

Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

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, Plug angled M12, coding: A, on free cable end, 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	1682883
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	02
Product Key	BF1CJA
Catalog Page	Page 199 (C-2-2019)
GTIN	4017918169015
Weight per Piece (including packing)	126.8 g
Weight per Piece (excluding packing)	126 g
Customs tariff number	85444290
Country of origin	PL

1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Technical Data

Product properties

Product type	Sensor/actuator cable
Number of positions	4
Application	Standard
No. of cable outlets	1
Shielded	yes
Coding	A - standard

Insulation characteristics

Overvoltage category	II
Degree of pollution	3

Material specifications

Flammability rating according to UL 94	HB
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

Contact resistance	$\leq 5 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Protective circuit	unwired

Mechanical properties

Mechanical data

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

LED signaling

Status display	No
Status display present	No

Connection data

Conductor connection

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

Connector

Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Connection 1

Head design	Plug
Head cable outlet	angled
Head thread type	M12
Coding	A

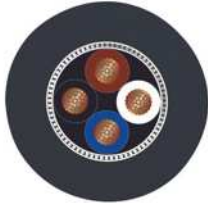
Connection 2

Head design	free cable end
-------------	----------------

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 ² (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. 0.5 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)

Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

	≤ 135 pF/m (Wire/shield)
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
Max. bending cycles	10000000
Halogen-free	in accordance with DIN VDE 0472 part 815
	in accordance with DIN EN 50267-2-1
Flame resistance	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
Special properties	abrasion-resistant
	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
Ambient temperature (operation)	Low adhesion surface
	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (Cable, flexible installation)

Ambient conditions

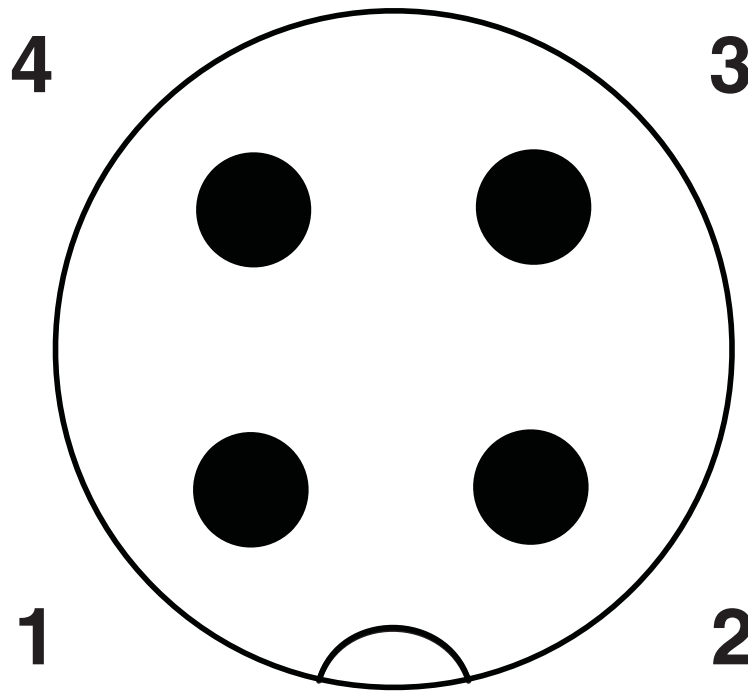
Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
	-25 °C ... 80 °C (cable, fixed installation)
	-5 °C ... 80 °C (Cable, flexible installation)

Standards and regulations

Standards/specifications	IEC 61076-2-101
--------------------------	-----------------

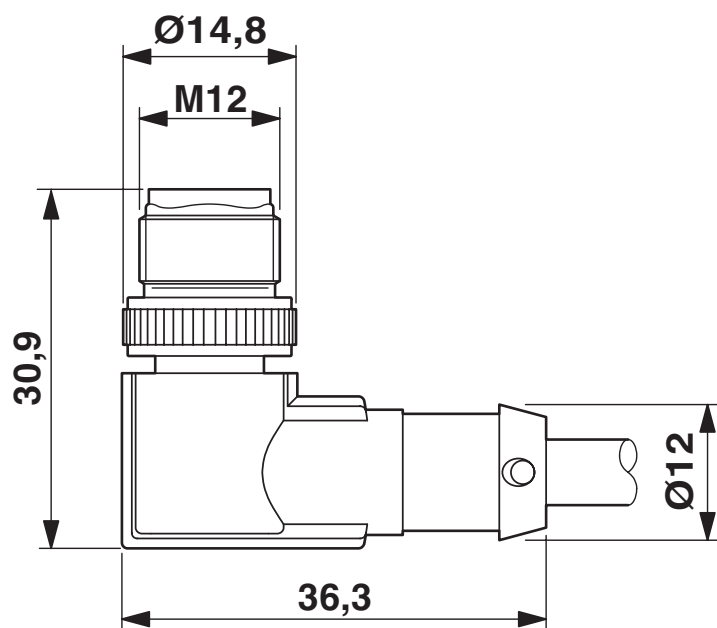
Drawings

Schematic diagram



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

Dimensional drawing

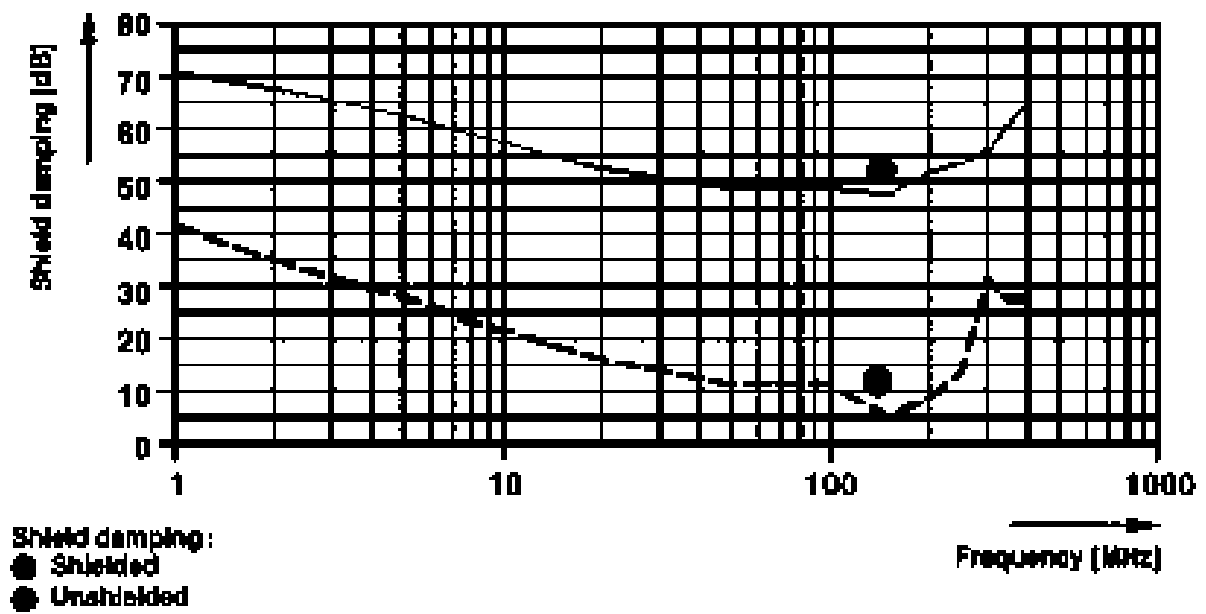


M12 x 1 male plug, angled, shielded

1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Diagram



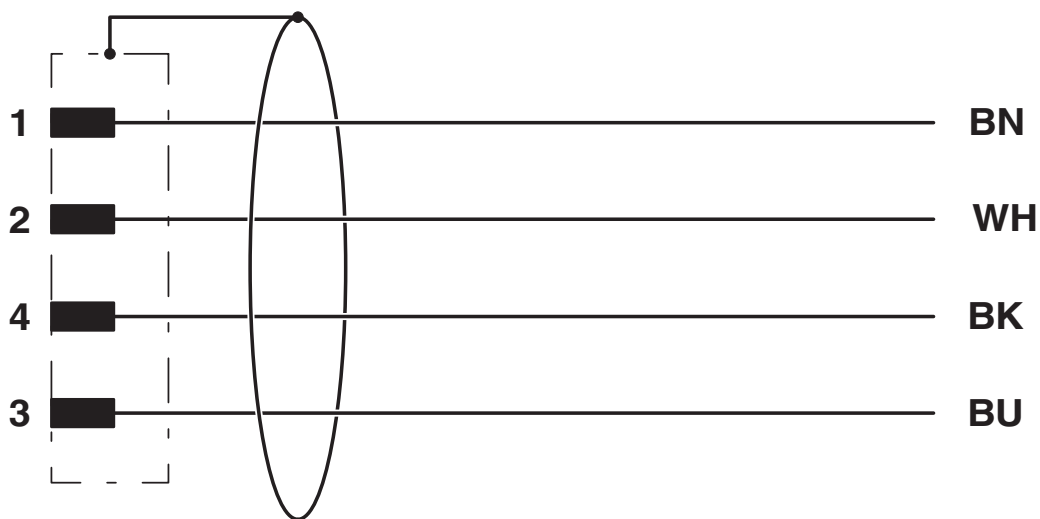
Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Circuit diagram



Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Approvals



EAC

Approval ID: RU C-DE.BL08.B.00286



UL Listed

Approval ID: FILE E 221474

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	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
	300 V	4 A	-	-



EAC

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

cULus Listed

Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Classifications

ECLASS

ECLASS-9.0	27060311
ECLASS-10.0.1	27060311
ECLASS-11.0	27060311

ETIM

ETIM 8.0	EC001855
----------	----------

UNSPSC

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

Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Accessories

Sealing cap

Sealing cap - PROT-M12 FS-PA-CHAIN - 1430873

<https://www.phoenixcontact.com/pc/products/1430873>

M12 sealing cap made of plastic with fixing band, for sensor cables, for free M12 plugs



Locking clip

Locking clip - SAC-M12-EXCLIP-M - 1558988

<https://www.phoenixcontact.com/pc/products/1558988>

Locking clip for the pin side of sensor/actuator cables with M12 connector and M12 connectors for assembly, for knurl diameter: 15 mm or for Allen key with a wrench size of 14 mm, prevents the disconnection of plug-in connections without tools



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Insert label

Insert label - PABA WH/23 - 1013779

<https://www.phoenixcontact.com/pc/products/1013779>



Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

Insert label

Insert label - PABA YE/23 - 1013782

<https://www.phoenixcontact.com/pc/products/1013782>



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Marker pen

Marker pen - B-STIFT - 1051993

<https://www.phoenixcontact.com/pc/products/1051993>



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

Diagonal cutter

Diagonal cutter - CUTFOX-S VDE - 1212207

<https://www.phoenixcontact.com/pc/products/1212207>



Diagonal cutter for hard (piano wire) and soft wires, VDE 1000 V AC/1500 V DC tested

1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Stripping tool

Stripping tool - WIREFOX SAC-1 - 1212757

<https://www.phoenixcontact.com/pc/products/1212757>



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 3.2 to 4.4 mm, any stripping length

Stripping tool

Stripping tool - WIREFOX SAC - 1212623

<https://www.phoenixcontact.com/pc/products/1212623>



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 4.4 to 7 mm, any stripping length

Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Stripping tool

Stripping tool - WIREFOX 10 - 1212150

<https://www.phoenixcontact.com/pc/products/1212150>



Stripping tool, for cables and conductors from 0.02 - 10 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

Protective hose adapter

Protective hose adapter - WP-CTA POM 13,0 BK - 1422884

<https://www.phoenixcontact.com/pc/products/1422884>



Protective hose adapter, for corrugated hoses with a nominal size of 13 (10 x 13), corrugated in parallel

Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Protective hose

Protective hose - WP-PA HF 13,0 BK - 3240681

<https://www.phoenixcontact.com/pc/products/3240681>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: V0, inner diameter: 10 mm, Total length: 50 m

Protective hose

Protective hose - WP-PA HF-HB 13,0 BK - 3240839

<https://www.phoenixcontact.com/pc/products/3240839>



Protective hose, material: PA 6, UV-resistant: yes, flexible, degree of protection: IP68, color: black, flammability rating in acc. with UL 94: HB, inner diameter: 10 mm, Total length: 50 m

Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Torque screwdriver

Torque screwdriver - TSD 04 SAC - 1208429

<https://www.phoenixcontact.com/pc/products/1208429>



Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

Torque screwdriver

Torque screwdriver - TSD-M 1,2NM - 1212224

<https://www.phoenixcontact.com/pc/products/1212224>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

Sensor/actuator cable - SAC-4P-M12MR/ 3,0-PUR SH



1682883

<https://www.phoenixcontact.com/pc/products/1682883>

Adapter insert

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

<https://www.phoenixcontact.com/pc/products/1212600>



Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

Tool

Tool - SAC BIT M12-D15 - 1208432

<https://www.phoenixcontact.com/pc/products/1208432>



Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive

Phoenix Contact 2022 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstraße 8
D-32825 Blomberg
+49 (0) 5235-3 00
info@phoenixcontact.com