

SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable



1421454

<https://www.phoenixcontact.com/us/products/1421454>

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 halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, on Plug straight M12, coding: A, M12 Y-distributor, 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

Commercial data

Item number	1421454
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF03
Product key	AF1CCA
GTIN	4055626263922
Weight per piece (including packing)	566.9 g
Weight per piece (excluding packing)	545 g
Customs tariff number	85444290
Country of origin	PL

SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable



1421454

<https://www.phoenixcontact.com/us/products/1421454>

Technical data

Product properties

Product type	Sensor/actuator cable
Application	External areas
Number of positions	4
No. of cable outlets	1
Shielded	no
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	250 V AC
	250 V DC
Nominal current I_N	4 A

Mechanical properties

Mechanical data

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

Signaling

Status display	no
Status display present	no

Connection data

Conductor connection

Tightening torque	0.4 Nm (M12 connector)
-------------------	------------------------

Connector

Connection 1

Type	Plug straight M12
------	-------------------

SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable



1421454

<https://www.phoenixcontact.com/us/products/1421454>

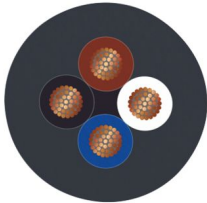
Number of positions	4
Coding type	A

Connection 2

Type	Plug straight M12
Number of positions	4
Coding type	A

Cable/line

PE-X black [28X]

Dimensional drawing	
Cable weight	44 kg/km
Number of positions	4
Shielded	no
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 ² (Signal line)
Wire diameter incl. insulation	1.6 mm ±0.05 mm (Signal line)
External cable diameter	5.20 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. 0.60 mm (Outer cable sheath)
Overall twist	4 wires, twisted
Length of twist, overall twist	61.6 mm
Max. conductor resistance	≤ 39 Ω/km (at 20 °C)
Insulation resistance	≥ 100 MΩ*km (at 20 °C)
Nominal voltage, cable	≤ 300 V AC
Test voltage	≥ 3000 V AC
Smallest bending radius, fixed installation	26 mm
Smallest bending radius, movable installation	52 mm
Dynamic load capacity (bending)	Max. bending cycles: 2000000, Bending radius: 52 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10

SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable



1421454

<https://www.phoenixcontact.com/us/products/1421454>

	m/s ²
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
	according to IEC 60332-3-25 (bunched fire test)
Fume corrosiveness	according to IEC 60754
Concentration of fumes	according to DIN EN 61034
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)
	120 °C (at 48 h - see test report 19233)
	180 °C (at 48 h - see test report 19233)

Environmental and real-life conditions

Ambient conditions

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))
Ambient temperature (operation) (Special release)	120 °C (at 48 h - see test report 19233)

Standards and regulations

M12

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

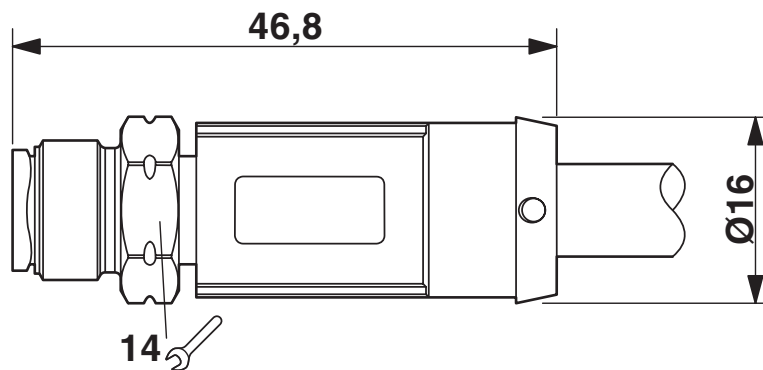
SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable

1421454

<https://www.phoenixcontact.com/us/products/1421454>

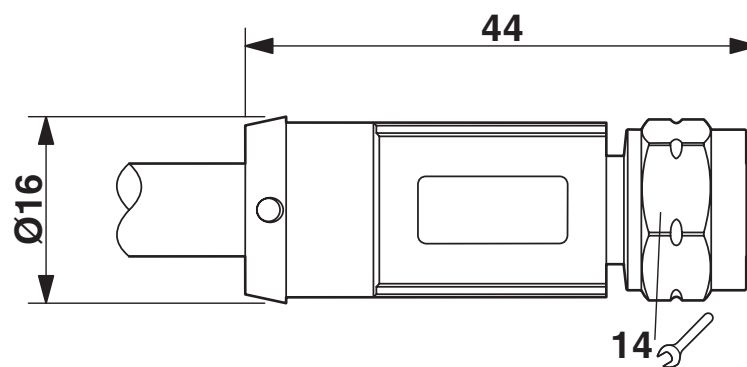
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



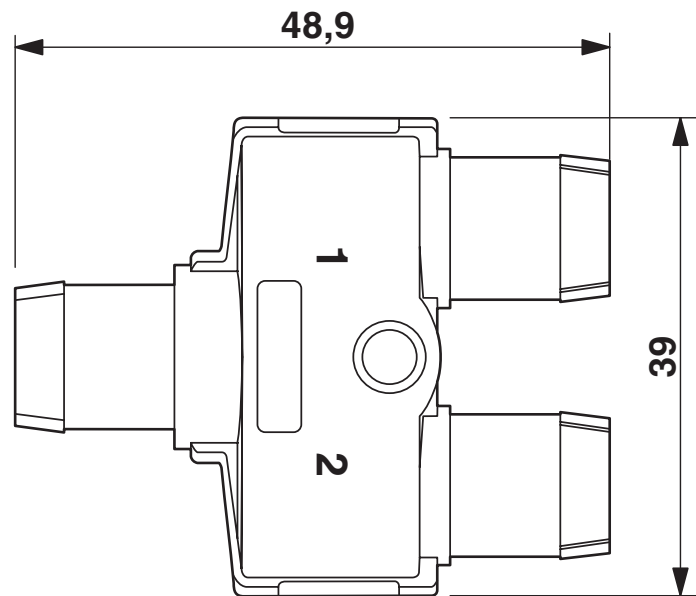
M12 x 1 socket, straight

SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable

1421454

<https://www.phoenixcontact.com/us/products/1421454>

Dimensional drawing



Y-distributor

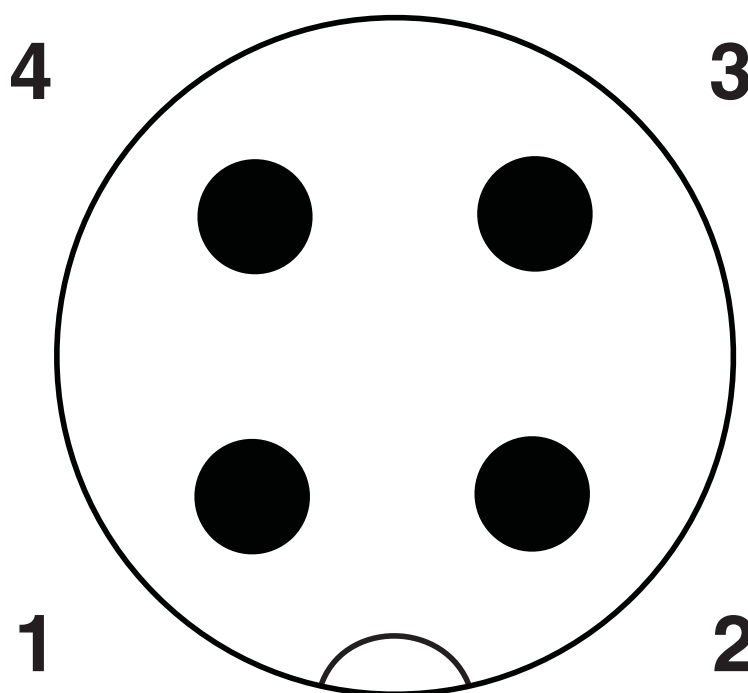
SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable



1421454

<https://www.phoenixcontact.com/us/products/1421454>

Schematic diagram



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

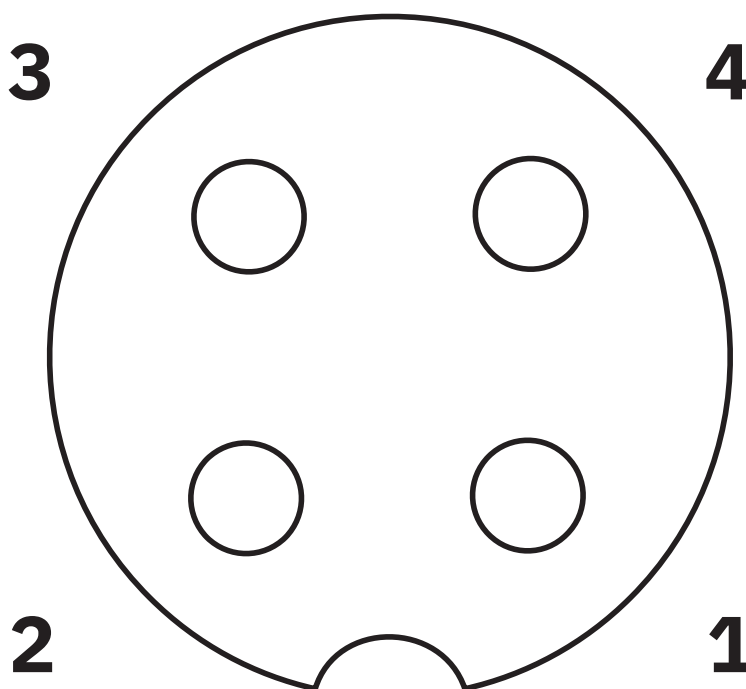
SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable



1421454

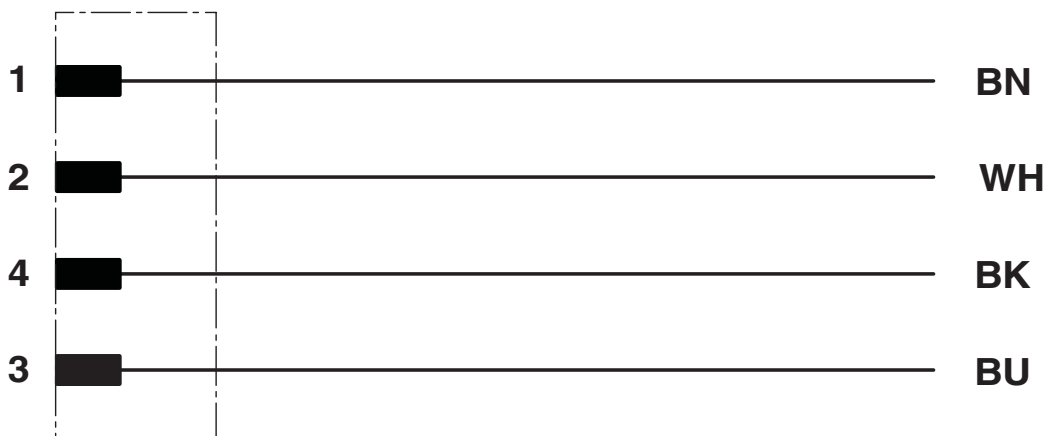
<https://www.phoenixcontact.com/us/products/1421454>

Schematic diagram



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

Circuit diagram



Contact assignment of the M12 plug

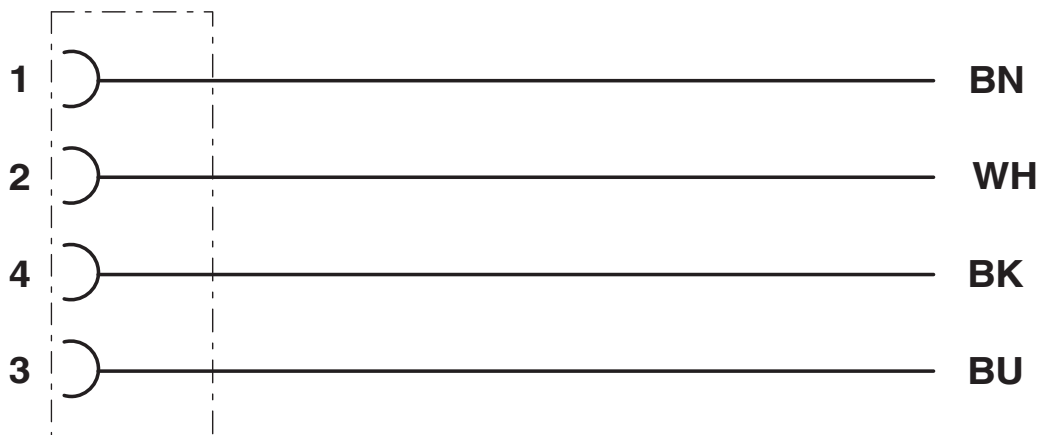
SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable



1421454

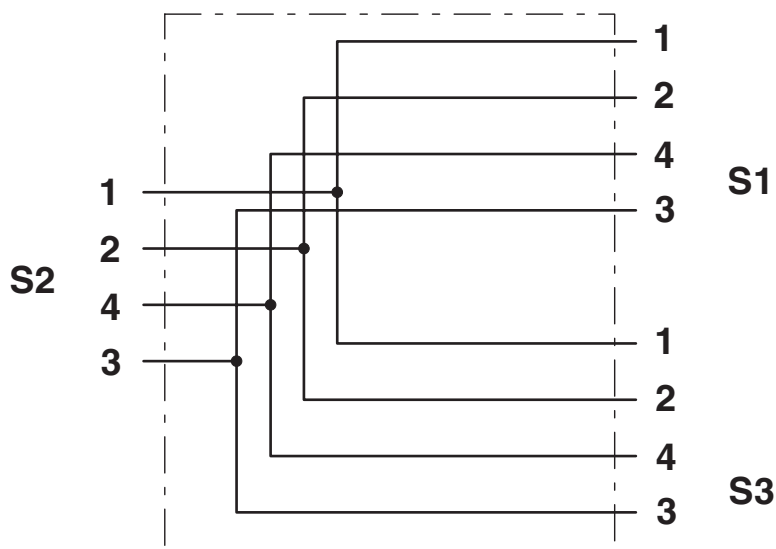
<https://www.phoenixcontact.com/us/products/1421454>

Circuit diagram



Contact assignment of the M12 socket

Circuit diagram



Contact assignment of the M12 Y distributor

SAC-4P-M12Y/28X-9XM12F OD RI - Sensor/actuator cable



1421454

<https://www.phoenixcontact.com/us/products/1421454>

Classifications

ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

ETIM

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

UNSPSC

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

1421454
<https://www.phoenixcontact.com/us/products/1421454>

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