

Sensor/actuator cable - SAC-8P-10,0-PUR/M12FS SH



1522891

<https://www.phoenixcontact.com/de/produkte/1522891>

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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, shielded, free cable end, on Socket straight M12, coding: A, cable length: 10 m

Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

Sensor/actuator cable - SAC-8P-10,0-PUR/M12FS SH



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Commercial Data

| | |
|--------------------------------------|-------------------------|
| Item number | 1522891 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales Key | C1 - Sensor-Aktor-Kabel |
| Product Key | BF1CMA |
| Catalog Page | Page 211 (C-2-2019) |
| GTIN | 4017918957674 |
| Weight per Piece (including packing) | 548 g |
| Weight per Piece (excluding packing) | 544,3 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 | yes |
| Coding | A - standard |

Insulation characteristics

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

Material specifications

| | |
|--|---|
| Flammability rating according to UL 94 | HB |
| Sealing material | NBR |
| Material of grip body | TPU, hardly inflammable, self-extinguishing |
| Contact material | CuZn |
| Contact surface material | Ni/Au |
| Contact carrier material | TPU GF |
| Cable gland material | 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 | 30 V AC |
| | 30 V DC |
| Nominal current I_N | 2 A |
| Protective circuit | unwired |

Connection data

Conductor connection

| | |
|-------------------|---------------------|
| Tightening torque | 0.4 NmM12 connector |
|-------------------|---------------------|

Connector

| | |
|-----------------------------|------------|
| Insertion/withdrawal cycles | ≥ 100 |
|-----------------------------|------------|

Header 1

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

Header 2

| | |
|-------------------|----------|
| Head design | Socket |
| Head cable outlet | straight |
| Head thread type | M12 |

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| | |
|--------|---|
| Coding | A |
|--------|---|

LED signaling

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

Cable / line

| | |
|---|---|
| Cable length | 10 m |
| Cable weight | 53 kg/km |
| UL AWM Style | 20549 / 10493 (80°C/300 V) |
| Number of positions | 8 |
| Shielded | yes |
| 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 mm ² (Signal line) |
| Wire diameter incl. insulation | 1.17 mm ±0.02 mm |
| External cable diameter | 5.9 mm ±0.2 mm |
| Outer sheath, material | PUR |
| External sheath, color | black-gray RAL 7021 |
| Conductor material | Bare Cu litz wires |
| Material wire insulation | PP |
| Single wire, color | brown, white, green, yellow, gray, pink, blue, red |
| Thickness, insulation | approx. 0.2 mm |
| Thickness, outer sheath | approx. 0.5 mm |
| Overall twist | 8 wires around filler to the core |
| Optical shield covering | 85 % |
| Max. conductor resistance | ≤ 78 Ω/km (at 20 °C) |
| Insulation resistance | ≥ 1 GΩ*km (at 20 °C) |
| Nominal voltage, cable | ≤ 300 V AC |
| Test voltage | ≥ 3000 V AC (Spark test) |
| Test voltage Core/Shield | ≥ 2000 V AC (for 60 s) |
| Minimum bending radius, fixed installation | 5 x D |
| Minimum bending radius, flexible installation | 10 x D |
| Max. bending cycles | 2000000 |
| Halogen-free | in accordance with DIN VDE 0472 part 815 according to IEC 60754-1 |
| Flame resistance | in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) |
| Resistance to oil | in accordance with IEC 60811-404 |
| Other resistance | hydrolysis and microbe resistant Resistant to salt water |

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| | |
|---------------------------------|--|
| | low-abrasion |
| | partly UV-resistant in accordance with DIN EN ISO 4892-2-A |
| Special properties | Flexible cable conduit capable |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation) |
| | -25 °C ... 80 °C (Cable, flexible installation) |
| Cable weight | 54 kg/km |

Cable structure

| | |
|---------------------------------|--|
| Cable abbreviation | Li9Y-V1-C-V1-11Y |
| Cable type | PUR halogen-free black |
| External cable diameter | 5.90 mm |
| Outer sheath, material | PUR |
| External sheath, color | black-gray RAL 7021 |
| Conductor material | Bare Cu litz wires |
| Conductor structure signal line | 32x 0.10 mm |
| AWG signal line | 24 |
| Material, filler | PE |
| Material wire insulation | PP |
| Thickness, insulation | ≥ 0.21 mm (Core insulation) |
| Wire diameter incl. insulation | 1.17 mm ±0.02 mm |
| Single wire, color | brown, white, green, yellow, gray, pink, blue, red |
| Overall twist | 8 wires around filler to the core |
| Shielding | Braided copper wires |
| Optical shield covering | 85 % |

Electrical properties

| | |
|-----------------------------|--------------|
| Nominal voltage, cable | ≤ 300 V |
| Test voltage, cable | ≥ 3000 V |
| Conductor resistance | max. 78 Ω/km |
| Cable insulation resistance | ≥ 100 GΩ*km |

Mechanical properties

| | |
|---|---------------------|
| Smallest bending radius, fixed installation | 59 mm |
| Smallest bending radius, movable installation | 59 mm |
| Number of bending cycles | 4000000 |
| Bending radius | 59 mm |
| Traversing path | 10 m |
| Traversing rate | 3 m/s |
| Acceleration | 10 m/s ² |

Bending cycles

| | |
|---|---------|
| Smallest bending radius, fixed installation | 59 mm |
| Smallest bending radius, movable installation | 59 mm |
| Number of bending cycles | 4000000 |
| Bending radius | 59 mm |
| Traversing path | 10 m |

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| | |
|-----------------|---------------------|
| Traversing rate | 3 m/s |
| Acceleration | 10 m/s ² |

Ambient conditions

| | |
|---------------------------------|--|
| Ambient temperature (operation) | -5 °C ... 80 °C (Cable, flexible installation) |
| | -25 °C ... 80 °C (cable, fixed installation) |

Ambient conditions

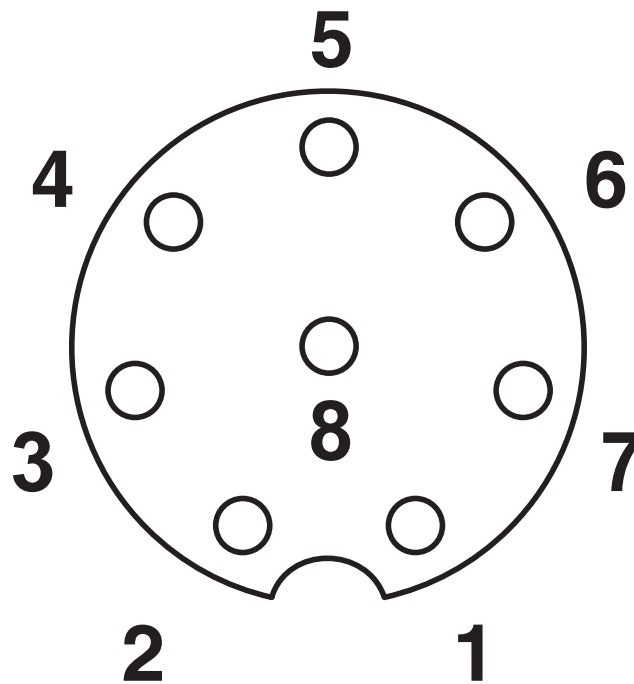
| | |
|---------------------------------|--|
| Degree of protection | IP65 |
| | IP67 |
| Ambient temperature (operation) | -25 °C ... 90 °C (Plug / socket) |
| | -25 °C ... 80 °C (cable, fixed installation) |
| | -5 °C ... 80 °C (Cable, flexible installation) |

Standards and regulations

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

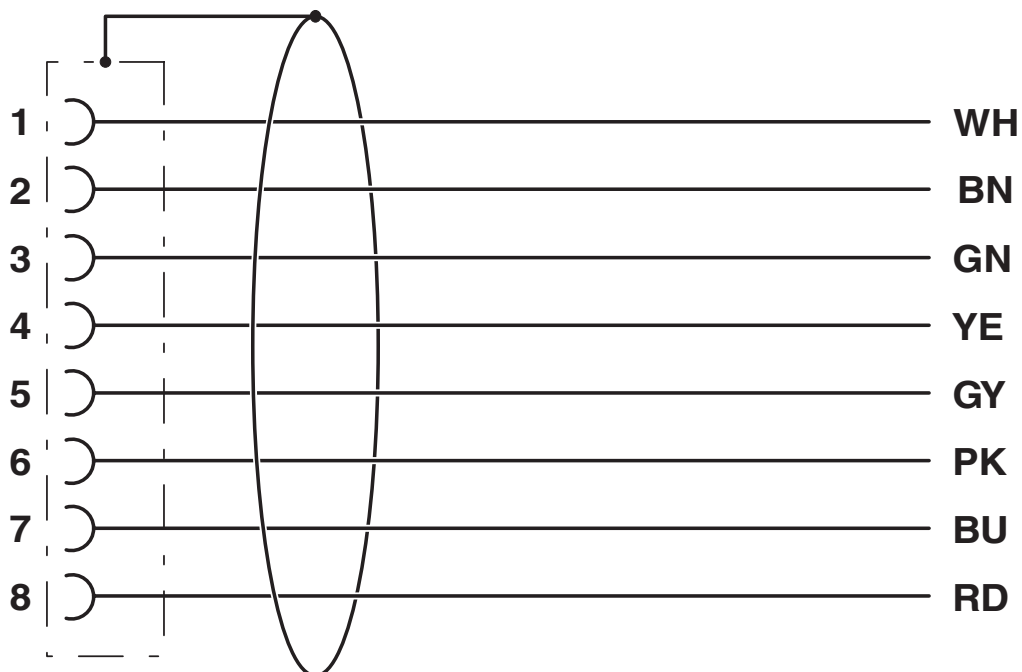
Drawings

Schematic diagram



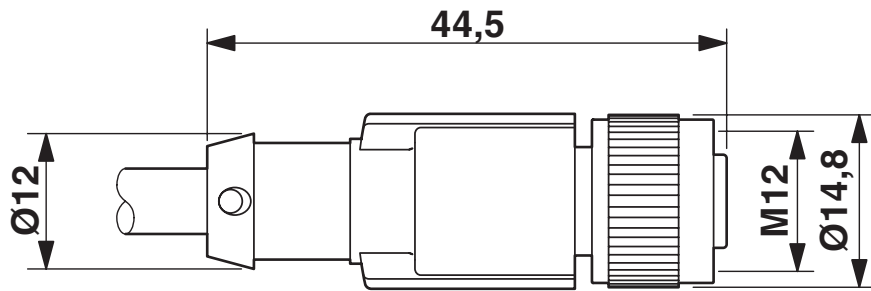
Pin assignment M12 socket, 8-pos., A-coded, view female side

Circuit diagram



Contact assignment of the M12 socket

Dimensional drawing



M12 x 1 socket, straight, shielded


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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 | - | - |

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

| cULus Listed |
|---------------------|
|---------------------|

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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

| | |
|------------|--|
| REACH SVHC | Lead 7439-92-1 |
| 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

Insert label

Insert label - PABA WH/23 - 1013779

<https://www.phoenixcontact.com/de/produkte/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

Insert label

Insert label - PABA YE/23 - 1013782

<https://www.phoenixcontact.com/de/produkte/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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Marker pen

Marker pen - B-STIFT - 1051993

<https://www.phoenixcontact.com/de/produkte/1051993>



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

Diagonal cutter

Diagonal cutter - CUTFOX-S VDE - 1212207

<https://www.phoenixcontact.com/de/produkte/1212207>



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

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Stripping tool

Stripping tool - WIREFOX SAC-1 - 1212757

<https://www.phoenixcontact.com/de/produkte/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

Stripping tool

Stripping tool - WIREFOX SAC - 1212623

<https://www.phoenixcontact.com/de/produkte/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/de/produkte/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

Protective hose adapter

Protective hose adapter - WP-CTA POM 13,0 BK - 1422884

<https://www.phoenixcontact.com/de/produkte/1422884>



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

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Protective hose

Protective hose - WP-PA HF 13,0 BK - 3240681

<https://www.phoenixcontact.com/de/produkte/3240681>



Protective hose, material: PA 6, filament: without, UV-resistant: yes, flexible, degree of protection: IP68, color: black, inflammability class in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

Protective hose

Protective hose - WP-PA HF-HB 13,0 BK - 3240839

<https://www.phoenixcontact.com/de/produkte/3240839>



Protective hose, material: PA 6, filament: without, UV-resistant: yes, flexible, degree of protection: IP68, color: black, inflammability class in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m

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Screw plug

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

<https://www.phoenixcontact.com/de/produkte/1430899>

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



Locking clip

Locking clip - SAC-M12-EXCLIP-F - 1558991

<https://www.phoenixcontact.com/de/produkte/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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Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/de/produkte/1208429>



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

Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

<https://www.phoenixcontact.com/de/produkte/1212224>



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

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Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

<https://www.phoenixcontact.com/de/produkte/1212600>



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

Tool

Tool - SAC BIT M12-D15 - 1208432

<https://www.phoenixcontact.com/de/produkte/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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