

SAC-5P-M12MS/2,0-28X/M12FSSHOD - Sensor/actuator cable



1407269

<https://www.phoenixcontact.com/us/products/1407269>

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Sensor/actuator cable, 5-position, PE-X/PE-X halogen-free, black-gray RAL 7021, shielded, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 2 m, for outdoor applications, with high-grade steel knurl

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Robust throughout: resistant to oil, UV, and ozone, withstands temperatures from -40°C ... +105°C
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 1407269 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | BF03 |
| Product key | AF1CKA |
| GTIN | 4046356773874 |
| Weight per piece (including packing) | 210 g |
| Weight per piece (excluding packing) | 210 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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Technical data

Product properties

| | |
|----------------------|-----------------------|
| Product type | Sensor/actuator cable |
| Application | External areas |
| Number of positions | 5 |
| No. of cable outlets | 1 |
| Shielded | yes |
| Coding | A |

Insulation characteristics

| | |
|---------------------|---|
| Degree of pollution | 3 |
|---------------------|---|

Material specifications

| | |
|--|-----------------|
| Flammability rating according to UL 94 | V0 |
| Seal material | FPM |
| Material of grip body | PP |
| Contact material | CuSn |
| Contact surface material | Ni/Au |
| Contact carrier material | PP |
| Material for screw connection | Stainless steel |

Electrical properties

| | |
|-----------------------|----------|
| Insulation resistance | ≥ 100 MΩ |
| 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 | 0.4 Nm (M12 connector) |
|-------------------|------------------------|

Connector

Connection 1

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| | |
|---------------------|-------------------|
| Type | Plug straight M12 |
| Number of positions | 5 |
| Coding type | A |

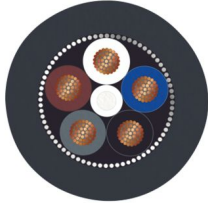
Connection 2

| | |
|---------------------|---------------------|
| Type | Socket straight M12 |
| Number of positions | 5 |
| Coding type | A |

Cable/line

| | |
|--------------|-----|
| Cable length | 2 m |
|--------------|-----|

PE-X black [28X]

| | |
|---------------------------------|---|
| Dimensional drawing |  |
| Cable weight | 85 kg/km |
| Number of positions | 5 |
| Shielded | yes |
| Cable type | PE-X black [28X] |
| Conductor structure signal line | 28x 0.15 mm |
| AWG signal line | 20 |
| Conductor cross-section | 5x 0.5 mm ² |
| Wire diameter incl. insulation | 1.6 mm ±0.05 mm |
| External cable diameter | 7.25 mm ±0.3 mm |
| Outer sheath, material | PE-X |
| External sheath, color | black-gray RAL 7021 |
| Conductor material | Bare Cu litz wires |
| Material, filler | PP yarn |
| Material wire insulation | PE-X |
| Single wire, color | brown, white, blue, black, gray |
| Thickness, insulation | approx. 0.30 mm (Core insulation) |
| Inner sheath thickness | approx. 0.50 mm |
| Thickness, outer sheath | approx. 0.70 mm |
| Overall twist | 5 wires around filler to the core |
| Length of twist, overall twist | 68 mm |
| Optical shield covering | 85 % |
| Max. conductor resistance | ≤ 39 Ω/m (at 20 °C) |

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| | |
|---|--|
| Insulation resistance | ≥ 100 MΩ*km (at 20 °C) |
| Working capacitance | ≤ 110 pF (Line-line) |
| | ≤ 200 pF (Line-shield) |
| Nominal voltage, cable | ≤ 300 V AC |
| Test voltage | ≥ 3000 V AC (Spark test) |
| Test voltage Core/Shield | ≥ 1000.00 V AC (for 10 s) |
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Smallest bending radius, fixed installation | 37 mm |
| Smallest bending radius, movable installation | 73 mm |
| Dynamic load capacity (bending) | Max. bending cycles: 1000000, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s ² |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| | in accordance with DIN EN 50267-2-1 |
| Flame resistance | According to DIN EN 60332-1-2 |
| | according to DIN EN 50266-2-5 |
| Resistance to oil | According to DIN EN 60811-2-1, 168 h at 100°C |
| | According to DIN EN 50306 |
| Other resistance | Resistance to fuels (according to IEC 60811, 168 h at 70°C) |
| | UV resistant (according to DIN VDE 0276-605) |
| | UV resistant (in accordance with DIN EN ISO 4892-2-A (750 h)) |
| Special properties | Inductance approx. 0.48 mH/km |
| | Irradiated |
| Ambient temperature (operation) | -40 °C ... 105 °C (cable, fixed installation) |
| | -15 °C ... 105 °C (Cable, flexible installation) |
| | 20 °C ±5 °C (cable, drag chain applications) |

Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| | IP69K |
| Ambient temperature (operation) (male connector/female connector) | -40 °C ... 105 °C (Plug / socket) |
| Ambient temperature (operation) (Operation) | -40 °C ... 85 °C (On sudden changes in temperature (according to IEC 60512-11-4)) |

Standards and regulations

M12

| | |
|--------------------------|-----------------|
| Standard designation | M12 connector |
| Standards/specifications | IEC 61076-2-101 |

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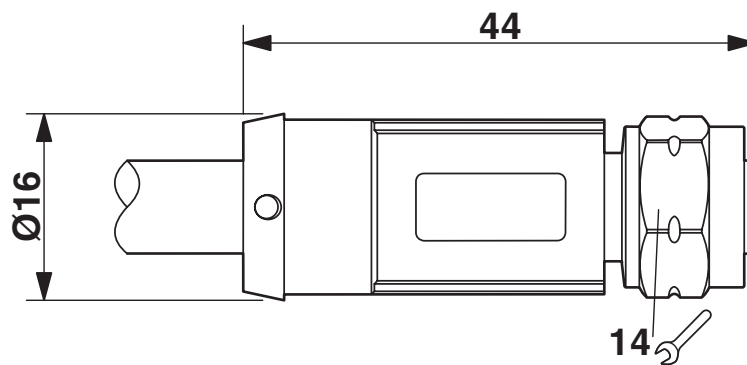
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



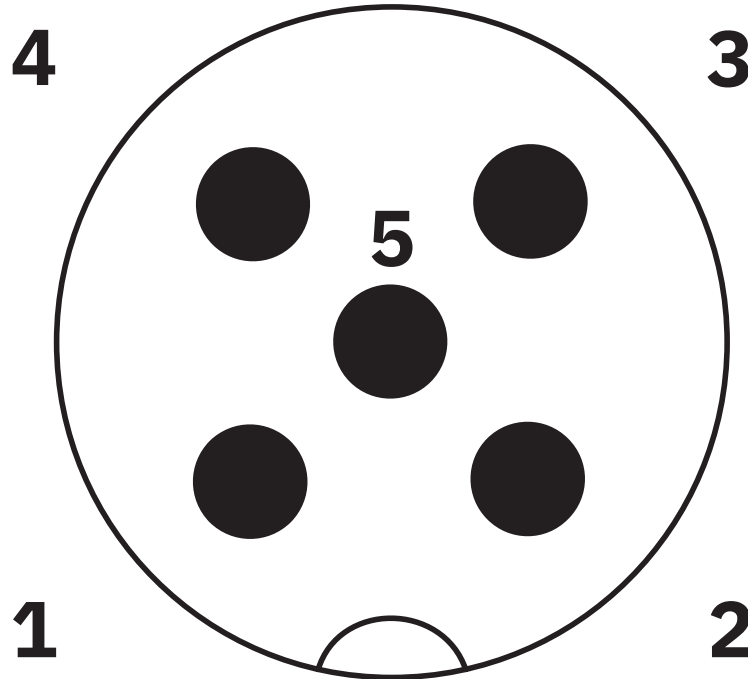
M12 x 1 socket, straight

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Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



Pin assignment M12 socket, 5-pos., A-coded, socket side view

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Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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Approvals

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DNV

Approval ID: TAE00002K4



EAC-RoHS

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

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27060311 |
| ECLASS-15.0 | 27060311 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | 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% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 4.285 kg CO2e |
|---------|---------------|

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