

SAC-4P-M12MR/3,0-PVC/M12FR - Sensor/actuator cable



1415645

<https://www.phoenixcontact.com/us/products/1415645>

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, PVC, black RAL 9005, Plug angled M12, coding: A, on Socket angled M12, coding: A, cable length: 3 m

Your advantages

- Easy and safe: 100 % electrically tested plug-in components

Commercial data

Item number	1415645
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	AF1CCA
GTIN	4055626050133
Weight per piece (including packing)	121.9 g
Weight per piece (excluding packing)	107.5 g
Customs tariff number	85444290
Country of origin	DE

SAC-4P-M12MR/3,0-PVC/M12FR - Sensor/actuator cable



1415645

<https://www.phoenixcontact.com/us/products/1415645>

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

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	$\geq 10 \text{ M}\Omega$
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
-------------------	--------

Connector

Connection 1

SAC-4P-M12MR/3,0-PVC/M12FR - Sensor/actuator cable

1415645

<https://www.phoenixcontact.com/us/products/1415645>

Type	Plug angled 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
--------------	-----

PVC black [PVC]

Dimensional drawing	
Cable weight	40 kg/km
UL AWM Style	2464 / 1729 (80°C/300 V)
Number of positions	4
Shielded	no
Cable type	PVC black [PVC]
Conductor structure signal line	19x 0.15 mm
AWG signal line	22
Conductor cross-section	4x 0.34 mm ² (Signal line)
Wire diameter incl. insulation	1.26 mm ±0.05 mm
External cable diameter	4.70 mm ±0.15 mm
Outer sheath, material	PVC
External sheath, color	black RAL 9005
Conductor material	Bare Cu litz wires
Material wire insulation	PVC
Single wire, color	brown, white, blue, black
Thickness, insulation	≥ 0.23 mm (Core insulation)
Thickness, outer sheath	≥ 0.76 mm
Overall twist	4 wires, twisted
Max. conductor resistance	≤ 57 Ω/km (at 20 °C)
Insulation resistance	≥ 200 MΩ*km (at 20 °C)
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

SAC-4P-M12MR/3,0-PVC/M12FR - Sensor/actuator cable



1415645

<https://www.phoenixcontact.com/us/products/1415645>

Smallest bending radius, fixed installation	24 mm
Smallest bending radius, movable installation	47 mm
Flame resistance	As per UL-Style 2464
Resistance to oil	according to DIN EN 60811-2-1, 168 h at 60 °C
Ambient temperature (operation)	-25 °C ... 80 °C (cable, fixed installation) -10 °C ... 80 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65 IP67 IP68
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)

Standards and regulations

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

SAC-4P-M12MR/3,0-PVC/M12FR - Sensor/actuator cable

1415645

<https://www.phoenixcontact.com/us/products/1415645>

Drawings

Dimensional drawing



M12 x 1 male plug, angled

Dimensional drawing



M12 x 1 socket, angled

SAC-4P-M12MR/3,0-PVC/M12FR - Sensor/actuator cable

1415645

<https://www.phoenixcontact.com/us/products/1415645>

Schematic diagram



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

SAC-4P-M12MR/3,0-PVC/M12FR - Sensor/actuator cable

1415645

<https://www.phoenixcontact.com/us/products/1415645>

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-M12MR/3,0-PVC/M12FR - Sensor/actuator cable



1415645

<https://www.phoenixcontact.com/us/products/1415645>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1415645>

 UL Listed Approval ID: FILE E 221474				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	125 V	4 A	-	-

 cUL Listed Approval ID: FILE E 221474				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	125 V	4 A	-	-

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

SAC-4P-M12MR/3,0-PVC/M12FR - Sensor/actuator cable



1415645

<https://www.phoenixcontact.com/us/products/1415645>

Classifications

ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

ETIM

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

UNSPSC

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

SAC-4P-M12MR/3,0-PVC/M12FR - Sensor/actuator cable



1415645

<https://www.phoenixcontact.com/us/products/1415645>

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	1.034 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