

SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable



1439599

<https://www.phoenixcontact.com/us/products/1439599>

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, coding: A, on Valve connector A, with 1 LED, Wiring: Z diode, cable length: 2 m

The figure shows the SPEEDCON version

Commercial data

Item number	1439599
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF07
Product key	AF1DJA
GTIN	4046356489447
Weight per piece (including packing)	95.3 g
Weight per piece (excluding packing)	91.5 g
Customs tariff number	85444290
Country of origin	PL

SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable



1439599

<https://www.phoenixcontact.com/us/products/1439599>

Technical data

Product properties

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

Insulation characteristics

Overvoltage category	III
Degree of pollution	3

Material specifications

Flammability rating according to UL 94	HB
Seal material	TPU
Material housing valve plug	TPU
Material of grip body	TPU
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Contact material	CuSn
Valve plug contact insert material	PA 6.6
Contact surface material	Sn
Material for screw connection	Zinc die-cast, nickel-plated

Electrical properties

Insulation resistance	$\geq 100 \text{ M}\Omega$
Nominal voltage U_N	24 V AC
	24 V DC
Nominal current I_N	4 A

Mechanical properties

Mechanical data

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

Signaling

Status display	1 LED
Status display present	yes

Connector

Connection 1

Type	Plug straight M12
------	-------------------

SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable



1439599

<https://www.phoenixcontact.com/us/products/1439599>

Coding type	A
-------------	---

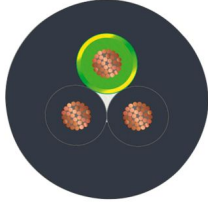
Connection 2

Type	Valve connector A
Material	CuSn (Contact)
	Sn (Contact surface)
	PA 6.6 (Contact carrier)
	TPU (Housing)
Protective circuit	Z diode

Cable/line

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

PUR halogen-free black [PUR]

Dimensional drawing	
Cable weight	30 kg/km
UL AWM Style	20549
Number of positions	3
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	28x 0.15 mm
AWG signal line	20
Conductor cross-section	3x 0.5 mm ²
Wire diameter incl. insulation	1.5 mm ±0.05 mm (Signal line)
External cable diameter	4.50 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	black 1, black 2, green/yellow
Overall twist	3 wires, twisted
Max. conductor resistance	39 Ω/km (at 20 °C)
Insulation resistance	min. 20 MΩ*km
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 1200 V
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Smallest bending radius, fixed installation	22.5 mm

SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable



1439599

<https://www.phoenixcontact.com/us/products/1439599>

Smallest bending radius, movable installation	45 mm
Dynamic load capacity (bending)	Max. bending cycles: 15000000, Bending radius: 50 mm, Traversing path: 0.9 m, Traversing rate: 5 m/s, Acceleration: 30 m/s ²
Halogen-free	in accordance with DIN VDE 0472 part 815
Flame resistance	according to DIN VDE 0482 According to DIN EN 50265-2-1
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	largely oil-resistant partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation) -20 °C ... 80 °C (Cable, flexible installation)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65 IP67
Ambient temperature (operation) (male connector/female connector)	-25 °C ... 90 °C (Plug / socket)
Ambient temperature (operation) (Valve connector)	-20 °C ... 85 °C (Valve connector)

Standards and regulations

M12

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

Valve connector

Standard designation	Valve connector
Standards/specifications	EN 175301-803

SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable

1439599

<https://www.phoenixcontact.com/us/products/1439599>

Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



Valve connector, type A

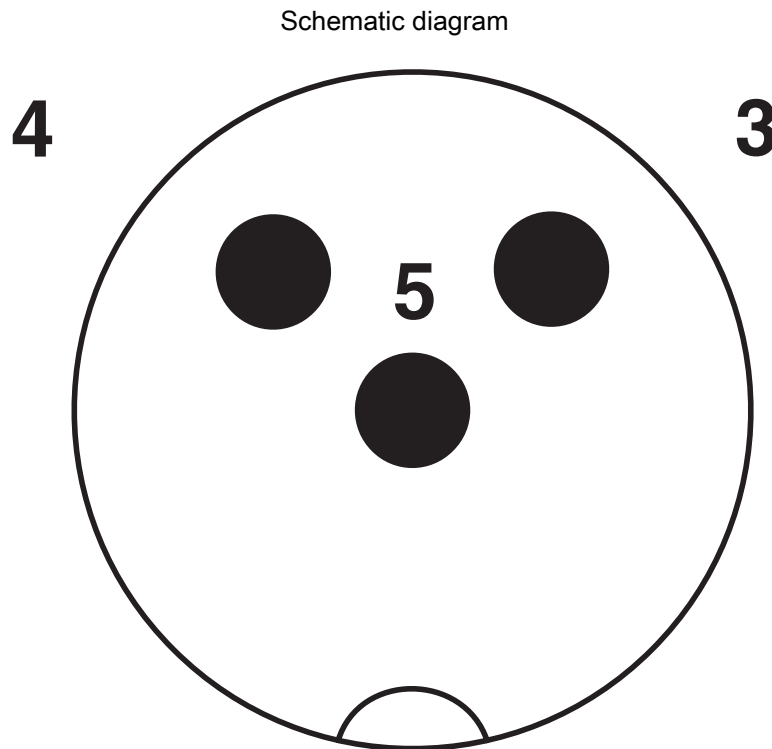
SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable

1439599

<https://www.phoenixcontact.com/us/products/1439599>



Valve connector, type A, side view



Pin assignment M12 plug, 3-pos., valve connector

SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable

1439599

<https://www.phoenixcontact.com/us/products/1439599>

Schematic diagram



Valve connector pin assignment, type A

Circuit diagram



Contact assignment of M12 plug and valve connector

SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable





1439599


<https://www.phoenixcontact.com/us/products/1439599>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1439599>

 CSA Approval ID: 13631				
	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				
--	--	--	--	--

 CSAus Approval ID: 13631				
	Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
keine				
	24 V	4 A	-	-

SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable



1439599

<https://www.phoenixcontact.com/us/products/1439599>

Classifications

ECLASS

ECLASS-13.0	27060312
ECLASS-15.0	27060312

ETIM

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

UNSPSC

UNSPSC 21.0	31251500
-------------	----------

SAC-3P-M12MS/2,0-PUR/A-1L-Z - Sensor/actuator cable



1439599

<https://www.phoenixcontact.com/us/products/1439599>

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Diboron trioxide(CAS: 1303-86-2)
	Lead monoxide (lead oxide)(CAS: 1317-36-8)
SCIP	eb1eb254-a34d-4353-a79c-4a3c4a1ddf5f

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