

SAC-4P- 5,0-28X/M12FS SH OD - Sensor/actuator cable



1454163

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Sensor/actuator cable, 4-position, PE-X/PE-X halogen-free, black-gray RAL 7021, shielded, free cable end, on Socket straight M12, coding: A, cable length: 5 m, for outdoor applications, with high-grade steel knurl

Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Robust throughout: resistant to oil, UV, and ozone, withstands temperatures from -40°C ... +105°C
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

Commercial data

Item number	1454163
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	BF1CJA
Catalog page	Page 154 (C-4-2013)
GTIN	4046356568777
Weight per piece (including packing)	388.6 g
Weight per piece (excluding packing)	379.7 g
Customs tariff number	85444290
Country of origin	PL

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Technical data

Product properties

Product type	Sensor/actuator cable
Application	External areas
Number of positions	4
No. of cable outlets	1
Shielded	yes
Coding	A

Data management status

Article revision	07
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Insulation characteristics

Degree of pollution	3
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Material specifications

Flammability rating according to UL 94	V0
Seal material	FPM
Material of grip body	PP
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PP
Material for screw connection	Stainless steel

Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 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

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Connection 1

Type	free cable end
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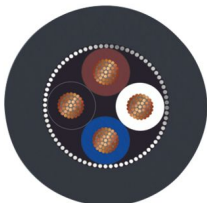
Connection 2

Type	Socket straight M12
Number of positions	4
Coding type	A

Cable/line

Cable length	5 m
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PE-X black [28X]

Dimensional drawing		
Cable weight	74 kg/km	
Number of positions	4	
Shielded	yes	
Cable type	PE-X black [28X]	
Conductor structure signal line	28x 0.15 mm	
AWG signal line	20	
Conductor cross section	4x 0.5 mm² (Signal line)	
Wire diameter incl. insulation	1.6 mm ±0.05 mm (Signal line)	
External cable diameter	6.80 mm ±0.2 mm	
Outer sheath, material	PE-X	
External sheath, color	black-gray RAL 7021	
Conductor material	Bare Cu litz wires	
Material wire insulation	PE-X	
Single wire, color	brown, white, blue, black	
Thickness, insulation	approx. 0.30 mm (Core insulation)	
	approx. 0.70 mm (Outer cable sheath)	
	approx. 0.45 mm (Inner sheath)	
Overall twist	4 wires, twisted	
Length of twist, overall twist	108.8 mm	
Optical shield covering	85 %	
Max. conductor resistance	≤ 39 Ω/km (at 20 °C)	
Insulation resistance	≥ 100 MΩ*km (at 20 °C)	
Cable capacity	≤ 100 nF/km (Conductor-conductor, asymmetrical/touching)	
	≤ 85 nF/km (Conductor-conductor, symmetrical/star quad)	

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	≤ 150 nF/km (Wire/shield)
Nominal voltage, cable	≤ 300 V AC
Test voltage	≥ 3000 V AC
Smallest bending radius, fixed installation	34 mm
Smallest bending radius, movable installation	68 mm
Dynamic load capacity (bending)	Max. bending cycles: 1000000, Bending radius: 68 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s ²
Halogen-free	in accordance with DIN VDE 0472 part 815
Flame resistance	according to DIN 60332-1-2 according to DIN EN 50266-2-5
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	UV resistant (according to DIN VDE 0276-605)
Special properties	Irradiated
Ambient temperature (operation)	-40 °C ... 105 °C (cable, fixed installation) -15 °C ... 105 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65
	IP67
	IP68
	IP69K
Ambient temperature (operation)	-40 °C ... 105 °C (Plug / socket)
	-40 °C ... 85 °C (On sudden changes in temperature (according to IEC 60512-11-4))

Standards and regulations

M12

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

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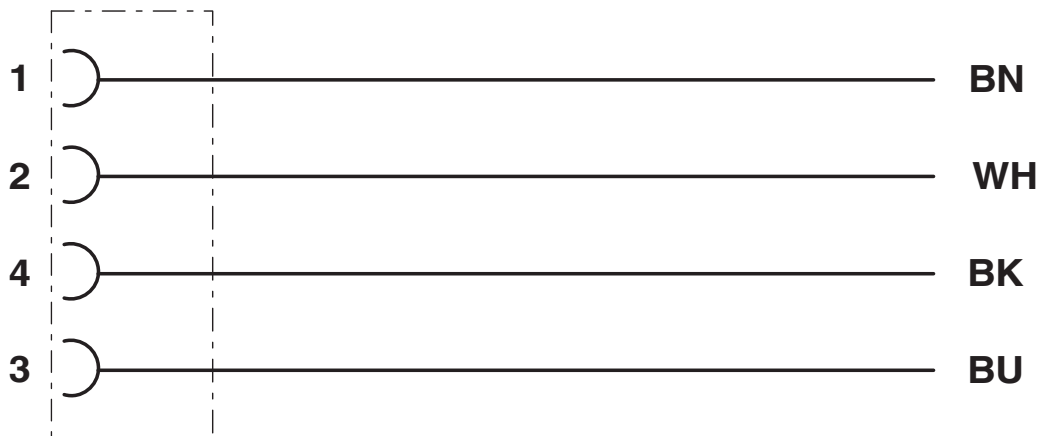


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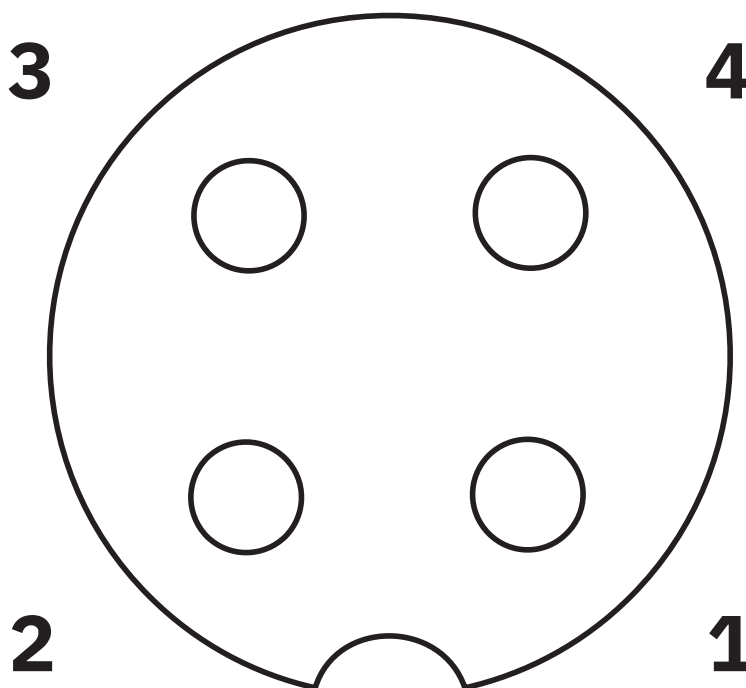
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Drawings

Circuit diagram



Schematic diagram

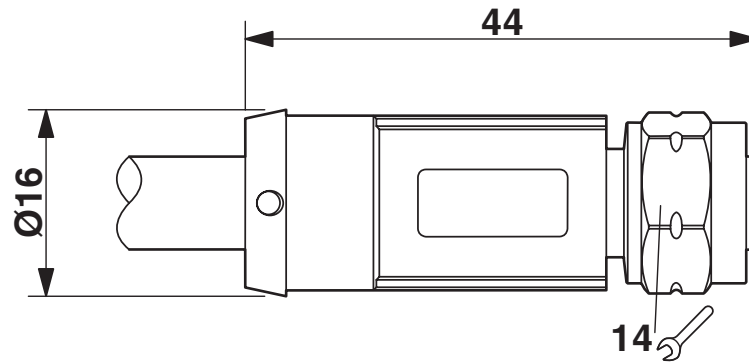


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Dimensional drawing



M12 x 1 socket, straight

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Approvals

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DNV

Approval ID: TAE00002K4



EAC-RoHS

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 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%
EF3.0 Climate Change	
CO2e kg	3.157 kg CO2e

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