

1500198

https://www.phoenixcontact.com/us/products/1500198

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M8, coding: A, on free cable end, cable length: 1 m

### Your advantages

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

### Commercial data

Item number	1500198
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF01
Product key	BF1BBA
GTIN	4017918584832
Weight per piece (including packing)	24.8 g
Weight per piece (excluding packing)	23 g
Customs tariff number	85444290
Country of origin	DE



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### Technical data

### Product properties

Product type	Sensor/actuator cable
Application	Standard
Number of positions	3
No. of cable outlets	1
Shielded	no
Coding	A

### Material specifications

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

Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	48 V AC
	60 V DC
Nominal current I <sub>N</sub>	4 A

### Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	≥ 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

Туре	Plug straight M8
Number of positions	3
Coding type	A

Connection 2	
Type	free cable end



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### Cable/line

Cable length	1 m
PUR halogen-free black [PUR]	
Dimensional drawing	
Cable weight	18 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	3
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Conductor cross section	3x 0.25 mm² (Signal line)
Wire diameter incl. insulation	1.17 mm ±0.02 mm
External cable diameter	3.60 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, blue, black
Thickness, insulation	≥ 0.21 mm (Core insulation)
Thickness, outer sheath	approx. 0.50 mm
Overall twist	3 wires, twisted
Length of twist, overall twist	40 mm
Max. conductor resistance	≤ 78 Ω/km (at 20 °C)
Insulation resistance	≥ 100 GΩ*km (at 20 °C)
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Smallest bending radius, fixed installation	18 mm
Smallest bending radius, movable installation	36 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
	hydrolysis and microbe resistant



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Other resistance	Highly resistant to acids, alkaline solutions and solvents
	Resistant to salt water
	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

### M8

Standard designation	M8 connector
Standards/specifications	IEC 61076-2-104

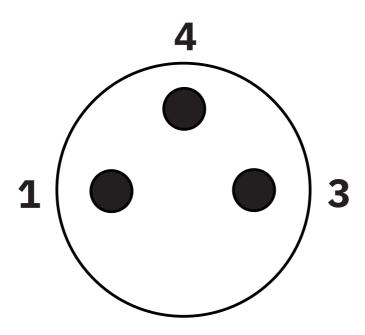


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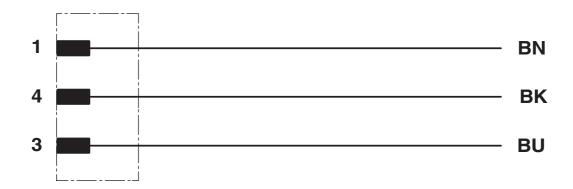
### Drawings





Pin assignment M8 plug, 3-pos., view male side

Circuit diagram

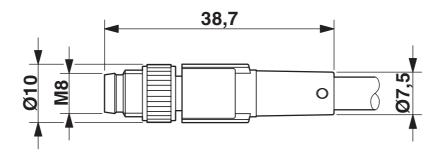




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### Dimensional drawing



M8 x 1 male plug, straight version



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### **Approvals**

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1500198

<u> </u>	<b>UL Listed</b> Approval ID: FILE E 221474				
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		60 V	4 A	-	-

• <u>®</u>	<b>cUL Listed</b> Approval ID: FILE E 221474	1			
		Nominal voltage U <sub>N</sub>	Nominal current I <sub>N</sub>	Cross section AWG	Cross section mm <sup>2</sup>
		60 V	4 A	-	-

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

cULus Listed



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### Classifications

UNSPSC 21.0

### **ECLASS**

ECLASS-11.0	27060311
ECLASS-12.0	27060311
ECLASS-13.0	27060311
ETIM	
ETIM 9.0	EC001855
UNSPSC	

26121600



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### Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	ac3db1aa-595c-4673-a356-9869cc560844



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### Accessories

### PROT-M 8 FS-PA-CHAIN - Sealing cap

1430857

https://www.phoenixcontact.com/us/products/1430857

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



### UCT-WMT (23X4) - Conductor marker

0801453

https://www.phoenixcontact.com/us/products/0801453



Conductor marker, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size:  $23 \times 4$  mm, Number of individual labels: 30



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#### UC-WMT (23X4) - Conductor marker

0819411

https://www.phoenixcontact.com/us/products/0819411



Conductor marker, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 24

### US-WMT (23X4) - Cable marker

0828769

https://www.phoenixcontact.com/us/products/0828769



Cable marker, Card, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 56



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### WMTW (23X4)R - Cable marker

0831004

https://www.phoenixcontact.com/us/products/0831004



Cable marker, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: insert, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 3000

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

1422884

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



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



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

3240681

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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/us/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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### B-STIFT - Marker pen

1051993

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

### CUTFOX-S VDE - Diagonal cutter

1212207

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



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

### WIREFOX SAC - Stripping tool

1212623

https://www.phoenixcontact.com/us/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/us/products/1212150



Stripping tool, for cables and conductors from 0.02 -  $10~\text{mm}^2$ , self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm $^2$  stranded/1.5 mm $^2$  solid, replaceable stripping blade

### TSD 02 SAC - Torque screwdriver

1208487

https://www.phoenixcontact.com/us/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/us/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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