

# Data sheet

**M12 Sensor/actuator cable, A-coded,  
M12 plug angled - free line end,  
shielded, 5-pole, PUR-C**

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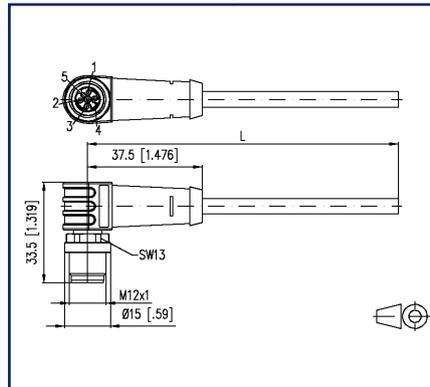
**P/N  
142MGAD0XXX**

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Version: G

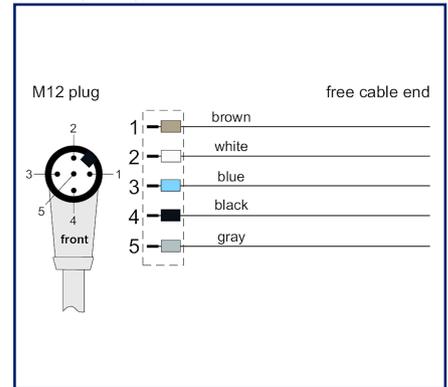
## Illustrations



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

- all available variants can be created with the configurator

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**Technical Data**

**General Data**

Fields of application	Industrial Ethernet
Design	Sensor/actuator connection cable M12, A-coded
Shielding	shielded
Transmission technology	Copper
Color coding fiber/ wire(s)	brown, white, blue, black, gray
Color	black
Dimensions	
Dimension - Interface 1 (L x W x H)	33.5 mm x 37.5 mm x 15 mm
Dimension - Interface 1 (L x W x H)	1.319 in. x 1.476 in. x 0.591 in.
Labeling option	identification label carrier

**Connections/interfaces**

Connector technology interface 1	M12-plug angled
Connector technology interface 2	free line end
Coding interface 1	A-coded
Number of positions/contacts interface 1	5
Termination data, stranded wire (min. - max.)	
Conductor cross section, stranded wire	AWG 22/42
Conductor cross section, stranded wire	0.34 mm <sup>2</sup>
Stranded wire structure	42x0.10mm
Cable sheath diameter (min. - max.)	
Cable sheath diameter	5.6 mm
Cable sheath diameter	0.22 in.

**Electrical characteristics**

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

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**Technical Data**

**Mechanical data**

Life - Number of mating cycles	min. 100
Torsion	+/-180°/m, >= 0.5 million cycles
Maximum operating bending radius	67.2 mm
Alternating bending radius	67 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 - Contact interface 1	CuSn
Material - Contact finish interface 1	Au (gold)
Material - Contact carriers interface 1	Plastics
Material - Union nut interface 1	CuZnPb (brass)
Material - Union nut finish interface 1	Ni (nickel)
Flame retardancy	yes
Halogen free	yes
Oil resistance	yes
UV-resistance	yes
drag chain suitable	yes
torsional	yes
RoHS	compliant

**Environmental conditions**

Temperature (min. - max.)	
Temperature - Operating °C	-40 °C - 90 °C
Temperature - Operating °F	-40 °F - 194 °F
Temperature - Installation °C	-30 °C - 90 °C
Temperature - Installation °F	-22 °F - 194 °F
Temperature - drag chain °C	-25 °C - 60 °C
Temperature - drag chain °F	-13 °F - 140 °F
Particulate ingress interface 1	IP6X when plugged in

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**Technical Data****Environmental conditions**

Liquid ingress/immersion interface 1	IPX5, IPX7, IPX8 when plugged in
Pollution degree interface 1	3

**Approvals**

UL listed (file no.)	Approval pending
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**Standards/Regulations**

Connectors for electronic equipment	
circular connector	DIN EN 61076-2-101

**Classifications**

ETIM 7.0	EC001855
ETIM 8.0	EC001855

**Packing details**

Type of packaging	1 pc(s) / plastic bag
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**Application note**

This product is a standard product of METZ CONNECT. METZ CONNECT is not aware of the specific intended use of the goods by the Customer or any customers of the Customer. The Customer guarantees that it has fully and sufficiently tested the use of the goods and any product modifications, product changes or product enhancements with regard to the specific intended use in accordance with the state of the art or in any other way. At METZ CONNECT's request, the Customer shall submit and make available meaningful evidence (e.g. test and laboratory protocols, certifications, etc.).



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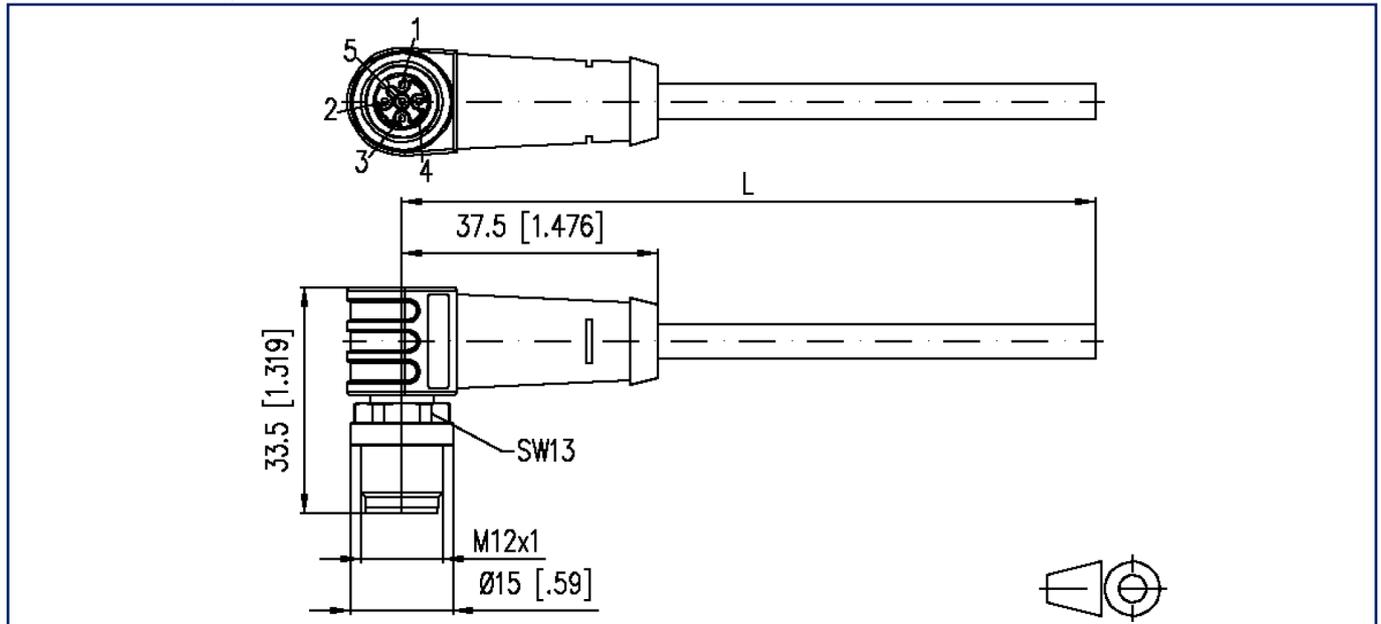
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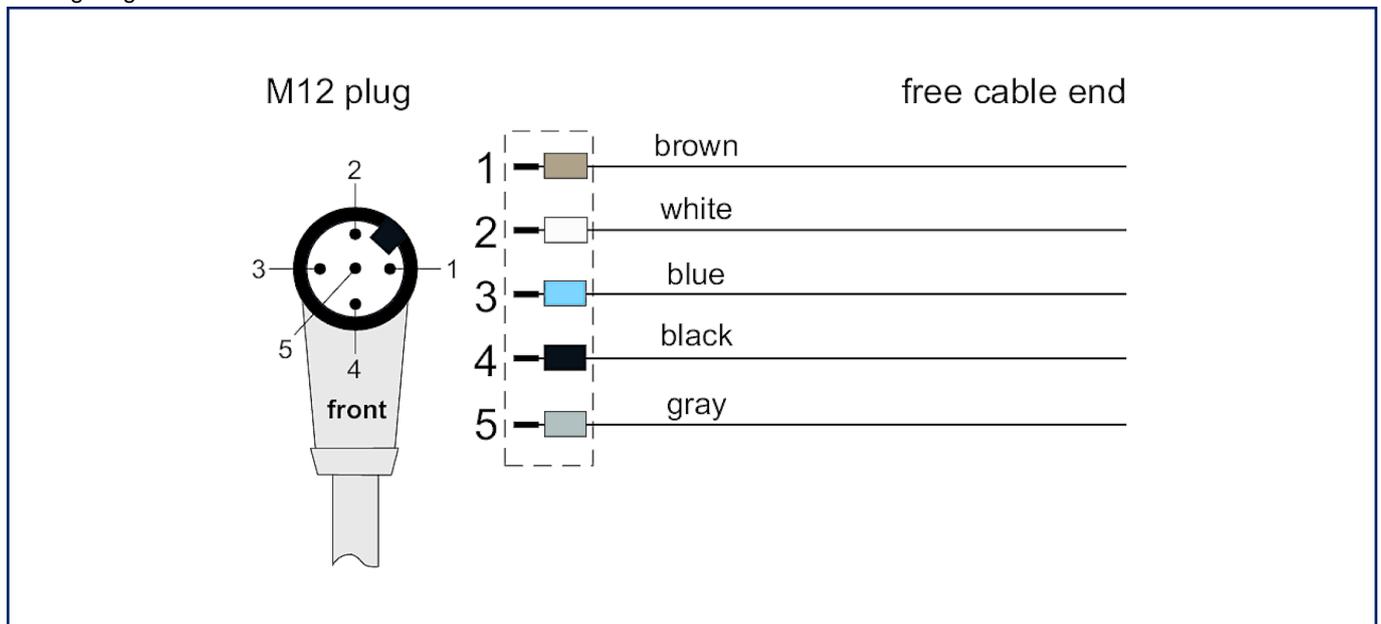
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Dimensional drawing



Wiring diagram



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Principle diagram

