

# SAC-4P-M12MS/ 3,0-PUR/M12FR SH - Sensor/actuator cable



1500994

<https://www.phoenixcontact.com/us/products/1500994>

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, shielded (Advanced Shielding Technology), Plug straight M12, coding: A, on Socket angled M12, coding: A, cable length: 3 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	1500994
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	AF1CJA
GTIN	4017918612344
Weight per piece (including packing)	145.2 g
Weight per piece (excluding packing)	137.9 g
Customs tariff number	85444290
Country of origin	PL

# SAC-4P-M12MS/ 3,0-PUR/M12FR SH - Sensor/actuator cable



1500994

<https://www.phoenixcontact.com/us/products/1500994>

## Technical data

### Product properties

Product type	Sensor/actuator cable
Application	Standard
Number of positions	4
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	HB
Seal material	NBR
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	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	48 V AC
	60 V DC

### Mechanical properties

#### Mechanical data

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

### Signaling

Status display	no
Status display present	no

### Connection data

Conductor connection	
Tightening torque	0.4 Nm (M12 connector)

### Connector

#### Connection 1

# SAC-4P-M12MS/ 3,0-PUR/M12FR SH -

## Sensor/actuator cable



1500994

<https://www.phoenixcontact.com/us/products/1500994>

Type	Plug straight M12
Number of positions	4
Coding type	A

### Connection 2

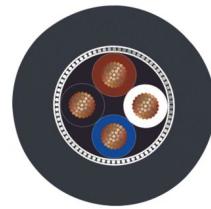
Type	Socket angled M12
Number of positions	4
Coding type	A

### Cable/line

Cable length	3 m
--------------	-----

#### PUR halogen-free black [PUR]

##### Dimensional drawing



Cable weight	36 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	4
Shielded	yes
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 (Signal line)
External cable diameter	4.95 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
Thickness, insulation	≥ 0.21 mm
Thickness, outer sheath	approx. 0.50 mm
Overall twist	4 wires, twisted
Optical shield covering	80 %
Max. conductor resistance	max. 58 Ω/km (at 20 °C)
Insulation resistance	≥ 100 GΩ*km (at 20 °C)
Wave impedance	≥ 62 Ω (f = 10 MHz)
Cable capacity	≤ 80 pF/m (Conductor-Conductor)
	≤ 135 pF/m (Wire/shield)

# SAC-4P-M12MS/ 3,0-PUR/M12FR SH - Sensor/actuator cable



1500994

<https://www.phoenixcontact.com/us/products/1500994>

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	25 mm
Smallest bending radius, movable installation	50 mm
Dynamic load capacity (bending)	Max. bending cycles: 10000000, 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: ≥2000000, Torsional frequency: 35 cycles/min.
Halogen-free	in accordance with DIN VDE 0472 part 815
Flame resistance	in accordance with DIN EN 50267-2-1 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 ... 90 °C (Plug / socket)
Ambient temperature (operation) (Cable, fixed installation)	-25 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (Cable, flexible installation)	-5 °C ... 80 °C (Cable, flexible installation)

## Standards and regulations

Standard designation	M12 connector
Standards/specifications	IEC 61076-2-101

# SAC-4P-M12MS/ 3,0-PUR/M12FR SH - Sensor/actuator cable

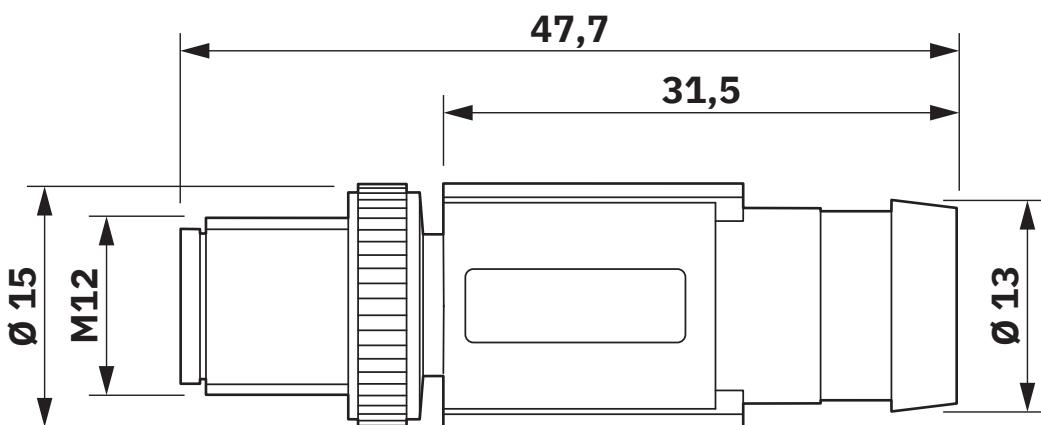


1500994

<https://www.phoenixcontact.com/us/products/1500994>

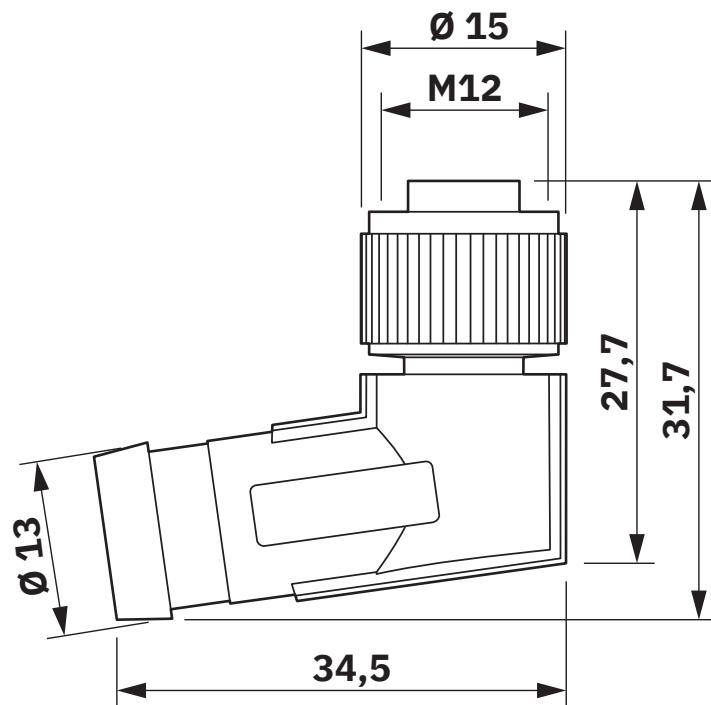
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, angled, shielded

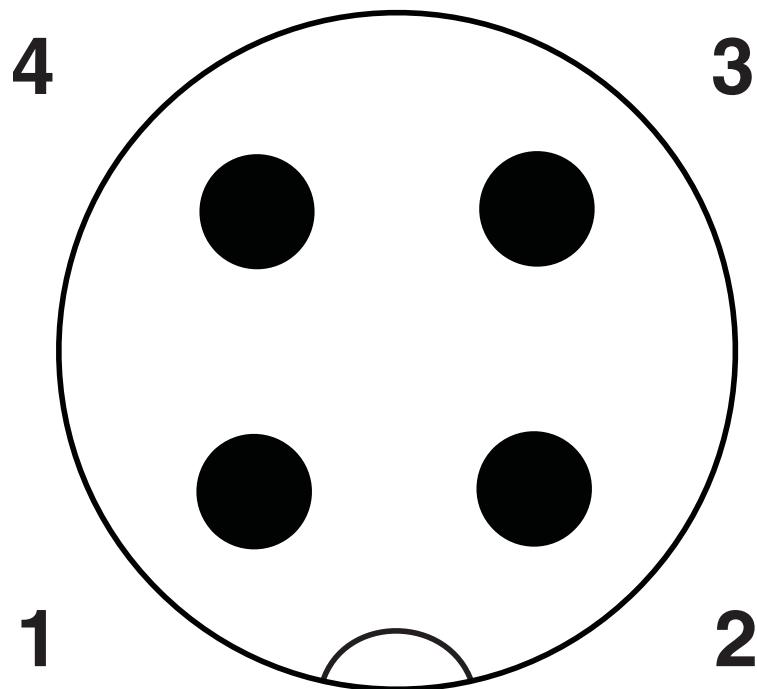
SAC-4P-M12MS/ 3,0-PUR/M12FR SH -  
Sensor/actuator cable



1500994

<https://www.phoenixcontact.com/us/products/1500994>

Schematic diagram



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

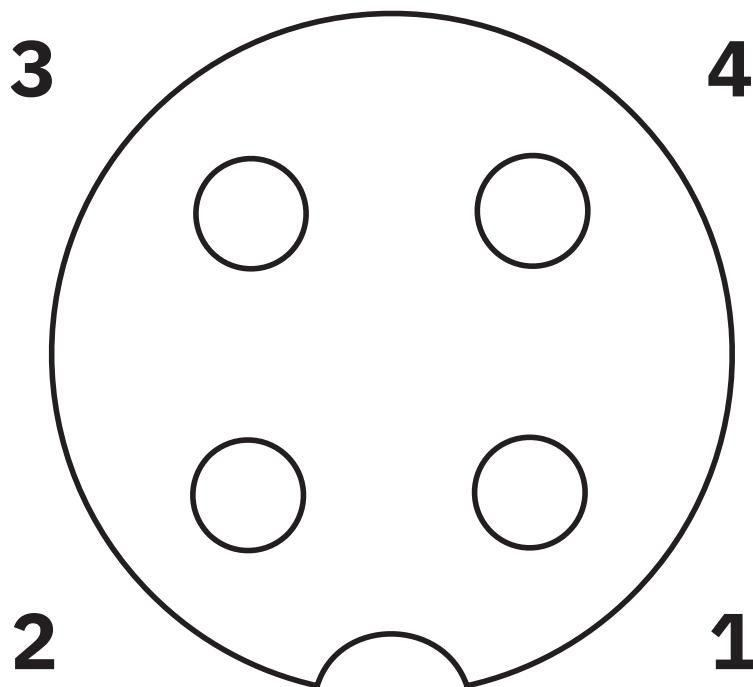
SAC-4P-M12MS/ 3,0-PUR/M12FR SH -  
Sensor/actuator cable



1500994

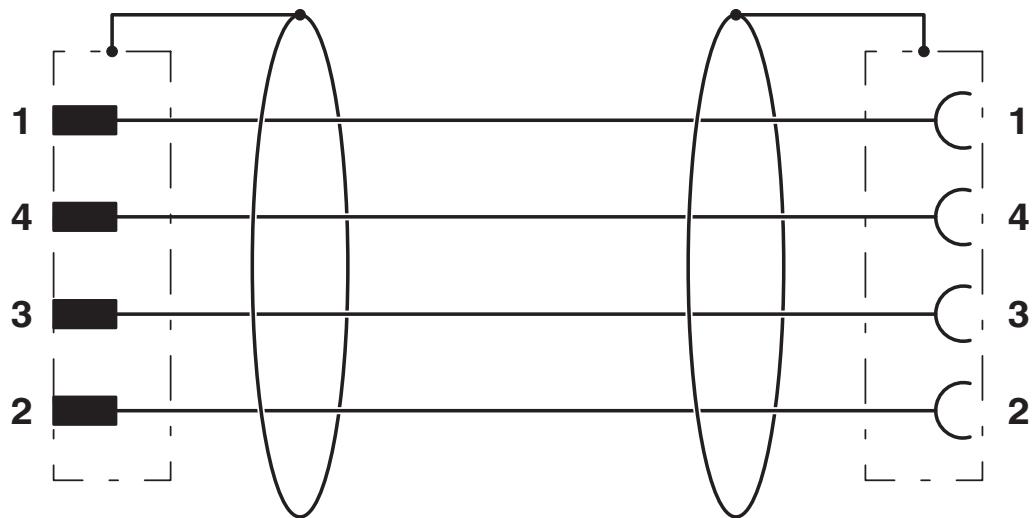
<https://www.phoenixcontact.com/us/products/1500994>

Schematic diagram



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

Circuit diagram



Contact assignment of the M12 plug and the M12 socket

# SAC-4P-M12MS/ 3,0-PUR/M12FR SH - Sensor/actuator cable



1500994

<https://www.phoenixcontact.com/us/products/1500994>

## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1500994>

UL Listed		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine					
		300 V	4 A	-	-

cUL Listed		Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $mm^2$
keine					
		300 V	4 A	-	-

EAC-RoHS					
ER	Approval ID: RU D-DE.HB35.B.00387				

# SAC-4P-M12MS/ 3,0-PUR/M12FR SH - Sensor/actuator cable



1500994

<https://www.phoenixcontact.com/us/products/1500994>

## Classifications

### ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

### ETIM

ETIM 9.0	EC001855
----------	----------

### UNSPSC

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

# SAC-4P-M12MS/ 3,0-PUR/M12FR SH - Sensor/actuator cable



1500994

<https://www.phoenixcontact.com/us/products/1500994>

## 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 2025 © - 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)