

SAC-4P-M12MS/20-28X/M12FSSHOD - Sensor/actuator cable



1411609

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Sensor/actuator cable, 4-position, PE-X/PE-X halogen-free, black-gray RAL 7021, shielded, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 20 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	1411609
Packing unit	1 pc
Minimum order quantity	25 pc
Product key	AF1CJA
GTIN	4046356935357
Weight per piece (including packing)	1,515 g
Weight per piece (excluding packing)	1,501 g
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

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	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

Connector

Connection 1

Type	Plug straight M12
Number of positions	4
Coding type	A

Connection 2

Type	Socket straight M12
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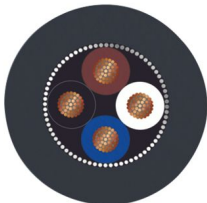
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Number of positions	4
Coding type	A

Cable/line

Cable length	20 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 mm ² (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)	
	≤ 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	

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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 IP68
Ambient temperature (operation)	-40 °C ... 105 °C (Plug / socket)
Ambient temperature (operation) (Operation)	-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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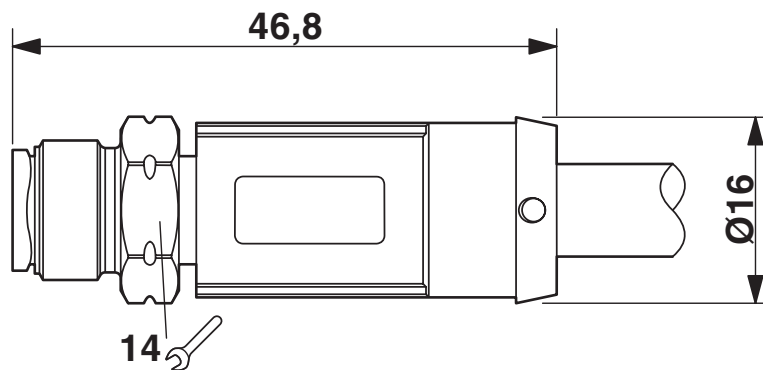


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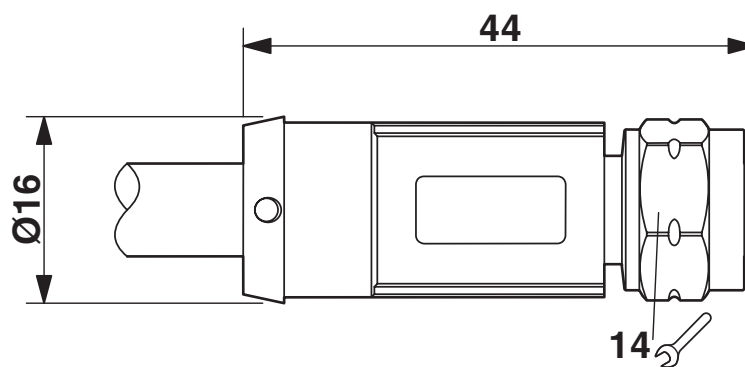
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight

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Schematic diagram



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

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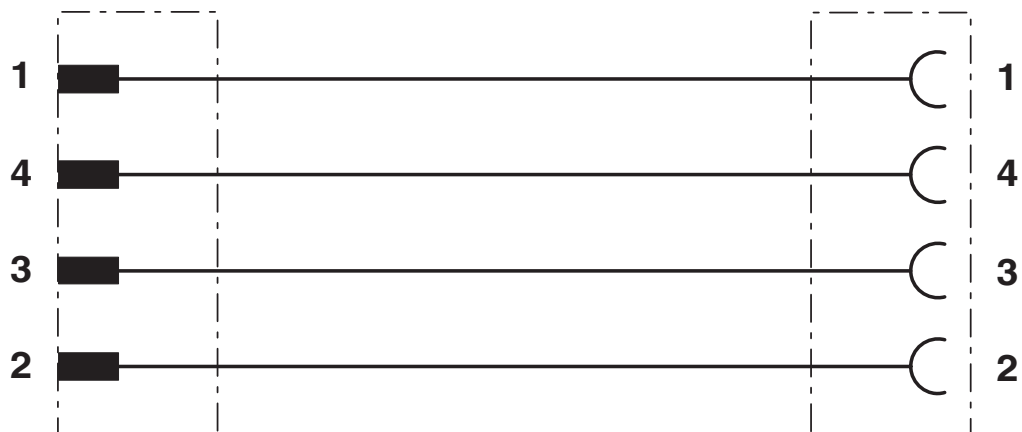
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Schematic diagram



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

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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Classifications

ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

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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-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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