

SAC-3P-M 8MR/0,6-PUR/M 8FS - Sensor/actuator cable



1682032

<https://www.phoenixcontact.com/us/products/1682032>

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug angled M8, coding: A, on Socket straight M8, cable length: 0.6 m

Your advantages

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

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 1682032 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF01 |
| Product key | BF1BBA |
| Catalog page | Page 188 (C-2-2019) |
| GTIN | 4017918158699 |
| Weight per piece (including packing) | 20.5 g |
| Weight per piece (excluding packing) | 17.52 g |
| Customs tariff number | 85444290 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|----------------------|-----------------------|
| Product type | Sensor/actuator cable |
| Application | Standard |
| Number of positions | 3 |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A |

Insulation characteristics

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

Material specifications

| | |
|--|---|
| Flammability rating according to UL 94 | HB |
| Seal 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

| | |
|-----------------------|----------------------------|
| Insulation resistance | $\geq 100 \text{ M}\Omega$ |
| Nominal voltage U_N | 48 V AC |
| | 60 V DC |
| Nominal current I_N | 4 A |

Mechanical properties

Mechanical data

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

Signaling

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

Connection data

Conductor connection

| | |
|-------------------|------------------------|
| Tightening torque | 0.2 Nm (M8 connectors) |
|-------------------|------------------------|

Connector

Connection 1

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| | |
|---------------------|----------------|
| Type | Plug angled M8 |
| Number of positions | 3 |
| Coding type | A |

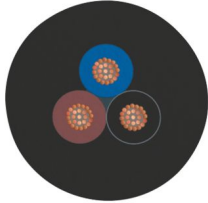
Connection 2

| | |
|---------------------|--------------------|
| Type | Socket straight M8 |
| Number of positions | 3 |

Cable/line

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

PUR halogen-free black [PUR]

| | |
|---|---|
| Dimensional drawing |  |
| Cable weight | 18 kg/km |
| UL AWM Style | 20549 / 10493 (80°C/300 V) |
| Number of positions | 3 |
| Shielded | no |
| Cable type | PUR halogen-free black [PUR] |
| Conductor structure signal line | 32x 0.10 mm |
| AWG signal line | 24 |
| Conductor cross section | 3x 0.25 mm ² (Signal line) |
| Wire diameter incl. insulation | 1.17 mm ±0.02 mm |
| External cable diameter | 3.60 mm ±0.15 mm |
| Outer sheath, material | PUR |
| External sheath, color | black-gray RAL 7021 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PP |
| Single wire, color | brown, blue, black |
| Thickness, insulation | ≥ 0.21 mm (Core insulation) |
| Thickness, outer sheath | approx. 0.50 mm |
| Overall twist | 3 wires, twisted |
| Length of twist, overall twist | 40 mm |
| Max. conductor resistance | ≤ 78 Ω/km (at 20 °C) |
| Insulation resistance | ≥ 100 GΩ*km (at 20 °C) |
| Nominal voltage, cable | ≤ 300 V |
| Test voltage | ≥ 3000 V |
| Smallest bending radius, fixed installation | 18 mm |
| Smallest bending radius, movable installation | 36 mm |

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| | |
|---------------------------------|---|
| Max. bending cycles | 10000000 |
| Bending radius | 44 mm |
| Traversing path | 10 m |
| Traversing rate | 3 m/s |
| Acceleration | 10 m/s ² |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| Flame resistance | in accordance with UL 758/1581 FT2 DIN EN 60332-2-2 (20 s) |
| 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) |
| Special properties | Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) -25 °C ... 80 °C (Cable, flexible installation) |

Environmental and real-life conditions

Ambient conditions

| | |
|---------------------------------|--|
| Degree of protection | IP65 IP67 IP68 |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) -40 °C ... 80 °C (cable, fixed installation) -5 °C ... 80 °C (Cable, flexible installation) |

Standards and regulations

| | |
|--------------------------|-----------------|
| Standard designation | M8 connector |
| Standards/specifications | IEC 61076-2-104 |

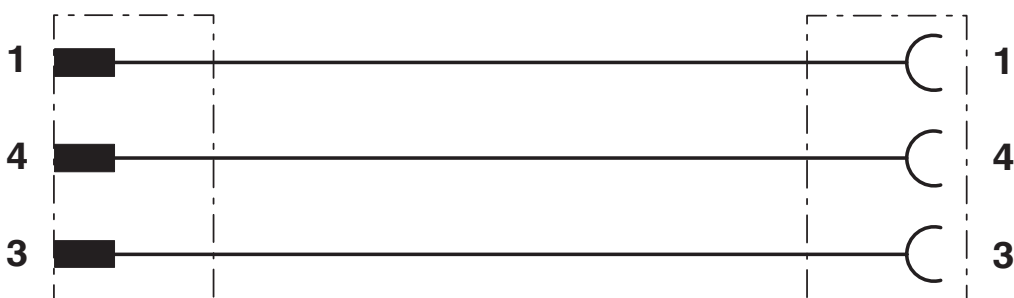
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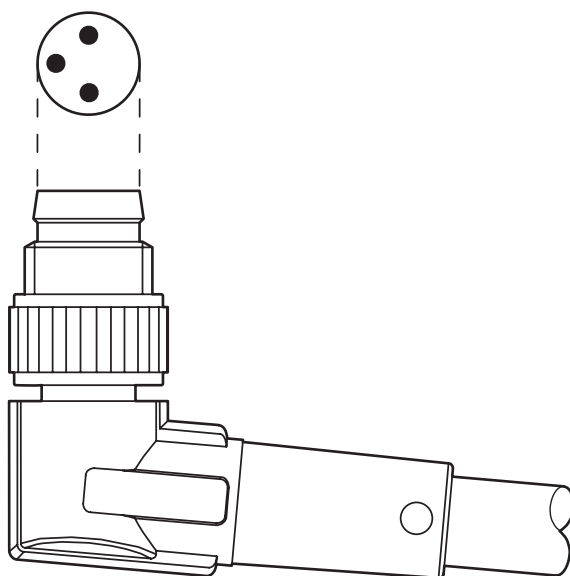
<https://www.phoenixcontact.com/us/products/1682032>

Drawings

Circuit diagram



Schematic diagram



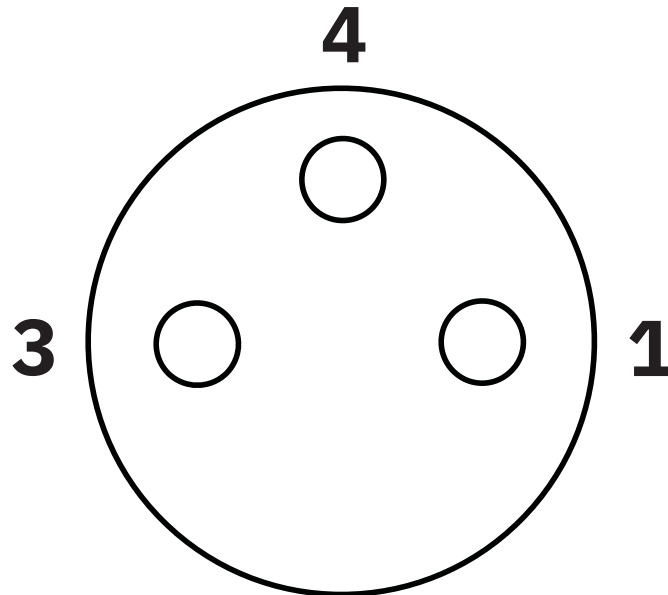
Layout of connector pin assignments

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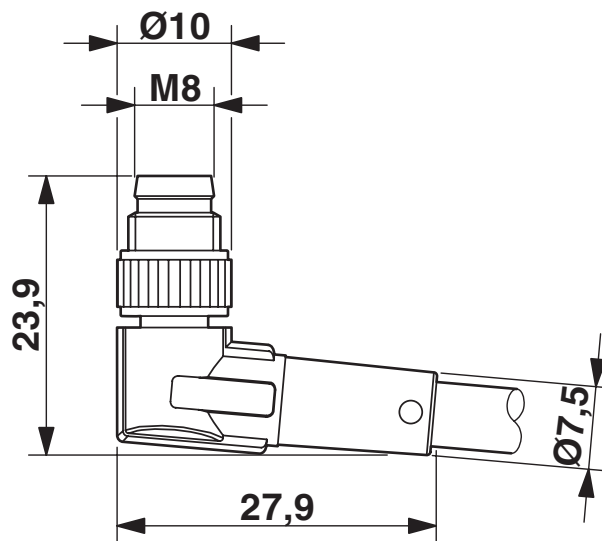
<https://www.phoenixcontact.com/us/products/1682032>

Schematic diagram



Pin assignment M8 socket, 3-pos., view female side

Dimensional drawing



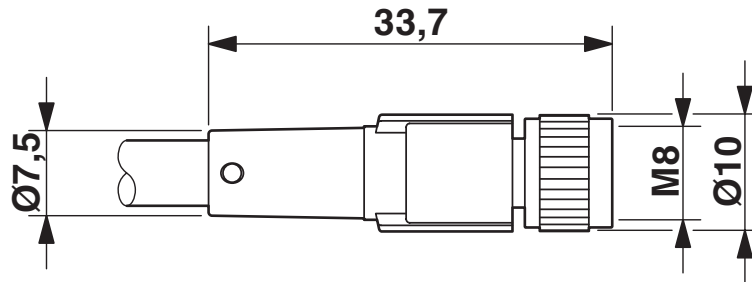
M8 x 1 male plug, angled version

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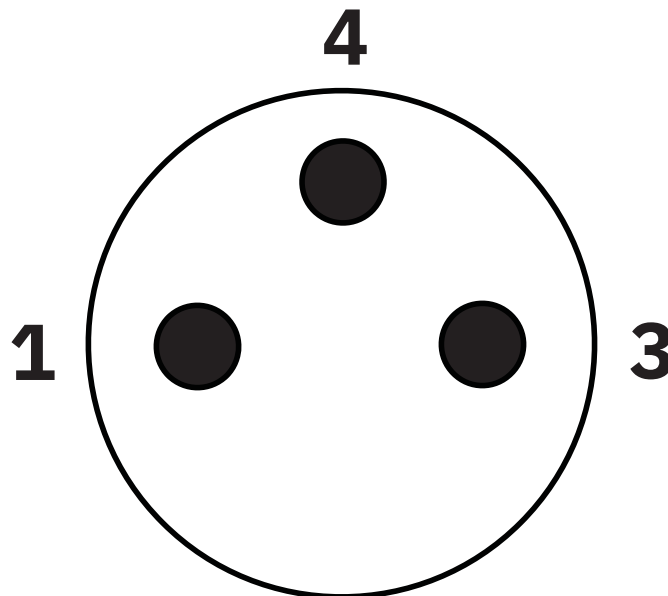
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Dimensional drawing



Socket M8 x 1, straight

Schematic diagram



Pin assignment M8 plug, 3-pos., view male side

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1682032>

|  UL Listed Approval ID: FILE E 221474 | | | | |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
| | 60 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 |
| | 60 V | 4 A | - | - |

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

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

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27060311 |
| ECLASS-12.0 | 27060311 |
| ECLASS-13.0 | 27060311 |

ETIM

| | |
|----------|----------|
| ETIM 9.0 | EC001855 |
|----------|----------|

UNSPSC

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

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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Accessories

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

1430857

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

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



UCT-WMT (23X4) - Conductor marker

0801453

<https://www.phoenixcontact.com/us/products/0801453>

Conductor marker, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 30



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UC-WMT (23X4) - Conductor marker

0819411

<https://www.phoenixcontact.com/us/products/0819411>



Conductor marker, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 24

US-WMT (23X4) - Cable marker

0828769

<https://www.phoenixcontact.com/us/products/0828769>



Cable marker, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 56

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WMTW (23X4)R - Cable marker

0831004

<https://www.phoenixcontact.com/us/products/0831004>



Cable marker, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 3000

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

1430860

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

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



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B-STIFT - Marker pen

1051993

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



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

TSD 02 SAC - Torque screwdriver

1208487

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



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

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SAC BIT M8-D10 - Tool

1208461

<https://www.phoenixcontact.com/us/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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