

# Sensor/actuator cable - SAC-3P-M 8MR/0,3-PUR/M 8FR-2L - 1682100

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)




Sensor/actuator cable, 3-position, PUR halogen-free, black-gray RAL 7021, Plug angled M8, on Socket angled M8, with 2 LEDs, cable length: 0.3 m

## Your advantages

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Convenient: increased machine availability thanks to quick and easy diagnostics



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 158767
GTIN	4017918158767
Sales Key	02

## Technical data

### Dimensions

Length of cable	0.3 m
-----------------	-------

### Ambient conditions

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

### General

Rated current at 40°C	4 A
Rated voltage	24 V DC
Number of positions	3
Insulation resistance	≥ 100 MΩ

# Sensor/actuator cable - SAC-3P-M 8MR/0,3-PUR/M 8FR-2L - 1682100

## Technical data

### General

Coding	A - standard
Standards/regulations	M8 connector IEC 61076-2-104
Status display	2 LEDs
Protective circuit/component	unwired
Overvoltage category	II
Degree of pollution	3
Insertion/withdrawal cycles	≥ 100
Torque	0.2 Nm (M8 connectors)

### Material

Flammability rating 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

### Standards and Regulations

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

### Cable

Cable type	PUR halogen-free black
Cable type (abbreviation)	PUR
Cable abbreviation	Li9Y11Y-HF
UL AWM style	20549 / 10493 (80°C/300 V)
Conductor cross section	3x 0.25 mm <sup>2</sup>
AWG signal line	24
Conductor structure signal line	32x 0.10 mm
Core diameter including insulation	1.17 mm ±0.02 mm
Thickness, insulation	≥ 0.21 mm (Core insulation)
Wire colors	brown, blue, black
Overall twist	3 wires, twisted
Length of twist, overall twist	40 mm
Outer sheath thickness	approx. 0.5 mm
External cable diameter D	3.6 mm ±0.15 mm
Smallest bending radius, fixed installation	18 mm
Smallest bending radius, movable installation	36 mm
Number of bending cycles	10000000
Bending radius	44 mm
Traversing path	10 m
Traversing rate	3 m/s

# Sensor/actuator cable - SAC-3P-M 8MR/0,3-PUR/M 8FR-2L - 1682100

## Technical data

### Cable

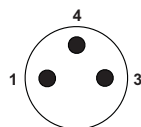
Acceleration	10 m/s <sup>2</sup>
Cable weight	18 kg/km
External sheath, color	black-gray RAL 7021
Outer sheath, material	PUR
Material conductor insulation	PP
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 100 GΩ*km (at 20 °C)
Conductor resistance	≤ 78 Ω/km (at 20 °C)
Nominal voltage, cable	≤ 300 V
Test voltage, cable	≥ 3000 V
Special properties	Flexible cable conduit capable
	Silicone-free
	Free of substances which would hinder coating with paint or varnish
Other resistance	hydrolysis and microbe resistant
	Highly resistant to acids, alkaline solutions and solvents
	Resistant to salt water
	partly UV-resistant in accordance with DIN EN ISO 4892-2-A
Flame resistance	in accordance with UL 758/1581 FT2
	DIN EN 60332-2-2 (20 s)
Halogen-free	in accordance with DIN VDE 0472 part 815
Resistance to oil	in accordance with DIN EN 60811-2-1
Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (Cable, flexible installation)

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

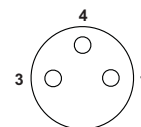
## Drawings

Schematic diagram



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

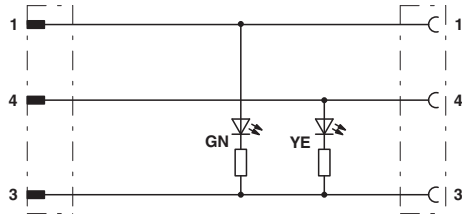
Schematic diagram



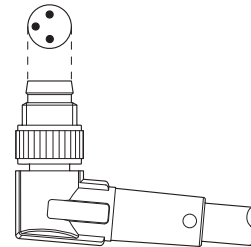
Pin assignment M8 socket, 3-pos., view female side

# Sensor/actuator cable - SAC-3P-M 8MR/0,3-PUR/M 8FR-2L - 1682100

Circuit diagram

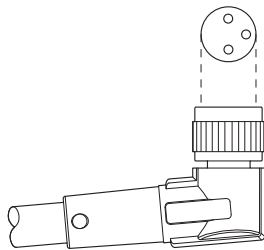


Schematic diagram



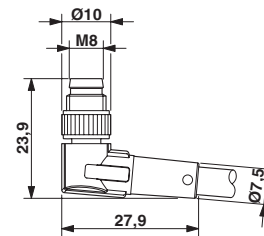
Contact assignment of M8 plugs/sockets

Schematic diagram



Layout of connector pin assignments

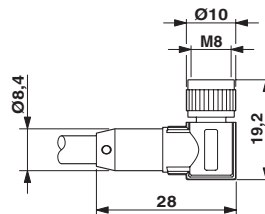
Dimensional drawing



Layout of connector pin assignments

M8 x 1 male plug, angled version

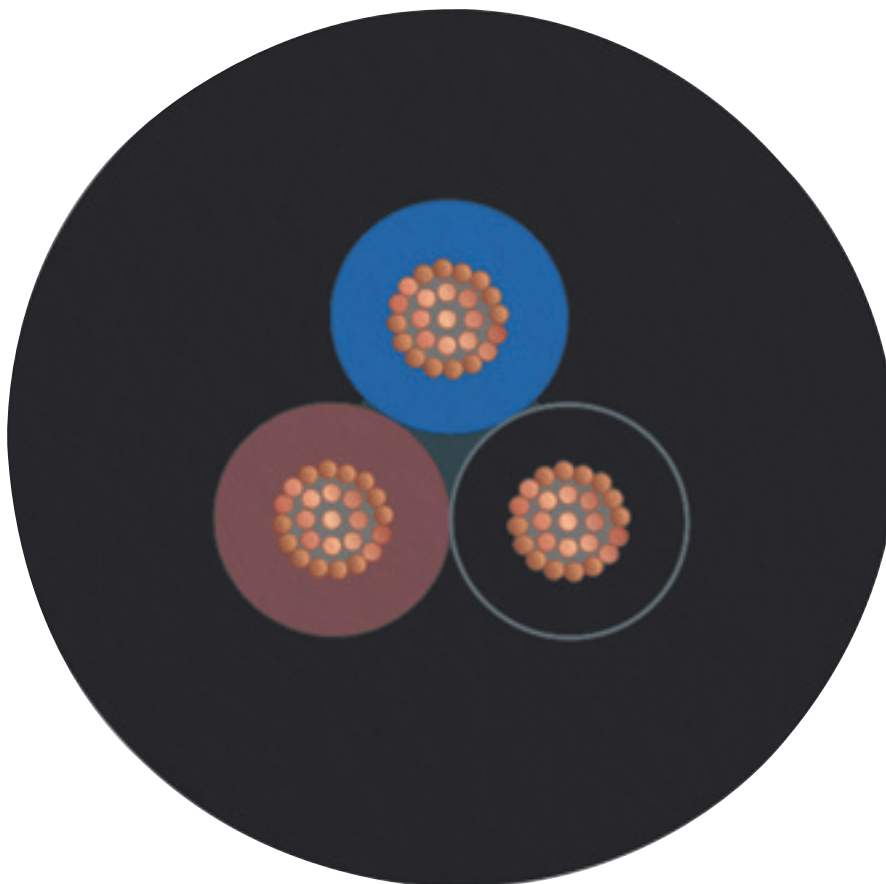
Dimensional drawing



Socket M8 x 1, angled, with LED

# Sensor/actuator cable - SAC-3P-M 8MR/0,3-PUR/M 8FR-2L - 1682100

Cable cross section



PUR halogen-free black [PUR]

## Classifications

eCl@ss

eCl@ss 10.0.1	27060311
eCl@ss 11.0	27060311
eCl@ss 4.0	27060300
eCl@ss 4.1	27060300
eCl@ss 5.0	27061800
eCl@ss 5.1	27061800
eCl@ss 6.0	27279200
eCl@ss 7.0	27279218
eCl@ss 9.0	27060311

ETIM

ETIM 2.0	EC000830
----------	----------

# Sensor/actuator cable - SAC-3P-M 8MR/0,3-PUR/M 8FR-2L - 1682100

## Classifications

### ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 6.0	EC001855
ETIM 7.0	EC001855

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501
UNSPSC 12.01	31251501
UNSPSC 13.2	31251501
UNSPSC 19.0	31251501
UNSPSC 20.0	31251501
UNSPSC 21.0	31251501

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / EAC-RoHS / EAC / cULus Listed

#### Ex Approvals

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 221474
Nominal voltage UN	24 V		
Nominal current IN	4 A		

cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 221474
Nominal voltage UN	24 V		
Nominal current IN	4 A		

## Sensor/actuator cable - SAC-3P-M 8MR/0,3-PUR/M 8FR-2L - 1682100

### Approvals

EAC-RoHS		RU D- DE.HB35.B.00387
----------	--	--------------------------

EAC		EAC-Zulassung
-----	--	---------------

cULus Listed		
--------------	--	--

### Accessories

#### Accessories

#### Conductor marking

Insert label - PABA WH/23 - 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

Insert label - PABA YE/23 - 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

#### 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

#### Plug for cable screw gland

## Sensor/actuator cable - SAC-3P-M 8MR/0,3-PUR/M 8FR-2L - 1682100

### Accessories

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

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



---

### 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



---

### Screwdriver tools

Tool - SAC BIT M8-D10 - 1208461



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

---

### Torque tool

Torque screwdriver - TSD 02 SAC - 1208487



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