

# SAC-3P-MS/ 1,2-240/BI SCO - Sensor/actuator cable



1409764

<https://www.phoenixcontact.com/us/products/1409764>

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Sensor/actuator cable, 3-position, PUR halogen-free, yellow, Plug straight M12 SPEEDCON, coding: A, on Valve connector BI (11 mm), cable length: 1.2 m

As shown in the illustration but with a yellow conductor

## Commercial data

Item number	1409764
Packing unit	1 pc
Minimum order quantity	50 pc
Note	Made to order (non-returnable)
Product key	AF1DMA
GTIN	4046356881548
Weight per piece (including packing)	64.6 g
Weight per piece (excluding packing)	63.9 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

### 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	≥ 100 MΩ
Nominal voltage $U_N$	48 V AC
	60 V DC
Nominal current $I_N$	4 A

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	≥ 100 (M12 connector)
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### Connector

#### Connection 1

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

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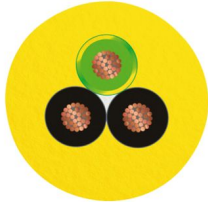
## Connection 2

Type	Valve connector BI (11 mm)
Number of positions	3
Material	CuSn (Contact)
	Sn (Contact surface)
	PA 6.6 (Contact carrier)
	TPU (Housing)

## Cable/line

Cable length	1.2 m
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## PUR halogen-free yellow [240]

Dimensional drawing	
Cable weight	30 kg/km
UL AWM Style	20549 (80°C/300 V)
Number of positions	3
Shielded	no
Cable type	PUR halogen-free yellow [240]
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	1.46 mm ±0.02 mm
External cable diameter	4.50 mm ±0.15 mm
Outer sheath, material	PUR
External sheath, color	yellow
Conductor material	Bare Cu litz wires
Material wire insulation	PP
Single wire, color	black 1, black 2, green/yellow
Thickness, insulation	≥ 0.21 mm
Thickness, outer sheath	approx. 0.60 mm
Overall twist	3 wires, twisted
Max. conductor resistance	≤ 39 Ω/km
Insulation resistance	≥ 10 GΩ*km
Nominal voltage, cable	≤ 300 V
Test voltage	≥ 3000 V
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D

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Smallest bending radius, fixed installation	23 mm
Smallest bending radius, movable installation	45 mm
Halogen-free	in accordance with DIN VDE 0472 part 815
Flame resistance	in accordance with DIN UL-Style 20549
Resistance to oil	in accordance with DIN EN 60811-2-1
Ambient temperature (operation)	-15 °C ... 80 °C (cable, fixed installation)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
Ambient temperature (operation) (Valve connector)	-20 °C ... 85 °C (Valve connector)
Ambient temperature (operation) (Cable, fixed installation)	-40 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (Cable, flexible installation)	-15 °C ... 80 °C (Cable, flexible installation)

## Standards and regulations

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

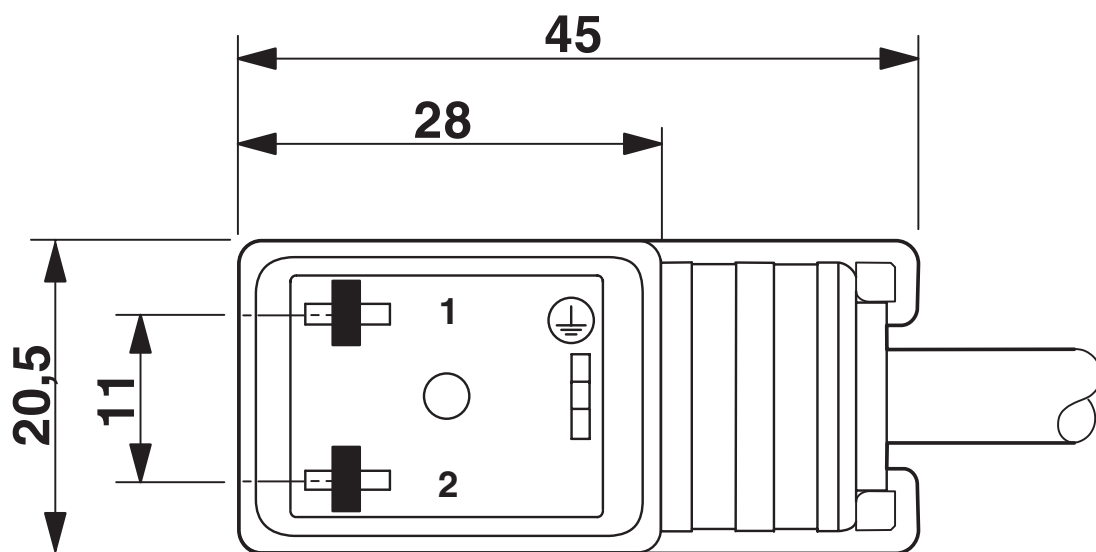
Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



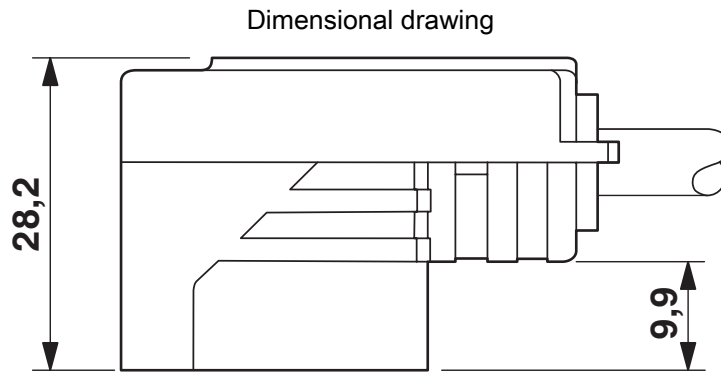
Valve connector, type BI

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Valve connector, type BI, side view

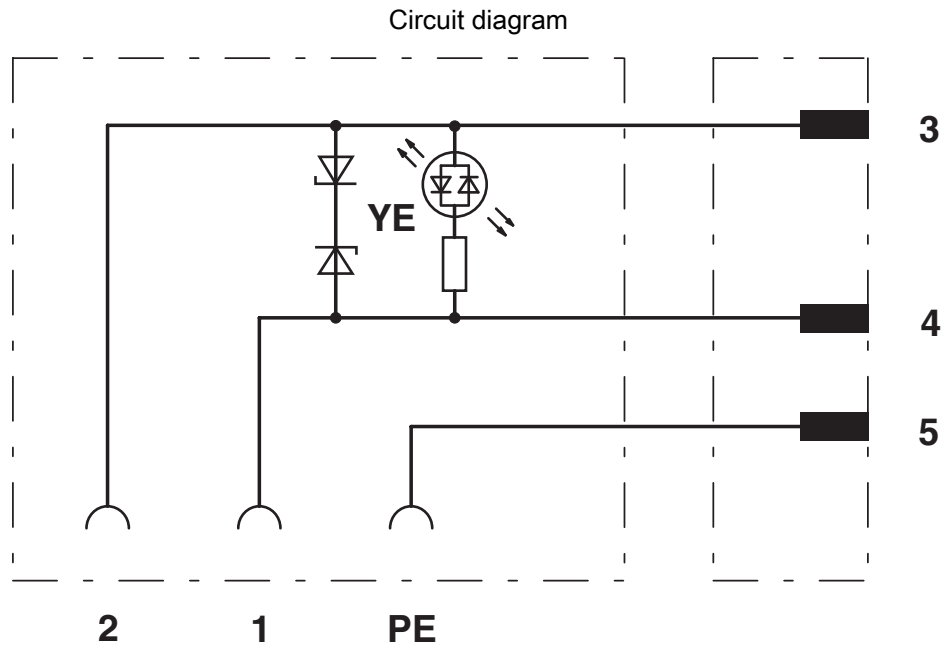
Schematic diagram



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

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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/1409764>



**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				
	230 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, 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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