

SAC-3P-M12MR/ 0,5-542/M12FSSH - Sensor/actuator cable



1406259

<https://www.phoenixcontact.com/us/products/1406259>

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Sensor/actuator cable, 3-position, shielded, Plug angled M12, coding: A, on Socket straight M12, coding: A, cable length: 0.5 m

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1406259 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | BF13 |
| Product key | BF1IDA |
| GTIN | 4046356797931 |
| Weight per piece (including packing) | 22.22 g |
| Weight per piece (excluding packing) | 22.22 g |
| Customs tariff number | 85444290 |
| Country of origin | US |

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Technical data

Product properties

| | |
|----------------------|-----------------------|
| Product type | Sensor/actuator cable |
| Number of positions | 3 |
| Application | Standard, U.S. cables |
| No. of cable outlets | 1 |
| Shielded | yes |
| 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

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

Signaling

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

Connection data

Conductor connection

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

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Connector

Connection 1

| | |
|---------------------|-----------------|
| Type | Plug angled M12 |
| Number of positions | 3 |
| Coding type | A |
| Number of positions | 3 |

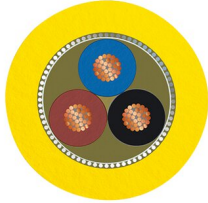
Connection 2

| | |
|---------------------|---------------------|
| Type | Socket straight M12 |
| Number of positions | 3 |
| Coding type | A |
| Number of positions | 3 |

Cable/line

| | |
|--------------|-------|
| Cable length | 0.5 m |
|--------------|-------|

PVC yellow 105 °C [542]

| | |
|---------------------------------|--|
| Dimensional drawing |  |
| Cable weight | 40 kg/km |
| UL AWM Style | 2517 (105 °C / 300 V) |
| Number of positions | 3 |
| Shielded | yes |
| Cable type | PVC yellow 105 °C [542] |
| Conductor structure signal line | 30x 1.30 mm |
| AWG signal line | 22 |
| Wire diameter incl. insulation | 1.27 mm ±0.03 mm |
| External cable diameter | 5.2 mm ±0.2 mm |
| Outer sheath, material | PVC |
| External sheath, color | yellow |
| Conductor material | Tin-plated Cu litz wires |
| Material wire insulation | PVC |
| Single wire, color | brown, blue, black |
| Overall twist | 3 wires, twisted |
| Optical shield covering | 85 % |
| Max. conductor resistance | max. 50.5 Ω/km (20 °C) |
| Insulation resistance | ≥ (550 M Ohms/m @ 500V) |

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| | |
|---|---|
| Nominal voltage, cable | 300 V |
| Minimum bending radius, flexible installation | 12 x D |
| Flame resistance | FT4 |
| Other resistance | UV resistant |
| Special properties | UL standards PLTC and ITC |
| Ambient temperature (operation) | -30 °C ... 105 °C (cable, fixed installation) |
| | -5 °C ... 105 °C (Cable, flexible installation) |

Environmental and real-life conditions

Ambient conditions

| | |
|---------------------------------|--|
| Degree of protection | IP65 |
| | IP67 |
| 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 | M12 connector |
| Standards/specifications | IEC 61076-2-101 |

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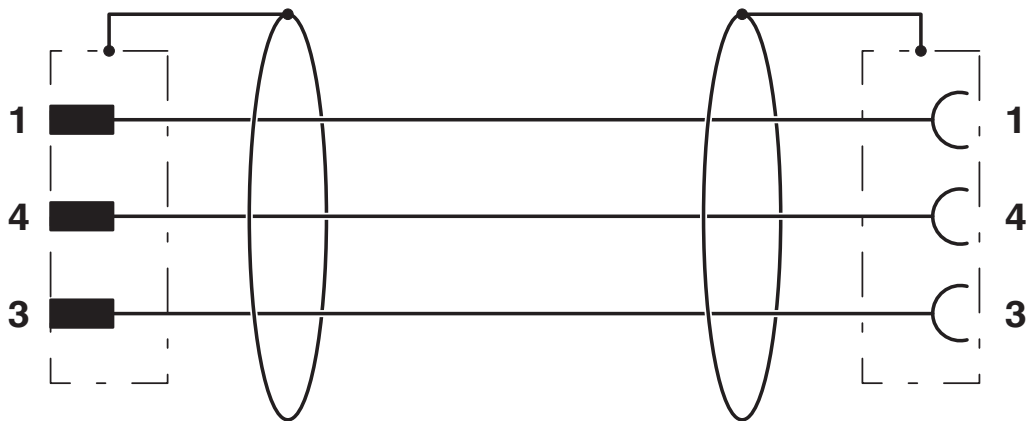


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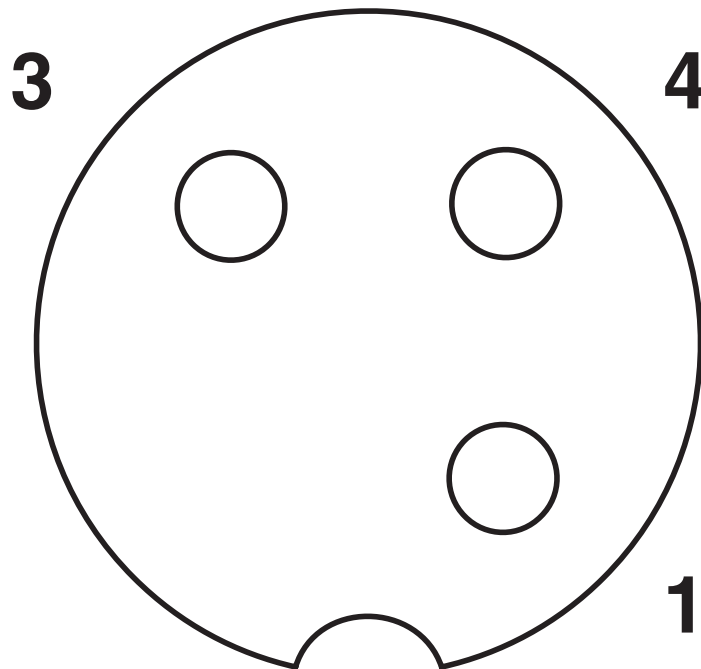
<https://www.phoenixcontact.com/us/products/1406259>

Drawings

Circuit diagram



Schematic diagram



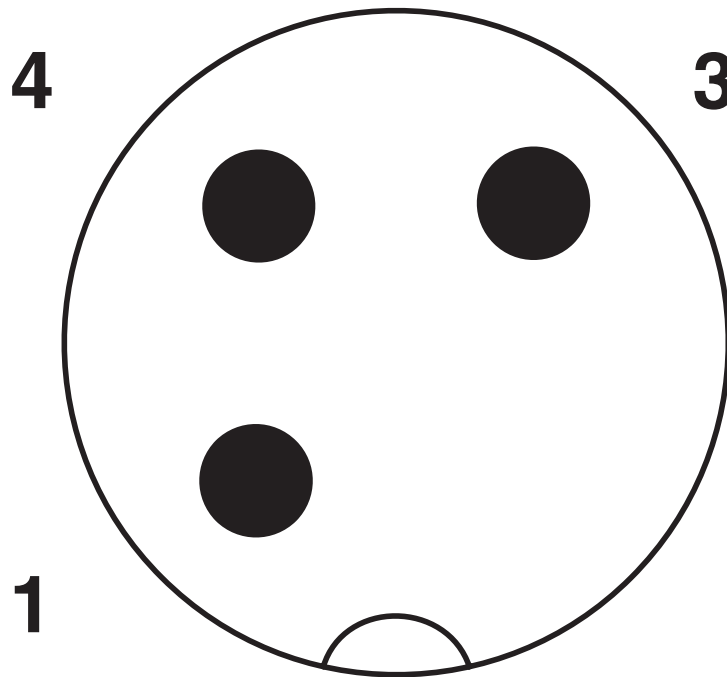
Pin assignment M12 socket, 3-pos., A-coded, view female side

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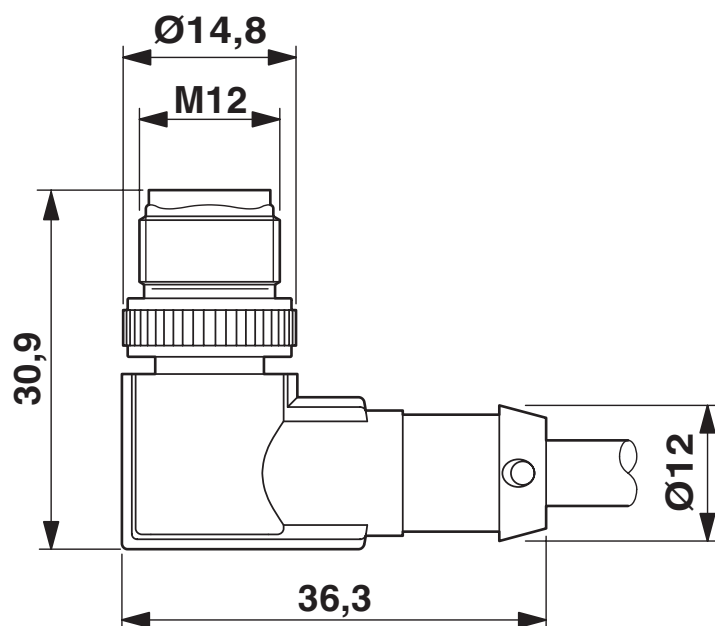
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Schematic diagram



Pin assignment M12 plug, 3-pos., A-coded, view male side

Dimensional drawing



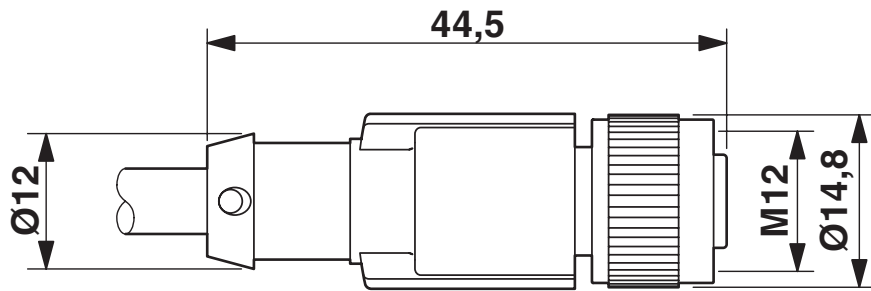
M12 x 1 male plug, angled, shielded

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Dimensional drawing



M12 x 1 socket, straight, shielded

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1406259>



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

UNSPSC

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

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Environmental product compliance

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

PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

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

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



SAC-M12-EXCLIP-M - Locking clip

1558988

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



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PROT-M12 MS-PA-CHAIN - Screw plug

1430899

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

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



SAC-M12-EXCLIP-F - Locking clip

1558991

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



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TSD 04 SAC - Torque screwdriver

1208429

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



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

TSD-M 1,2NM - Torque screwdriver

1212224

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



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

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TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

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



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

SAC BIT M12-D15 - Tool

1208432

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

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