque screwdriver - TSD 02 SAC - 1208487

<https://www.phoenixcontact.com/pc/products/1208487>

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



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Tool

Tool - SAC BIT M8-D10 - 1208461

<https://www.phoenixcontact.com/pc/products/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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