

# SAC-4P-P12MR/ 1,5-PUR/P12FS - Sensor/actuator cable



1224169

<https://www.phoenixcontact.com/us/products/1224169>

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Sensor/actuator cable, 4-position halogen-free, Plug angled M12, coding: A Push Pull, connected with unwired, on Socket straight M12, coding: A Push Pull, cable length: 1.5 m

## Your advantages

- Easy and safe: 100% electrically tested plug-in components
- Save time, thanks to installation with push-pull fast locking

## Commercial data

Item number	1224169
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF06
Product key	BF1CCC
GTIN	4063151313753
Weight per piece (including packing)	69.9 g
Weight per piece (excluding packing)	69 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	Standard
No. of cable outlets	1
Shielded	no
Coding	A

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Material	PK
	PA
Flammability rating according to UL 94	V0
Seal material	FKM
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ni/Au
Material for screw connection	Brass, nickel-plated

### 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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### Signaling

Status display	No
Status display present	No

### Connection data

#### Conductor connection

Tightening torque	M12 push-pull connectors
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## Connector

### Connection 1

Type	Plug angled M12 Push Pull
Number of positions	4
Coding type	A
Number of positions	4
Locking type	Push Pull


### Connection 2

Type	Socket straight M12 Push Pull
Number of positions	4
Coding type	A
Number of positions	4
Locking type	Push Pull

## Cable/line

Cable length	1.5 m
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### PUR halogen-free black [PUR]

Dimensional drawing	
Cable weight	30 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	4
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross section	4x 0.34 mm <sup>2</sup> (Signal line)
Wire diameter incl. insulation	1.27 mm ±0.02 mm
External cable diameter	4.2 mm ±0.15 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	brown, white, blue, black
Thickness, insulation	≥ 0.21 mm

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Thickness, outer sheath	approx. 0.5 mm
Overall twist	4 wires, twisted
Max. conductor resistance	≤ 58 Ω/km
Insulation resistance	≥ 1 GΩ*km
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Max. bending cycles	10000000
Halogen-free	in accordance with DIN VDE 0472 part 815
	in accordance with DIN EN 50267-2-1
Flame resistance	in accordance with UL 758/1581 FT2
	DIN EN 60332-2-2 (20 s)
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
	partly UV-resistant in accordance with DIN EN ISO 4892-2-A
	Low adhesion
Special properties	abrasion-resistant
	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
Ambient temperature (operation)	flexible
	-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
	IP67
Ambient temperature (operation)	-25 °C ... 85 °C (Plug / socket)

## Standards and regulations

Standard designation	M12-Push-Pull
Standards/specifications	IEC 61076-2-010

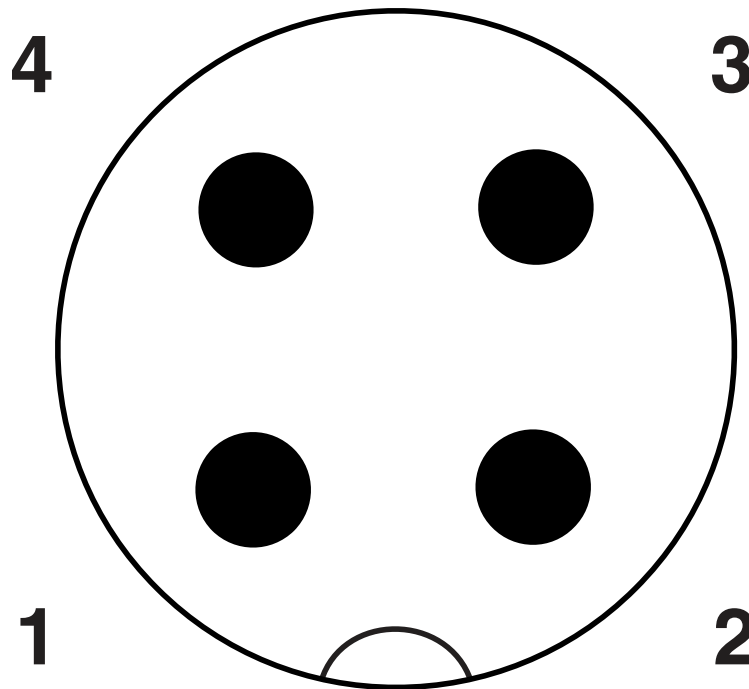
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## Drawings

Schematic diagram



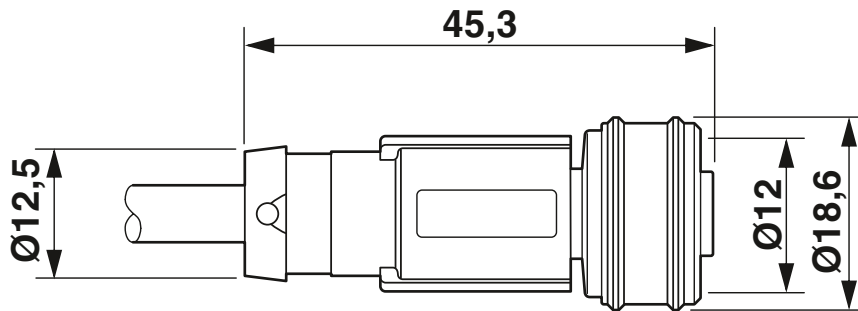
Pin assignment M12 male connector

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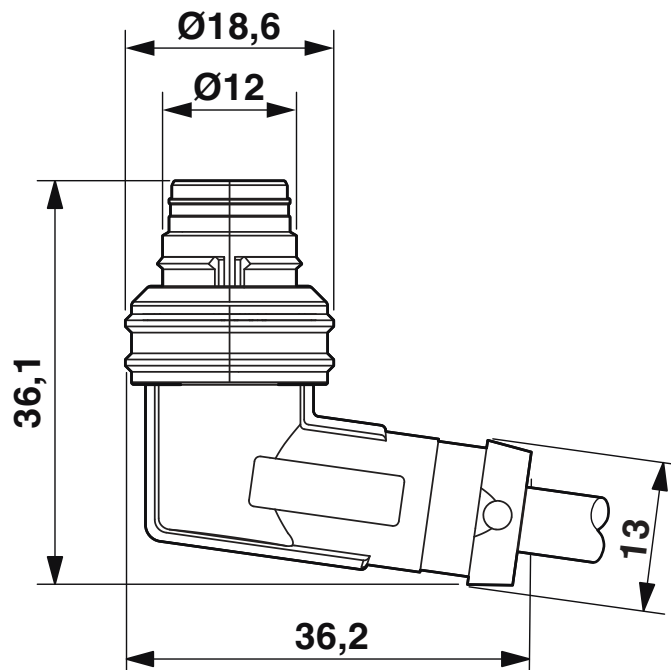
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Dimensional drawing



M12 push-pull female connector, straight

Dimensional drawing



M12 push-pull male connector, angled

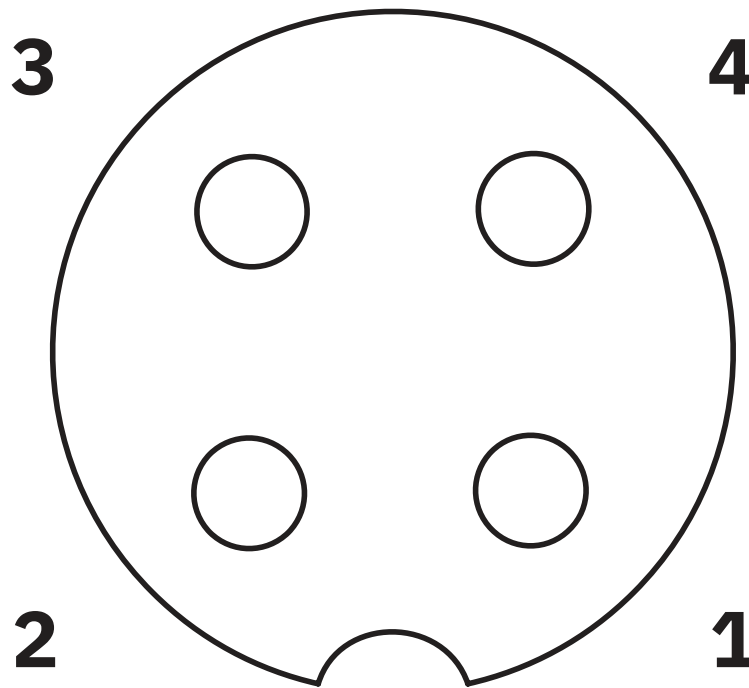
# SAC-4P-P12MR/ 1,5-PUR/P12FS - Sensor/actuator cable



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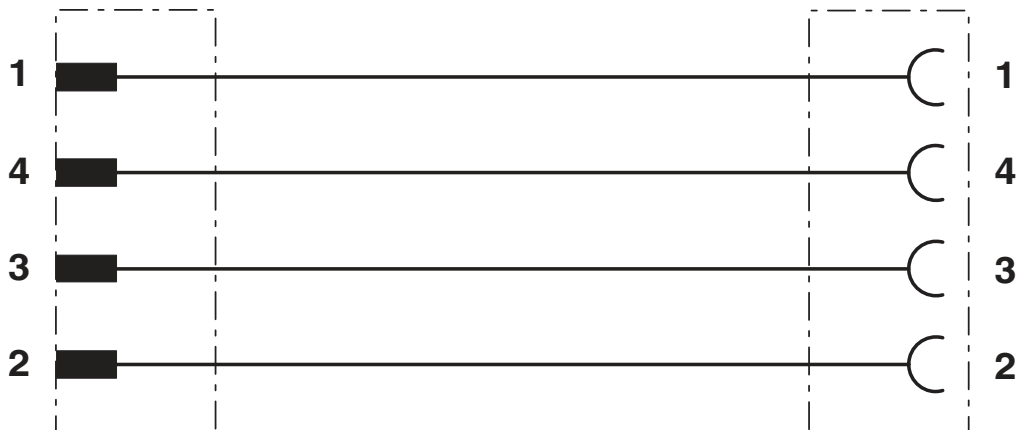
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Schematic diagram



Pin assignment socket M 12

Circuit diagram



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## Classifications

### ECLASS

ECLASS-11.0	27060311
ECLASS-12.0	27060311
ECLASS-13.0	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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