

# SAC-4P-M12MS/1,5-280 OBS - Sensor/actuator cable



1412100

<https://www.phoenixcontact.com/us/products/1412100>

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Sensor/actuator cable, 4-position, PUR halogen-free, gray RAL 7001, Plug straight M12, coding: A, on free cable end, cable length: 1.5 m

But with gray conductor

## Commercial data

Item number	1412100
Packing unit	1 pc
Minimum order quantity	50 pc
Product key	AF1CCA
GTIN	4046356949415
Weight per piece (including packing)	22.22 g
Weight per piece (excluding packing)	22.22 g
Country of origin	DE

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## Technical data

### Product properties

Product type	Sensor/actuator cable
Number of positions	4
No. of cable outlets	1
Shielded	no
Coding	A

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Flammability rating according to UL 94	HB
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

Insulation resistance	≥ 100 MΩ
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	free cable end
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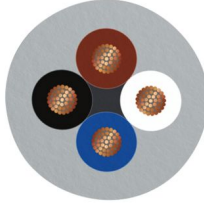
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## Cable/line

Cable length	1.5 m
PUR halogen-free gray [280]	
Dimensional drawing	
Cable weight	30 kg/km
Number of positions	4
Shielded	no
Cable type	PUR halogen-free gray [280]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross-section	0.34 mm <sup>2</sup>
Wire diameter incl. insulation	1.27 mm ±0.02 mm
External cable diameter	4.70 mm ±0.15 mm
Outer sheath, material	PUR
External sheath, color	gray RAL 7001
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	brown, white, blue, black
Thickness, insulation	≥ 0.21 mm (Core insulation) approx. 0.80 mm (Outer cable sheath)
Overall twist	4 wires, twisted
Length of twist, overall twist	49.5 mm
Max. conductor resistance	max. 58 Ω/km (at 20 °C)
Insulation resistance	≥ 100 MΩ*km
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Smallest bending radius, fixed installation	23.5 mm
Smallest bending radius, movable installation	47 mm
Dynamic load capacity (bending)	Max. bending cycles: 10000000, Bending radius: 47 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup>
Dynamic load capacity (torsion)	Torsion: ±180 °/m, Torsion cycles: ≥5000000, Torsional frequency: 35 cycles/min.
Halogen-free	in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1
Flame resistance	in accordance with DIN UL-Style 20549

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	in accordance with FT1 as per UL 758
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
Special properties	Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish
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 IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket) -40 °C ... 80 °C (cable, fixed installation) -5 °C ... 80 °C (Cable, flexible installation)

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## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

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Schematic diagram



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

Circuit diagram



Contact assignment of the M12 plug

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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-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)