


SAC-4P- 5,0-PUR/M12FR P

Order No.: 1442735



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Sensor/Actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, free cable end, on Socket angled M12, A-coded, Cable length: 5 m, with plastic knurl

Commercial data	
EAN	 4 046356 535649
Note	Made-to-order
sales group	D111
Pack	1 Pcs.
Customs tariff	85444290
Gross weight in pieces	0.1579 KG
Net weight per piece	0.152 KG
Catalog page information	Page 132 (PC-2011)

Product notes

WEEE/RoHS-compliant since:
09/30/2009



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Technical data	
Dimensions	
Length of cable	5 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	250 V
Number of positions	4
Contact resistance	≤ 5 mΩ
Insulation resistance	≥ 10 MΩ
Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
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	Polyamide
Sealing material	NBR

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	4x 0.34 mm ²
AWG signal line	22
Conductor structure signal line	42x 0.10 mm
Core diameter including insulation	1.27 mm ±0.02 mm

Thickness, insulation	≥ 0.21 mm
Wire colors	brown, white, blue, black
Overall twist	4 wires, twisted
External sheath, color	black-gray RAL 7021
Outer sheath thickness	approx. 0.8 mm
External cable diameter D	4.7 mm ±0.15 mm
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 ²
Cable weight	30 kg/km
Outer sheath, material	PUR
Material conductor insulation	PP
Conductor material	Bare Cu litz wires
Insulation resistance	≥ 1 GΩ*km
Conductor resistance	≤ 58 Ω/km
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
	Flexible
Flame resistance	in accordance with DIN UL-Style 20549
	in accordance with FT1 as per UL 758
Halogen-free	in accordance with DIN VDE 0472 part 815
	in accordance with DIN EN 50267-2-1
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
	Low adhesion
	abrasion-resistant

Ambient temperature (operation)	-40 °C ... 80 °C (cable, fixed installation)
	-25 °C ... 80 °C (cable, flexible installation)

Certificates / Approvals



Certification GOST

Certifications applied for:

Certification Ex:

Accessories

Item	Designation	Description
Fuse		
1558991	SAC-M12-EXCLIP-F	Fuse clip for the socket side of sensor/actuator cables with M12 connector and M12 connectors which can be assembled with QUICKON fast connection technology, prevents the disconnection of plug-in connections without tools

Marking

1051993	B-STIFT	Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm
1013944	PABA RD/15	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
1013151	PABA WH/15	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
1013698	PABA YE/15	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
1013038	PATG 2/15	Conductor marker carrier, transparent, unlabeled, Mounting type: Slide on, Cable diameter: 2-4 mm, Lettering field: 4 x 15 mm
1013041	PATG 3/15	Conductor marker carrier, transparent, unlabeled, Mounting type: Slide on, Cable diameter: 4-7 mm, Lettering field: 4 x 15 mm
1013054	PATG 4/15	Conductor marker carrier, transparent, unlabeled, Mounting type: Slide on, Cable diameter: 6-10 mm, Lettering field: 4 x 15 mm

Protection and sealing elements

1430899	PROT-M12 MS-PA-CHAIN	M12 sealing cap with fixing band, for sensor cables, for free M12 sockets
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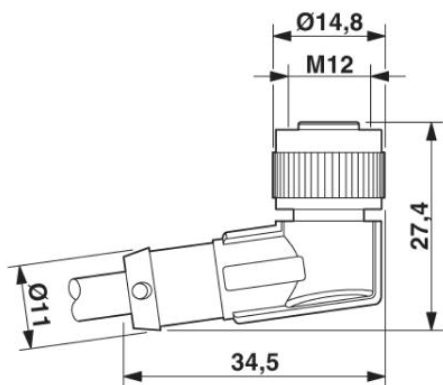
Tools

1212207	CUTFOX-S VDE	Diagonal cutter for copper and aluminum conductors, VDE-tested
1208432	SAC BIT M12-D15	Nut for assembling sensor/actuator cables with M12 connector and for M12 connectors with QUICKON fast connection technology, for 4 mm hexagonal drive
1208429	TSD 04 SAC	Torque screwdriver, with preset torque of 0.4 Nm and 4 mm hexagonal drive for M12 connectors
1212224	TSD-M 1,2NM	Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 0.3 - 1.2 Nm
1212600	TSD-M SAC-BIT ADAPTER	Adapter bit for TSD-M...torque tools, E6.3-1/4" drive with 4 mm hexagon to accommodate SAC bits
1212150	WIREFOX 10	Stripping tool, for cables and conductors from 0.02 - 10 mm ² , self-adjusting, stripping length of up to 18 mm, cutting capacity of up to 10 mm ² stranded/1.5 mm ² solid, replaceable stripping blade
1212623	WIREFOX SAC	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
1212757	WIREFOX SAC-1	Stripping pliers, for halogen-free sensor/actuator cables (SAC cables), with PUR and PVC insulation, from Ø of 3.2 to 4.4 mm, any stripping length

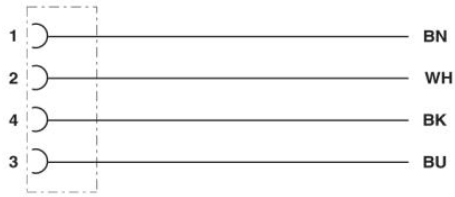
Drawings

Dimensioned drawing

M12 x 1 socket, angled

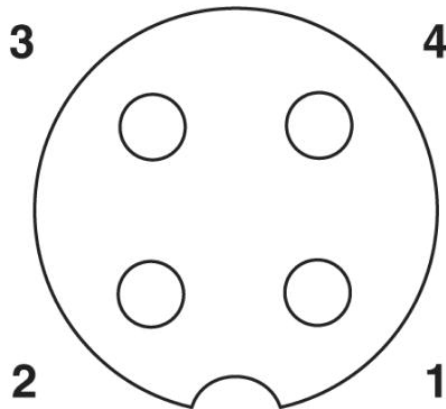


Circuit diagram

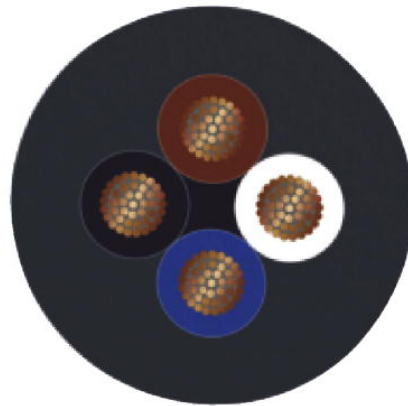


Contact assignment of the M12 socket

Schematic diagram



Pin assignment M12 socket, 4-pos., A-coded, view female side



PUR halogen-free black [PUR]

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