

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR



1681703

<https://www.phoenixcontact.com/pc/products/1681703>

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, 3-position, PUR halogen-free, black-gray RAL 7021, Plug angled M8, on free cable end, cable length: 3 m

Your advantages

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

Commercial Data

Item number	1681703
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	02
Product Key	BF1BBA
Catalog Page	Page 188 (C-2-2019)
GTIN	4017918158361
Weight per Piece (including packing)	62.3 g
Weight per Piece (excluding packing)	47.36 g
Customs tariff number	85444290
Country of origin	DE

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR



1681703

<https://www.phoenixcontact.com/pc/products/1681703>

Technical Data

Product properties

Product type	Sensor/actuator cable
Number of positions	3
Application	Standard
No. of cable outlets	1
Shielded	no
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	$\leq 100 \text{ M}\Omega$
Nominal voltage U_N	48 V AC
	60 V DC
Nominal current I_N	4 A
Protective circuit	unwired

Valve connector characteristics

Switch-over time	\leq
Clock frequency	\leq

Mechanical properties

Mechanical data

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

LED signaling

Status display	No
Status display present	No

Connection data

Conductor connection

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR



1681703

<https://www.phoenixcontact.com/pc/products/1681703>

Tightening torque	0.2 Nm (M8 connectors)
-------------------	------------------------

Connector

Connection 1

Head design	Plug
Head cable outlet	angled
Head thread type	M8


Connection 2

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

Cable / line

Cable length	3 m
--------------	-----

PUR halogen-free black [PUR]

Dimensional drawing	
Cable weight	18 kg/km
UL AWM Style	20549 / 10493 (80°C/300 V)
Number of positions	3
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	32x 0.10 mm
AWG signal line	24
Conductor cross section	3x 0.25 mm ²
Wire diameter incl. insulation	1.17 mm ±0.02 mm
External cable diameter	3.6 mm ±0.15 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, blue, black
Thickness, insulation	≥ 0.21 mm (Core insulation)
Thickness, outer sheath	approx. 0.5 mm
Overall twist	3 wires, twisted
Length of twist, overall twist	40 mm
Max. conductor resistance	≤ 78 Ω/km (at 20 °C)
Insulation resistance	≥ 100 GΩ*km (at 20 °C)

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR



1681703

<https://www.phoenixcontact.com/pc/products/1681703>

Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Smallest bending radius, fixed installation	18 mm
Smallest bending radius, movable installation	36 mm
Max. bending cycles	10000000
Halogen-free	in accordance with DIN VDE 0472 part 815
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	hydrolysis and microbe resistant Highly resistant to acids, alkaline solutions and solvents Resistant to salt water partly UV-resistant in accordance with DIN EN ISO 4892-2-A
Special properties	Flexible cable conduit capable Silicone-free Free of substances which would hinder coating with paint or varnish
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation) -25 °C ... 80 °C (Cable, flexible installation)

Ambient conditions

Degree of protection	IP65 IP67 IP68
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket) -40 °C ... 80 °C (cable, fixed installation) -5 °C ... 80 °C (Cable, flexible installation)

Standards and regulations

Standards/specifications	IEC 61076-2-104
--------------------------	-----------------

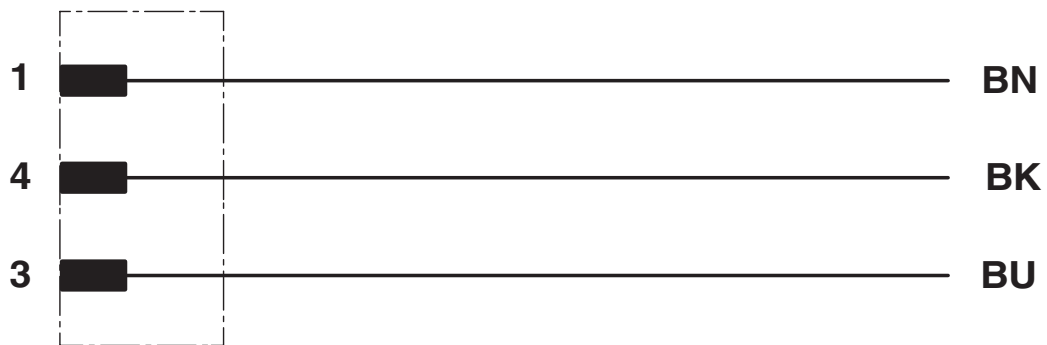
Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR

1681703

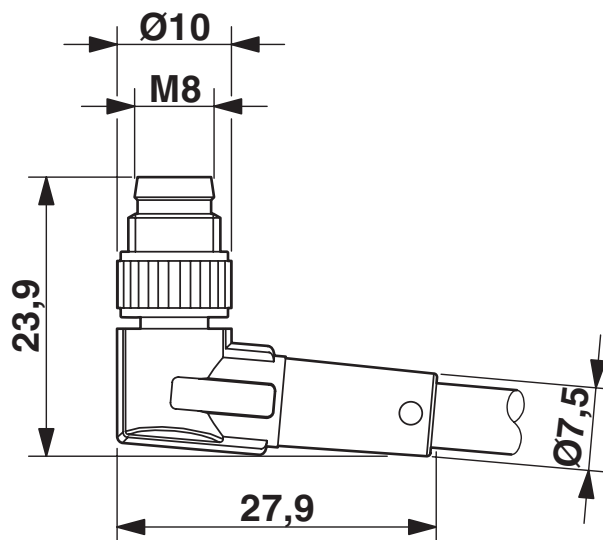
<https://www.phoenixcontact.com/pc/products/1681703>

Drawings

Circuit diagram



Dimensional drawing



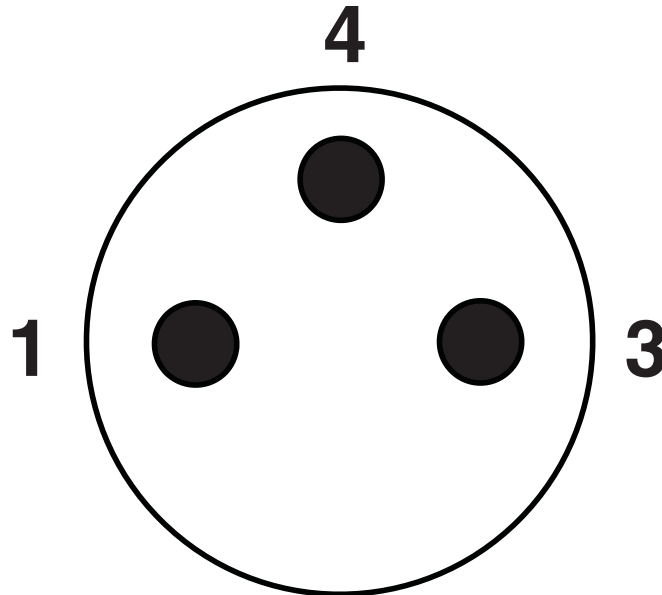
M8 x 1 male plug, angled version

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR

1681703

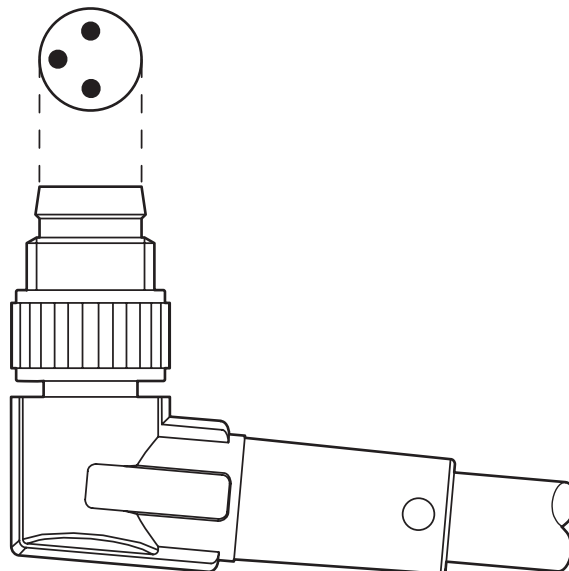
<https://www.phoenixcontact.com/pc/products/1681703>

Schematic diagram



Pin assignment M8 plug, 3-pos., view male side

Schematic diagram



Layout of connector pin assignments


Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR





1681703

<https://www.phoenixcontact.com/pc/products/1681703>

Approvals

 UL Listed Approval ID: FILE E 221474				
	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
	60 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
	60 V	4 A	-	-

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

cULus Listed				
---------------------	--	--	--	--

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR



1681703

<https://www.phoenixcontact.com/pc/products/1681703>

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-3P-M 8MR/3,0-PUR



1681703

<https://www.phoenixcontact.com/pc/products/1681703>

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR



1681703

<https://www.phoenixcontact.com/pc/products/1681703>

Accessories

Sealing cap

Sealing cap - PROT-M 8 FS-PA-CHAIN - 1430857

<https://www.phoenixcontact.com/pc/products/1430857>

M8 sealing cap made of plastic with fixing band for sensor cables, for M8 plugs



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



Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR

1681703

<https://www.phoenixcontact.com/pc/products/1681703>

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

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

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR

1681703

<https://www.phoenixcontact.com/pc/products/1681703>

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

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 \varnothing of 3.2 to 4.4 mm, any stripping length

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR

1681703

<https://www.phoenixcontact.com/pc/products/1681703>

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

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

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR

1681703

<https://www.phoenixcontact.com/pc/products/1681703>

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

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

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR

1681703

<https://www.phoenixcontact.com/pc/products/1681703>

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

Torque screwdriver

Torque screwdriver - TSD 02 SAC - 1208487

<https://www.phoenixcontact.com/pc/products/1208487>



Torque screwdriver, with preset torque of 0.2 Nm and 4 mm hexagonal drive for M8 connectors

Sensor/actuator cable - SAC-3P-M 8MR/3,0-PUR



1681703

<https://www.phoenixcontact.com/pc/products/1681703>

Tool

Tool - SAC BIT M8-D10 - 1208461

<https://www.phoenixcontact.com/pc/products/1208461>



Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 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