

# SAC-3P-MR/7,5-PUR/BI-1L-Z SCO - Sensor/actuator cable



1438901

<https://www.phoenixcontact.com/us/products/1438901>

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Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug angled M12 SPEEDCON, coding: A, with 1 LED, on Valve connector BI (11 mm), with 1 LED, Wiring: Z diode, cable length: 7.5 m

## Commercial data

Item number	1438901
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF07
Product key	AF1DMA
GTIN	4046356496759
Weight per piece (including packing)	262.9 g
Weight per piece (excluding packing)	243 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
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

### Signaling

Status display	1 LED
Status display present	yes

### Connector

#### Connection 1

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

#### Connection 2

Type	Valve connector BI (11 mm)
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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	7.5 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 <sup>2</sup>
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
Smallest bending radius, movable installation	45 mm
Dynamic load capacity (bending)	Max. bending cycles: 15000000, Bending radius: 50 mm,

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	Traversing path: 0.9 m, Traversing rate: 5 m/s, Acceleration: 30 m/s <sup>2</sup>
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)	-25 °C ... 90 °C (Plug / socket)
	-20 °C ... 80 °C (Valve connector)
	-40 °C ... 80 °C (cable, fixed installation)
	-15 °C ... 80 °C (Cable, flexible installation)

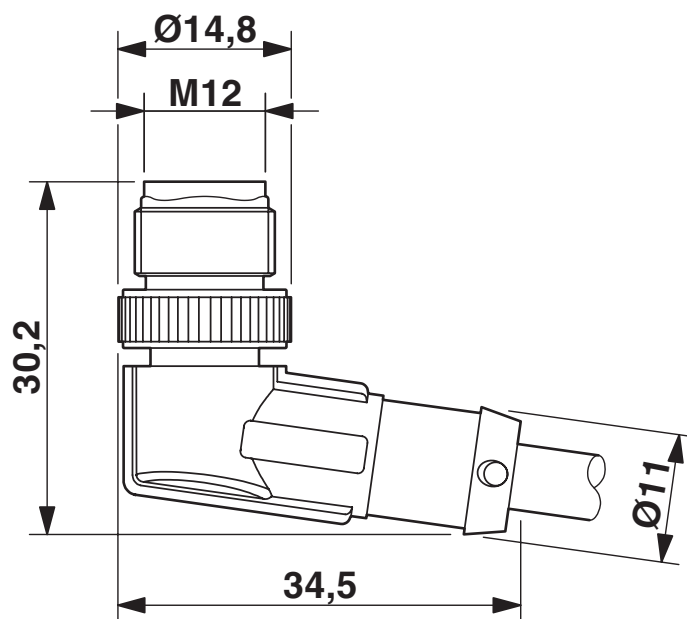
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## Drawings

Dimensional drawing



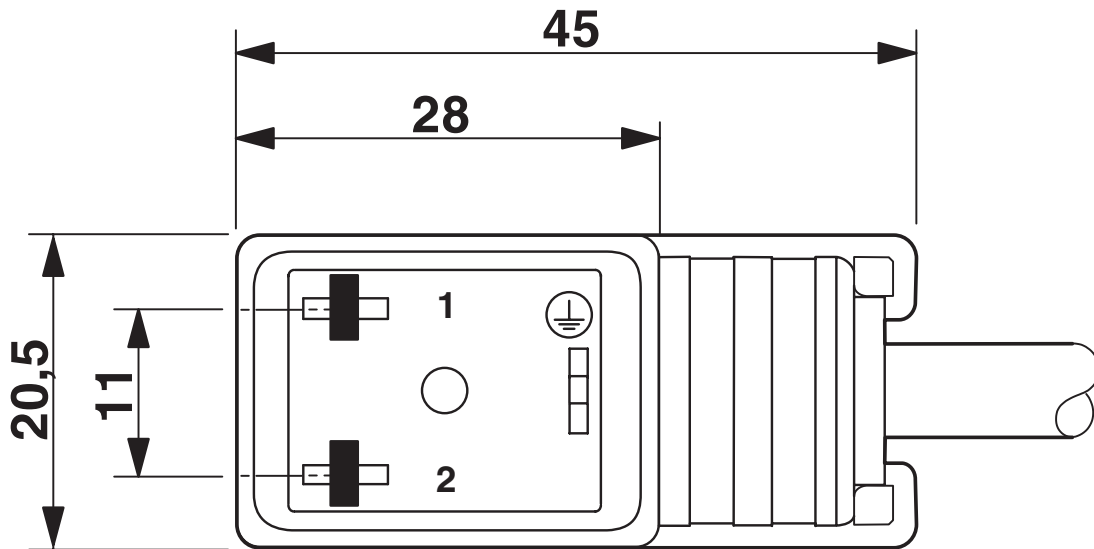
M12 x 1 male plug, angled

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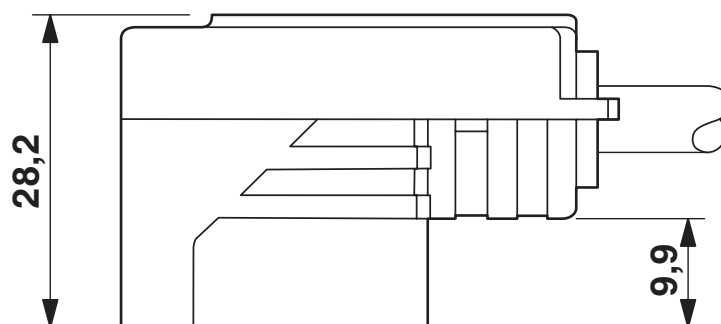
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Dimensional drawing



Valve connector, type BI

Dimensional drawing



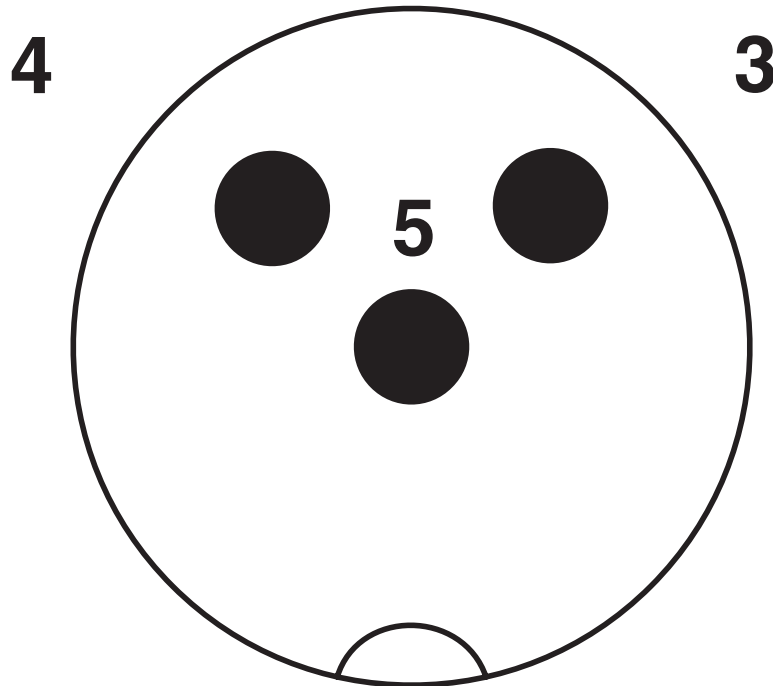
Valve connector, type BI, side view

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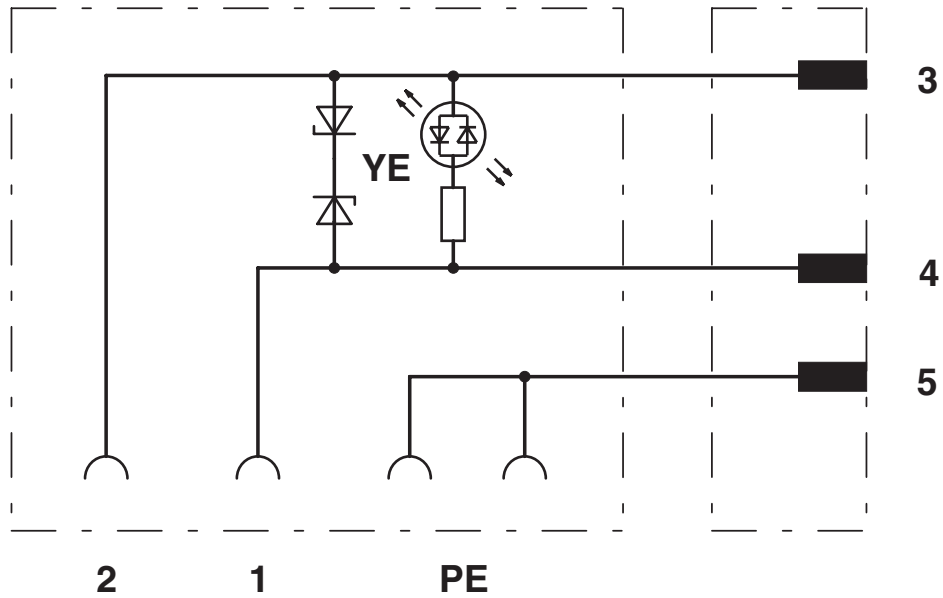
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Schematic diagram



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

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/1438901>



**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 $\text{mm}^2$
keine				
	24 V	4 A	-	-

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## Classifications

### ECLASS

ECLASS-13.0	27060312
ECLASS-15.0	27060312

### ETIM

ETIM 10.0	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.)	Diboron trioxide(CAS: 1303-86-2)
	Lead monoxide (lead oxide)(CAS: 1317-36-8)

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