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Sensor/Actuator cable, 4-position, PUR halogen-free, black-gray RAL 7021, Plug straight M12 SPEEDCON, Acoded, on Socket straight M12 SPEEDCON, A-coded and Socket straight M12 SPEEDCON, A-coded, Cable length: 1.5 m



### **Key Commercial Data**

Packing unit	1 STK	
GTIN	4 046356 432474	
GTIN	4046356432474	
Weight per Piece (excluding packing)	80.000 g	
Custom tariff number	85444290	
Country of origin	Poland	

#### Technical data

#### **Dimensions**

Length of cable	1.5 m
Center distance	21 mm

#### Ambient conditions

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

#### General

Rated current at 40°C	4 A
Rated voltage	60 V
Number of positions	4



## Technical data

#### General

Insulation resistance	$\geq 100 \ M\Omega$	
Coding	A - standard	
Standards/regulations	M12 connector IEC 61076-2-101	
Status display	No	
Overvoltage category	II	
Degree of pollution	3	
Torque	0.4 Nm (M12 connector)	

### Material

Flammability rating 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	

## Standards and Regulations

Standard designation	M12 connector
Standards/regulations	IEC 61076-2-101
Flammability rating according to UL 94	НВ

#### 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 mm²	
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	
Smallest bending radius, fixed installation	23.5 mm	
Smallest bending radius, movable installation	47 mm	



## Technical data

### Cable

Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Number of bending cycles	4000000
Bending radius	47 mm
Minimum bending radius, drag chain applications	10 x D
Traversing path	10 m
Traversing rate	3 m/s
Acceleration	10 m/s <sup>2</sup>
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	according to UL 758/1581 (horizontal)
	in accordance with UL 758/1581 FT2
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)

## **Environmental Product Compliance**

China RoHS	Environmentally Friendly Use Period = 50	
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"	



## **Drawings**

Schematic diagram



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

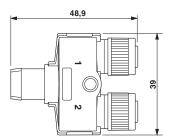
Pin assignment M12 socket, 3-pos., A-coded, view female side

Schematic diagram

Cable cross section



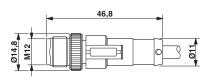
Dimensional drawing



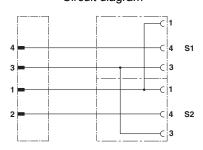
PUR halogen-free black [PUR]

Y distributor, 2 x socket M12 x 1

Dimensional drawing



Circuit diagram



Plug, M12 x 1, straight, shielded

Contact assignment of the M12 Y distributor

## Approvals

Approvals

Approvals

EAC

Ex Approvals



Approvals		
Approval details		
EAC	ERC	EAC-Zulassung

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