

# SAC-2P-M 8MS-C-1L-Z/.../... - Sensor/actuator cable



1405653

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Sensor/actuator cable, 2-position, Variable cable type, Plug straight M8, coding: A, on Valve connector C (8 mm), with 1 LED, Wiring: Z diode, cable length: Free input (0.2 ... 40.0 m)

## Your advantages

- Easy and safe: 100 % electrically tested plug-in components
- Convenient: increased machine availability thanks to quick and easy diagnostics
- Flexible solutions - configurable materials with variable cable types and cable lengths

## Commercial data

Item number	1405653
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Sales key	BF17
Product key	AF1DNA
Customs tariff number	85444290
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	2
No. of cable outlets	1
Shielded	no
Coding	A

### Connection data

#### Conductor connection

Tightening torque	0.2 Nm (M8 connectors)
	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, hardly inflammable, self-extinguishing
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

#### Valve connector characteristics

Fixing screws	M2,5 x 27,5
Pulse power	40 W (at 100 $\mu\text{s}$ square-wave pulse)
Terminal voltage	70 V (at 2 mA constant current)
Reverse voltage	50 V

### Mechanical properties

#### Mechanical data

Insertion/withdrawal cycles	$\geq 100$ (M8 connectors)
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## Signaling

Status display	1 LED
Status display present	yes

## Connector

### Connection 1

Type	Plug straight M8
Coding type	A

### Connection 2

Type	Valve connector C (8 mm)
Material	CuSn (Contact)
	Contact surface
	TPU (Housing)
	Sn
Protective circuit	Z diode

## Cable/line

Cable length	Free input (0.2 ... 40.0 m)
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### PUR halogen-free black [PUR]

Cable weight	25 kg/km
UL AWM Style	20549 / 10152 (80°C/300 V)
Number of positions	2
Shielded	no
Cable type	PUR halogen-free black [PUR]
	PUR halogen-free black PUR
Conductor structure signal line	28x 0.15 mm
AWG signal line	20
Conductor cross-section	2x 0.5 mm <sup>2</sup>
Wire diameter incl. insulation	1.46 mm ±0.05 mm
External cable diameter	4.25 mm ±0.15 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	brown, blue
Thickness, outer sheath	≥ 0.38 mm
Max. conductor resistance	≤ 39 Ω/km (at 20 °C)
Insulation resistance	≥ 1 GΩ*km (at 20 °C)
Nominal voltage, cable	≤ 300 V AC
Test voltage	≥ 3000 V AC (Spark test)
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	22 mm
Smallest bending radius, movable installation	43 mm
Dynamic load capacity (bending)	Max. bending cycles: 4000000, Bending radius: 10 x D, Traversing path: 10 m, Traversing rate: 3 m/s, Acceleration: 10 m/s <sup>2</sup>
Halogen-free	in accordance with DIN VDE 0472 part 815
	in accordance with DIN EN 50267-2-1
Flame resistance	according to UL 758/1581 (horizontal)
	in accordance with UL 758/1581 FT2
Resistance to oil	According to DIN EN 60811-2-1, 168 h at 100°C
Other resistance	hydrolysis and microbe resistant
	partly UV-resistant (in accordance with DIN EN ISO 4892-2-A)
	Resistant to salt water
	Low adhesion
Special properties	abrasion-resistant
	flexible
	Flexible cable conduit capable
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (Cable, flexible installation)

## PVC black [PVC]

Cable weight	34.9 kg/km
UL AWM Style	2464
Number of positions	2
Shielded	no
Cable type	PVC black [PVC]
	PVC black PVC
Conductor structure signal line	16x 0.20 mm
AWG signal line	20
Conductor cross-section	2x 0.5 mm <sup>2</sup>
Wire diameter incl. insulation	1.5 mm ±0.05 mm
External cable diameter	4.80 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	black
Conductor material	Bare Cu litz wires
Material wire insulation	PVC
Single wire, color	brown, blue
Max. conductor resistance	39 Ω/km (at 20 °C)
Insulation resistance	≥ 20 MΩ*km
Nominal voltage, cable	300 V
Test voltage	1200 V
Minimum bending radius, fixed installation	5 x D
Smallest bending radius, fixed installation	24 mm
Flame resistance	according to DIN VDE 0482
	According to DIN EN 50265-2-1

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Resistance to oil	largely oil-resistant
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-5 °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

### M8

Standard designation	M8 connector
Standards/specifications	IEC 61076-2-104

### Valve connector

Standard designation	Valve connector
Standards/specifications	EN 175301-803

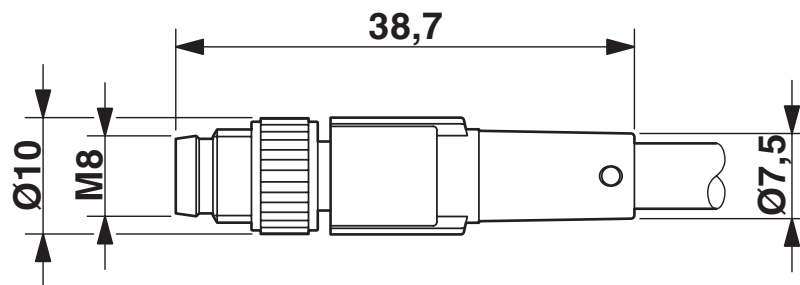
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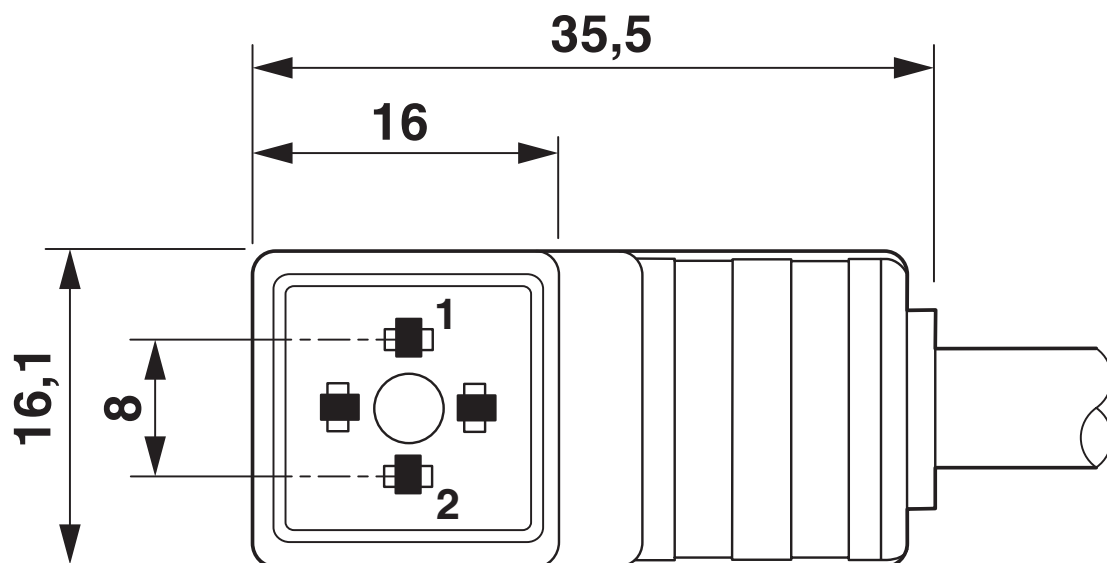
## Drawings

Dimensional drawing



M8 x 1 male plug, straight version

Dimensional drawing



Valve connector, type C

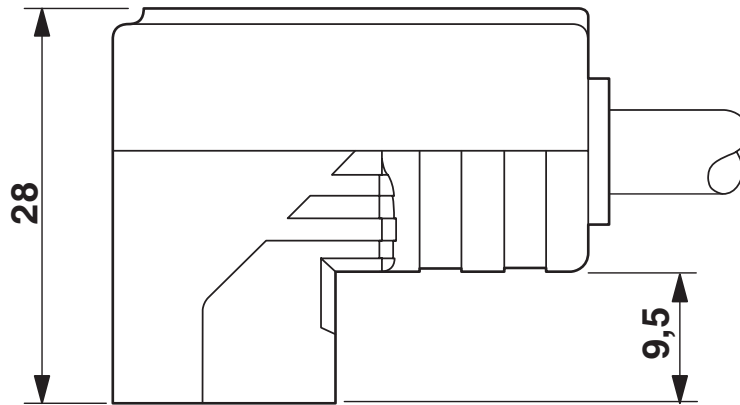
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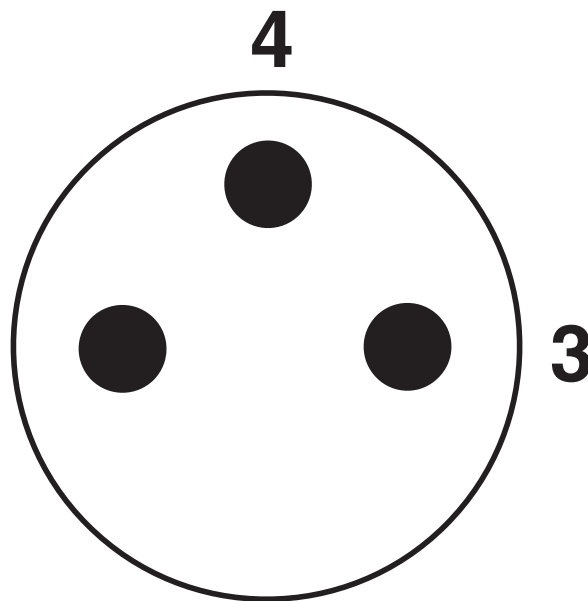


Dimensional drawing



Valve connector, type C, side view

Schematic diagram

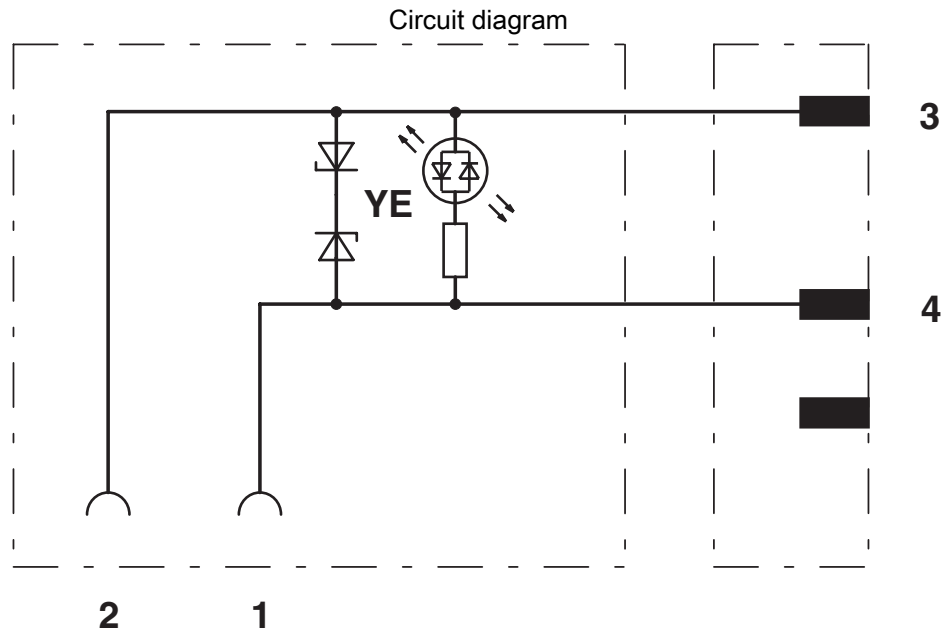


Pin assignment M8 plug, 3-pos., view male side

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Contact assignment of the M8 plug and the valve connector

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1405653>



**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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