

## Data sheet

**Sensor/actuator connection line M12, A-coded, 1.0 m,  
AWG 22/42, M12 plug straight - M12 jack straight,  
unshielded, 4-pole, PUR, black**

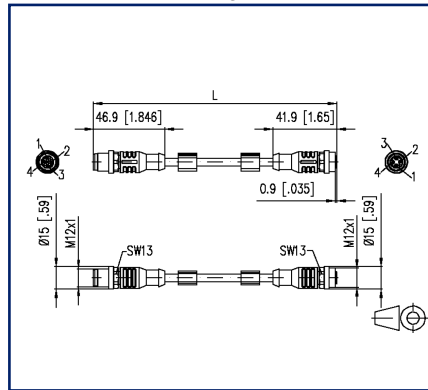
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P/N  
142MCA12010  
EAN 4251394647876  
2021/08/18  
Version: D

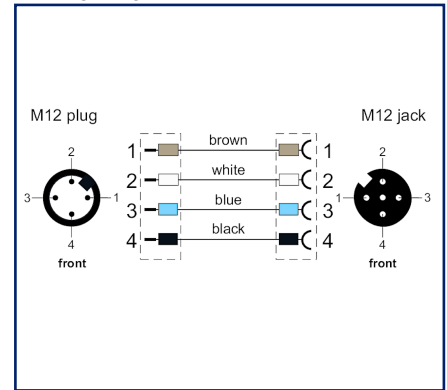
### Illustrations



Dimensional drawing



Wiring diagram



See enlarged drawings at the end of document

### Product specification

Flexible, silicone- and halogen-free control cable with high mechanical strength. The cable is resistant to chemicals, hydrolysis and microbes. The drag-chain application is possible at a bending radius of minimum 10xd. Due to its weld-field immunity, the cable is very well suited for the flexible application in robotics, machine tools and metal-cutting production. The cables meet the UL and CSA (UL10493/20549; cULus) requirements. Special features: flame retardant, seawater resistant, recyclable, LABS free, RoHs compliant, acid and alkali resistant, ozone resistant, UV resistant, hydrolysis proof, drag chain resistant, torsion resistant, welding sparks resistant, halogen free, silicone free, oil resistant

- unshielded M12 sensor/actuator cable
- coding: 4-pole, A-coded acc. to IEC 61076-2-101
- side 1: M12 plug straight
- side 2: M12 jack straight
- outer diameter cable sheath: (4.7 ±0.2) mm
- material: PUR
- wire colors: 1 BN, 2 WH, 3 BU, 4 BK
- wire cross-section/stranded copper wire construction: 4x0.34 mm<sup>2</sup>, 42x0.10 mm
- torsion: +/-360°/m, >= 2 million cycles
- drag chain capable: max. 5m/s<sup>2</sup>, 5 million cycles
- nominal voltage cable: <= 300 V

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## Technical Data

### General Data

Fields of application	Industrial Ethernet
Design	Sensor/actuator connection cable M12, A-coded
Shielding	unshielded
Transmission technology	Copper
Color coding fiber/ wire(s)	brown, white, blue, black
Color	black
Dimensions	
Dimension - Interface 1 (L x W x H)	46.9 mm x 15 mm x 15 mm
Dimension - Interface 1 (L x W x H)	1.846 in. x 0.591 in. x 0.591 in.
Dimension - Interface 2 (L x W x H)	41.9 mm x 15 mm x 15 mm
Dimension - Interface 2 (L x W x H)	1.65 in. x 0.591 in. x 0.591 in.
Cable length (m)	1 m
Cable length (ft)	3.28 ft
Labeling option	identification label carrier

### Connections/interfaces

Connector technology interface 1	M12-plug
Connector technology interface 2	M12-jack
Coding interface 1	A-coded
Coding interface 2	A-coded
Number of positions/contacts interface 1	4
Number of positions/contacts interface 2	4
Termination data, stranded wire (min. - max.)	
Conductor cross section, stranded wire	0.34 mm <sup>2</sup>
Stranded wire structure	42x0.10mm
Cable sheath diameter (min. - max.)	
Cable sheath diameter	4.7 mm
Cable sheath diameter	0.185 in.



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#### Electrical characteristics

Current carrying capacity	4 A bei 40 °C
Rated voltage	60 V DC
Insulation resistance	min. 100 MOhm

#### Mechanical data

Life - Number of mating cycles	min. 100
Torsion	+/-360°/m, >= 2 million cycles
Maximum operating bending radius	47 mm
Alternating bending radius	47 mm
acceleration	5 m/s <sup>2</sup>

#### Materials and material properties

Material - Conductor	Cu (copper)
Material - Conductor Insulation	polypropylene
Material - Cable jacket	PUR
Material - Body interface 1	Plastics
Material - Body interface 2	Plastics
Material - Protective housing interface 2	FPM/FKM
Material - Contact interface 1	CuSn (tin bronze)
Material - Contact interface 2	CuSn (tin bronze)
Material - Contact finish interface 1	Au (gold)
Material - Contact finish interface 2	Au (gold)
Material - Contact carriers interface 1	Plastics
Material - Contact carriers interface 2	Plastics
Material - Union nut interface 1	CuZnPb (brass)
Material - Union nut interface 2	CuZnPb (brass)
Material - Union nut finish interface 1	Ni (nickel)
Material - Union nut finish interface 2	Ni (nickel)
Flame retardancy	yes
Halogen free	yes
Silicone free	yes
Oil resistance	yes
UV-resistance	yes
rag chain suitable	yes
capable of torsion	yes
RoHS	compliant



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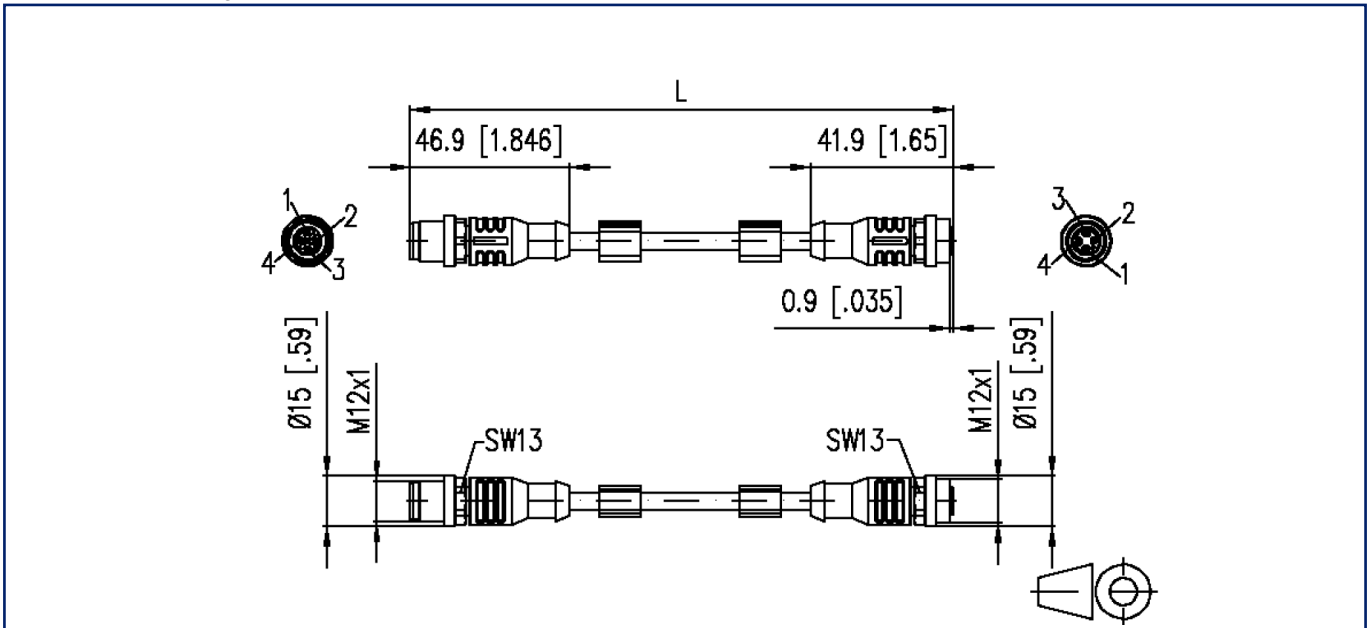
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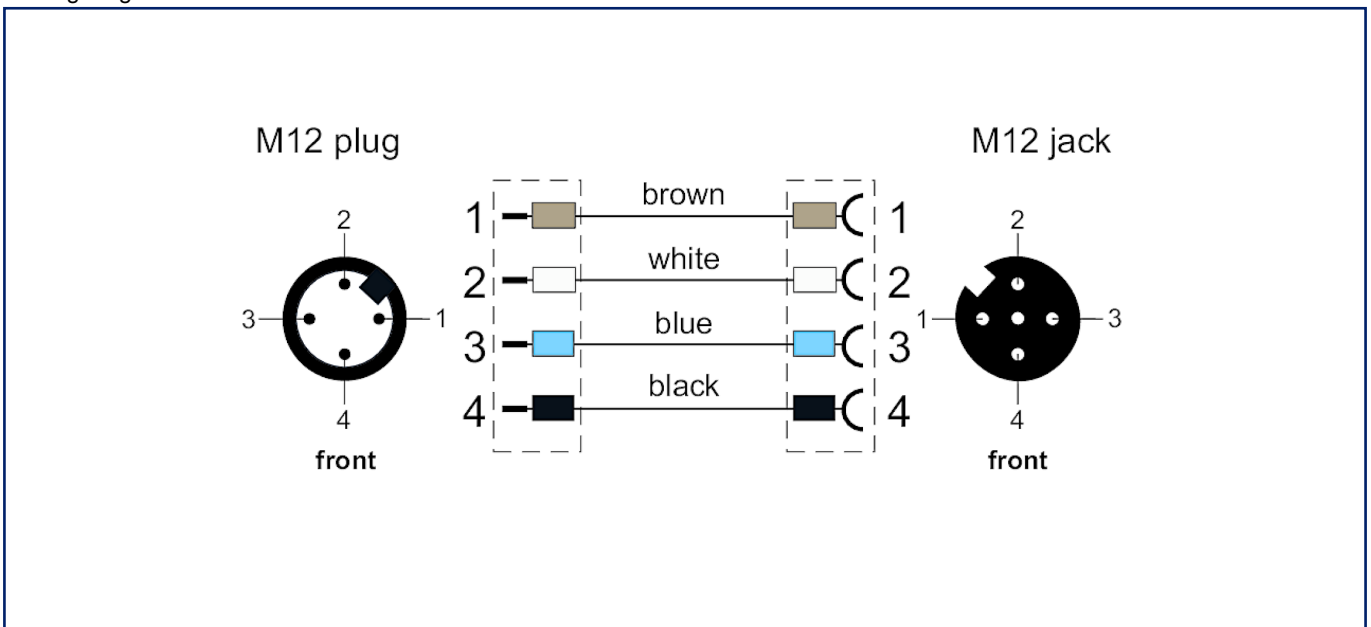
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Wiring diagram



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Principle diagram

