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Especialistas en Automatización

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# Sensor/Actuator cable - SAC-4P-M12MS/ 3,0-PUR/M12FR SH - 1500994

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Sensor/Actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12, A-coded, on Socket angled M12, A-coded, Cable length: 3 m

## Why buy this product

- Easy and safe: 100% electrically tested plug-in components
- Our standard: robust halogen-free PUR cable
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

## Key Commercial Data

Packing unit	1 STK
GTIN	 4 017918 612344

## Technical data

### Dimensions

Length of cable	3 m
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### Ambient conditions

Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
Degree of protection	IP65
	IP67

### General

Rated current at 40°C	4 A
Rated voltage	250 V
Number of positions	4
Insulation resistance	≥ 100 MΩ
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
Protective circuit/component	Unwired
Overvoltage category	II
Degree of pollution	3
Insertion/withdrawal cycles	≥ 100

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## Technical data

### General

Torque	0.4 Nm (M12 connector)
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### Material

Flammability rating according to UL 94	HB
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated
Sealing material	NBR

### Standards and Regulations

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

### Cable

Cable type	PUR halogen-free black
Cable type (abbreviation)	PUR
Cable abbreviation	Li9Y-V1-C-V1-11Y
UL AWM style	20549 / 10493 (80°C/300 V)
Conductor cross section	4x 0.34 mm <sup>2</sup> (Signal line)
AWG signal line	22
Conductor structure signal line	42x 0.10 mm
Core diameter including insulation	1.27 mm ±0.02 mm (Signal line)
Thickness, insulation	≥ 0.21 mm
Wire colors	brown, white, blue, black
Overall twist	4 wires, twisted
Shielding	Tinned copper braided shield
Optical shield covering	85 %
External sheath, color	black-gray RAL 7021
Outer sheath thickness	approx. 1 mm
External cable diameter D	5.9 mm ±0.2 mm
Smallest bending radius, fixed installation	29.5 mm
Smallest bending radius, movable installation	59 mm
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Number of bending cycles	2000000
Bending radius	59 mm
Minimum bending radius, drag chain applications	10 x D
Traversing path	10 m
Traversing rate	3 m/s

# Sensor/Actuator cable - SAC-4P-M12MS/ 3,0-PUR/M12FR SH - 1500994

## Technical data

### Cable

Acceleration	10 m/s <sup>2</sup>
Cable weight	46 kg/km
Outer sheath, material	PUR
Material conductor insulation	PP
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 100 GΩ*km (at 20 °C)
Conductor resistance	max. 58 Ω/km (at 20 °C)
Working capacitance	≤ 80 pF (Conductor-Conductor)
	≤ 135 pF (Wire/shield)
Wave impedance	≥ 62 Ω (f = 10 MHz)
Inductance	approx. 0.75 mH (f = 1 kHz)
Nominal voltage, cable	≤ 300 V
Test voltage, cable	≥ 3000 V
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
	Low adhesion surface
Flame resistance	in acc. with UL FT-2
Halogen-free	in accordance with DIN VDE 0472 part 815
	in accordance with DIN EN 50267-2-1
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
	Resistant to salt water
	partly UV-resistant in accordance with DIN EN ISO 4892-2-A
	abrasion-resistant
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (cable, flexible installation)

## Classifications

### eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	27061801
eCl@ss 6.0	27061801
eCl@ss 7.0	27061801
eCl@ss 8.0	27279218

# Sensor/Actuator cable - SAC-4P-M12MS/ 3,0-PUR/M12FR SH - 1500994

## Classifications

### ETIM

ETIM 2.0	EC000830
ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC001855

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501

## Approvals

### Approvals

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#### Approvals

UL Listed / cUL Listed / EAC / cULus Listed

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#### Ex Approvals

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#### Approvals submitted

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## Approval details

UL Listed	
Nominal current IN	4 A
Nominal voltage UN	300 V

cUL Listed	
Nominal current IN	4 A
Nominal voltage UN	300 V

# Sensor/Actuator cable - SAC-4P-M12MS/ 3,0-PUR/M12FR SH - 1500994

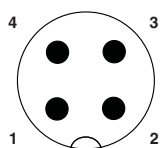
## Approvals

EAC

cULus Listed

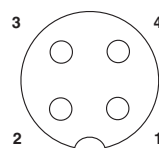
## Drawings

Schematic diagram



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

Schematic diagram



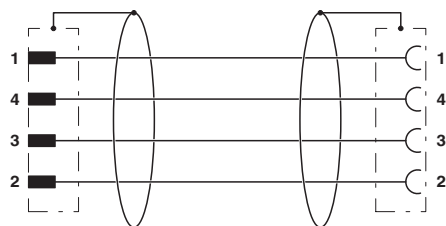
Pin assignment M12 socket, 4-pos., A-coded, view female side

Cable cross section



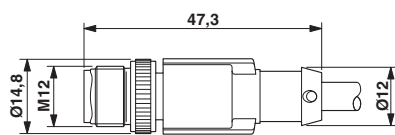
PUR halogen-free black [PUR]

Circuit diagram



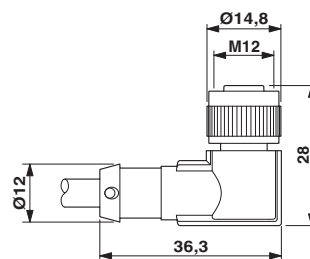
Contact assignment of the M12 plug and the M12 socket

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, angled, shielded

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