

SAC-3P-M12MS/ 1,5-800/M12FS - Sensor/actuator cable



1456792

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Sensor/actuator cable, 3-position, PUR halogen-free, resistant to welding sparks, highly flexible, gray RAL 7001, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 1.5 m, for robots and drag chains

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Reliable solution for the body shop as cable is resistant to welding sparks

Commercial data

Item number	1456792
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	BF1CBA
Catalog page	Page 192 (C-2-2019)
GTIN	4046356593151
Weight per piece (including packing)	60 g
Weight per piece (excluding packing)	60 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Product properties

Product type	Sensor/actuator cable
Application	Robots and drag chains
Number of positions	3
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

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	250 V AC
	250 V DC
Nominal current I_N	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	0.4 Nm (M12 connector)
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Connector

Connection 1

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Type	Plug straight M12
Number of positions	3
Coding type	A

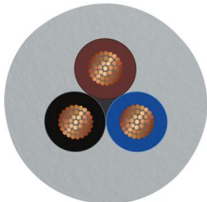
Connection 2

Type	Socket straight M12
Number of positions	3
Coding type	A

Cable/line

Cable length	1.5 m
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Gray, highly flexible PUR [800]

Dimensional drawing	
Note	Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments.
Cable weight	28.3 kg/km
UL AWM Style	20549
Number of positions	3
Shielded	no
Cable type	Gray, highly flexible PUR [800]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross section	3x 0.34 mm ² (Signal line)
Wire diameter incl. insulation	1.3 mm ±0.05 mm (Signal line)
External cable diameter	4.50 mm ±0.2 mm
Outer sheath, material	PUR
External sheath, color	gray RAL 7001
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	brown, blue, black
Overall twist	3 wires, twisted
Max. conductor resistance	approx. 53 Ω/km
Insulation resistance	≥ 20 MΩ*km
Nominal voltage, cable	300 V
Test voltage	2000 V
Minimum bending radius, fixed installation	4 x D
Minimum bending radius, flexible installation	7.5 x D

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Smallest bending radius, fixed installation	18 mm
Smallest bending radius, movable installation	34 mm
Max. bending cycles	10000000
Minimum bending radius, drag chain applications	7,5 x D
Traversing path	5 m
Traversing rate	3.3 m/s
Acceleration	5 m/s ²
Max. bending cycles	15000000
Bending radius	50 mm
Traversing path	0.9 m
Traversing rate	5 m/s
Acceleration	30 m/s ²
Torsion force	± 360 °/m
Torsion cycles	1000000
Halogen-free	in accordance with DIN VDE 0472 part 815
Flame resistance	in accordance with UL 758/1581 FT2
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	Highly resistant to acids, alkaline solutions and solvents Silicone-free
Special properties	Cable jacket is welding spark-resistant, recyclable, matt, low-adhesion, abrasion-resistant, flame-retardant, and self-extinguishing Free from silicone and cadmium 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) -40 °C ... 90 °C (cable, fixed installation) -30 °C ... 90 °C (Cable, flexible installation) to 120 °C (for 3000 h) to 90 °C (in acc. with UL)

Standards and regulations

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

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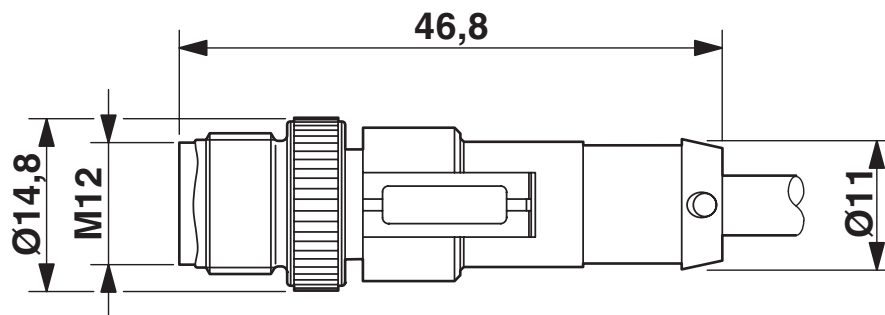


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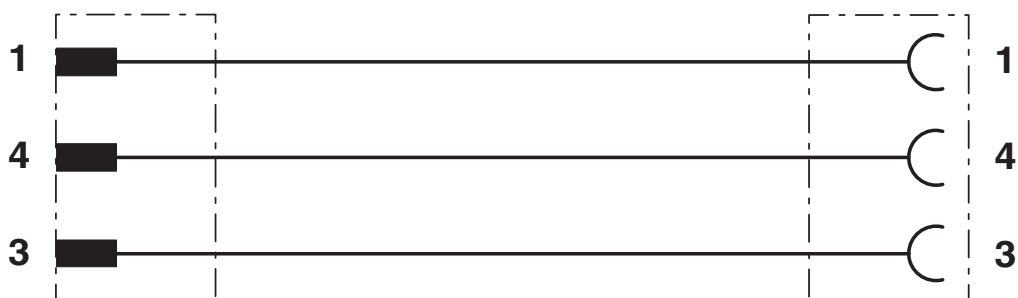
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Circuit diagram

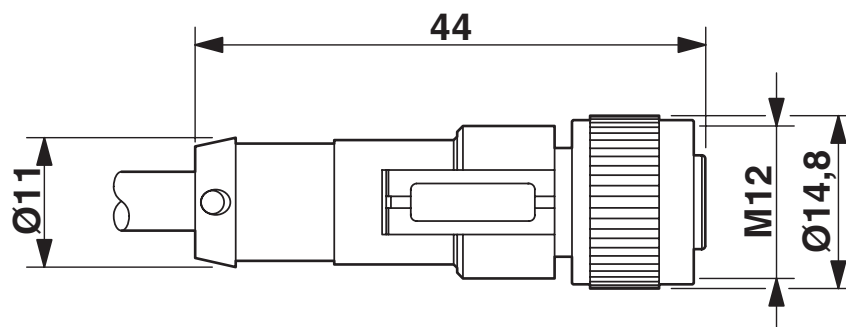


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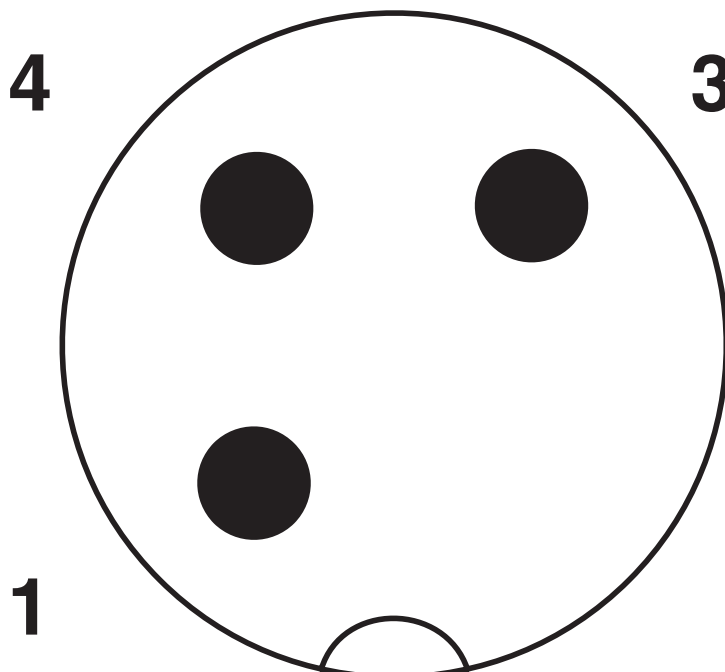
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Dimensional drawing



M12 x 1 socket, straight

Schematic diagram



Pin assignment M12 plug, 3-pos., A-coded, view male side

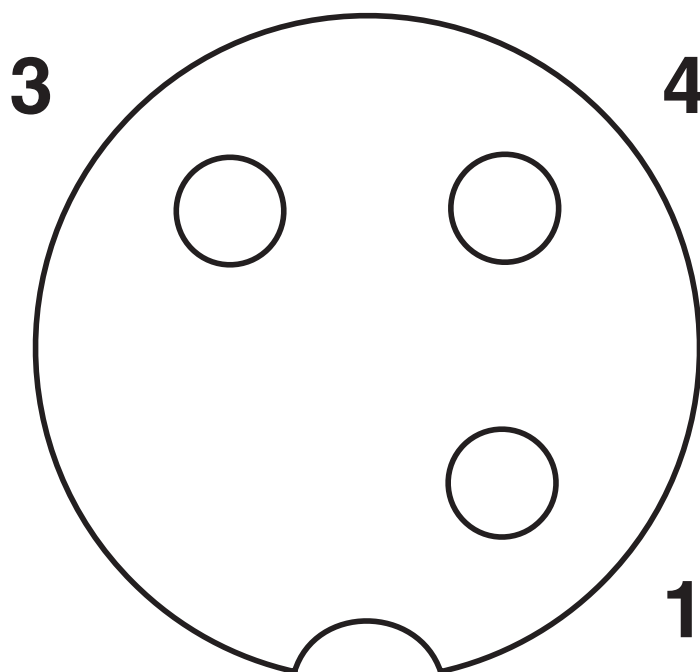
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Schematic diagram



Pin assignment socket M 12

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1456792>

	UL Listed Approval ID: FILE E 221474			
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	300 V	4 A	-	-

	cUL Listed Approval ID: FILE E 221474			
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
	300 V	4 A	-	-

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

cULus Listed				
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Classifications

ECLASS

ECLASS-11.0	27060311
ECLASS-12.0	27060311
ECLASS-13.0	27060311

ETIM

ETIM 9.0	EC001855
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UNSPSC

UNSPSC 21.0	26121600
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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Accessories

PROT-M12 FS-PA-CHAIN - Sealing cap

1430873

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

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



PROT-M12 MS-PA-CHAIN - Screw plug

1430899

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



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TSD 04 SAC - Torque screwdriver

1208429

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

SAC BIT M12-D15 - Tool

1208432

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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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