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Sensor/actuator cable, 8-position, PUR halogen-free, black-gray RAL 7021, shielded, Plug straight M12, A-coded, on free cable end, cable length: 10 m

Why buy this product

- Reliable signal transmission 360° shielding in environments with electromagnetic interference



Key Commercial Data

Packing unit	1 STK
GTIN	4 017918 957599
GTIN	4017918957599

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

General

Rated current at 40°C	2 A
Rated voltage	30 V AC
	30 V DC
Number of positions	8
Insulation resistance	≥ 100 MΩ



Technical data

General

Coding	A - standard
Standards/regulations	M12 connector IEC 61076-2-101
Status display	No
Protective circuit/component	Unwired
Overvoltage category	II
Degree of pollution	3
Insertion/withdrawal cycles	≥ 100
Torque	0.4 Nm (M12 connector)

Material

Flammability rating according to UL 94	НВ
Contact material	CuZn
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

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	LiF9YC11Y
UL AWM style	20549 / 10493 (80°C/300 V)
Conductor cross section	8x 0.25 mm² (Signal line)
AWG signal line	24
Conductor structure signal line	32x 0.10 mm
Core diameter including insulation	1.17 mm ±0.02 mm
Thickness, insulation	approx. 0.2 mm
Wire colors	Brown, white, green, yellow, gray, pink, blue, red
Overall twist	8 wires around filler to the core
Shielding	Tinned copper braided shield
Optical shield covering	85 %
External sheath, color	black-gray RAL 7021
Outer sheath thickness	approx. 0.5 mm
External cable diameter D	5.9 mm ±0.2 mm
Minimum bending radius, fixed installation	5 x D
Minimum bending radius, flexible installation	10 x D
Number of bending cycles	2000000



Technical data

Cable

Traversing rate 3 m/s Acceleration 10 m/s² Cable weight 53 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 1 GΩ*km (at 20 °C) Conductor resistance ≤ 78 0/km (at 20 °C) Nominal voltage, cable ≤ 300 V AC Test voltage, cable ≥ 3000 V AC (Spark test) Test voltage Core/Shield ≥ 2000 V AC (for 60 s) Special properties Flexible cable conduit capable Flame resistance in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A	Minimum bending radius, drag chain applications	10 x D
Acceleration 10 m/s² Cable weight 53 kg/km Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 1 GΩ*km (at 20 °C) Conductor resistance ≤ 78 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V AC Test voltage, cable ≥ 3000 V AC (Spark test) Test voltage Core/Shield ≥ 2000 V AC (fr 60 s) Special properties Flexible cable conduit capable Flame resistance in acc. with UL F7-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) in accordance with DIN VDE 0472 part 815 Halogen-free in accordance with DIN VDE 0472 part 815 Under resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Traversing path	10 m
Cable weight Cable weight Couter sheath, material Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 1 GΩ*km (at 20 °C) Conductor resistance ≥ 1 GΩ*km (at 20 °C) Conductor resistance ≥ 300 V AC Test voltage, cable ≥ 3000 V AC (Spark test) Test voltage Core/Shield ≥ 2000 V AC (for 60 s) Special properties Flexible cable conduit capable Flame resistance in according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VED 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Traversing rate	3 m/s
Outer sheath, material PUR Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 1 GΩ*km (at 20 °C) Conductor resistance ≤ 78 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V AC Test voltage, cable ≥ 3000 V AC (Spark test) Test voltage Core/Shield ≥ 2000 V AC (for 60 s) Special properties Flexible cable conduit capable Flame resistance in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) in accordance with DIN VDE 0472 part 815 Halogen-free in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Acceleration	10 m/s²
Material conductor insulation PP Conductor material Bare Cu litz wires Insulation resistance ≥ 1 GΩ*km (at 20 °C) Conductor resistance ≤ 78 Ω/km (at 20 °C) Conductor resistance ≤ 300 V AC Test voltage, cable ≥ 3000 V AC (Spark test) Test voltage Core/Shield ≥ 2000 V AC (for 60 s) Special properties Flexible cable conduit capable Flame resistance in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Cable weight	53 kg/km
Bare Cu litz wires Insulation resistance ≥ 1 GΩ*km (at 20 °C) Conductor resistance ≤ 78 Ω/km (at 20 °C) Nominal voltage, cable Test voltage, cable ≥ 300 V AC (Spark test) Test voltage Core/Shield ≥ 2000 V AC (for 60 s) Special properties Flexible cable conduit capable Flame resistance in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Outer sheath, material	PUR
Insulation resistance ≥ 1 G Ω *km (at 20 °C) Conductor resistance ≤ 78 Ω /km (at 20 °C) Nominal voltage, cable ≤ 300 V AC Test voltage, cable ≥ 300 V AC (Spark test) Test voltage Core/Shield ≥ 200 V AC (for 60 s) Special properties Flexible cable conduit capable Flame resistance in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) 40 °C 80 °C (cable, fixed installation)	Material conductor insulation	PP
Conductor resistance ≤ 78 Ω/km (at 20 °C) Nominal voltage, cable ≤ 300 V AC Test voltage, cable ≥ 3000 V AC (Spark test) Test voltage Core/Shield ≥ 2000 V AC (for 60 s) Special properties Flexible cable conduit capable Flame resistance in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free In accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Conductor material	Bare Cu litz wires
Some standard of the standa	Insulation resistance	≥ 1 GΩ*km (at 20 °C)
Test voltage, cable ≥ 3000 V AC (Spark test) Test voltage Core/Shield ≥ 2000 V AC (for 60 s) Special properties Flexible cable conduit capable in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Conductor resistance	≤ 78 Ω/km (at 20 °C)
Test voltage Core/Shield ≥ 2000 V AC (for 60 s) Special properties Flexible cable conduit capable in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Nominal voltage, cable	≤ 300 V AC
Flexible cable conduit capable Flame resistance in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) Flexible cable conduit capable in acc. with UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 bydrolysis and microbe resistant Low adhesion Low adhesion artly UV-resistant in accordance with DIN EN ISO 4892-2-A	Test voltage, cable	≥ 3000 V AC (Spark test)
Flame resistance in acc. with UL FT-2 according to UL 758/1581 (horizontal) in accordance with UL 758/1581 FT2 According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Test voltage Core/Shield	≥ 2000 V AC (for 60 s)
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According to DIN EN 60332-2-2 (20 s) Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) According to DIN EN 60332-2-2 (20 s) in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A		according to UL 758/1581 (horizontal)
Halogen-free in accordance with DIN VDE 0472 part 815 in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)		in accordance with UL 758/1581 FT2
in accordance with DIN EN 50267-2-1 Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)		According to DIN EN 60332-2-2 (20 s)
Other resistance hydrolysis and microbe resistant Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Halogen-free	in accordance with DIN VDE 0472 part 815
Resistant to salt water Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)		in accordance with DIN EN 50267-2-1
Low adhesion Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)	Other resistance	hydrolysis and microbe resistant
Low adhesion partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)		Resistant to salt water
partly UV-resistant in accordance with DIN EN ISO 4892-2-A Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)		Low adhesion
Ambient temperature (operation) -40 °C 80 °C (cable, fixed installation)		Low adhesion
		partly UV-resistant in accordance with DIN EN ISO 4892-2-A
-25 °C 80 °C (cable, flexible installation)	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: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings



Schematic diagram

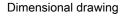


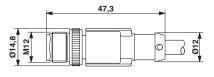
Pin assignment M12 plug, 8-pos., view plug side

Cable cross section



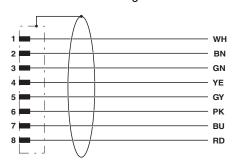
PUR halogen-free black [PUR]





Plug, M12 x 1, straight, shielded





Contact assignment of the M12 plug

Approvals

Approvals

Approvals

UL Listed / cUL Listed / EAC / cULus Listed

Ex Approvals

Approval details

UL Listed	UL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm		FILE E 221474
Nominal voltage UN			30 V	
Nominal current IN			2 A	



Approvals

cUL Listed	CUL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm		FILE E 221474
Nominal voltage UN			30 V	
Nominal current IN			2 A	

EAC	EAC	EAC-Zulassung
cULus Listed	C UL US	

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