

1500871

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Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, shielded (Tinned copper braided shield), 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	1500871
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	BF1CJA
Catalog page	Page 199 (C-2-2019)
GTIN	4017918612276
Weight per piece (including packing)	146.1 g
Weight per piece (excluding packing)	136.6 g
Customs tariff number	85444290
Country of origin	US



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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	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	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material for screw connection	Zinc die-cast, nickel-plated

Electrical properties

Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage U _N	48 V AC
	60 V DC
Nominal current I _N	4 A
Protective circuit	unwired

Mechanical properties

М	lechanical data	
	Insertion/withdrawal cycles	≥ 100
Sig	naling	
	Status display	No
	Status display present	No
Connection data		
С	onductor connection	

Tightening torque 0.4 Nm (M12 connector)
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Connector

Connection 1	
Plug straight M12	
4	
A	
Socket straight M12	
4	
A	

Cable/line

Cable length

3 m

PUR halogen-free black [PUR]

Dimensional drawing



Cable weight	36 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	4
Shielded	yes
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm² (Signal line)
Wire diameter incl. insulation	1.27 mm ±0.02 mm (Signal line)
External cable diameter	4.95 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, blue, black
Thickness, insulation	≥ 0.21 mm
Thickness, outer sheath	approx. 0.50 mm
Overall twist	4 wires, twisted
Optical shield covering	80 %
Max. conductor resistance	max. 58 Ω/km (at 20 °C)



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s 135 pF/m (Wire/shield) Nominal voltage, cable \$ 300 V Test voltage \$ 3000 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, fixed installation 10 x D Smallest bending radius, fixed installation 25 mm Smallest bending radius, movable installation 50 mm Max. bending cycles 10000000 Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN NDE 05267-2-1 in accordance with DIN EN 50267-2-1 Flame resistance in accordance with DIN EN 50267-2-1 Pame resistance in accordance with DIN EN 50267-2-1 Other resistance in accordance with DIN EN 50267-2-1 Other resistance in accordance with DIN EN 60311-2-1 Other resistance in accordance with DIN EN 60811-2-1 Other resistance Highly resistant to acids, alkaline solutions and solvents hydrolysis and microbe resistant sesistant to sait water party UV-resistant (in accordance with DIN EN ISO 4892-2-A) abrasion-resistant Special properties Flexible cable conduit capable Silicone-free Silicone-free	Insulation resistance	≥ 100 GΩ*km (at 20 °C)
s 135 pF/m (Wire/shield) Nominal voltage, cable \$ 300 V Test voltage \$ 3000 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, fixed installation 10 x D Smallest bending radius, fixed installation 25 mm Smallest bending radius, movable installation 50 mm Max. bending cycles 1000000 Halogen-free in accordance with DIN VDE 0472 part 815 Max. bending cycles in accordance with DIN VDE 0472 part 815 Flame resistance in accordance with DIN EN 50267-2-1 Flame resistance to oil in accordance with DIN EN 50267-2-1 Other resistance in accordance with DIN EN 50267-2-1 Flame resistance to oil in accordance with DIN EN 60811-2-1 Other resistance in accordance with DIN EN 60811-2-1 Other resistance Highly resistant to acids, alkaline solutions and solvents hydrolysis and microbe resistant resistant to salt water Party UV-resistant (in accordance with DIN EN ISO 4892-2-A) abrasion-resistant Special properties Flexible cable conduit capable Silicone-free Silicone-free	Wave impedance	≥ 62 Ω (f = 10 MHz)
Nominal voltage, cable \$ 300 V Test voltage \$ 3000 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, fixed installation 10 x D Smallest bending radius, fixed installation 25 mm Smallest bending radius, movable installation 50 mm Max. bending cycles 1000000 Halogen-free in accordance with DIN VDE 0472 part 815 Name resistance in accordance with DIN NDE 0672-2-1 Flame resistance in accordance with DIN NDE 05267-2-1 Other resistance in accordance with DIN NDE 06811-2-1 Other resistance in accordance with DIN ND 60811-2-1 Other resistance Highly resistant to acids, alkaline solutions and solvents hydrolysis and microbe resistant hydrolysis and microbe resistant Special properties Flexible cable conduit capable Silicone-free Silicone-free Silicone-free Free of substances which would hinder coating with paint or varnish Low adhesion surface Flexible cable conduit capable Silicone-free Silicone-free Silicone-free Free of substances which would hinder coating with pai	Cable capacity	≤ 80 pF/m (Conductor-Conductor)
Test voltage > 3000 V Minimum bending radius, fixed installation 5 x D Minimum bending radius, fixed installation 10 x D Smallest bending radius, movable installation 25 mm Smallest bending radius, movable installation 50 mm Max. bending cycles 1000000 Halogen-free in accordance with DIN VDE 0472 part 815 Frame resistance in accordance with DIN EN 50267-2-1 Flame resistance in accordance with UL 758/1581 FT2 DIN EN 60332-2-2 (20 s) DIN EN 60332-2-2 (20 s) Resistance to oil in accordance with DIN EN 0811-2-1 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) abrasion-resistant Silicone-free Special properties Flexible cable conduit capable Silicone-free Silicone-free Silicone-free Free of substances which would hinder coating with paint or varnish Low adhesion surface Low adhesion surface Atheint temperature (operation) -40 °C 80 °C (cable, fixed installation)		≤ 135 pF/m (Wire/shield)
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Smallest bending radius, movable installation 50 mm Max. bending cycles 1000000 Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 in accordance with DIN EN 50267-2-1 Flame resistance in accordance with UL 758/1581 FT2 DIN EN 60332-2-2 (20 s) in accordance with DIN EN 60811-2-1 Other resistance Highly resistant to acids, alkaline solutions and solvents hydrolysis and microbe resistant hydrolysis and microbe resistant Resistant to salt water partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) abrasion-resistant Silicone-free Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish Low adhesion surface -40 °C 80 °C (cable, fixed installation)	Minimum bending radius, flexible installation	10 x D
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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 hydrolysis and microbe resistant Resistant to salt water partly UV-resistant (in accordance with DIN EN ISO 4892-2-A) abrasion-resistant Flexible cable conduit capable Special properties Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish Low adhesion surface to wathesion surface	Flame resistance	in accordance with UL 758/1581 FT2
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Ambient temperature (operation) Ambient temperature (operation)		Resistant to salt water
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Silicone-free Free of substances which would hinder coating with paint or varnish Low adhesion surface Ambient temperature (operation)		abrasion-resistant
Free of substances which would hinder coating with paint or varnish Low adhesion surface Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Special properties	Flexible cable conduit capable
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Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)		• •
		Low adhesion surface
-25 °C 80 °C (Cable, flexible installation)	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

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



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