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Sensor/actuator cable, 5-position, PUR halogen-free, resistant to welding sparks, highly flexible, gray RAL 7001, free cable end, on Socket straight M12, coding: A, cable length: 1.5 m, for robots and drag chains

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Reliable solution for the body shop as cable is resistant to welding sparks

Commercial data

| | |
|--------------------------------------|---------------------|
| Item number | 1454419 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | BF03 |
| Product key | AF1CDA |
| Catalog page | Page 203 (C-2-2019) |
| GTIN | 4046356578042 |
| Weight per piece (including packing) | 64 g |
| Weight per piece (excluding packing) | 64 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

SAC-5P- 1,5-802/M12FS - Sensor/actuator cable



1454419

<https://www.phoenixcontact.com/us/products/1454419>

Technical data

Product properties

| | |
|----------------------|------------------------|
| Product type | Sensor/actuator cable |
| Application | Robots and drag chains |
| Number of positions | 5 |
| 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 | 0.4 Nm (M12 connector) |
|-------------------|------------------------|

Connector

Connection 1

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| | |
|------|----------------|
| Type | free cable end |
|------|----------------|

Connection 2

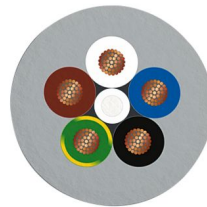
| | |
|---------------------|---------------------|
| Type | Socket straight M12 |
| Number of positions | 5 |
| Coding type | A |

Cable/line

| | |
|--------------|-------|
| Cable length | 1.5 m |
|--------------|-------|

PUR halogen-free highly flexible resistant to welding sparks gray 5th conductor green/yellow [802]

Dimensional drawing



| | |
|---|--|
| Note | Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments. |
| Cable weight | 38 kg/km |
| UL AWM Style | 20549 |
| Number of positions | 5 |
| Shielded | no |
| Cable type | PUR halogen-free highly flexible resistant to welding sparks gray 5th conductor green/yellow [802] |
| Conductor structure signal line | 42x 0.10 mm |
| AWG signal line | 22 |
| Conductor cross section | 5x 0.34 mm ² (Signal line) |
| Wire diameter incl. insulation | 1.3 mm ±0.05 mm (Signal line) |
| External cable diameter | 5.10 mm ±0.2 mm |
| Outer sheath, material | PUR |
| External sheath, color | gray RAL 7001 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PP |
| Single wire, color | brown, white, blue, black, green-yellow |
| Overall twist | 5 wires around filler to the core |
| Max. conductor resistance | approx. 53 Ω/km |
| Insulation resistance | ≥ 20 MΩ*km |
| Nominal voltage, cable | 300 V |
| Test voltage | 1200 V |
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 5 x D |
| Smallest bending radius, fixed installation | 26 mm |

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| | |
|---|--|
| Smallest bending radius, movable installation | 26 mm |
| Dynamic load capacity (bending) | Max. bending cycles: 10000000, Bending radius: 7,5 x D, Traversing path: 5 m, Traversing rate: 3.3 m/s, Acceleration: 5 m/s ² |
| | Max. bending cycles: 15000000, Bending radius: 50 mm, Traversing path: 0.9 m, Traversing rate: 5 m/s, Acceleration: 30 m/s ² |
| Dynamic load capacity (torsion) | Torsion: ±360 °/m, Torsion cycles: 1000000, Torsional frequency: 35 cycles/min. |
| Halogen-free | The cable is halogen-free |
| Flame resistance | in accordance with UL 758/1581 FT2 |
| Resistance to oil | in accordance with DIN EN 60811-2-1 |
| Other resistance | Highly resistant to acids, alkaline solutions and solvents |
| | Silicone-free |
| Special properties | Cable jacket is welding spark-resistant, recyclable, matt, low-adhesion, abrasion-resistant, flame-retardant, and self-extinguishing |
| | Free from silicone and cadmium |
| | 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 ... 90 °C (cable, fixed installation) |
| | -30 °C ... 90 °C (Cable, flexible installation) |
| | to 120 °C (for 3000 h) |
| | to 80 °C (in acc. with UL) |

Standards and regulations

M12

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

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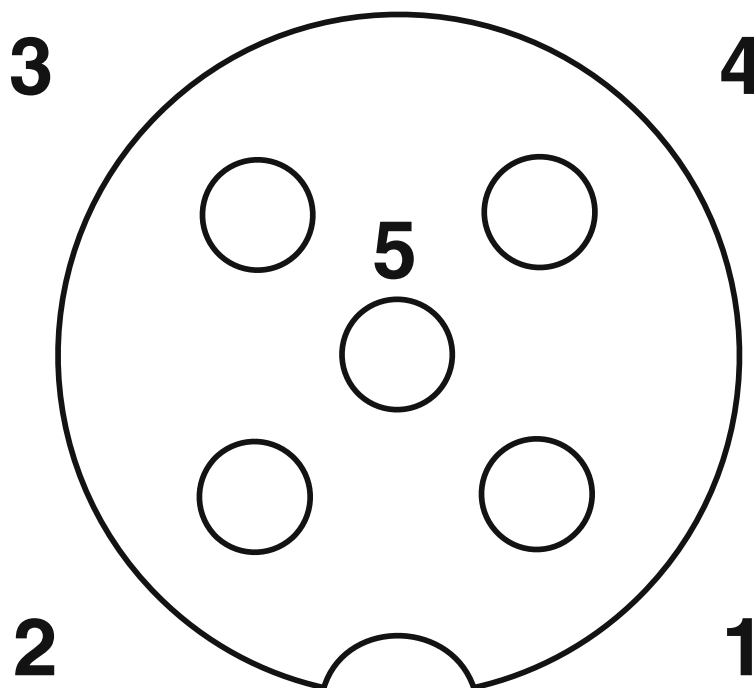
Drawings

Dimensional drawing



M12 x 1 socket, straight

Schematic diagram



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

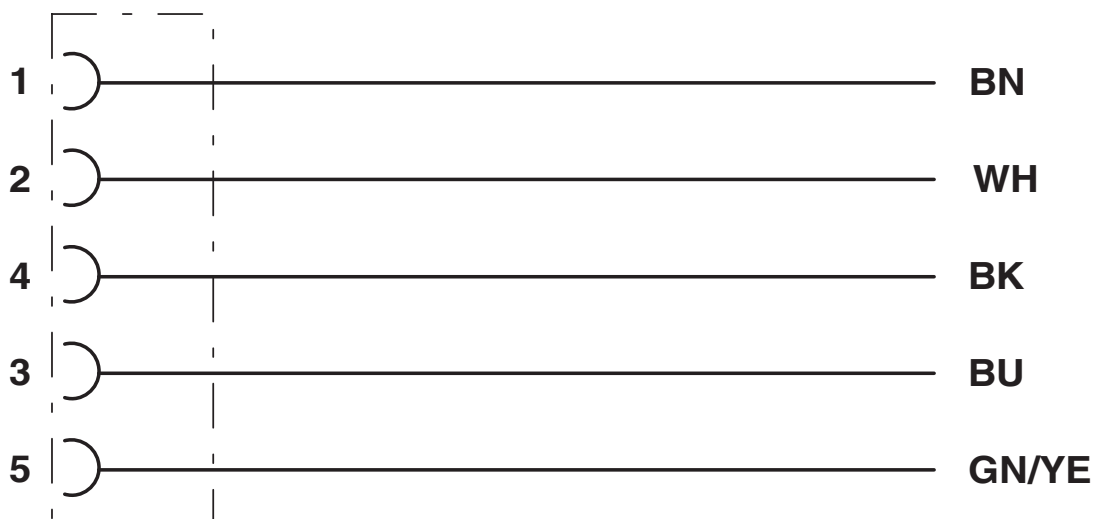
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Circuit diagram



Contact assignment of the M12 sockets

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1454419>



UL Listed

Approval ID: FILE E 221474

| | Nominal voltage U_N | Nominal current I_N | Cross section AWG | Cross section mm^2 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 125 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 |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
| | 125 V | 4 A | - | - |



EAC-RoHS

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

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Classifications

ECLASS

| | |
|-------------|----------|
| 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% |
| EF3.0 Climate Change | |
| CO2e kg | 0.676 kg CO2e |

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