

SAC-4P-M12MS/ 0,5-186/M12FS - Sensor/actuator cable



1509539

<https://www.phoenixcontact.com/us/products/1509539>

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, black-gray RAL 7021, Plug straight M12, coding: A, on Socket straight M12, coding: A, cable length: 0.5 m

Your advantages

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

Commercial data

Item number	1509539
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF03
Product key	AF1CCA
GTIN	4017918899172
Weight per piece (including packing)	48.6 g
Weight per piece (excluding packing)	46.8 g
Customs tariff number	85444290
Country of origin	PL

SAC-4P-M12MS/ 0,5-186/M12FS - Sensor/actuator cable



1509539

<https://www.phoenixcontact.com/us/products/1509539>

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	$\geq 100 \text{ M}\Omega$
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

SAC-4P-M12MS/ 0,5-186/M12FS - Sensor/actuator cable

1509539

<https://www.phoenixcontact.com/us/products/1509539>

Type	Plug straight M12
Number of positions	4
Coding type	A

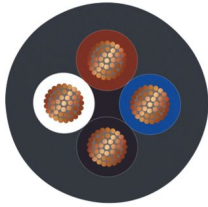
Connection 2

Type	Socket straight M12
Number of positions	4
Coding type	A

Cable/line

Cable length	0.5 m
--------------	-------

PUR POWER 0.75 mm² black [186]

Dimensional drawing	
Cable weight	57 kg/km
UL AWM Style	20549 / 1061 (80°C/300 V)
Number of positions	4
Shielded	no
Cable type	PUR POWER 0.75 mm ² black [186]
Conductor structure signal line	42x 0.15 mm
AWG signal line	18
Conductor cross-section	4x 0.75 mm ² (power line)
Wire diameter incl. insulation	1.75 mm ±0.05 mm
External cable diameter	5.90 mm ±0.15 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Conductor material	Bare Cu litz wires
Material wire insulation	PVC
Single wire, color	brown, white, blue, black
Thickness, insulation	≥ 0.23 mm (Core insulation) ≥ 0.76 mm (Outer cable sheath)
Overall twist	4 wires, twisted
Max. conductor resistance	max. 26 Ω/km (at 20 °C)
Insulation resistance	≥ 1 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-M12MS/ 0,5-186/M12FS - Sensor/actuator cable



1509539

<https://www.phoenixcontact.com/us/products/1509539>

Smallest bending radius, fixed installation	30 mm
Smallest bending radius, movable installation	59 mm
Dynamic load capacity (bending)	Max. bending cycles: 2000000, Bending radius: 59 mm, Traversing path: 5 m, Traversing rate: 3 m/s, Acceleration: 5 m/s ²
Flame resistance	according to UL 758/1581 (horizontal)
	in accordance with UL 758/1581 FT2
Resistance to oil	According to DIN EN 60811-2-1, 168 h at 100°C
Other resistance	hydrolysis and microbe resistant
	Low adhesion
	abrasion-resistant
	Resistant to salt water
Ambient temperature (operation)	-25 °C ... 80 °C (cable, fixed installation)
	-5 °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)
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)

SAC-4P-M12MS/ 0,5-186/M12FS - Sensor/actuator cable



1509539

<https://www.phoenixcontact.com/us/products/1509539>

Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M12 x 1 socket, straight

SAC-4P-M12MS/ 0,5-186/M12FS - Sensor/actuator cable

1509539

<https://www.phoenixcontact.com/us/products/1509539>

Schematic diagram



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

SAC-4P-M12MS/ 0,5-186/M12FS - Sensor/actuator cable

1509539

<https://www.phoenixcontact.com/us/products/1509539>

Schematic diagram



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

Circuit diagram



Contact assignment of the M12 connector and the M12 socket

SAC-4P-M12MS/ 0,5-186/M12FS - Sensor/actuator cable



1509539

<https://www.phoenixcontact.com/us/products/1509539>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1509539>

 UL Listed Approval ID: FILE E 221474				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	300 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				
	300 V	4 A	-	-

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

SAC-4P-M12MS/ 0,5-186/M12FS - Sensor/actuator cable



1509539

<https://www.phoenixcontact.com/us/products/1509539>

Classifications

ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

ETIM

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

UNSPSC

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

SAC-4P-M12MS/ 0,5-186/M12FS - Sensor/actuator cable



1509539

<https://www.phoenixcontact.com/us/products/1509539>

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	0.38 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