Sensor/Actuator cable - SAC-3P-10,0-PUR/M12FR-2L B - 1681059

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Sensor/Actuator cable, 3-position, PUR halogen-free, Black-gray RAL 7021, Free cable end, on Socket angled M12, A-coded, with 2 LEDs, PIN 2+4 bridged, Cable length: 10 m

Product Features

- Easy and safe: 100% electrically tested plug-in components
- Our standard: robust halogen-free PUR cable
- Convenient: increased machine availability thanks to quick and easy diagnostics

Key commercial data

Packing unit	1 PCE
Weight per Piece (excluding packing)	267.7 GRM
Custom tariff number	85444290
Country of origin	Poland

Technical data

Dimensions

Length of cable	10 m
Stripping length of the free conductor end	50 mm

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	≤ 5 mΩ
Insulation resistance	≥ 100 MΩ
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	≥ 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

Cable type	PUR halogen-free black
Cable type (abbreviation)	PUR
Cable abbreviation	Li9Y11Y
UL AWM style	20549
Conductor cross section	3x 0.34 mm² (signal line)
AWG signal line	22
Conductor structure signal line	42x 0.10 mm
Core diameter including insulation	1.27 mm ±0.02 mm (signal line)
Thickness, insulation	≥ 0.21 mm (Core insulation)
	approx. 0.8 mm (Outer cable sheath)
Wire colors	brown, blue, black
Overall twist	3 wires, twisted
External sheath, color	Black-gray RAL 7021
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

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Technical data

Cable

Bending radius	44 mm
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s²
Cable weight	26 kg/km
Outer sheath, material	PUR
Material conductor insulation	PP
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 100 GΩ*km (at 20 °C)
Conductor resistance	max. 58 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
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

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Classifications

ETIM

ETIM 3.0	EC001855
ETIM 4.0	EC001855
ETIM 5.0	EC001855

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 IN	4 A
Nominal voltage UN	24 V

cUL Listed

Nominal current IN	4 A

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Approvals

Nominal voltage UN	24 V

GOST

cULus Listed

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

Cutting tools

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Accessories

Cable-cutting tool - CUTFOX-S VDE - 1212207



Diagonal cutter for copper and aluminum conductors, VDE-tested

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Marker carrier cable

Conductor marker carrier - PATG 2/15 - 1013038



Conductor marker carrier, transparent, Unlabeled, Mounting type: Slide on, Cable diameter: 2-4 mm, Lettering field: 4 x 15 mm

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Conductor marker carrier - PATG 3/15 - 1013041



Conductor marker carrier, transparent, Unlabeled, Mounting type: Slide on, Cable diameter: 4-7 mm, Lettering field: 4 x 15 mm

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Conductor marker carrier - PATG 4/15 - 1013054



Conductor marker carrier, transparent, Unlabeled, Mounting type: Slide on, Cable diameter: 6-10 mm, Lettering field: 4 x 15 mm

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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

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Accessories

Protective cap

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



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

Safety locking

Fuse clip - SAC-M12-EXCLIP-F - 1558991



Fuse clip for the socket side of various M12 sensor/actuator connectors prevents plug-in connections being interrupted without using a tool

Screwdriver tools

Adapter insert - TSD-M SAC-BIT ADAPTER - 1212600

Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits

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

Stripping tool

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Accessories

Stripping tool - WIREFOX SAC - 1212623



Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 4.4 to 7 mm, any stripping length

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Stripping tool - WIREFOX 10 - 1212150



Stripping tool, for cables and conductors from 0.02 - 10 mm², self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm² stranded/1.5 mm² solid, replaceable stripping blade

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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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Torque screwdriver - TSD-M 1,2NM - 1212224



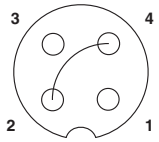
Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm

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Drawings

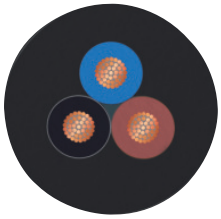
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Schematic diagram



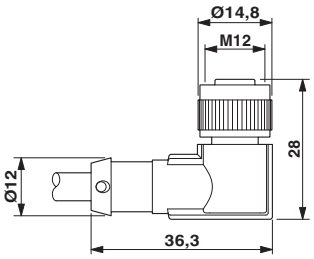
Pin assignment M12 socket, 3-pos., PIN 2+4 bridged, A-coded, view female side

Cable cross section



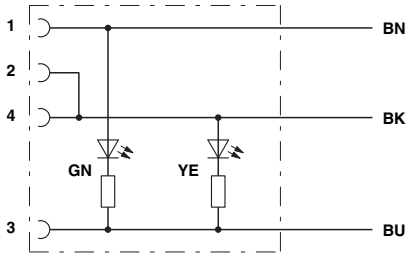
PUR halogen-free black [PUR]

Dimensioned drawing



Socket M12 x 1, angled, with LED

Circuit diagram



Contact assignment of M12 sockets with 2 LEDs, bridged

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