

1522516

https://www.phoenixcontact.com/in/products/1522516

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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, on free cable end, cable length: 5 m

Your advantages

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

Commercial Data

| Item number | 1522516 |
|--------------------------------------|---------------------|
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales Key | BF1 |
| Product Key | BF1CFA |
| Catalog Page | Page 208 (C-2-2019) |
| GTIN | 4017918957377 |
| Weight per Piece (including packing) | 228.6 g |
| Weight per Piece (excluding packing) | 228 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 | 8 | | |
| Application | Standard | | |
| No. of cable outlets | 1 | | |
| Shielded | no | | |
| Coding | A | | |
| Insulation characteristics | | | |
| Overvoltage category | П | | |
| Degree of pollution | 3 | | |

Material specifications

| Flammability rating according to UL 94 | HB |
|--|---|
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Contact material | CuZn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Material for screw connection | Zinc die-cast, nickel-plated |

Electrical properties

| Contact resistance | ≤ 5 mΩ |
|--------------------------------|----------|
| Insulation resistance | ≥ 100 MΩ |
| Nominal voltage U _N | 30 V AC |
| | 30 V DC |
| Nominal current I _N | 2 A |
| Protective circuit | unwired |

Mechanical properties

| Mechanical data | | | | |
|-----------------|-----------------------------|-------|--|--|
| | Insertion/withdrawal cycles | ≥ 100 | | |
| Si | Signaling | | | |
| | Status display | No | | |
| | Status display present | No | | |
| Сс | Connection data | | | |

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

Connector

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| Coding type | A |
|---|--|
| e/line | |
| Cable length | 5 m |
| JR halogen-free black [PUR] | |
| Dimensional drawing | |
| | |
| Cable weight | 46 kg/km |
| UL AWM Style | 20549 / 10493 (80°C/300 V) |
| Number of positions | 8 |
| Shielded | no |
| Cable type | PUR halogen-free black [PUR] |
| Conductor structure signal line | 32x 0.10 mm |
| AWG signal line | 24 |
| Conductor cross section | 8x 0.25 mm² (Signal line) |
| Wire diameter incl. insulation | 1.17 mm ±0.02 mm |
| External cable diameter | 5.9 mm ±0.15 mm |
| Outer sheath, material | PUR |
| External sheath, color | black-gray RAL 7021 |
| Conductor material | Bare Cu litz wires |
| Material, filler | PE |
| Material wire insulation | PP |
| Single wire, color | white, brown, green, yellow, gray, pink, blue, red |
| Thickness, insulation | ≥ 0.21 mm |
| Thickness, outer sheath | approx. 0.8 mm |
| Overall twist | 8 wires around filler to the core |
| Max. conductor resistance | ≤ 78 Ω/km |
| Insulation resistance | ≥ 1 GΩ*km |
| Wave impedance | 100 Ω +15 % (with 1 MHz) |
| Cable capacity | ≤ 70 pF/m |
| Nominal voltage, cable | ≤ 300 V |
| Test voltage | ≥ 3000 V |
| Minimum bending radius, fixed installation | 8 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Max. bending cycles | 4000000 |
| Halogen-free | in accordance with DIN VDE 0472 part 815 |



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| Flame resistance | in accordance with UL 758/1581 FT2 | |
|---------------------------------|---|--|
| | According to 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) | |

Environmental and real-life conditions

| Ambient conditions | |
|---------------------------------|--|
| Degree of protection | IP65 |
| | IP67 |
| | IP68 |
| 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

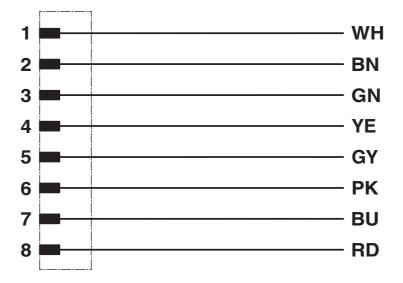
| Standards/specifications | IEC 61076-2-101 |
|--------------------------|-----------------|
| Otanuarus/specifications | |

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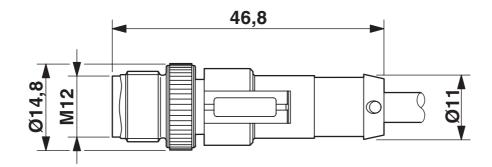
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Drawings

Circuit diagram



Dimensional drawing



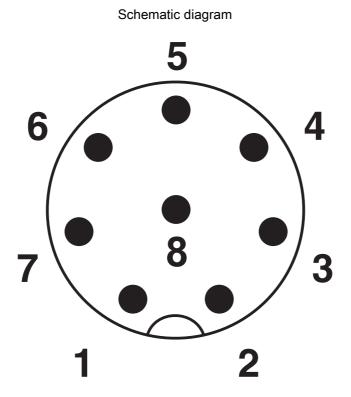
Plug, M12 x 1, straight, shielded

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Pin assignment M12 plug, 8-pos., view plug side



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Approvals

| | UL Listed Approval ID: FILE E 221474 | | | | |
|---|---|--------------------------------|--------------------------------|-------------------|-------------------------------|
| | | Nominal Voltage U _N | Nominal Current I _N | Cross Section AWG | Cross Section mm ² |
| | | 30 V | 2 A | - | - |
| | | | | | |
| ٩ | CUL Listed Approval ID: FILE E 221474 | | | | |
| | | Nominal Voltage U _N | Nominal Current I _N | Cross Section AWG | Cross Section mm ² |
| | | 30 V | 2 A | - | - |
| | | | | | |



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



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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: unlimited = EFUP-e No hazardous substances above threshold values

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Accessories

PROT-M12 FS-PA-CHAIN - Sealing cap

1430873 https://www.phoenixcontact.com/in/products/1430873

 $\mathsf{M12}$ sealing cap made of plastic with fixing band, for sensor cables, for free $\mathsf{M12}$ plugs



SAC-M12-EXCLIP-M - Locking clip

1558988

https://www.phoenixcontact.com/in/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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PABA WH/23 - Insert label

1013779

https://www.phoenixcontact.com/in/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

PABA YE/23 - Insert label

1013782 https://www.phoenixcontact.com/in/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

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B-STIFT - Marker pen

1051993

https://www.phoenixcontact.com/in/products/1051993



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 $\rm mm$

CUTFOX-S VDE - Diagonal cutter

1212207 https://www.phoenixcontact.com/in/products/1212207



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

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WIREFOX SAC-1 - Stripping tool

1212757

https://www.phoenixcontact.com/in/products/1212757



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 3.2 to 4.4 mm, any stripping length

WIREFOX SAC - Stripping tool

1212623 https://www.phoenixcontact.com/in/products/1212623



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

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WIREFOX 10 - Stripping tool

1212150

https://www.phoenixcontact.com/in/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

WP-CTA POM 13,0 BK - Protective hose adapter

1422884 https://www.phoenixcontact.com/in/products/1422884



Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 x 13), corrugated in parallel

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WP-PA HF 13,0 BK - Protective hose

3240681

https://www.phoenixcontact.com/in/products/3240681



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

WP-PA HF-HB 13,0 BK - Protective hose

3240839 https://www.phoenixcontact.com/in/products/3240839



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m

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TSD 04 SAC - Torque screwdriver

1208429

https://www.phoenixcontact.com/in/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/in/products/1212224



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0. 3 - 1.2 $\rm Nm$

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TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

https://www.phoenixcontact.com/in/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/in/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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