

SAC-3P-M12MS/1,5-PUR/A-1L-Z - Sensor/actuator cable



1400770

<https://www.phoenixcontact.com/us/products/1400770>

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, with 1 LED, on Valve connector A, with 1 LED, Wiring: Z diode, cable length: 1.5 m

Commercial data

Item number	1400770
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF07
Product key	AF1DJA
GTIN	4046356509527
Weight per piece (including packing)	80.6 g
Weight per piece (excluding packing)	77.9 g
Customs tariff number	85444290
Country of origin	PL

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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

Connection data

Conductor connection

Tightening torque	0.4 Nm (M12 connector) 0.6 Nm (Valve connector)
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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
Nominal current I_N	24 V DC 4 A

Mechanical properties

Mechanical data

Insertion/withdrawal cycles	≥ 100 (M12 connector)
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Signaling

Status display	1 LED
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Status display present	yes
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Connector

Connection 1

Type	Plug straight M12
Number of positions	3
Coding type	A

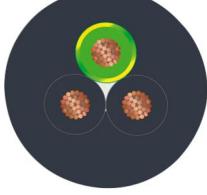
Connection 2

Type	Valve connector A
Number of positions	3
Material	CuSn (Contact) Sn (Contact surface) PA 6.6 (Contact carrier) TPU (Housing)
Protective circuit	Z diode

Cable/line

Cable length	1.5 m
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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

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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
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

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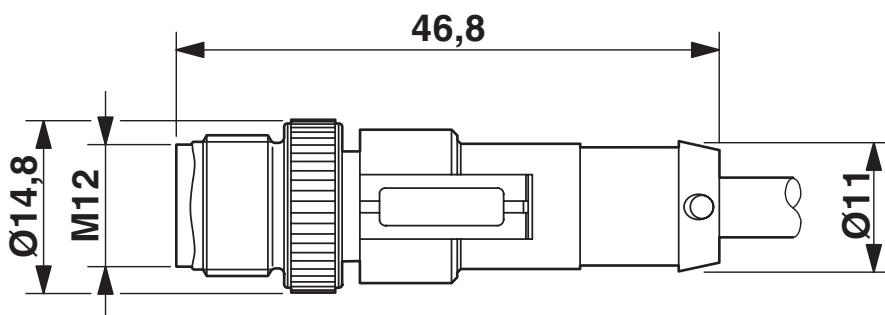


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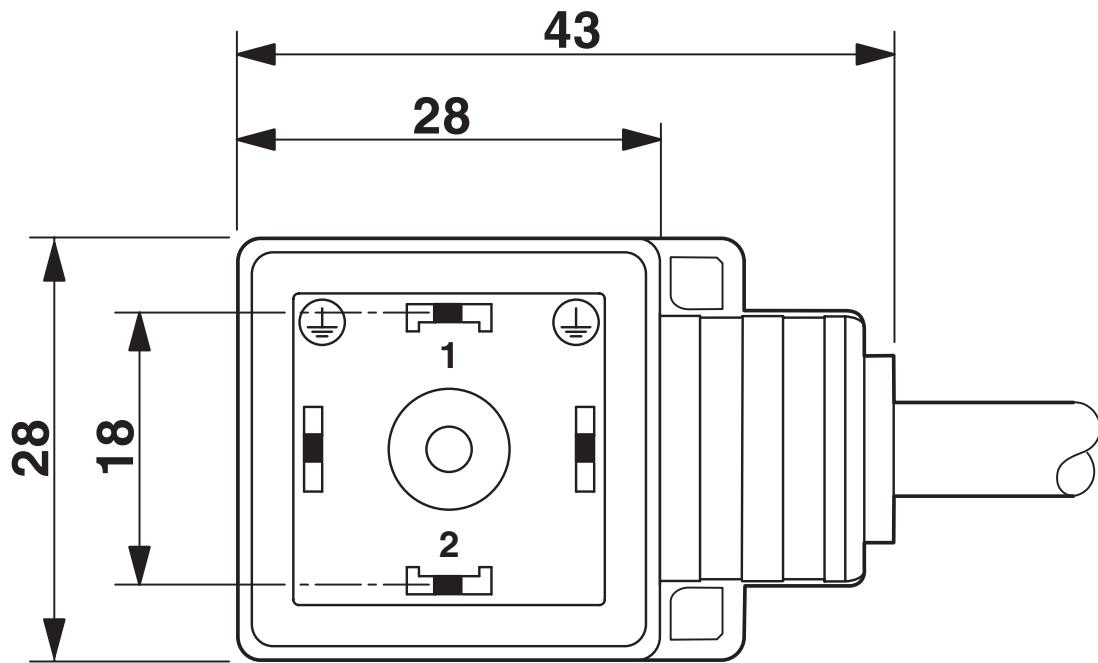
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



Valve connector, type A

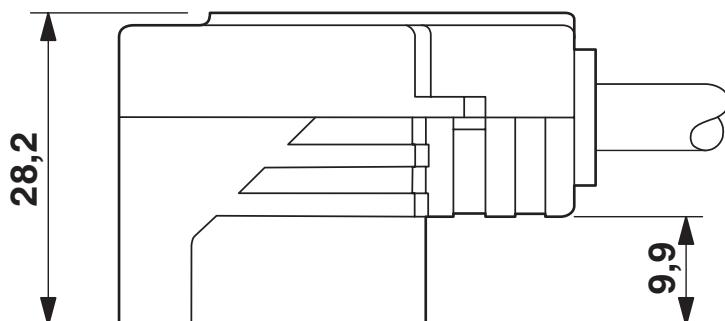
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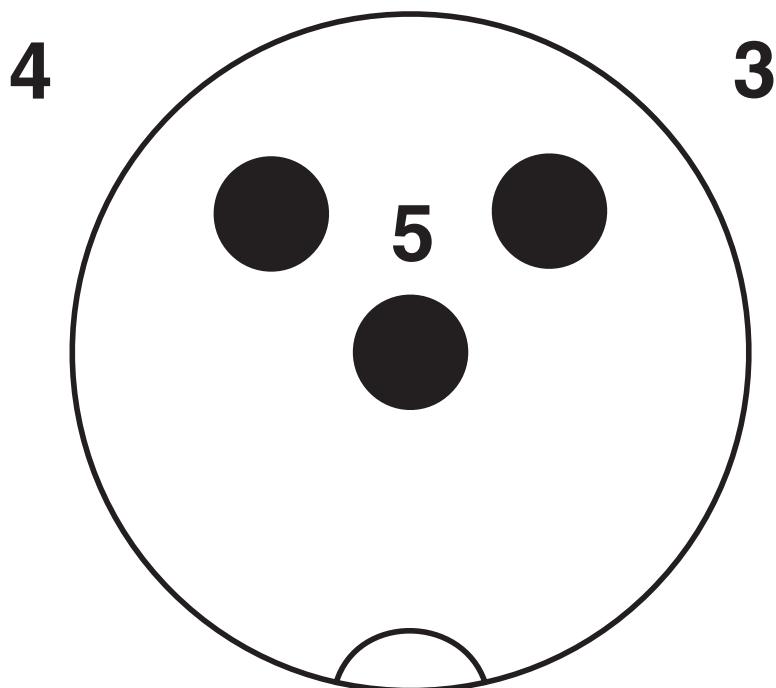
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Dimensional drawing



Valve connector, type A, side view

Schematic diagram



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

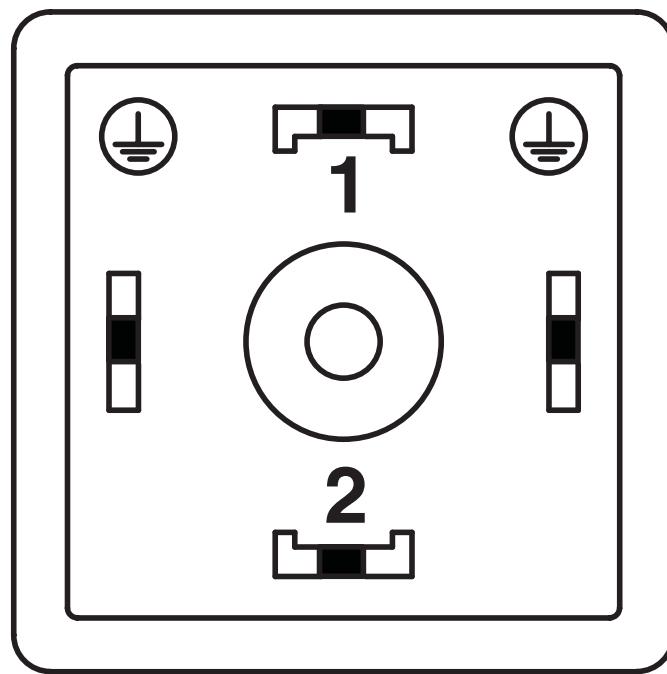
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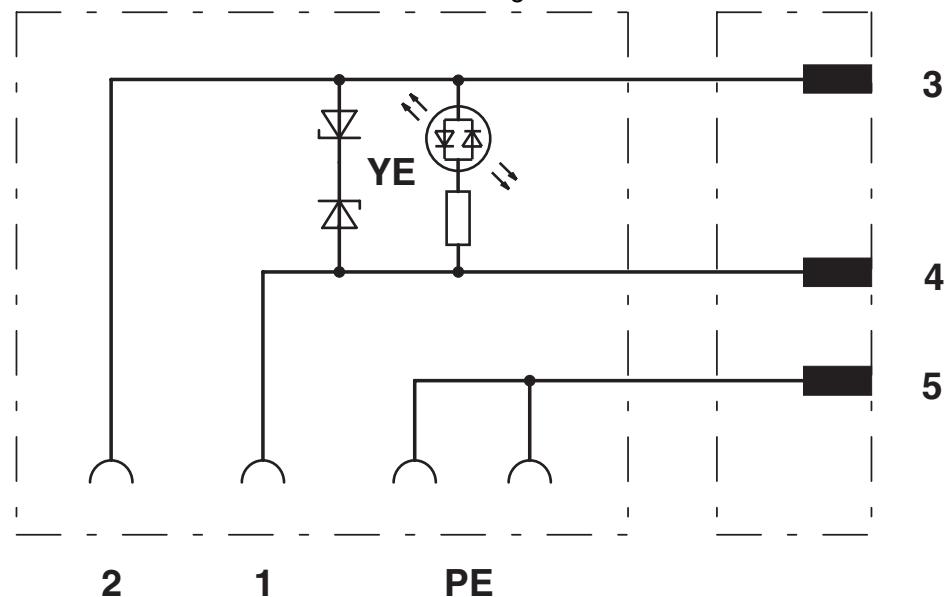
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Schematic diagram



Valve connector pin assignment, type A

Circuit diagram



Contact assignment of M12 plug and valve connector

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Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1400770>

		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

		Nominal voltage U_N	Nominal current I_N	Cross section AWG	Cross section mm^2
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Classifications

ECLASS

ECLASS-13.0	27060312
ECLASS-15.0	27060312

ETIM

ETIM 9.0	EC001855
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UNSPSC

UNSPSC 21.0	31251500
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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.)	No substance above 0.1 wt%
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EF3.0 Climate Change

CO2e kg	1.337 kg CO2e
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