

# Sensor/actuator cable - SAC-4P-M12MS/100-28X/FSSHOD HT - 1417631


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Sensor/actuator cable, 4-position, PE-X/PE-X, black-gray RAL 7021, Plug straight M12, A-coded, on Socket straight M12, A-coded, cable length: 100 m, for outdoor applications, with high-grade steel knurl



## Key Commercial Data

Packing unit	1 pc
Minimum order quantity	10 pc
GTIN	 4 055626 118116
GTIN	4055626118116

## Technical data

### Dimensions

Length of cable	100 m
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### Ambient conditions

Ambient temperature (operation)	-40 °C ... 105 °C (Plug / socket)
	-40 °C ... 85 °C (On sudden changes in temperature (according to IEC 60512-11-4))

### General

Rated current at 40°C	4 A
Rated voltage	48 V AC
	60 V DC
Number of positions	4
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
Degree of pollution	3

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## Technical data

### General

Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

### Material

Flammability rating according to UL 94	V0
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	PP
Material of grip body	PP
Material, knurls	Stainless steel
Sealing material	FPM

### Standards and Regulations

Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101
Flammability rating according to UL 94	V0

### Cable

Cable type	PE-X black
Cable type (abbreviation)	28X
Cable abbreviation	Li2X2X-C-VI-2X
Conductor cross section	4x 0.5 mm <sup>2</sup> (Signal line)
AWG signal line	20
Conductor structure signal line	28x 0.15 mm
Core diameter including insulation	1.6 mm ±0.05 mm (Signal line)
Thickness, insulation	approx. 0.3 mm (Core insulation)
	approx. 0.7 mm (Outer cable sheath)
	approx. 0.45 mm (Inner sheath)
Wire colors	brown, white, blue, black
Overall twist	4 wires, twisted
Length of twist, overall twist	108.8 mm
Shielding	Braided copper wires
Optical shield covering	85 %
External sheath, color	black-gray RAL 7021
External cable diameter D	6.8 mm ±0.2 mm
Smallest bending radius, fixed installation	34 mm
Smallest bending radius, movable installation	68 mm
Number of bending cycles	1000000
Bending radius	68 mm
Traversing path	10 m
Traversing rate	3 m/s

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## Technical data

### Cable

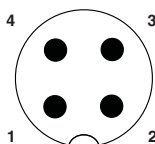
Acceleration	10 m/s <sup>2</sup>
Cable weight	74 kg/km
Outer sheath, material	PE-X
Material, inner sheath	PE-X
Material conductor insulation	PE-X
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 100 MΩ*km (at 20 °C)
Conductor resistance	≤ 39 Ω/km (at 20 °C)
Cable capacity	≤ 100 nF/km (Conductor-conductor, asymmetrical/touching)
	≤ 85 nF/km (Conductor-conductor, symmetrical/star quad)
	≤ 150 nF/km (Wire/shield)
Conductor inductance	0.64 mH/km (at 1 kHz)
	0.46 mH/km (at 10 MHz)
Nominal voltage, cable	≤ 300 V AC
Test voltage, cable	≥ 3000 V AC
Special properties	Irradiated
Flame resistance	according to DIN 60332-1-2
	according to DIN EN 50266-2-5
Halogen-free	in accordance with DIN VDE 0472 part 815
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	UV resistant according to DIN VDE 0276-605
Ambient temperature (operation)	-40 °C ... 105 °C (cable, fixed installation)
	-15 °C ... 105 °C (cable, flexible installation)

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

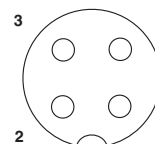
## Drawings

Schematic diagram



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

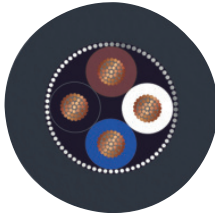
Schematic diagram



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

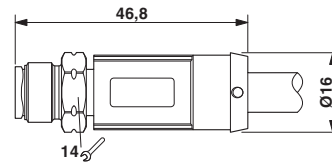
# Sensor/actuator cable - SAC-4P-M12MS/100-28X/FSSHOD HT - 1417631

Cable cross section



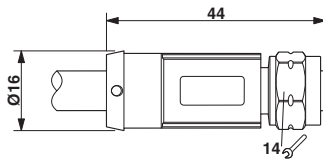
PE-X black [28X]

Dimensional drawing



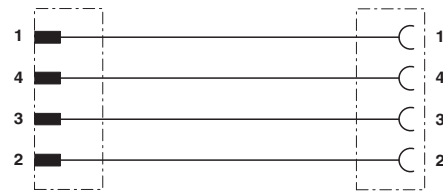
Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

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