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Sensor/Actuator cable, 4-position, PUR halogen-free, Black-gray RAL 7021, Free cable end, on Socket straight M12, A-coded, Cable length: 15 m



Key commercial data

Packing unit	11
Weight per Piece (excluding packing)	444.1 GRM
Custom tariff number	85444290
Country of origin	Germany

Technical data

Dimensions

Length of cable	15 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	$\leq 5 \text{ m}\Omega$
Insulation resistance	$\geq 100 \text{ M}\Omega$
Coding	A - standard
Status display	No

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Technical data

General

Surge voltage category	II
Pollution degree	3
Insertion/withdrawal cycles	≥ 100

Material

Inflammability class according to UL 94	НВ
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		
UL AWM style	20549		
Conductor cross section	4x 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)		
	≥ 0.8 mm (Outer cable sheath)		
Wire colors	brown, white, blue, black		
Overall twist	4 wires, twisted		
Length of twist, overall twist	49.5 mm		
External sheath, color	Black-gray RAL 7021		
External cable diameter D	4.7 mm ±0.15 mm		
Smallest bending radius, fixed installation	23.5 mm		
Smallest bending radius, movable installation	47 mm		
Number of bending cycles	4000000		
Bending radius	47 mm		
Traversing path	10 m		
Traversing rate	3 m/s		
Acceleration	10 m/s²		
Cable weight	30 kg/km		
Outer sheath, material	PUR		

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Technical data

Cable

Material conductor insulation	PP	
Conductor material	Bare Cu litz wires	
Insulation resistance	\geq 1 G Ω *km	
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	
	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	
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

Αp	pr	ΌV	'al	ls

Αı	ga	ro	va	ls

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed (I)				
Nominal current IN	4 A			
Nominal voltage UN	300 V			

cUL Listed • • • • • • • • • • • • • • • • • • •				
Nominal current IN	4 A			
Nominal voltage UN	300 V			



Approvals





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

Cable-cutting tool - CUTFOX-S VDE - 1212207



Diagonal cutter for copper and aluminum conductors, VDE-tested



Accessories

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

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

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

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



Accessories

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



Accessories

Stripping tool - WIREFOX SAC - 1212623



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

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

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

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



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

Drawings



Schematic diagram



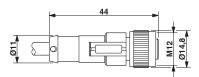
Pin assignment M12 socket, 4-pos., A-coded, view female side

Cable cross section



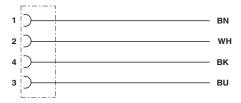
PUR halogen-free black [PUR]

Dimensioned drawing



M12 x 1 socket, straight

Circuit diagram



Contact assignment of the M12 socket

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