

# Sensor/actuator cable - SAC-12P-10,0-PUR/FR SCO



1430682

<https://www.phoenixcontact.com/pc/products/1430682>

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Sensor/actuator cable, 12-position, PUR halogen-free, black RAL 9005, free cable end, on Socket angled M12 SPEEDCON, coding: A, cable length: 10 m

## Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Save time, thanks to installation with SPEEDCON fast locking system
- Our standard: robust halogen-free PUR cable
- Save space – with high-pos. connectors

## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1430682             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Product Key                          | BF1CGA              |
| Catalog Page                         | Page 212 (C-2-2019) |
| GTIN                                 | 4046356456494       |
| Weight per Piece (including packing) | 618 g               |
| Weight per Piece (excluding packing) | 595.3 g             |
| Customs tariff number                | 85444290            |
| Country of origin                    | DE                  |

## Technical Data

### Product properties

|                      |                       |
|----------------------|-----------------------|
| Product type         | Sensor/actuator cable |
| Number of positions  | 12                    |
| Application          | Standard              |
| No. of cable outlets | 1                     |
| Shielded             | no                    |
| Coding               | A - standard          |

### Insulation characteristics

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

### Material specifications

|  |   |
|--|---|
| Flammability rating according to UL 94 | V0  |
| Sealing material                       | NBR   |
| Material of grip body                  | TPU, hardly inflammable, self-extinguishing |
| Contact material                       | CuZn  |
| Contact surface material               | Ni/Au                                       |
| Contact carrier material               | PA 6.6                                      |
| 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 $I_N$ | 1.5 A    |
| Protective circuit    | unwired  |

### LED signaling

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

### Connection data

#### Conductor connection

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

### Connector

#### Connection 1

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

#### Connection 2

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

## Cable / line

|              |      |
|--------------|------|
| Cable length | 10 m |
|--------------|------|

### PUR halogen-free black [PUR]

|                                 |  |
|---------------------------------|--|
| Dimensional drawing             |      |
| Cable weight                    | 17 kg/km   |
| Number of positions             | 12   |
| Shielded                        | no   |
| Cable type                      | PUR halogen-free black [PUR]   |
| Conductor structure signal line | 18x 0.10 mm  |
| AWG signal line                 | 26   |
| Conductor cross section         | 12x 0.14 mm <sup>2</sup> (Signal line)   |
| Wire diameter incl. insulation  | 1 mm ±0.05 mm (Signal line)  |
| External cable diameter         | 7.2 mm   |
| Outer sheath, material          | PUR  |
| External sheath, color          | black RAL 9005   |
| Conductor material              | Tin-plated Cu litz wires   |
| Material wire insulation        | PP   |
| Single wire, color              | white, brown, green, yellow, gray, pink, blue, red, black, violet, gray/pink, red/blue |
| Overall twist                   | 12 wires twisted in layers   |
| Max. conductor resistance       | 142 Ω/km   |
| Nominal voltage, cable          | ≤ 300 V  |
| Test voltage                    | ≥ 1500 V   |
| Max. bending cycles             | 4000000  |
| Halogen-free                    | in accordance with DIN EN 50267-2-1  |
| Flame resistance                | in acc. to UL VW1<br>DIN EN 60332-1-2  |
| Resistance to oil               | EN 60811-2-1   |
| Other resistance                | EN 50525-2-21:2012-01<br>partly UV-resistant in accordance with DIN EN ISO 4892-2-A    |

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|                                 |  |
|---------------------------------|--|
| Special properties              | Low adhesion surface                           |
| Ambient temperature (operation) | -40 °C ... 80 °C (cable, fixed installation)   |
|                                 | -5 °C ... 80 °C (Cable, flexible installation) |

## Ambient conditions

|                                 |   |
|---------------------------------|---|
| Degree of protection            | IP65  |
|                                 | IP67  |
|                                 | IP68  |
| Ambient temperature (operation) | -25 °C ... 85 °C (Plug / socket)                |
|                                 | -40 °C ... 80 °C (cable, fixed installation)    |
|                                 | -20 °C ... 80 °C (Cable, flexible installation) |

## Standards and regulations

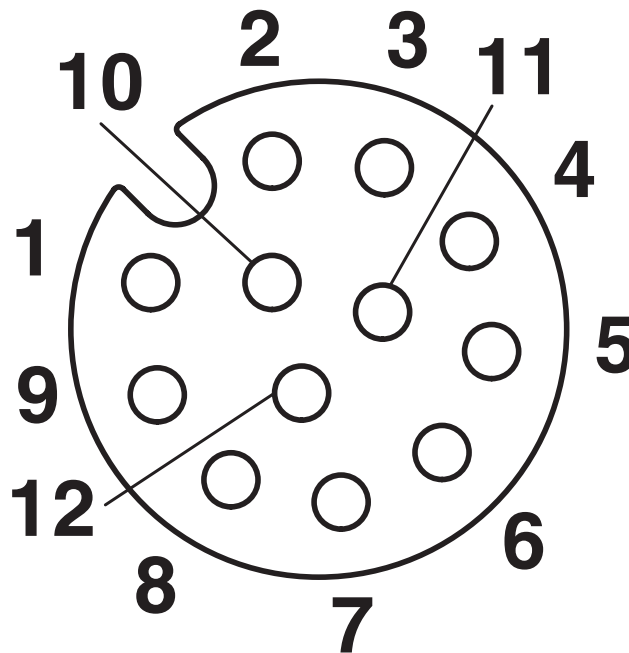
|                          |                 |
|--------------------------|-----------------|
| Standards/specifications | IEC 61076-2-101 |
|--------------------------|-----------------|

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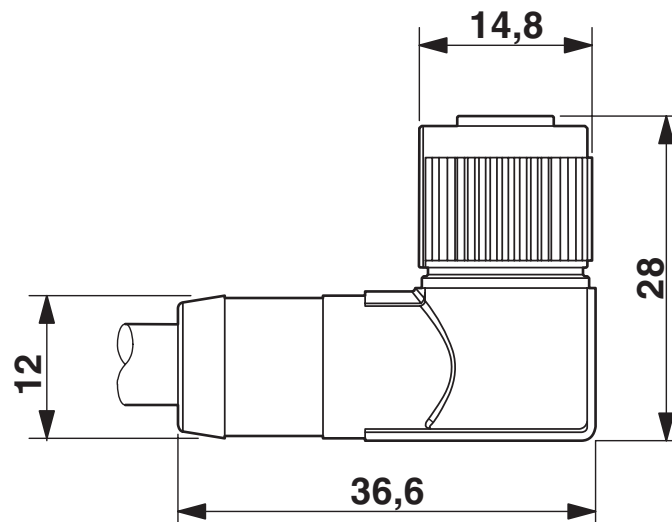
## Drawings

Schematic diagram



Pin assignment M12, 12-pos., female side view

Dimensional drawing



Socket M12-SPEEDCON, angled, shielded

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Circuit diagram



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## Approvals



**EAC**

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



**UL Listed**

Approval ID: FILE E 221474

|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 30 V                  | 1 A                   | -                 | -                           |



**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

### Insert label

Insert label - PABA WH/23 - 1013779

<https://www.phoenixcontact.com/pc/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

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### Insert label

Insert label - PABA YE/23 - 1013782

<https://www.phoenixcontact.com/pc/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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## Marker pen

Marker pen - B-STIFT - 1051993

<https://www.phoenixcontact.com/pc/products/1051993>



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

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## 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

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<https://www.phoenixcontact.com/pc/products/1430682>

## Stripping tool

Stripping tool - WIREFOX SAC-1 - 1212757

<https://www.phoenixcontact.com/pc/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

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## 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 mm<sup>2</sup>, self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm<sup>2</sup> stranded/1.5 mm<sup>2</sup> solid, replaceable stripping blade

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## Protective hose adapter

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

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

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## Protective hose

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

<https://www.phoenixcontact.com/pc/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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## Screw plug

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

<https://www.phoenixcontact.com/pc/products/1430899>

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



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## Locking clip

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

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

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## 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-D15 - 1208432

<https://www.phoenixcontact.com/pc/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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