

Sensor/actuator cable - SAC-5P-1,5-600/M12FR HD



1404053

<https://www.phoenixcontact.com/pc/products/1404053>

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Sensor/actuator cable, 5-position, PP-EPDM halogen-free, gray RAL 7035, free cable end, on Socket angled M12, coding: A, cable length: 1.5 m, Hygienic design, with high-grade steel knurl

Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Stainless steel type 1.4404 used to provide corrosion protection for all exposed metal parts
- Contamination can be detected quickly – thanks to the light color

Commercial Data

| | |
|--------------------------------------|---------------------|
| Item number | 1404053 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Product Key | BF1CDA |
| Catalog Page | Page 143 (C-4-2013) |
| GTIN | 4046356679084 |
| Weight per Piece (including packing) | 66.1 g |
| Weight per Piece (excluding packing) | 58.4 g |
| Customs tariff number | 85444290 |
| Country of origin | PL |

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Technical Data

Product properties

| | |
|----------------------|--------------------------|
| Product type | Sensor/actuator cable |
| Number of positions | 5 |
| Application | Food processing industry |
| No. of cable outlets | 1 |
| Shielded | no |
| Coding | A - standard |

Insulation characteristics

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

Material specifications

| | |
|-------------------------------|-----------------|
| Sealing material | FKM |
| 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

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

LED signaling

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

Connection data

Conductor connection

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

Connector

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Connection 1

| | |
|-------------|----------------|
| Head design | free cable end |
|-------------|----------------|


Connection 2

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

Cable / line

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

Halogen-free PP gray [600]

| | |
|---|---|
| Dimensional drawing |  |
| Cable weight | 34 kg/km |
| Number of positions | 5 |
| Shielded | no |
| Cable type | Halogen-free PP gray [600] |
| 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 | 1.27 mm ±0.02 mm (Signal line) |
| External cable diameter | 5 mm ±0.15 mm |
| Outer sheath, material | PP-EPDM |
| External sheath, color | gray RAL 7035 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PP |
| Single wire, color | Brown, white, blue, black, gray |
| Thickness, insulation | ≥ 0.21 mm (Core insulation) |
| Thickness, outer sheath | approx. 0.7 mm |
| Overall twist | 5 cores, twisted |
| Length of twist, overall twist | 55 mm |
| Max. conductor resistance | 58 Ω/km (at 20 °C) |
| Nominal voltage, cable | ≤ 300 V AC |
| Test voltage | ≥ 3000 V AC |
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 10 x D |

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| | |
|---------------------------------|---|
| Max. bending cycles | 4000000 |
| Torsion force | ± 270 °/m |
| Torsion cycles | ≥ 4000000 |
| Torsional frequency | max. 25 (Torsion cycles/min) |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |
| Other resistance | Resistant to cold bending and cold impacts according to DIN EN 60811-1-4 (-40 °C) |
| Special properties | FDA compliant according to FDA 21 CFR 177.2600 |
| | highly flexible |
| | Flexible cable conduit capable |
| Ambient temperature (operation) | -40 °C ... 105 °C (cable, fixed installation) |
| | -25 °C ... 105 °C (Cable, flexible installation) |

Ambient conditions

| | |
|---------------------------------|-----------------------------------|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| | IP69K |
| Ambient temperature (operation) | -40 °C ... 105 °C (Plug / socket) |

Standards and regulations

M12

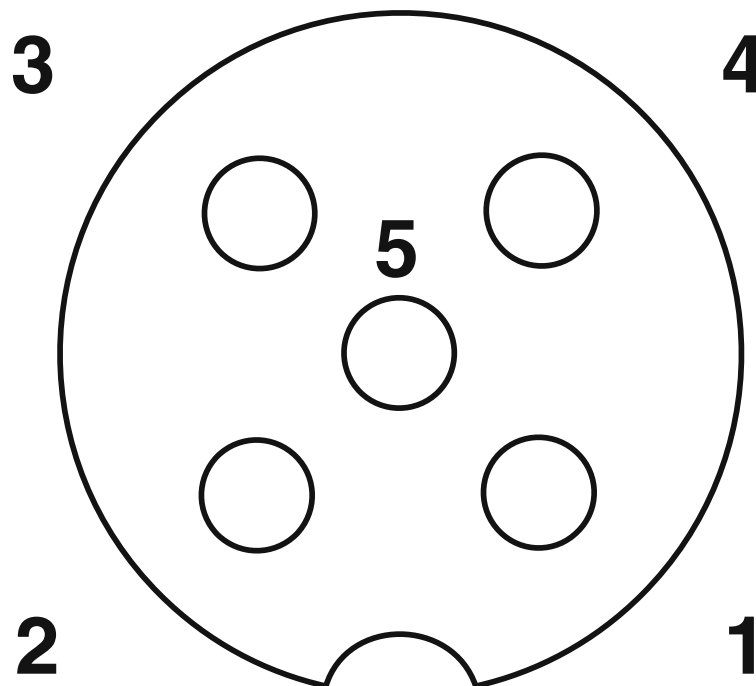
| | |
|--------------------------|---------------------|
| Standards/specifications | IEC 61076-2-101 |
| Standards/specifications | FDA 21 CFR 177.2600 |

Drawings

Circuit diagram



Schematic diagram



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

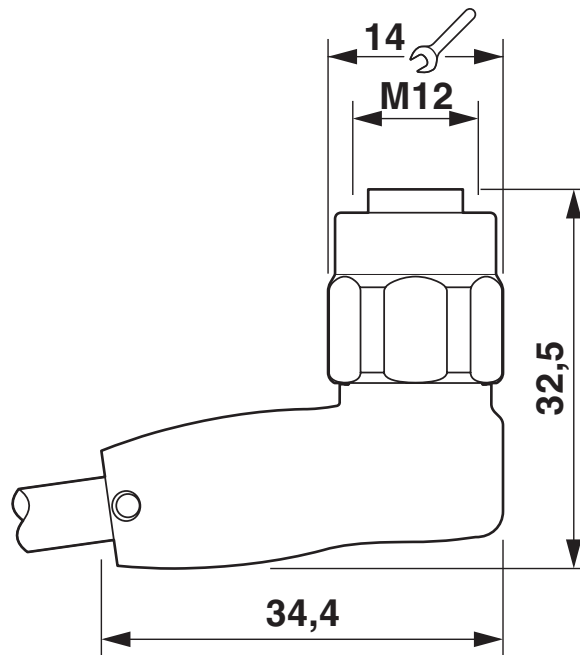
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Dimensional drawing



M12 x 1 socket, angled

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Approvals



EAC

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



EAC

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

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

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Environmental Product Compliance

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

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Accessories

Diagonal cutter

Diagonal cutter - CUTFOX-S VDE - 1212207

<https://www.phoenixcontact.com/pc/products/1212207>



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

Stripping tool

Stripping tool - WIREFOX SAC - 1212623

<https://www.phoenixcontact.com/pc/products/1212623>



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 4.4 to 7 mm, any stripping length

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Stripping tool

Stripping tool - WIREFOX 10 - 1212150

<https://www.phoenixcontact.com/pc/products/1212150>



Stripping tool, for cables and conductors from 0.02 - 10 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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

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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

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Tool

Tool - SAC BIT M12-W14 - 1212513

<https://www.phoenixcontact.com/pc/products/1212513>

Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a hexagonal knurl wrench size of 14 mm, with 4 mm hexagonal drive



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