

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



1224256

<https://www.phoenixcontact.com/us/products/1224256>

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, 5-position, PUR halogen-free, black-gray RAL 7021, shielded, 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
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

## Commercial data

Item number	1224256
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF06
Product key	AF1CKE
GTIN	4063151313975
Weight per piece (including packing)	108.5 g
Weight per piece (excluding packing)	22.22 g
Customs tariff number	85444290
Country of origin	PL

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



1224256

<https://www.phoenixcontact.com/us/products/1224256>

## Technical data

### Product properties

Product type	Sensor/actuator cable
Application	Standard
Number of positions	5
No. of cable outlets	1
Shielded	yes
Coding	A

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Flammability rating according to UL 94	V0
--	----

### Electrical properties

Insulation resistance	≥ 100 MΩ
Nominal voltage U <sub>N</sub>	48 V AC
	60 V DC
Nominal current I <sub>N</sub>	4 A

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	≥ 100
-----------------------------	-------

### Signaling

Status display	no
Status display present	no

### Connection data

#### Connection technology

Connection method	Push-Pull
-------------------	-----------

#### Conductor connection

Connection method	Push-Pull
-------------------	-----------

### Connector

#### Connection 1

Type	Plug angled M12 Push Pull
Number of positions	5
Locking type	Push Pull

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

1224256

<https://www.phoenixcontact.com/us/products/1224256>

Coding type	A
-------------	---


## Connection 2

Type	Socket straight M12 Push Pull
Number of positions	5
Locking type	Push Pull
Coding type	A

## Cable/line

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

## PUR halogen-free black [PUR]

Dimensional drawing	
Cable weight	43 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	5
Shielded	yes
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	42x 0.10 mm
AWG signal line	22
Conductor cross-section	5x 0.34 mm <sup>2</sup> (Signal line)
Wire diameter incl. insulation	1.27 mm ±0.02 mm (Signal line)
External cable diameter	5.25 mm ±0.2 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, gray
Thickness, insulation	≥ 0.21 mm
Thickness, outer sheath	approx. 0.50 mm
Overall twist	5 wires around filler to the core
Optical shield covering	80 %
Max. conductor resistance	max. 57 Ω/km (at 20 °C)
Insulation resistance	70 GΩ*km (at 20 °C)
Nominal voltage, cable	300 V (at 20 °C)
Test voltage Core/Core	3000 V (at 20 °C)
Smallest bending radius, fixed installation	26 mm
Smallest bending radius, movable installation	52 mm (up to +60 °C)

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



1224256

<https://www.phoenixcontact.com/us/products/1224256>

Dynamic load capacity (bending)	Max. bending cycles: 10000000, Bending radius: 52 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup>
Dynamic load capacity (torsion)	Torsion: $\pm 180$ °/m, Torsion cycles: $\geq 5000000$ , 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
	Resistant to salt water
	partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)
	abrasion-resistant
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
	Low adhesion surface
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)
Ambient temperature (operation) (Cable, fixed installation)	-40 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (Cable, flexible installation)	-25 °C ... 80 °C (Cable, flexible installation)

## Standards and regulations

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

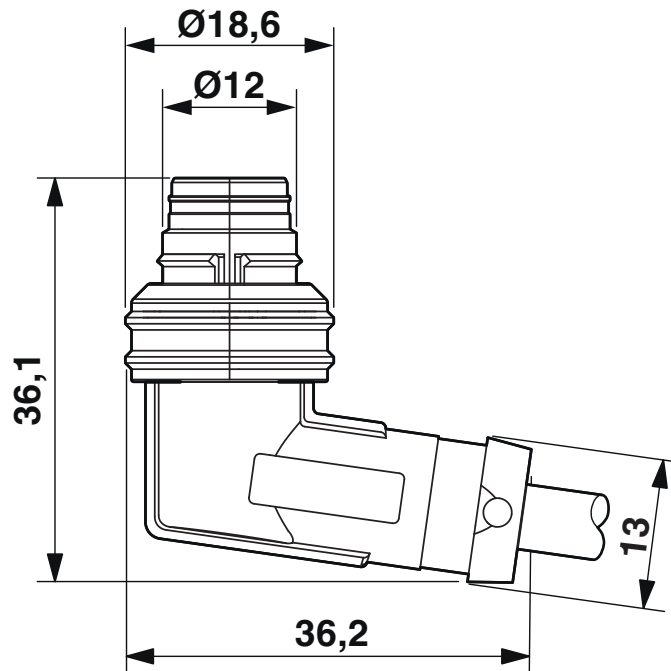
# SAC-5P-P12MR/ 1,5-PUR/P12FS SH - Sensor/actuator cable

1224256

<https://www.phoenixcontact.com/us/products/1224256>

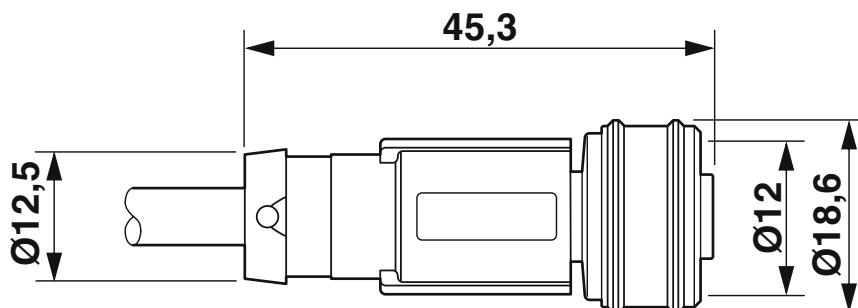
## Drawings

Dimensional drawing



M12 push-pull plug, angled, shielded

Dimensional drawing



M12 push-pull female, straight, shielded

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

1224256

<https://www.phoenixcontact.com/us/products/1224256>

Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



Pin assignment M12 socket, 5-pos., A-coded, socket side view

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

1224256

<https://www.phoenixcontact.com/us/products/1224256>

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

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



1224256

<https://www.phoenixcontact.com/us/products/1224256>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1224256>

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

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



1224256

<https://www.phoenixcontact.com/us/products/1224256>

## Classifications

### ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

### ETIM

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

### UNSPSC

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

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



1224256

<https://www.phoenixcontact.com/us/products/1224256>

## 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)