

# SAC-4P- 5,0-PUR/M 8FR - Sensor/actuator cable



1681897

<https://www.phoenixcontact.com/in/products/1681897>

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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M8, cable length: 5 m

## Your advantages

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

## Commercial Data

Item number	1681897
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF1
Product Key	BF1BCA
Catalog Page	Page 194 (C-2-2019)
GTIN	4017918158552
Weight per Piece (including packing)	112.4 g
Weight per Piece (excluding packing)	111.8 g
Customs tariff number	85444290
Country of origin	DE

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## Technical Data

### Product properties

Product type	Sensor/actuator cable
Number of positions	4
Application	Standard
No. of cable outlets	1
Shielded	no
Coding	A

### 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 $U_N$	48 V AC
	60 V DC
Nominal current $I_N$	4 A
Protective circuit	unwired

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$
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### 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
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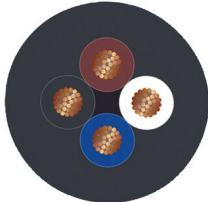
### Connection 2

Type	Socket angled M8
Number of positions	4
Coding type	A

## Cable/line

Cable length	5 m
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### PUR halogen-free black [PUR]

Dimensional drawing	
Cable weight	23 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	4
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Conductor cross section	4x 0.25 mm <sup>2</sup> (Signal line)
Wire diameter incl. insulation	1.17 mm ±0.02 mm (Signal line)
External cable diameter	3.95 mm ±0.15 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, blue, black
Thickness, insulation	≥ 0.21 mm (Core insulation) approx. 0.5 mm (Outer cable sheath)
Overall twist	4 wires, twisted
Max. conductor resistance	max. 78 Ω/km (at 20 °C)
Insulation resistance	≥ 100 GΩ*km (at 20 °C)
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V

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Smallest bending radius, fixed installation	20 mm
Smallest bending radius, movable installation	40 mm
Max. bending cycles	10000000
Halogen-free	in accordance with DIN VDE 0472 part 815
Flame resistance	in accordance with UL 758/1581 FT2 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
Special properties	Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish
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
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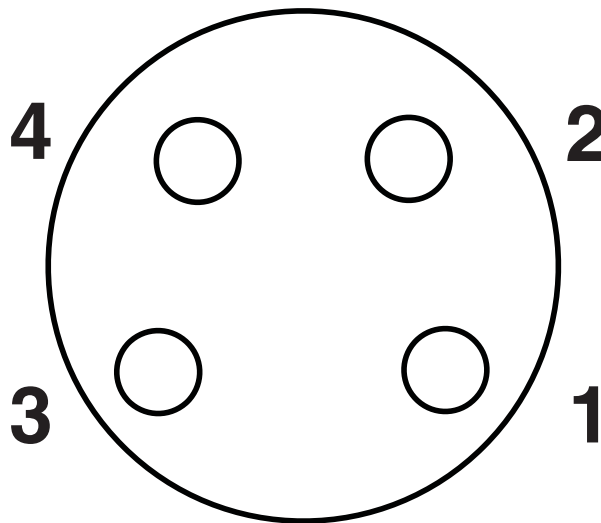
# SAC-4P- 5,0-PUR/M 8FR - Sensor/actuator cable

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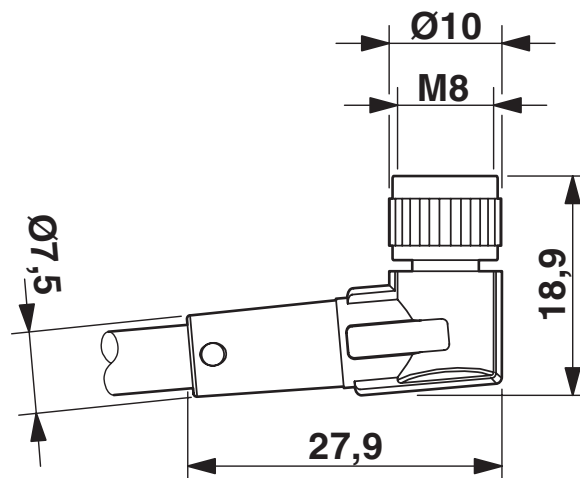
## Drawings

Schematic diagram



Pin assignment M8 socket, 4-pos., view female side

Dimensional drawing



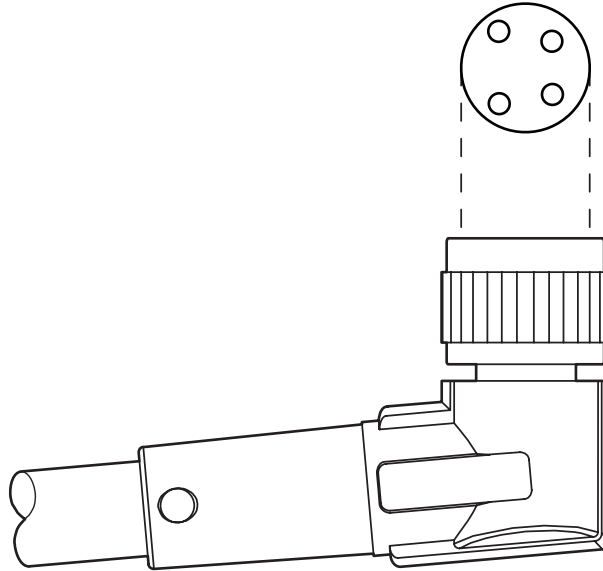
Socket M8 x 1, angled

# SAC-4P- 5,0-PUR/M 8FR - Sensor/actuator cable

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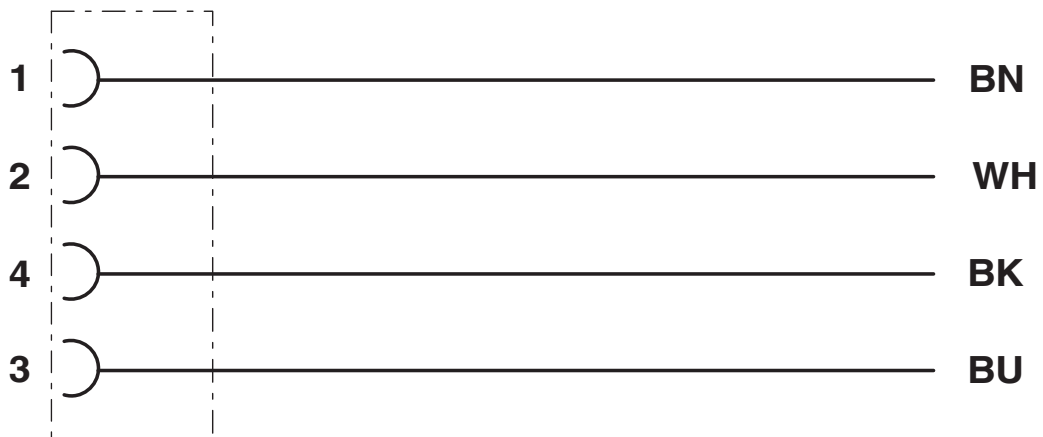
<https://www.phoenixcontact.com/in/products/1681897>

Schematic diagram



Layout of connector pin assignments

Circuit diagram



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## Approvals

 <b>UL Listed</b> Approval ID: FILE E 221474				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	30 V	4 A	-	-

 <b>cUL Listed</b> Approval ID: FILE E 221474				
	Nominal Voltage $U_N$	Nominal Current $I_N$	Cross Section AWG	Cross Section $\text{mm}^2$
	30 V	4 A	-	-

 <b>EAC</b> 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
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### 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

### 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 Ø 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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## 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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## 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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## 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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