

# SAC-5P- 3,0-115/M 8FSB - Sensor/actuator cable



1404471

<https://www.phoenixcontact.com/in/products/1404471>

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Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket straight M8, coding: B, cable length: 3 m

## Your advantages

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

## Commercial Data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1404471             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales Key                            | BF1                 |
| Product Key                          | BF1BDA              |
| Catalog Page                         | Page 200 (C-2-2019) |
| GTIN                                 | 4046356697095       |
| Weight per Piece (including packing) | 92.4 g              |
| Weight per Piece (excluding packing) | 88.7 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          | Standard              |
| No. of cable outlets | 1                     |
| Shielded             | no                    |
| Coding               | B                     |

### 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

|                       |                            |
|-----------------------|----------------------------|
| 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 $I_N$ | 3 A                        |
| Protective circuit    | unwired                    |

### Mechanical properties

#### Mechanical data

|                             |            |
|-----------------------------|------------|
| Insertion/withdrawal cycles | $\geq 100$ |
|-----------------------------|------------|

### Signaling

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

### Connection data

#### Conductor connection

|                   |                        |
|-------------------|------------------------|
| Tightening torque | 0.2 Nm (M8 connectors) |
|-------------------|------------------------|

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## Connector

### Connection 1

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

### Connection 2

|                     |                    |
|---------------------|--------------------|
| Type                | Socket straight M8 |
| Number of positions | 5                  |
| Coding type         | B                  |
| Number of positions | 5                  |

## Cable/line

|              |     |
|--------------|-----|
| Cable length | 3 m |
|--------------|-----|

### PUR, black, 5th conductor gray [115]

|   |   |
|---|---|
| Cable weight                                  | 30 kg/km  |
| UL AWM Style                                  | 20549   |
| Number of positions                           | 5   |
| Shielded                                      | no  |
| Cable type                                    | PUR, black, 5th conductor gray [115]  |
| Conductor structure signal line               | 32x 0.10 mm   |
| AWG signal line                               | 24  |
| Conductor cross section                       | 0.25 mm <sup>2</sup>  |
| Wire diameter incl. insulation                | 1.17 mm ±0.02 mm  |
| External cable diameter                       | 4.7 mm ±0.15 mm   |
| Outer sheath, material                        | PUR   |
| External sheath, color                        | black-gray RAL 7021   |
| Conductor material                            | Bare Cu litz wires  |
| Material, filler                              | PP  |
| Material wire insulation                      | PP  |
| Single wire, color                            | brown, white, blue, black, gray   |
| Thickness, insulation                         | approx. 0.21 mm (Core insulation)<br>approx. 0.7 mm (Outer cable sheath)        |
| Overall twist                                 | 5 cores, twisted  |
| Length of twist, overall twist                | 75 mm   |
| Max. conductor resistance                     | ≤ 75 Ω/km   |
| Insulation resistance                         | ≥ 1 GΩ*km   |
| Nominal voltage, cable                        | ≤ 300 V (AC)  |
| Test voltage                                  | ≥ 3000 V (AC)   |
| Smallest bending radius, fixed installation   | 23.5 mm   |
| Smallest bending radius, movable installation | 47 mm   |
| Max. bending cycles                           | 4000000   |
| Halogen-free                                  | in accordance with DIN VDE 0472 part 815<br>in accordance with DIN EN 50267-2-1 |
| Flame resistance                              | according to UL 758/1581 (horizontal)   |

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|                                 |   |
|---------------------------------|---|
|                                 | in accordance with UL 758/1581 FT2              |
| Resistance to oil               | According to DIN EN 60811-2-1, 168 h at 100°C   |
| Other resistance                | hydrolysis and microbe resistant                |
|                                 | Resistant to salt water                         |
|                                 | Low adhesion                                    |
|                                 | abrasion-resistant                              |
| 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) |

## Standards and regulations

|                          |                 |
|--------------------------|-----------------|
| Standards/specifications | IEC 61076-2-104 |
|--------------------------|-----------------|

# SAC-5P- 3,0-115/M 8FSB - Sensor/actuator cable

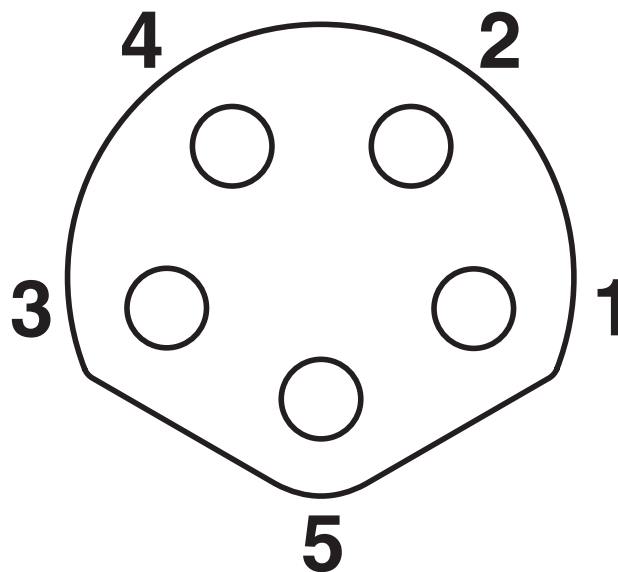


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## Drawings

Schematic diagram



Pin assignment, socket side, M8, 5-pos., B-coded

Circuit diagram



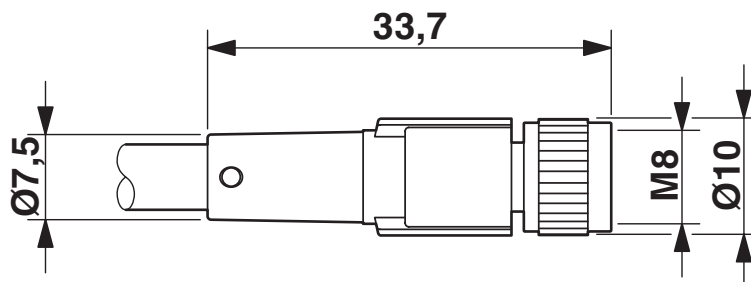
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Dimensional drawing



Socket M8 x 1, straight

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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                  | 3 A                   | -                 | -                           |



### cUL Listed

Approval ID: FILE E 221474

|  | Nominal Voltage $U_N$ | Nominal Current $I_N$ | Cross Section AWG | Cross Section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 30 V                  | 3 A                   | -                 | -                           |



### EAC-RoHS

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-M 8 MS-PA-CHAIN - Screw plug

1430860

<https://www.phoenixcontact.com/in/products/1430860>

M8 sealing cap made of plastic with fixing band for sensor cables, for M8 sockets



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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



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## 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 mm

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## 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

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## 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  $\varnothing$  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 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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## 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

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## 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 02 SAC - Torque screwdriver

1208487

<https://www.phoenixcontact.com/in/products/1208487>



Torque screwdriver, with preset torque of 0.2 Nm and 4 mm hexagonal drive for M8 connectors

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<https://www.phoenixcontact.com/in/products/1404471>

## SAC BIT M8-D10 - Tool

1208461

<https://www.phoenixcontact.com/in/products/1208461>



Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive

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