

# SAC-5P-M12MS/0,3-PUR/AD-2L - Sensor/actuator cable



1694981

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Sensor/actuator cable, 5-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12, coding: A, with 2 LEDs, on Valve connector AD (pressure switch), with 2 LEDs, Wiring: Z diode, cable length: 0.3 m

## Commercial data

Item number	1694981
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	BF07
Product key	AF1DKA
GTIN	4017918189013
Weight per piece (including packing)	70.3 g
Weight per piece (excluding packing)	70.3 g
Customs tariff number	85444190
Country of origin	DE

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## Technical data

### Product properties

Product type	Sensor/actuator cable with valve connector
Number of positions	5
No. of cable outlets	1
Shielded	no
Coding	A

### Insulation characteristics

Overvoltage category	II
Degree of pollution	3

### Material specifications

Flammability rating according to UL 94	HB
Seal material	TPU
Material housing valve plug	PBT
Material of grip body	TPU, hardly inflammable, self-extinguishing
Contact material	CuSn
Contact surface material	Ag
Contact carrier material	PBT
Contact material	CuSn
Valve plug contact insert material	PBT
Contact surface material	Ag
Material for screw connection	Zinc die-cast, nickel-plated

### Electrical properties

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

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$
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### Signaling

Status display	2 LEDs
Status display present	yes

### Connector

#### Connection 1

Type	Plug straight M12
Number of positions	5

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Coding type	A
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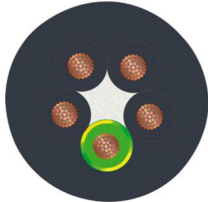
## Connection 2

Type	Valve connector AD (pressure switch)
Number of positions	5
Material	CuSn (Contact)
	Ag (Contact surface)
	PBT (Contact carrier)
	PBT (Housing)
Protective circuit	Z diode

## Cable/line

Cable length	0.3 m
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## PUR halogen-free black [PUR]

Dimensional drawing	
Cable weight	44.8 kg/km
UL AWM Style	20549
Number of positions	5
Shielded	no
Cable type	PUR halogen-free black [PUR]
Conductor structure signal line	28x 0.15 mm
AWG signal line	20
Conductor cross-section	5x 0.5 mm <sup>2</sup>
Wire diameter incl. insulation	1.5 mm ±0.05 mm (Signal line)
External cable diameter	5.30 mm ±0.02 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, black 3, black 4, green/yellow
Overall twist	5 cores, 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

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Smallest bending radius, fixed installation	26.5 mm
Smallest bending radius, movable installation	53 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	in accordance with DIN UL-Style 20549
Resistance to oil	in accordance with DIN EN 60811-2-1
Other resistance	Highly resistant to acids, alkaline solutions and solvents
	hydrolysis and microbe resistant
	largely oil-resistant
	partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
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)
Ambient temperature (operation) (fixed installation)	-30 °C ... 80 °C (cable, fixed installation)
Ambient temperature (operation) (flexible installation)	-5 °C ... 70 °C (Cable, flexible installation)

## 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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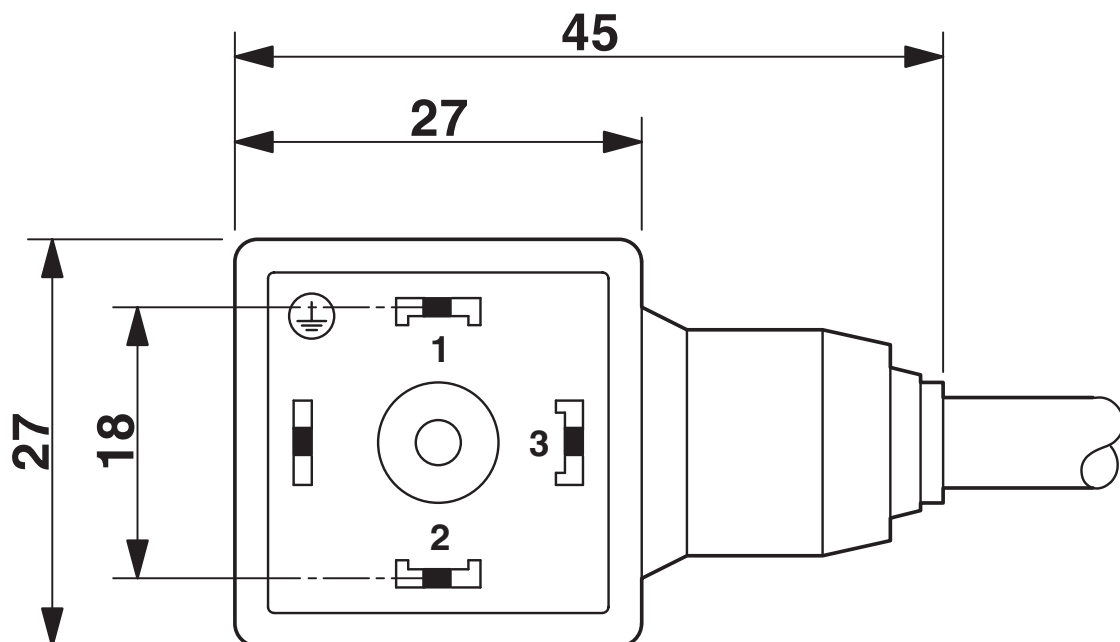
## Drawings

Dimensional drawing



Plug, M12 x 1, straight, shielded

Dimensional drawing



Valve connector, type AD

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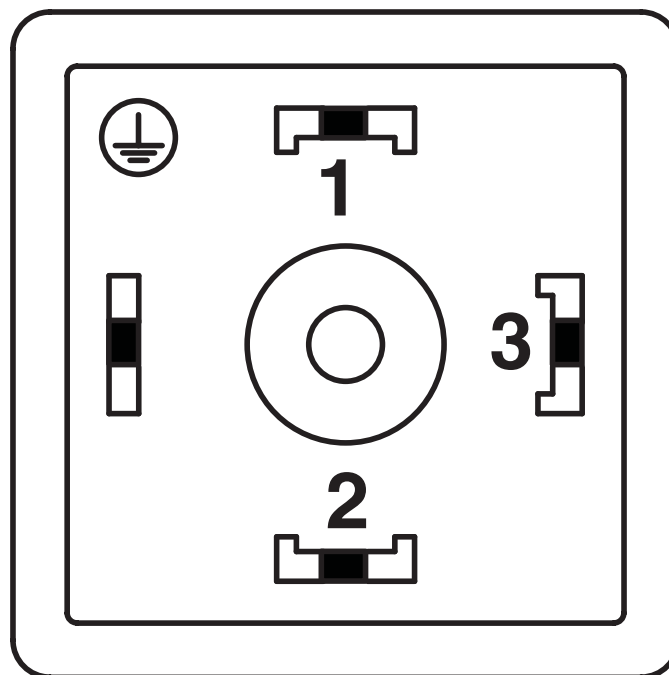
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Schematic diagram



Pin assignment M12 male connector, 5-pos., A-coded, male side

Schematic diagram



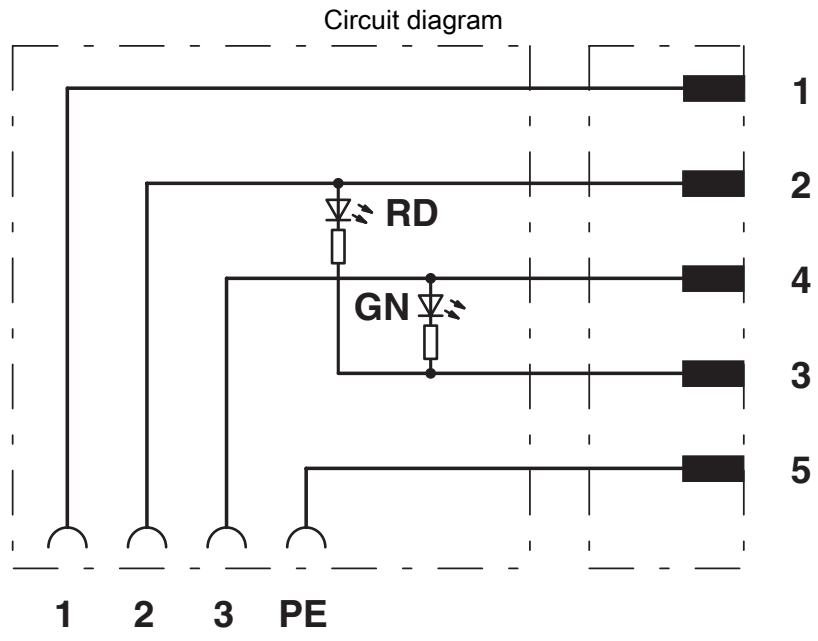
Valve plug connector pin assignment, type AD

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Contact assignment of M12 plug and valve connector

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## Classifications

### ECLASS

ECLASS-13.0	27060312
ECLASS-15.0	27060312

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## Environmental product compliance

### 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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