

# Sensor/actuator cable - SAC-4P-M12MS/5,0-28X/M12FS OD



1454118

<https://www.phoenixcontact.com/pc/products/1454118>

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Sensor/actuator cable, 4-position, PE-X halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, 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

## Commercial Data

Item number	1454118
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	BF1CCA
Catalog Page	Page 153 (C-4-2013)
GTIN	4046356568722
Weight per Piece (including packing)	242.7 g
Weight per Piece (excluding packing)	242 g
Customs tariff number	85444290
Country of origin	PL

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## Technical Data

### Product properties

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

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Color	black
Flammability rating according to UL 94	V0
Sealing 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

Contact resistance	$\leq 5 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	250 V AC
	250 V DC
Nominal current $I_N$	4 A
Protective circuit	unwired

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$
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### LED signaling

Status display	No
Status display present	No

### Connection data

#### Conductor connection

Tightening torque	0.4 Nm (M12 connector)
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## Connector

### Connection 1

Head design	Plug
Head cable outlet	straight
Head thread type	M12
Coding	A

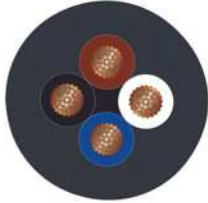
### Connection 2

Head design	Socket
Head cable outlet	straight
Head thread type	M12
Coding	A

## Cable / line

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

Dimensional drawing	
Cable weight	44 kg/km
Number of positions	4
Shielded	no
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 <sup>2</sup> (Signal line)
Wire diameter incl. insulation	1.6 mm ±0.05 mm (Signal line)
External cable diameter	5.2 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. 0.3 mm (Core insulation) approx. 0.6 mm (Outer cable sheath)
Overall twist	4 wires, twisted
Length of twist, overall twist	61.6 mm

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Max. conductor resistance	≤ 39 Ω/km (at 20 °C)
Insulation resistance	≥ 100 MΩ*km (at 20 °C)
Nominal voltage, cable	≤ 300 V AC
Test voltage	≥ 3000 V AC
Smallest bending radius, fixed installation	26 mm
Smallest bending radius, movable installation	52 mm
Max. bending cycles	2000000
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
	according to IEC 60332-3-25 (bunched fire test)
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)
	120 °C (at 48 h - see test report 19233)
	180 °C (at 48 h - see test report 19233)

## 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

Standards/specifications	IEC 61076-2-101
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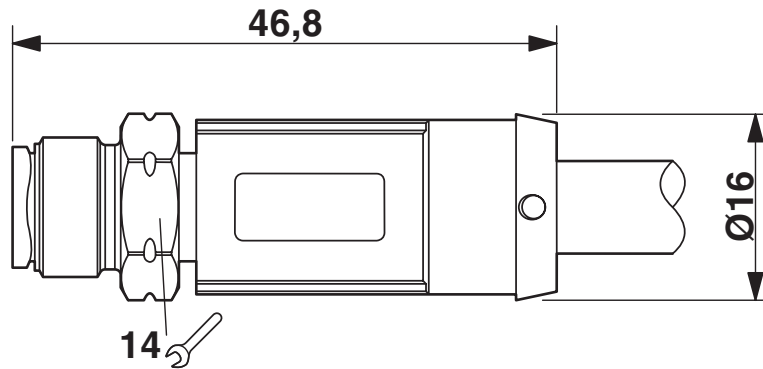
# Sensor/actuator cable - SAC-4P-M12MS/5,0-28X/M12FS OD

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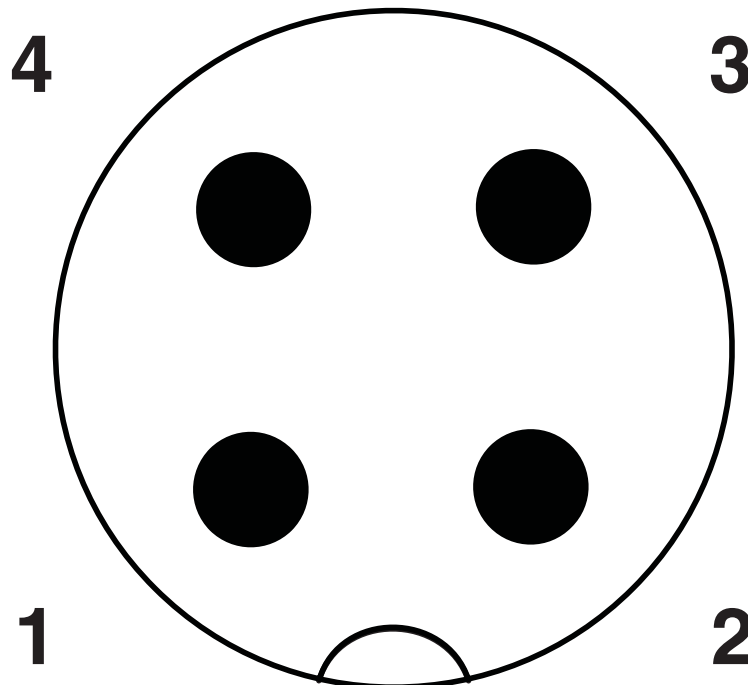
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Schematic diagram



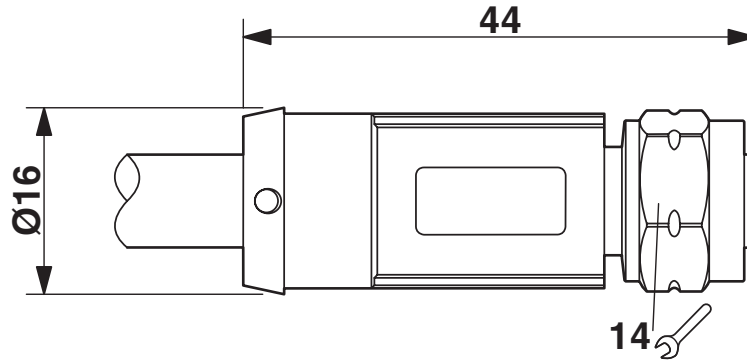
Pin assignment M12 plug, 4-pos., A-coded, view plug side

# Sensor/actuator cable - SAC-4P-M12MS/5,0-28X/M12FS OD

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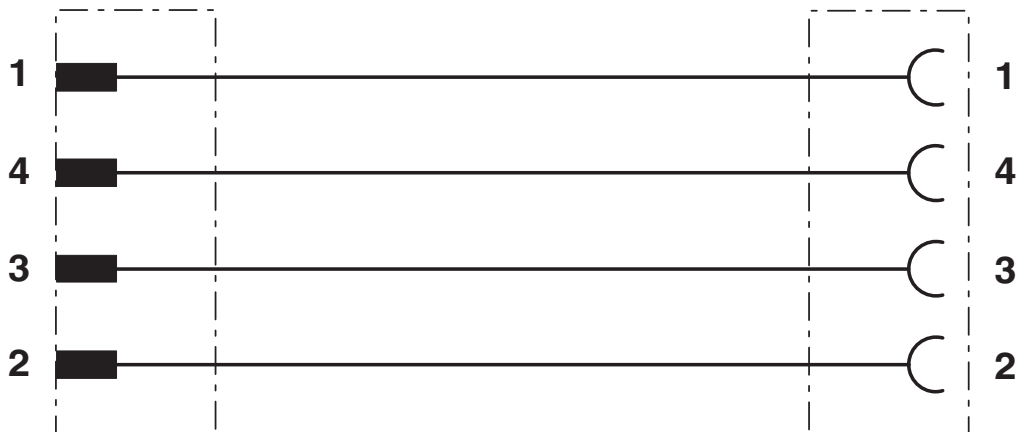
<https://www.phoenixcontact.com/pc/products/1454118>

Dimensional drawing



M12 x 1 socket, straight

Circuit diagram

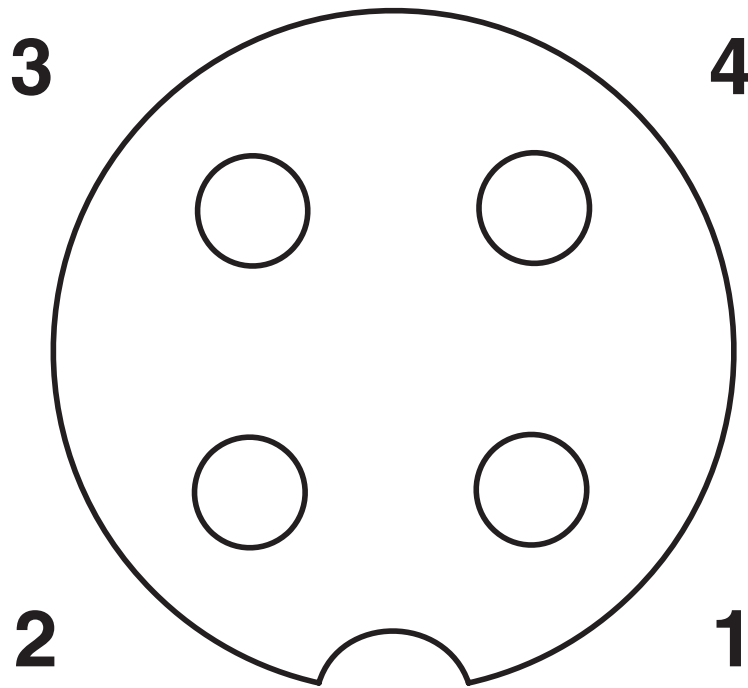


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Schematic diagram



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

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## Approvals

**DNV**

Approval ID: TAE00002K4



**EAC**

Approval ID: RU C-DE.BL08.B.00286



**EAC**

Approval ID: RU D-DE.HB35.B.00387

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## Classifications

### ECLASS

ECLASS-9.0	27060311
ECLASS-10.0.1	27060311
ECLASS-11.0	27060311

### ETIM

ETIM 8.0	EC001855
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### UNSPSC

UNSPSC 21.0	26121600
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## Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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## Accessories

### Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/pc/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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### Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

<https://www.phoenixcontact.com/pc/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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## Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

<https://www.phoenixcontact.com/pc/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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## Tool

Tool - SAC BIT M12-W14 - 1212513

<https://www.phoenixcontact.com/pc/products/1212513>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a hexagonal knurl wrench size of 14 mm, with 4 mm hexagonal drive

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