

SAC-8P-M12MS/ 3,0-PUR/M12FS SH - Sensor/actuator cable



1522998

<https://www.phoenixcontact.com/in/products/1522998>

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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 3 m

Your advantages

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

Commercial Data

Item number	1522998
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	BF1
Product Key	BF1CMA
Catalog Page	Page 211 (C-2-2019)
GTIN	4017918957759
Weight per Piece (including packing)	189.5 g
Weight per Piece (excluding packing)	185.4 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

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	CuZn
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	2 A
Protective circuit	unwired

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	0.4 Nm (M12 connector)
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Connector

Connection 1

Coding type	A
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Connection 2

Coding type	A
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Cable/line

Cable length	3 m
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PUR halogen-free black [PUR]

Dimensional drawing	
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)

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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 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)

Environmental and real-life conditions

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
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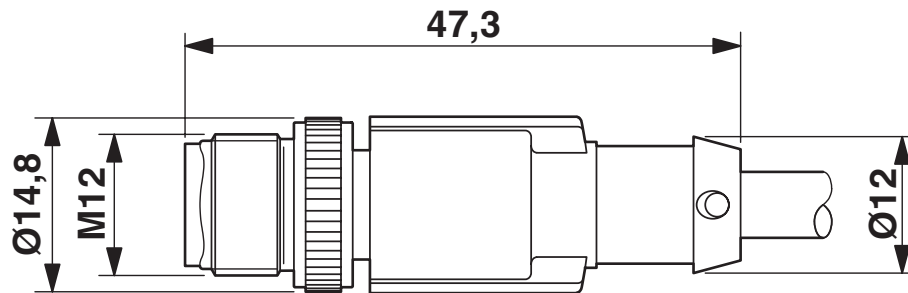
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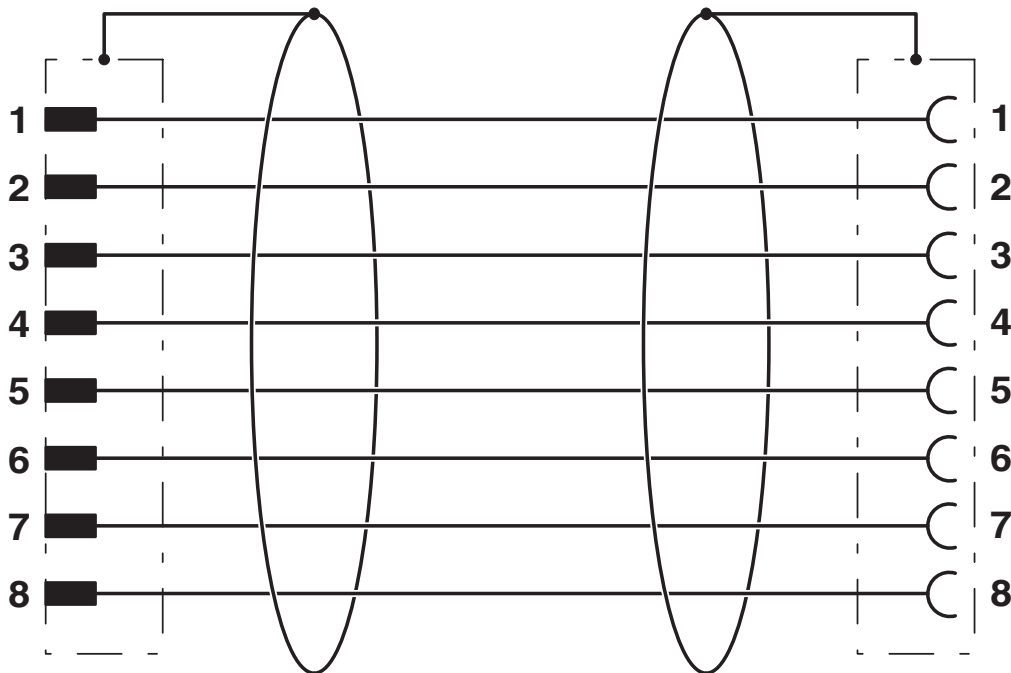
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram



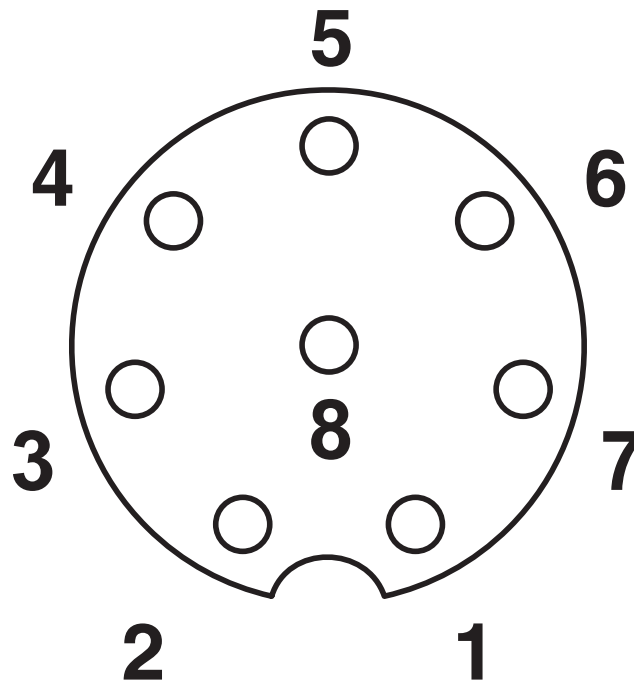
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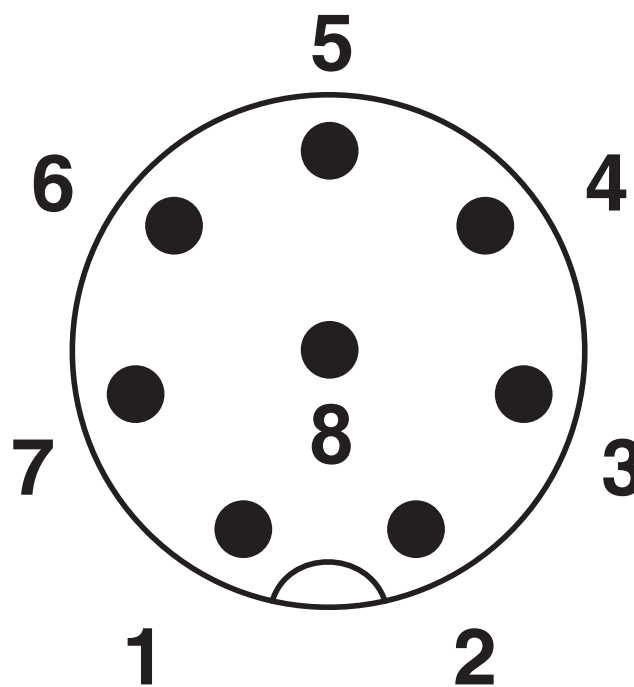
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Schematic diagram



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

Schematic diagram



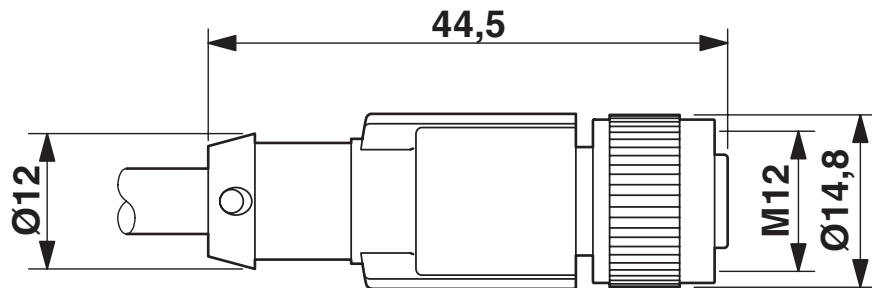
Pin assignment M12 plug, 8-pos., view plug side

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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	
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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

PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

<https://www.phoenixcontact.com/in/products/1430873>

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



SAC-M12-EXCLIP-M - Locking clip

1558988

<https://www.phoenixcontact.com/in/products/1558988>

Locking clip for the pin 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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PABA WH/23 - Insert label

1013779

<https://www.phoenixcontact.com/in/products/1013779>

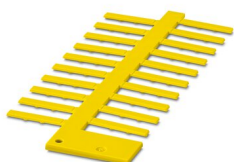


Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

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

PROT-M12 MS-PA-CHAIN - Screw plug

1430899

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

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



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SAC-M12-EXCLIP-F - Locking clip

1558991

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

TSD 04 SAC - Torque screwdriver

1208429

<https://www.phoenixcontact.com/in/products/1208429>



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

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TSD-M 1,2NM - Torque screwdriver

1212224

<https://www.phoenixcontact.com/in/products/1212224>



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

TSD-M SAC-BIT ADAPTER - Adapter insert

1212600

<https://www.phoenixcontact.com/in/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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SAC BIT M12-D15 - Tool

1208432

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