

# SAC-4P- 2,0-28X/M12FS SH OD - Sensor/actuator cable



1454150

<https://www.phoenixcontact.com/us/products/1454150>

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, PE-X/PE-X halogen-free, black-gray RAL 7021, shielded, free cable end, on Socket straight M12, coding: A, cable length: 2 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
- Reliable signal transmission – 360° shielding in environments with electromagnetic interference

## Commercial data

Item number	1454150
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	AF1CJA
GTIN	4046356568760
Weight per piece (including packing)	170.8 g
Weight per piece (excluding packing)	168.3 g
Customs tariff number	85444290
Country of origin	PL

# SAC-4P- 2,0-28X/M12FS SH OD - Sensor/actuator cable



1454150

<https://www.phoenixcontact.com/us/products/1454150>

## Technical data

### Product properties

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

### Insulation characteristics

Degree of pollution	3
---------------------	---

### Material specifications

Flammability rating according to UL 94	V0
Seal 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

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage $U_N$	48 V AC
	60 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	0.4 Nm (M12 connector)
-------------------	------------------------

### Connector

#### Connection 1

Type	free cable end
------	----------------

# SAC-4P- 2,0-28X/M12FS SH OD - Sensor/actuator cable

1454150

<https://www.phoenixcontact.com/us/products/1454150>

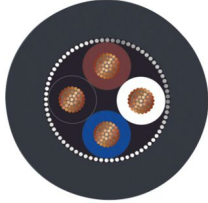
## Connection 2

Type	Socket straight M12
Number of positions	4
Coding type	A

## Cable/line

Cable length	2 m
--------------	-----

## PE-X black [28X]

Dimensional drawing	
Cable weight	74 kg/km
Number of positions	4
Shielded	yes
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	6.80 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. 0.30 mm (Core insulation) approx. 0.70 mm (Outer cable sheath) approx. 0.45 mm (Inner sheath)
Overall twist	4 wires, twisted
Length of twist, overall twist	108.8 mm
Optical shield covering	85 %
Max. conductor resistance	≤ 39 Ω/km (at 20 °C)
Insulation resistance	≥ 100 MΩ*km (at 20 °C)
Cable capacity	≤ 100 nF/km (Conductor-conductor, asymmetrical/touching) ≤ 85 nF/km (Conductor-conductor, symmetrical/star quad) ≤ 150 nF/km (Wire/shield)
Nominal voltage, cable	≤ 300 V AC
Test voltage	≥ 3000 V AC

# SAC-4P- 2,0-28X/M12FS SH OD - Sensor/actuator cable



1454150

<https://www.phoenixcontact.com/us/products/1454150>

Smallest bending radius, fixed installation	34 mm
Smallest bending radius, movable installation	68 mm
Dynamic load capacity (bending)	Max. bending cycles: 1000000, Bending radius: 68 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup>
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
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)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65 IP67 IP68 IP69K
Ambient temperature (operation) (male connector/female connector)	-40 °C ... 105 °C (Plug / socket)
Ambient temperature (operation) (Operation)	-40 °C ... 85 °C (On sudden changes in temperature (according to IEC 60512-11-4))

## Standards and regulations

### M12

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

# SAC-4P- 2,0-28X/M12FS SH OD - Sensor/actuator cable

1454150

<https://www.phoenixcontact.com/us/products/1454150>

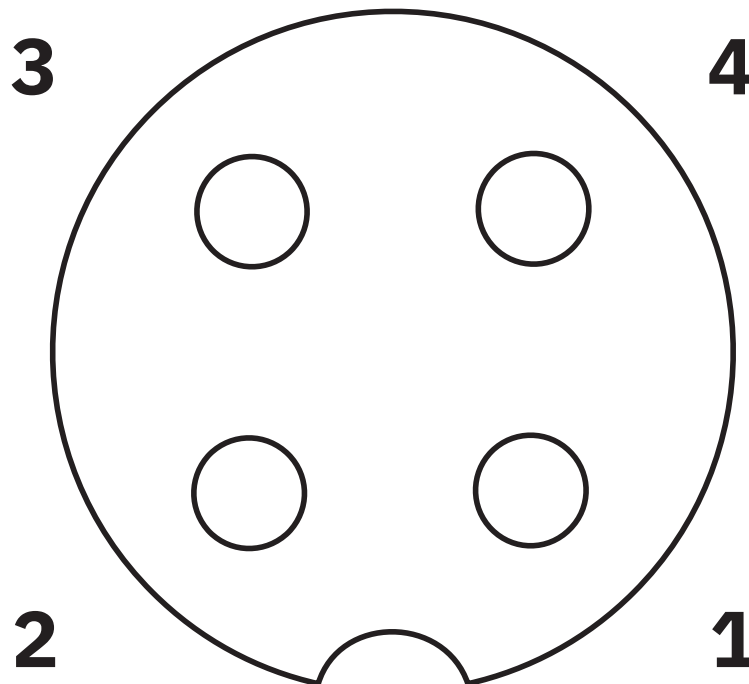
## Drawings

Dimensional drawing



M12 x 1 socket, straight

Schematic diagram



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

# SAC-4P- 2,0-28X/M12FS SH OD - Sensor/actuator cable



1454150

<https://www.phoenixcontact.com/us/products/1454150>

Circuit diagram



Contact assignment of the M12 socket

# SAC-4P- 2,0-28X/M12FS SH OD - Sensor/actuator cable



1454150

<https://www.phoenixcontact.com/us/products/1454150>

## Approvals

🔗 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1454150>

### **DNV**

Approval ID: TAE00002K4



### **EAC-RoHS**

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

# SAC-4P- 2,0-28X/M12FS SH OD - Sensor/actuator cable



1454150

<https://www.phoenixcontact.com/us/products/1454150>

## Classifications

### ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

### ETIM

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

### UNSPSC

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

# SAC-4P- 2,0-28X/M12FS SH OD - Sensor/actuator cable



1454150

<https://www.phoenixcontact.com/us/products/1454150>

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

### EF3.1 Climate Change

CO2e kg	2.163 kg CO2e
---------	---------------

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)