

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable



1538681

<https://www.phoenixcontact.com/us/products/1538681>

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 straight M12 SPEEDCON, coding: A, with 2 LEDs, on Socket angled M8, with 2 LEDs, cable length: 2 m

Commercial data

Item number	1538681
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	AF1BBA
GTIN	4046356077224
Weight per piece (including packing)	49.6 g
Weight per piece (excluding packing)	50.5 g
Country of origin	PL

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable



1538681

<https://www.phoenixcontact.com/us/products/1538681>

Technical data

Product properties

Product type	Sensor/actuator cable
Number of positions	3
No. of cable outlets	1
Shielded	no
Coding	A

Material specifications

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

Nominal voltage U_N	24 V
Nominal current I_N	4 A

Signaling

Status display	2 LEDs
Status display present	yes

Connector

Connection 1

Type	Plug straight M12 SPEEDCON
Number of positions	3
Locking type	SPEEDCON
Coding type	A

Connection 2

Type	Socket angled M8
Number of positions	3

Cable/line

Cable length	2 m
--------------	-----

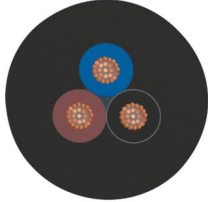
PUR halogen-free black [PUR]

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable



1538681

<https://www.phoenixcontact.com/us/products/1538681>

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 (Signal line)
Wire diameter incl. insulation	1.17 mm ±0.02 mm
External cable diameter	3.60 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. 0.50 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)
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Smallest bending radius, fixed installation	18 mm
Smallest bending radius, movable installation	36 mm
Dynamic load capacity (bending)	Max. bending cycles: 10000000, Bending radius: 44 mm, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s ²
Dynamic load capacity (torsion)	Torsion: ±180 °/m, Torsion cycles: ≥5000000, Torsional frequency: 35 cycles/min.
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

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable



1538681

<https://www.phoenixcontact.com/us/products/1538681>

Special properties	Resistant to salt water
	partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)
	Flexible cable conduit capable
	Silicone-free
Ambient temperature (operation)	Free of substances which would hinder coating with paint or varnish
	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

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

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable

1538681

<https://www.phoenixcontact.com/us/products/1538681>

Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



M8 x 1 socket, angled version

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable

1538681

<https://www.phoenixcontact.com/us/products/1538681>

Schematic diagram



Pin assignment M12 plug, 3-pos., A-coded, view male side

Schematic diagram



Pin assignment M8 socket, 3-pos.

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable

1538681

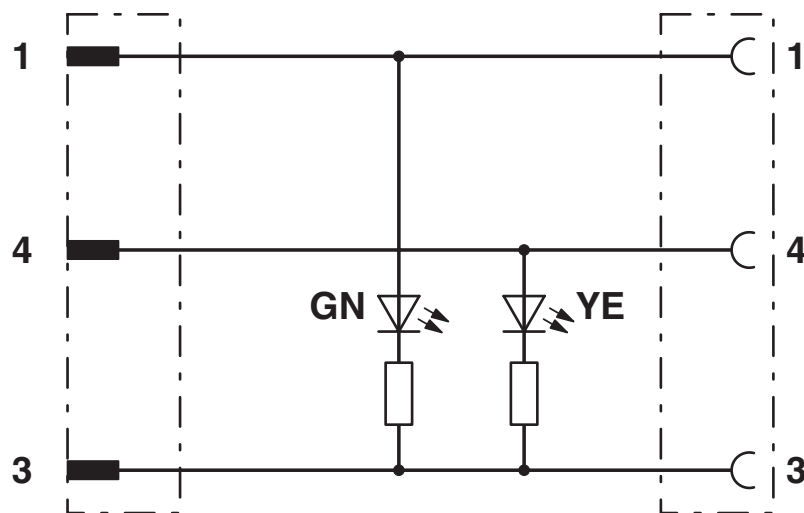
<https://www.phoenixcontact.com/us/products/1538681>

Schematic diagram



Layout of connector pin assignments

Circuit diagram



Contact assignment of M12 plugs / M8 sockets

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable



1538681

<https://www.phoenixcontact.com/us/products/1538681>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1538681>

 UL Listed Approval ID: FILE E 221474				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	24 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				
	24 V	4 A	-	-

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

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable



1538681

<https://www.phoenixcontact.com/us/products/1538681>

Classifications

ECLASS

ECLASS-13.0	27060311
ECLASS-15.0	27060311

ETIM

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

UNSPSC

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

SAC-3P-MS/2,0-170/M 8FR-2L SCO - Sensor/actuator cable



1538681

<https://www.phoenixcontact.com/us/products/1538681>

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	0.52 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