

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS



1668603

<https://www.phoenixcontact.com/pc/products/1668603>

Please be informed that the data shown in this PDF document is generated from our Online Catalog. Please find the complete data in the user documentation. Our General Terms of Use for Downloads are valid.



Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12, coding: A, on Socket straight M12, coding: A, cable length: 0.6 m

Your advantages

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

Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 1668603 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales Key | 02 |
| Product Key | BF1CCA |
| Catalog Page | Page 194 (C-2-2019) |
| GTIN | 4017918136055 |
| Weight per Piece (including packing) | 33.72 g |
| Weight per Piece (excluding packing) | 32.9 g |
| Customs tariff number | 85444290 |
| Country of origin | DE |

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS



1668603

<https://www.phoenixcontact.com/pc/products/1668603>

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 | $\geq 10 \text{ M}\Omega$ |
| Nominal voltage U_N | 250 V AC |
| | 250 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 |

Connection data

Conductor connection

| | |
|-------------------|------------------------|
| Tightening torque | 0.4 Nm (M12 connector) |
|-------------------|------------------------|

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS

1668603

<https://www.phoenixcontact.com/pc/products/1668603>

Connector

Connection 1

| | |
|-------------------|--------|
| Head design | Plug |
| Head cable outlet | angled |
| Head thread type | M12 |
| Coding | A |

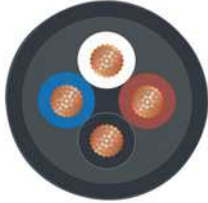
Connection 2

| | |
|-------------------|----------|
| Head design | Socket |
| Head cable outlet | straight |
| Head thread type | M12 |
| Coding | A |

Cable / line

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

PUR halogen-free black [PUR]

| | |
|---------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 30 kg/km |
| UL AWM Style | 20549 / 10493 (80°C/300 V) |
| Number of positions | 4 |
| Shielded | no |
| Cable type | PUR halogen-free black [PUR] |
| Conductor structure signal line | 42x 0.10 mm |
| AWG signal line | 22 |
| Conductor cross section | 4x 0.34 mm ² (Signal line) |
| Wire diameter incl. insulation | 1.27 mm ±0.02 mm |
| External cable diameter | 4.2 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, white, blue, black |
| Thickness, insulation | ≥ 0.21 mm |
| Thickness, outer sheath | approx. 0.5 mm |
| Overall twist | 4 wires, twisted |

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS



1668603

<https://www.phoenixcontact.com/pc/products/1668603>

| | |
|---|--|
| Max. conductor resistance | ≤ 58 Ω/km |
| Insulation resistance | ≥ 1 GΩ*km |
| Nominal voltage, cable | ≤ 300 V |
| Test voltage | ≥ 3000 V |
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Max. bending cycles | 10000000 |
| Halogen-free | in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 |
| 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 | Highly resistant to acids, alkaline solutions and solvents hydrolysis and microbe resistant partly UV-resistant in accordance with DIN EN ISO 4892-2-A Low adhesion abrasion-resistant |
| Special properties | Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish flexible |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) -25 °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 61076-2-101 |
|--------------------------|-----------------|

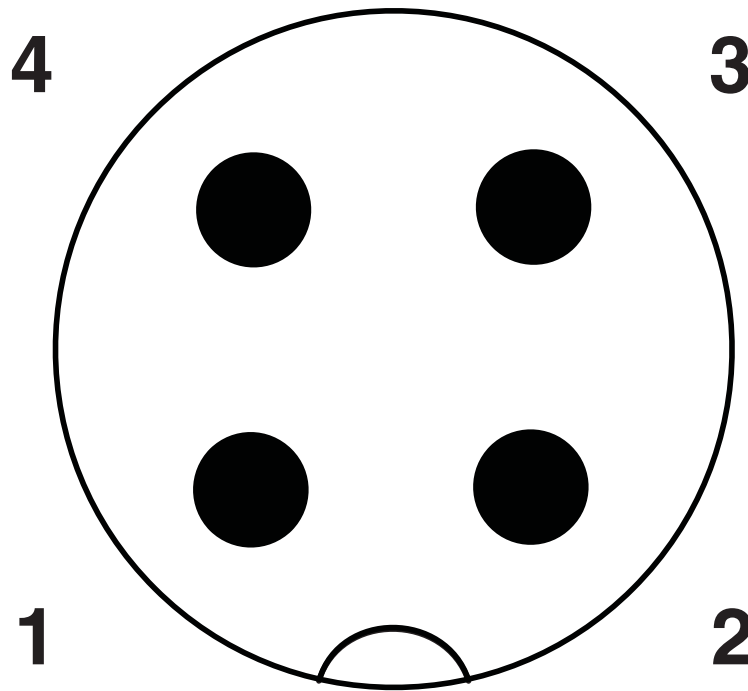
Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS

1668603

<https://www.phoenixcontact.com/pc/products/1668603>

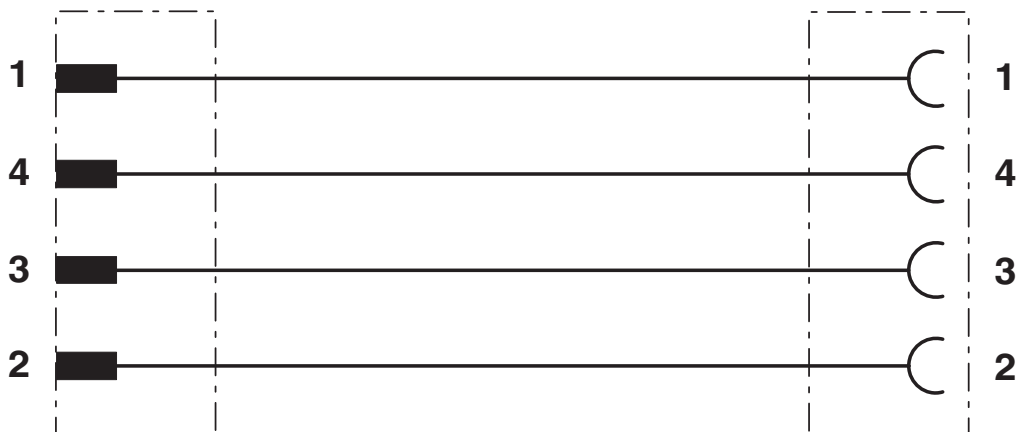
Drawings

Schematic diagram



Pin assignment M12 plug, 4-pos., A-coded, view plug side

Circuit diagram

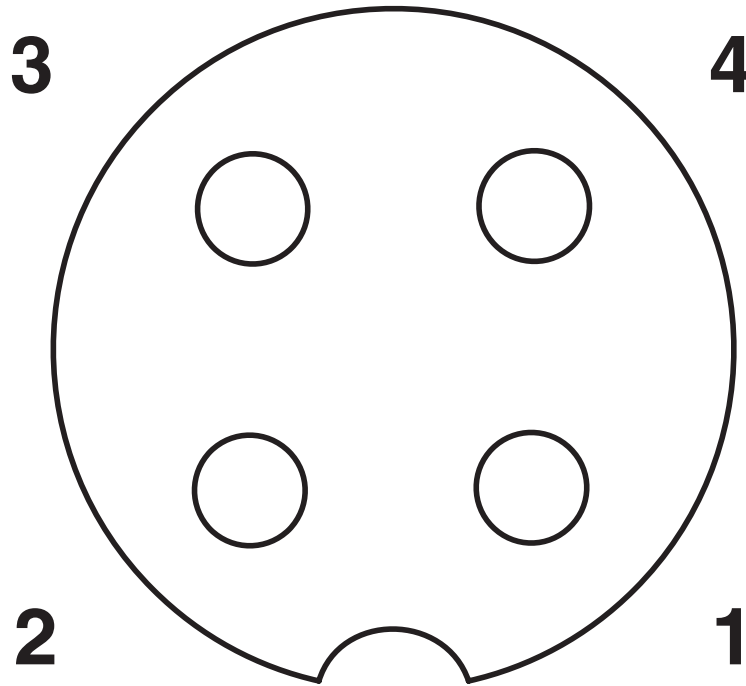


Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS

1668603

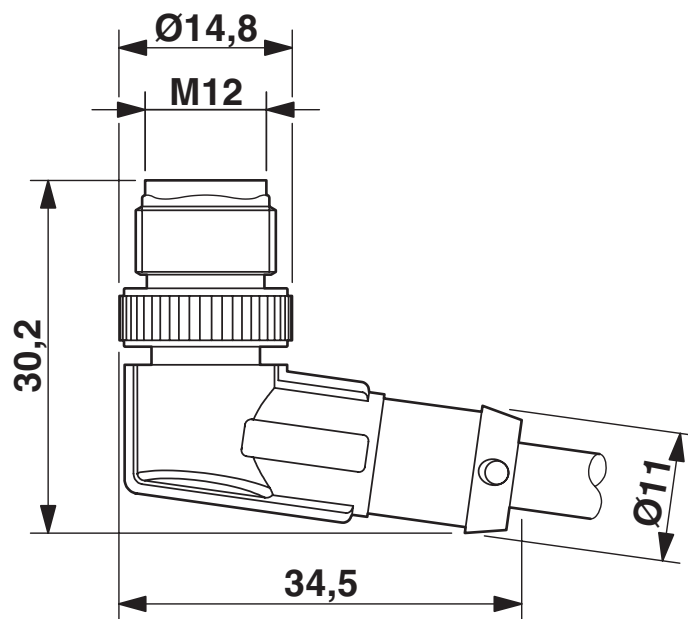
<https://www.phoenixcontact.com/pc/products/1668603>

Schematic diagram



Pin assignment M12 socket, 4-pos., A-coded, view female side

Dimensional drawing



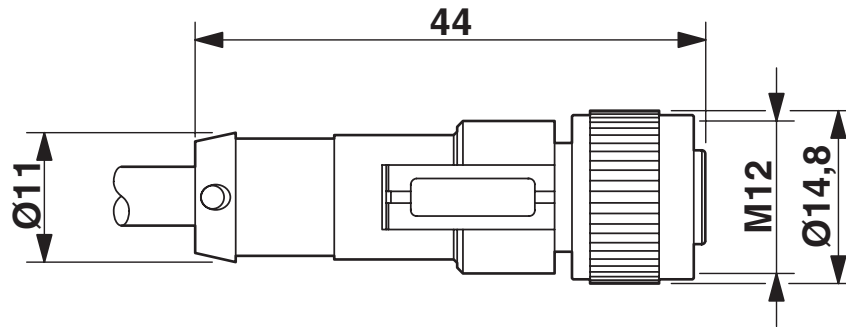
M12 x 1 male plug, angled

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS

1668603

<https://www.phoenixcontact.com/pc/products/1668603>

Dimensional drawing



M12 x 1 socket, straight

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS



1668603

<https://www.phoenixcontact.com/pc/products/1668603>

Approvals



EAC

Approval ID: RU C-DE.BL08.B.00286



UL Listed

Approval ID: FILE E 221474

| | Nominal Voltage U_N | Nominal Current I_N | Cross Section AWG | Cross Section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 300 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 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 300 V | 4 A | - | - |



EAC

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

cULus Listed

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS



1668603

<https://www.phoenixcontact.com/pc/products/1668603>

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 |
|-------------|----------|

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS



1668603

<https://www.phoenixcontact.com/pc/products/1668603>

Environmental Product Compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS



1668603

<https://www.phoenixcontact.com/pc/products/1668603>

Accessories

Sealing cap

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

<https://www.phoenixcontact.com/pc/products/1430873>

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



Locking clip

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

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



Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS

1668603

<https://www.phoenixcontact.com/pc/products/1668603>

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

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

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS

1668603

<https://www.phoenixcontact.com/pc/products/1668603>

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

Screw plug

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

<https://www.phoenixcontact.com/pc/products/1430899>



M12 sealing cap with fixing band, for sensor cables, for free M12 sockets

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS

1668603

<https://www.phoenixcontact.com/pc/products/1668603>

Locking clip

Locking clip - SAC-M12-EXCLIP-F - 1558991

<https://www.phoenixcontact.com/pc/products/1558991>



Locking clip for the socket 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

Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/pc/products/1208429>



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

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS

1668603

<https://www.phoenixcontact.com/pc/products/1668603>

Torque screwdriver

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

<https://www.phoenixcontact.com/pc/products/1212224>



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

Adapter insert

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

<https://www.phoenixcontact.com/pc/products/1212600>



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

Sensor/actuator cable - SAC-4P-M12MR/0,6-PUR/M12FS



1668603

<https://www.phoenixcontact.com/pc/products/1668603>

Tool

Tool - SAC BIT M12-D15 - 1208432

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

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstraße 8

D-32825 Blomberg

+49 (0) 5235-3 00

info@phoenixcontact.com