

## Sensor/Actuator cable - SAC-3P-10,0-800/M12FR-2L - 1454341

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Sensor/Actuator cable, 3-position, PUR halogen-free, welding sputter-resistant, highly flexible, Gray RAL 7001, free cable end, on Socket angled M12, A-coded, with 2 LEDs, Cable length: 10 m, for robots and drag chains

### Why buy this product

- ✓ Easy and safe: 100% electrically tested plug-in components
- ✓ Flexible: cable supports a high degree of torsion and bending
- ✓ Reliable solution for the body shop as cable is resistant to welding sparks
- ✓ Convenient: increased machine availability thanks to quick and easy diagnostics



### Key commercial data

Packing unit	1 pc
GTIN	 4 046356 577991
Weight per Piece (excluding packing)	287.0 g
Custom tariff number	85444290
Country of origin	Poland
Note	Made to Order (non-returnable)

### Technical data

#### Dimensions

Length of cable	10 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	24 V
Number of positions	3

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## Technical data

### General

Contact resistance	$\leq 5 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	2 LEDs
Protective circuit/component	Unwired
Surge voltage category	II
Pollution degree	3
Insertion/withdrawal cycles	$\geq 100$
Torque	0.4 Nm (M12 connector)

### 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

Note	Due to the extremely robust outer sheath, this cable should only be stripped in 5 cm increments.
Cable type	Gray, highly flexible PUR
Cable type (abbreviation)	800
Cable abbreviation	Li12Y11Y-HF
Conductor cross section	3x 0.34 mm <sup>2</sup> (signal line)
AWG signal line	22
Conductor structure signal line	42x 0.10 mm
Core diameter including insulation	1.3 mm $\pm$ 0.05 mm (signal line)
Wire colors	brown, blue, black
Overall twist	3 wires, twisted
External sheath, color	Gray RAL 7001
External cable diameter D	4.5 mm $\pm$ 0.2 mm
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	5 x D
Number of bending cycles	15000000
Bending radius	50 mm
Traversing path	0.9 m
Traversing rate	5 m/s
Acceleration	30 m/s <sup>2</sup>
Torsion force	$\pm 360 \text{ }^\circ/\text{m}$

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## Technical data

### Cable

Cable weight	28.3 kg/km
Outer sheath, material	PUR
Material conductor insulation	PES
Conductor material	Bare Cu litz wires
Insulation resistance	$\geq 20 \text{ M}\Omega\cdot\text{km}$
Conductor resistance	approx. $53 \text{ }\Omega/\text{km}$
Nominal voltage, cable	300 V
Test voltage, cable	2000 V
Special properties	Sheath resistant to welding beads, can be recycled, matt, without adhesion, wear-resistant, flame resistant and self-extinguishing
	Free from silicone and cadmium
	Free of substances which would hinder coating with paint or varnish
Flame resistance	DIN VDE 0472 part 804, test type B
	IEC 60332-1
	in acc. with UL FT-2
Halogen-free	The cable is halogen-free
Resistance to oil	According to VDE 0250 Part 407
Other resistance	Highly resistant to acids, alkaline solutions and solvents
Ambient temperature (operation)	-40 °C ... 90 °C (cable, fixed installation)
	-30 °C ... 90 °C (cable, flexible installation)
	to 120 °C (for 3000 h)

## 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	27279218

### ETIM

ETIM 4.0	EC001855
ETIM 5.0	EC001855

### UNSPSC

UNSPSC 6.01	31251501
UNSPSC 7.0901	31251501
UNSPSC 11	31251501

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### Classifications

#### UNSPSC

UNSPSC 12.01	31251501
UNSPSC 13.2	31251501

### Approvals

#### Approvals


#### Approvals


UL Listed / cUL Listed / EAC / cULus Listed

#### Ex Approvals

#### Approvals submitted

### Approval details

UL Listed 	
Nominal current I <sub>N</sub>	4 A
Nominal voltage U <sub>N</sub>	24 V

cUL Listed 	
Nominal current I <sub>N</sub>	4 A
Nominal voltage U <sub>N</sub>	24 V

EAC
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cULus Listed 
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### Accessories

#### Accessories

Protective cap

## Sensor/Actuator cable - SAC-3P-10,0-800/M12FR-2L - 1454341

### Accessories

Screw plug - PROT-M12 MS-PA-CHAIN - 1430899

M12 sealing cap with fixing band, for sensor cables, for free M12 sockets



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### Screwdriver tools

Tool - SAC BIT M12-D15 - 1208432



Nut for assembling sensor/actuator cables with M12 connector and for M12 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive

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### Torque tool

Torque screwdriver - TSD 04 SAC - 1208429

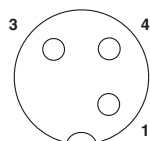


Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors

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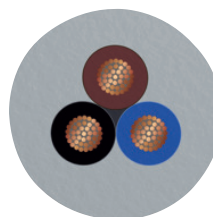
### Drawings

Schematic diagram



Pin assignment M12 socket, 3-pos., A-coded, view female side

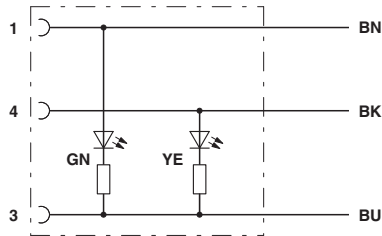
Cable cross section



Gray, highly flexible PUR [800]

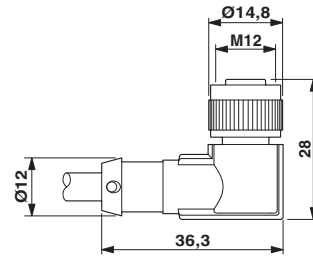
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Circuit diagram



Contact assignment of M12 sockets with LED

Dimensioned drawing



Socket M12 x 1, angled, with LED