

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



1224169

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

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Sensor/actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12 Push Pull, coding: A, on Socket straight M12 Push Pull, coding: A, 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	AF1CCC
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

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



1224169

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

## Technical data

### Product properties

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

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Material	PK (Pin contact carrier)
	PA (Female connector contact carrier)
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

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	250 V AC
	250 V DC
Nominal current $I_N$	4 A

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$
-----------------------------	------------

### Signaling

Status display	no
Status display present	no

### Connection data

#### Conductor connection

Tightening torque	M12 push-pull connectors
-------------------	--------------------------

### Connector

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



1224169

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

## Connection 1

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

## Connection 2

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

## Cable/line

Cable length	1.5 m
--------------	-------

## 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	4.20 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
Thickness, outer sheath	approx. 0.50 mm
Overall twist	4 wires, twisted
Max. conductor resistance	≤ 58 Ω/km
Insulation resistance	≥ 1 GΩ*km

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



1224169

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

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
Smallest bending radius, fixed installation	21 mm
Smallest bending radius, movable installation	42 mm
Dynamic load capacity (bending)	Max. bending cycles: 10000000, Bending radius: 42 mm, Bending radius: 10 x D, 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 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
	abrasion-resistant
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
	flexible
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
	IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 85 °C (Plug / socket)

## Standards and regulations

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

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

1224169

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

## Drawings

Dimensional drawing



M12 push-pull male connector, angled

Dimensional drawing



M12 push-pull female connector, straight

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

1224169

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

Schematic diagram



Pin assignment M12 male connector

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

1224169

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

Schematic diagram



Pin assignment socket M 12

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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



1224169

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

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1224169>

 <b>cULus Listed</b> Approval ID: E221474				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	300 V	4 A	- 22	-

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



1224169

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

## Classifications

### ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

### ETIM

ETIM 10.0	EC001855
-----------	----------

### UNSPSC

UNSPSC 21.0	26121600
-------------	----------

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



1224169

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

## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
---	--------------------

### 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%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)