

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



1405650

<https://www.phoenixcontact.com/de/produkte/1405650>

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

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## 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

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



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## Commercial Data

Item number	1405650
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	C1 - Sensor-Aktor-Kabel
Product Key	BF1DJA
Catalog Page	Page 228 (C-2-2019)
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	2
Application	Standard
No. of cable outlets	1
Shielded	no
Coding	A - standard

### Electrical properties

Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Nominal voltage $U_N$	24 V AC
	24 V DC
Nominal current $I_N$	4 A
Protective circuit	Z diode

### LED signaling

Status display	1 LED
Status display present	yes

### Material specifications

Flammability rating according to UL 94	HB
Sealing material	TPU (Seal molded)
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
Cable gland material	Zinc die-cast, nickel-plated

### Connector

Insertion/withdrawal cycles	≥ 100 (M8 connectors)
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#### Header 1

Head design	Plug
Head cable outlet	straight
Head thread type	M8

#### Header 2

Head design	Valve connector
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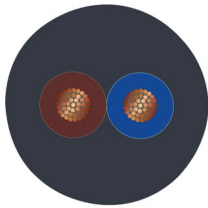
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Head thread type	A
Status indicator head	1 LED

## Cable / line

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

Dimensional drawing	
Shielded	no
UL AWM Style	20549 / 10152 (80°C/300 V)
Cable weight	25 kg/km
Cable type	PUR halogen-free black
Short symbol	Li9Y11Y
Cable type (abbreviation)	PUR
External cable diameter	4.25 mm ±0.15 mm
Outer sheath, material	PUR
External sheath, color	black-gray RAL 7021
Thickness, outer sheath	≥ 0.38 mm
Conductor material	Bare Cu litz wires
Conductor structure signal line	28x 0.15 mm
AWG signal line	20
Conductor cross section	2x 0.5 mm <sup>2</sup>
Material wire insulation	PP
Wire diameter incl. insulation	1.46 mm ±0.05 mm
Single wire, color	brown, blue
Nominal voltage, cable	≤ 300 V AC
Test voltage, cable	≥ 3000 V AC (Spark test)
Conductor resistance	≤ 39 Ω/km (at 20 °C)
Cable insulation resistance	≥ 1 GΩ*km (at 20 °C)
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Number of bending cycles	4000000
Minimum bending radius, drag chain applications	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

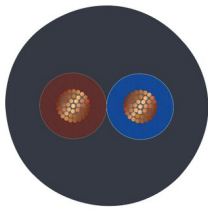
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	in accordance with DIN EN 50267-2-1
Resistance to oil	According to DIN EN 60811-2-1, 168 h at 100°C
Flame resistance	according to UL 758/1581 (horizontal)
	in accordance with UL 758/1581 FT2
Other resistance	hydrolysis and microbe resistant
	partly 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)	-25 °C ... 80 °C (Cable, flexible installation)
	-40 °C ... 80 °C (cable, fixed installation)

## PVC black [PVC]

Dimensional drawing	
Shielded	no
UL AWM Style	2464
Cable weight	34.9 kg/km
Cable type	PVC black
Short symbol	LiYY
Cable type (abbreviation)	PVC
External cable diameter	4.8 mm ±0.2 mm
Outer sheath, material	PVC
External sheath, color	black
Conductor material	Bare Cu litz wires
Conductor structure signal line	16x 0.20 mm
AWG signal line	20
Conductor cross section	2x 0.5 mm <sup>2</sup>
Material wire insulation	PVC
Wire diameter incl. insulation	1.5 mm ±0.05 mm
Single wire, color	brown, blue
Nominal voltage, cable	300 V
Test voltage, cable	1200 V
Conductor resistance	39 Ω/km (at 20 °C)
Cable insulation resistance	≥ 20 MΩ*km
Minimum bending radius, fixed installation	5 x D

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Resistance to oil	largely oil-resistant
Flame resistance	according to DIN VDE 0482
	According to DIN EN 50265-2-1
Ambient temperature (operation)	-5 °C ... 80 °C (Cable, flexible installation)
	-40 °C ... 80 °C (cable, fixed installation)
Note	This item is a sensor/actuator cable with a freely selectable cable type. The technical data for all possible cable types is listed in the table below.

## Cable structure

Cable type	PUR halogen-free black
	PVC black

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP65
	IP67
Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
	-20 °C ... 85 °C (valve plug)

## Standards and regulations

### M8

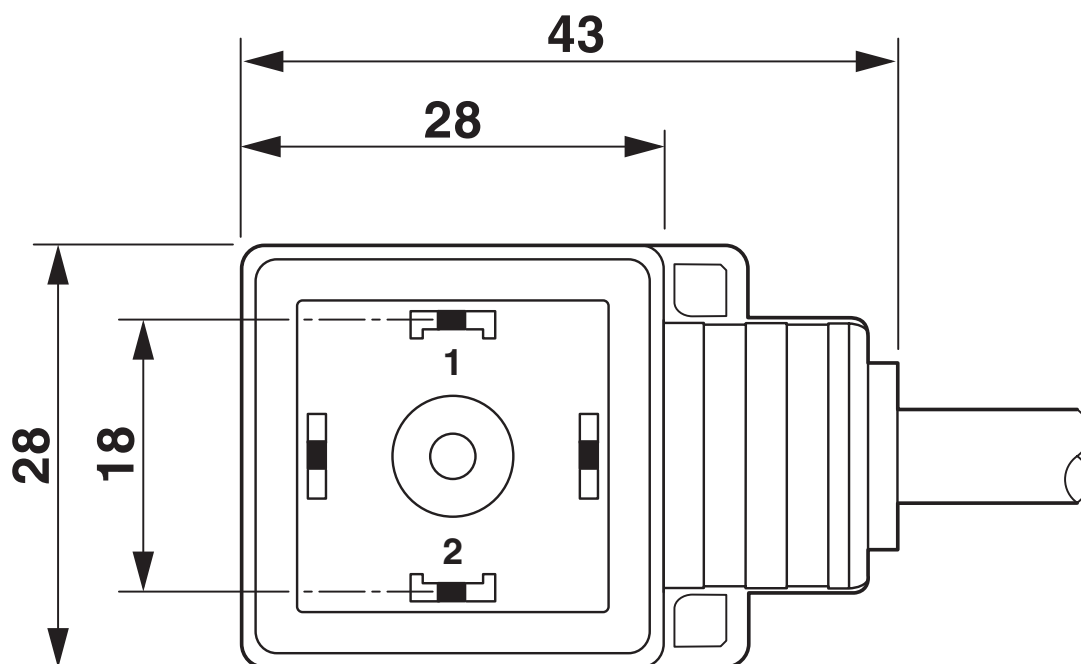
Standards/specifications	IEC 61076-2-104
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### M8

Standards/specifications	EN 175301-803
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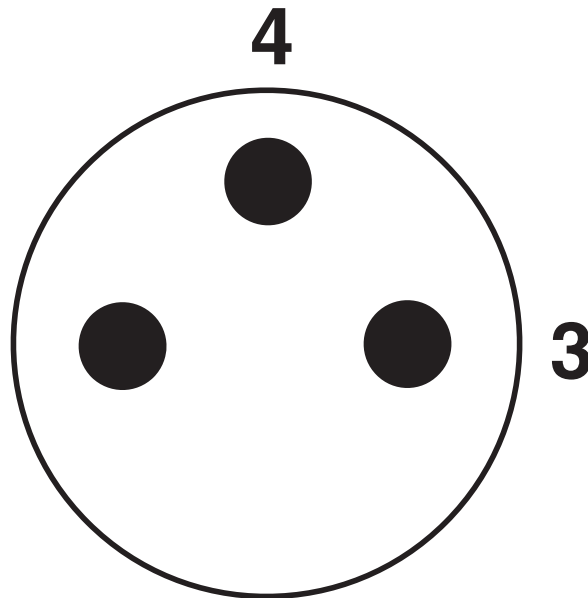
Drawings

Dimensional drawing



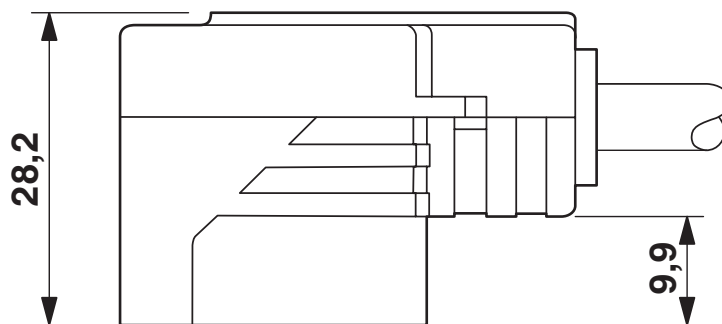
Valve connector, type A

Schematic diagram



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

Dimensional drawing



Valve connector, type A, side view

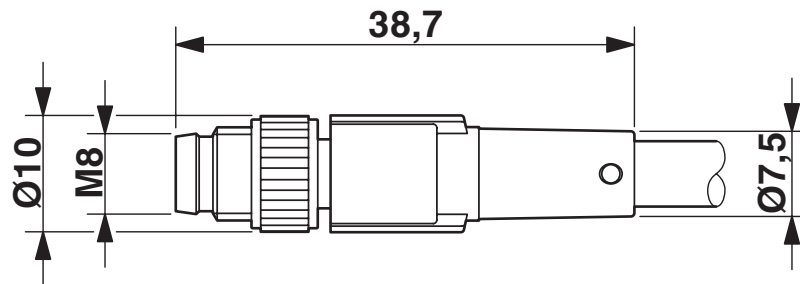


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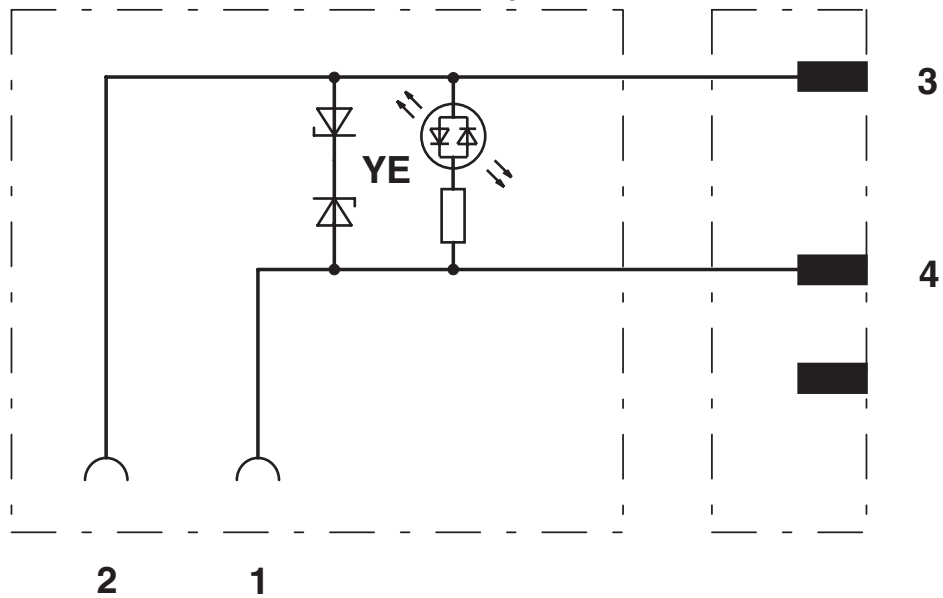
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Dimensional drawing



M8 x 1 male plug, straight version

Circuit diagram



Contact assignment of the M8 plug and the valve connector

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## Approvals



**EAC**

Approval ID: RU C-DE.BL08.B.00286



**EAC**

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

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## Classifications

### ECLASS

ECLASS-9.0	27060312
ECLASS-10.0.1	27060312
ECLASS-11.0	27060312

### ETIM

ETIM 8.0	EC001855
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### UNSPSC

UNSPSC 21.0	31251500
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Accessories

### Sealing cap

Sealing cap - PROT-M 8 FS-PA-CHAIN - 1430857

<https://www.phoenixcontact.com/de/produkte/1430857>

M8 sealing cap made of plastic with fixing band for sensor cables, for M8 plugs



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### Insert label

Insert label - PABA WH/23 - 1013779

<https://www.phoenixcontact.com/de/produkte/1013779>

Insert label, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20



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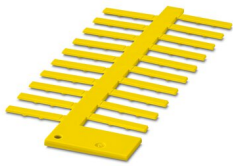
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## Insert label

Insert label - PABA YE/23 - 1013782

<https://www.phoenixcontact.com/de/produkte/1013782>



Insert label, Strip, yellow, unlabeled, can be labeled with: CMS-P1-PLOTTER, mounting type: slide-on, cable diameter range: 1.5 ... 35 mm, lettering field size: 23 x 4 mm, Number of individual labels: 20

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## Marker pen

Marker pen - B-STIFT - 1051993

<https://www.phoenixcontact.com/de/produkte/1051993>



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

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## Torque screwdriver

Torque screwdriver - TSD 02 SAC - 1208487

<https://www.phoenixcontact.com/de/produkte/1208487>



Torque screwdriver, with preset torque of 0.2 Nm and 4 mm hexagonal drive for M8 connectors

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## Tool

Tool - SAC BIT M8-D10 - 1208461

<https://www.phoenixcontact.com/de/produkte/1208461>



Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive

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