

## Sensor/Actuator cable - SAC-4P-M 8MS/3,0-PUR/M 8FR - 1682210

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Sensor/Actuator cable, 4-position, PUR halogen-free, Black-gray RAL 7021, Plug straight M8, on Socket angled M8, Cable length: 3 m

### Product Features

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Our standard: robust halogen-free PUR cable



### Key commercial data

Packing unit	1 1
Custom tariff number	85444290
Country of origin	Germany

### Technical data

#### Dimensions

Length of cable	3 m
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#### Ambient conditions

Ambient temperature (operation)	-25 °C ... 90 °C (Plug / socket)
Degree of protection	IP65
	IP67
	IP68

#### General

Rated current at 40°C	4 A
Rated voltage	30 V
Number of positions	4
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
Coding	A - standard

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### Technical data

#### General

Standards/regulations	M8 connector IEC 61076-2-104
Status display	No
Protective circuit/component	Unwired
Surge voltage category	II
Pollution degree	3
Insertion/withdrawal cycles	≥ 100
Torque	0.2 Nm (M8 connectors)

#### Material

Inflammability class according to UL 94	HB
Contact material	CuSn
Contact surface material	Ni/Au
Contact carrier material	TPU GF
Material of grip body	TPU, hardly inflammable, self-extinguishing
Material, knurls	Zinc die-cast, nickel-plated
Sealing material	NBR

#### Cable

Cable type	PUR halogen-free black
Cable type (abbreviation)	PUR
Cable abbreviation	Li9Y11Y-HF
Conductor cross section	4x 0.25 mm <sup>2</sup> (signal line)
AWG signal line	24
Conductor structure signal line	32x 0.10 mm
Core diameter including insulation	1.17 mm ±0.02 mm (signal line)
Thickness, insulation	≥ 0.21 mm (Core insulation)
	approx. 0.7 mm (Outer cable sheath)
Wire colors	brown, white, blue, black
Overall twist	4 wires, twisted
External sheath, color	RAL 9005 (black gray)
External cable diameter D	4.4 mm ±0.15 mm
Smallest bending radius, fixed installation	22 mm
Smallest bending radius, movable installation	44 mm
Number of bending cycles	4000000
Bending radius	44 mm
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	5 m/s <sup>2</sup>

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### Technical data

#### Cable

Cable weight	25 kg/km
Outer sheath, material	PUR
Material conductor insulation	PP
Conductor material	Bare Cu litz wires
Insulation resistance	$\geq 100 \text{ G}\Omega \cdot \text{km}$ (at 20 °C)
Conductor resistance	max. 78 $\Omega/\text{km}$ (at 20 °C)
Nominal voltage, cable	$\leq 300 \text{ V}$
Test voltage, cable	$\geq 3000 \text{ V}$
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
Flame resistance	in accordance with DIN UL-Style 20549
Halogen-free	in accordance with DIN VDE 0472 part 815
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
	partly UV-resistant in accordance with DIN EN ISO 4892-2-A
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (cable, flexible installation)

### Classifications

#### eCl@ss

eCl@ss 4.0	27060306
eCl@ss 4.1	27060306
eCl@ss 5.0	27061801
eCl@ss 5.1	27061801
eCl@ss 6.0	27061801
eCl@ss 7.0	27061801
eCl@ss 8.0	27061801

#### ETIM

ETIM 2.0	EC000830
ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC001855

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### Classifications

#### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501

### Approvals

#### Approvals


#### Approvals


UL Listed / cUL Listed / GOST / cULus Listed

#### Ex Approvals

#### Approvals submitted

### Approval details

UL Listed 	
Nominal current I <sub>N</sub>	4 A
Nominal voltage U <sub>N</sub>	125 V

cUL Listed 	
Nominal current I <sub>N</sub>	4 A
Nominal voltage U <sub>N</sub>	125 V

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### Approvals



### Accessories

#### Accessories

#### Conductor marking

Insert label - PABA WH/15 - 1013151



Insert label, Strip, white, Unlabeled, Can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

Insert label - PABA YE/15 - 1013698



Insert label, Strip, yellow, Unlabeled, Can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

Insert label - PABA RD/15 - 1013944



Insert label, Strip, red, Unlabeled, Can be labeled with: Plotter, Mounting type: Thread on, Cable diameter: 0.6-50 mm, Lettering field: 15 x 4 mm

#### Marker carrier cable

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### Accessories

Conductor marker carrier - PATO 2/15 - 1013122



Conductor marker carrier, transparent, Unlabeled, Mounting type: Clip on, Cable diameter: 2.8-4.4 mm, Lettering field: 4 x 15 mm

Conductor marker carrier - PATO 3/15 - 1013135



Conductor marker carrier, transparent, Unlabeled, Mounting type: Clip on, Cable diameter: 4.4-6.7 mm, Lettering field: 4 x 15 mm

Conductor marker carrier - PATO 4/15 - 1013148



Conductor marker carrier, transparent, Unlabeled, Mounting type: Clip on, Cable diameter: 6.7-10 mm, Lettering field: 4 x 15 mm

### Marker pen

Marker pen - B-STIFT - 1051993



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

### Protective cap

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



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

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### Accessories

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Screw plug - PROT-M 8 MS-PA-CHAIN - 1430860

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



### Screwdriver tools

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Tool - SAC BIT M8-D10 - 1208461



Nut for assembling sensor/actuator cables with M8 connector and for M8 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive

### Torque tool

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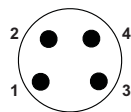
Torque screwdriver - TSD 02 SAC - 1208487



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

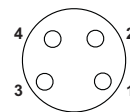
### Drawings

Schematic diagram



Pin assignment M8 plug, 4-pos., view male side

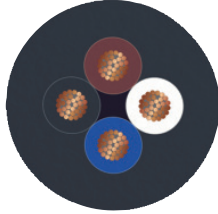
Schematic diagram



Pin assignment M8 socket, 4-pos., view female side

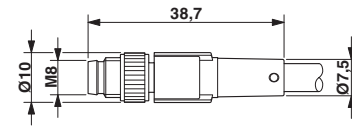
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Cable cross section



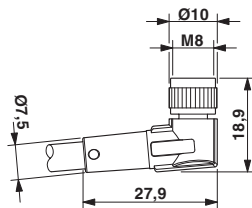
PUR halogen-free black [PUR]

Dimensioned drawing



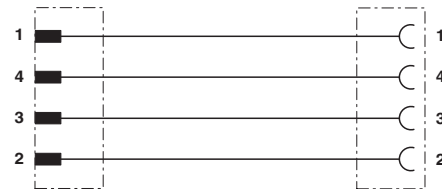
M8 x 1 male plug, straight version

Dimensioned drawing



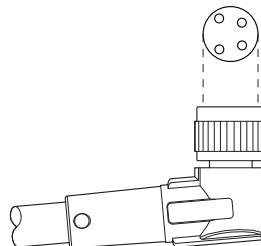
Socket M8 x 1, angled

Circuit diagram



Contact assignment of M8 plugs/sockets

Schematic diagram



Layout of connector pin assignments