

SAC-3P-M12MS/20,0-PUR - Sensor/actuator cable



1683581

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, on free cable end, cable length: 20 m

Commercial data

Item number	1683581
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF03
Product key	AF1CBA
GTIN	4017918418328
Weight per piece (including packing)	424.4 g
Weight per piece (excluding packing)	421.2 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	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
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

Signaling

Status display	no
Status display present	no

Connection data

Conductor connection	
Tightening torque	0.4 Nm

Connector

Connection 1	
Type	Plug straight M12
Number of positions	3

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Coding type

A

Connection 2

Type

free cable end

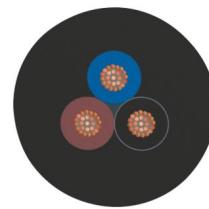
Cable/line

Cable length

20 m

PUR halogen-free black [PUR]

Dimensional drawing



Cable weight

23 kg/km

UL AWM Style

20549

Number of positions

3

Shielded

no

Cable type

PUR halogen-free black [PUR]

Conductor structure signal line

42x 0.10 mm

AWG signal line

22

Conductor cross section

3x 0.34 mm² (Signal line)

Wire diameter incl. insulation

1.27 mm ±0.02 mm (Signal line)

External cable diameter

3.85 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)

approx. 0.50 mm (Outer cable sheath)

Overall twist

3 wires, twisted

Max. conductor resistance

max. 58 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

19 mm

Smallest bending radius, movable installation

38 mm

Dynamic load capacity (bending)

Max. bending cycles: 10000000, Bending radius: 38 mm, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s²

Dynamic load capacity (torsion)

Torsion: ±180 °/m, Torsion cycles: ≥2000000, Torsional frequency: 35 cycles/min.

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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) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)
Ambient temperature (operation) (Cable, fixed installation)	-40 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (Cable, flexible installation)	-5 °C ... 80 °C (Cable, flexible installation)

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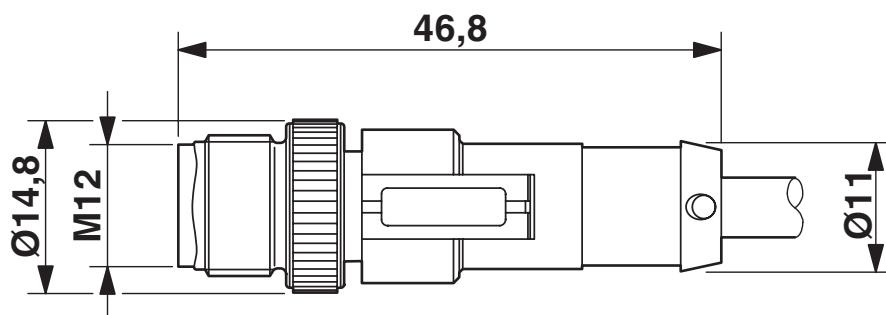
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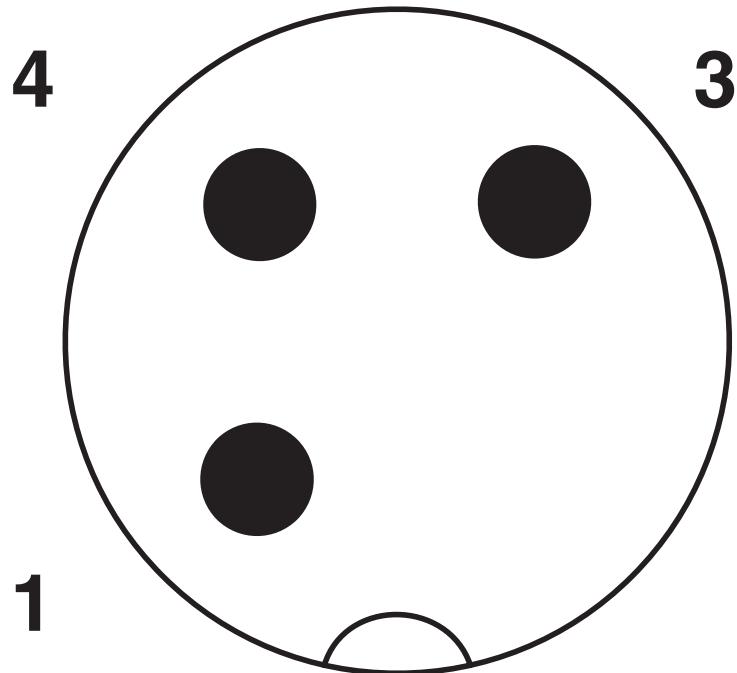
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram



Pin assignment M12 plug, 4-pos., A-coded, view plug side

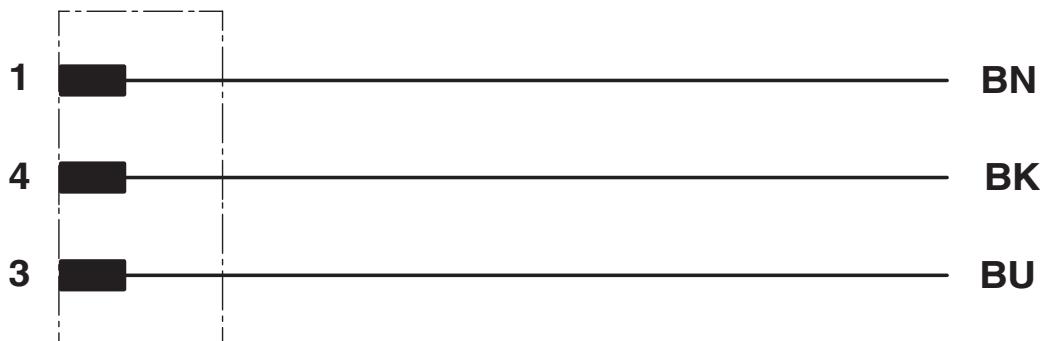
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Circuit diagram



Contact assignment of the M12 plug

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Approvals

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

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

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

Classifications

ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	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
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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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