

# SAC-3P-M12MS/0,3-PUR/C-1L-V - Sensor/actuator cable

1438820

<https://www.phoenixcontact.com/us/products/1438820>

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As illustrated, but without SPEEDCON

Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, with 1 LED, on Valve connector C (8 mm), with 1 LED, Wiring: Varistor, cable length: 0.3 m

## Commercial data

Item number	1438820
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	AF1DNA
GTIN	4046356505123
Weight per piece (including packing)	32.2 g
Weight per piece (excluding packing)	32.2 g
Country of origin	PL

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## Technical data

### Product properties

Product type	Sensor/actuator cable with valve connector
Application	Standard
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)

### 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	$\geq 100$ (M12 connector)
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### Signaling

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Status display	1 LED
Status display present	yes

## Connector

### Connection 1

Type	Plug straight M12
Number of positions	3
Coding type	A

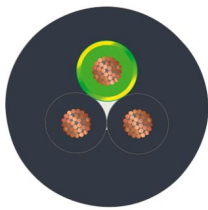
### Connection 2

Type	Valve connector C (8 mm)
Number of positions	3
Material	CuSn (Contact)
	Sn (Contact surface)
	PA 6.6 (Contact carrier)
	TPU (Housing)
Protective circuit	Varistor

## Cable/line

Cable length	0.3 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

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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, 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) (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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## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



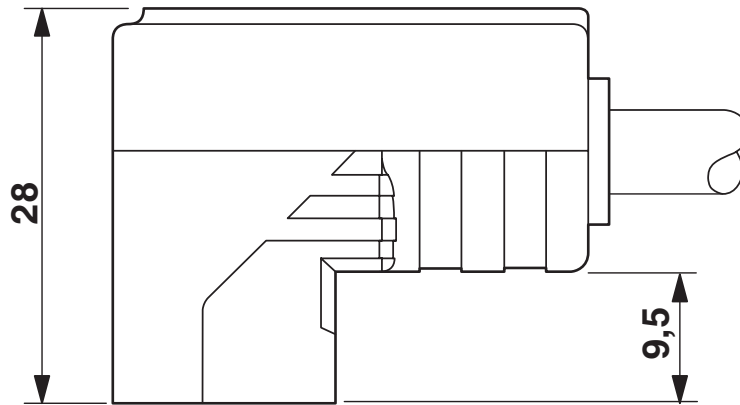
Valve connector, type C

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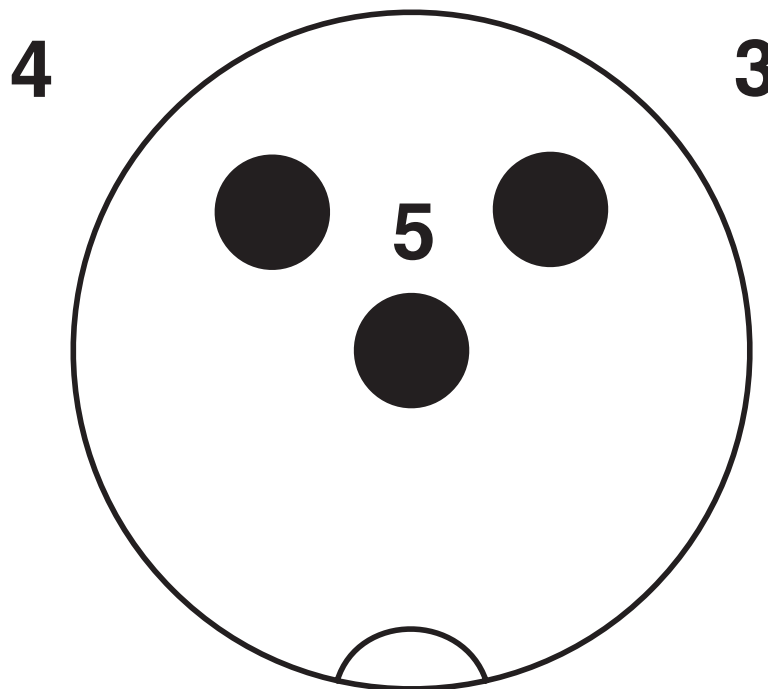
<https://www.phoenixcontact.com/us/products/1438820>

Dimensional drawing



Valve connector, type C, side view

Schematic diagram



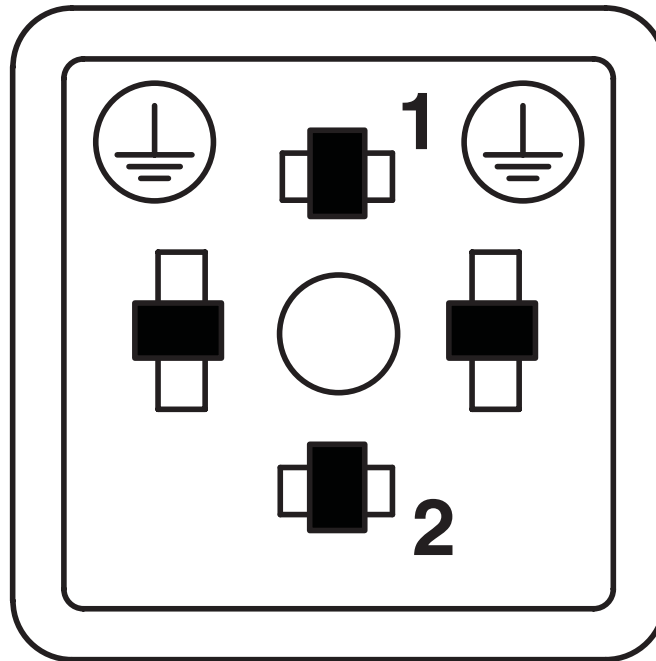
Pin assignment M12 plug, 3-pos., valve connector

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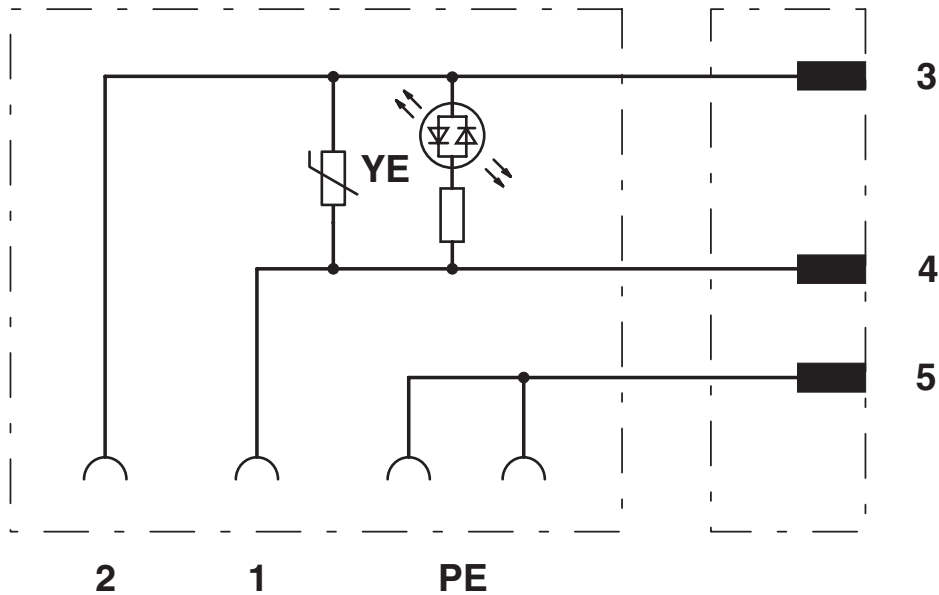
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Schematic diagram



Valve connector connector pin assignment, type C

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/1438820>



**EAC-RoHS**

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

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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, No exemptions
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### 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%
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