

Data sheet

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**M12 Industrial Ethernet cable, D-coded, 2.0 m,
M12 plug angled - free line end, PUR**

P/N

142M1D90020

EAN 4250184174967

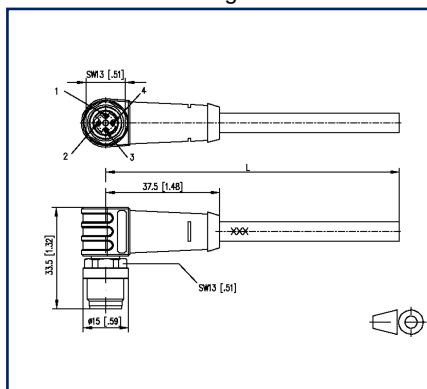
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Version: BC

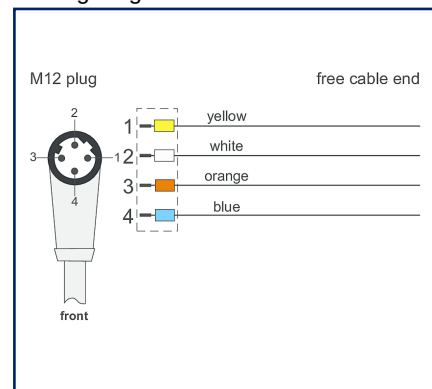
Illustrations



Dimensional drawing



Wiring diagram



See enlarged drawings at the end of document

Product specification

Shielded PUR cable for safe and industrial data transmission in automation and fieldbus technology. The cable is CMX-verified and complies with Cat5e (electrical properties based on EN50288-2-1). Materials and constructional design allow increased mechanical stress (abrasion, bending, vibrations etc.) of the cable. Use in drag chains with up to 3 million bending cycles is possible without risk. Special properties: flame retardant, seawater resistant, recyclable, LABS-free, RoHS compliant, acid and alkali resistant, ozone resistant, UV resistant, hydrolysis resistant, drag chain compatible, halogen free, oil resistant, high flexibility, microbe resistant, UN ECER118, PROFINET Type C.

- Standard variants: 1.0 m, 2.0 m, 5.0 m, 10.0 m.
- Other cable lengths on request.



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Technical Data

General Data	
Fields of application	Industrial Ethernet
Design	Ethernet-Connection line
Shielding	shielded
Transmission technology	Copper
Cable Type	SF/FTP
Number of twisting elements	2
Twisting element	Pair
Wiring	Profinet
Color coding fiber/ wire(s)	yellow, white, orange, blue
Color	green
Dimensions	
Dimension - Interface 1 (L x W x H)	33.5 mm x 15 mm x 45 mm
Dimension - Interface 1 (L x W x H)	1.319 in. x 0.591 in. x 1.772 in.
Cable length (m)	2 m
Cable length (ft)	6.56 ft
Labeling option	identification label carrier

Transmission characteristics	
Category (ISO)	5e
Transmission rate up to 100 MBit (Fast Ethernet)	IEEE 802.3u

Connections/interfaces	
Connector technology interface 1	M12-plug angled
Connector technology interface 2	free line end
Coding interface 1	D-coded
Number of positions/contacts interface 1	4
Termination data, stranded wire (min. - max.)	
Conductor cross section, stranded wire	AWG 22/7
Conductor diameter, stranded wire (bare copper)	0.75 mm
Conductor diameter, stranded wire (bare copper)	0.03 in.



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Technical Data

Connections/interfaces

Cable sheath diameter (min. - max.)

Cable sheath diameter 6.5 mm

Cable sheath diameter 0.236 in.

Electrical characteristics

Current carrying capacity 4 A at 40 °C

Rated voltage 60 V DC

UL rating (cable) 600 V

Insulation resistance min. 100 MOhm

Mechanical data

Life - Number of mating cycles min. 100

Bending radius without load min. 49 mm

Maximum operating bending radius 26 mm

Maximum operating bending radius 1.024 in.

Maximum installation load 52 mm

Maximum installation load 2.047 in.

Number of alternating bending cycles (mechanical resistance) at: 3 million bending cycles

Alternating bending radius 100 mm

velocity 4 m/s

acceleration 4 m/s²

Shielding braid coverage 85 %

Installation method PROFINET type C

Materials and material properties

Material - Conductor Cu (copper)

Material - Conductor Insulation Polyethylene

Material - Cable jacket PUR

Material - Inner cable jacket FRNC, with an aluminized film

Material - Body interface 1 Plastics

Material - Contact interface 1 CuZnPb (brass)

Material - Contact finish interface 1 Au (gold)

Material - Contact carriers interface 1 Plastics



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Materials and material properties

Material - Union nut interface 1	CuZnPb (brass)
Material - Union nut finish interface 1	Ni (nickel)
Material - Pair shield	plastic film
Material - Pair shield finish	Al (Aluminium)
Material - Main shield	Cu (copper) braid
Material - Main shield finish	Sn
Flame retardancy	according to IEC 60332-1-2
Halogen free	yes
Oil resistance	yes
UV-resistance	yes
drag chain suitable	yes
RoHS	compliant

Environmental conditions

Temperature (min. - max.)	
Temperature - Operating °C	-30 °C - 90 °C
Temperature - Operating °F	-22 °F - 194 °F
Particulate ingress interface 1	IP6X when plugged in
Liquid ingress/immersion interface 1	IPX5, IPX7, IPX8 when plugged in
Pollution degree interface 1	3

Approvals

UL listed (file no.)	DUXR.E178484
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Standards/Regulations

Generic cabling systems	
General requirements	ISO/IEC 11801-1 DIN EN 50173-1
Profinet	yes
Connectors for electronic equipment	
circular connector	DIN EN 61076-2-101
Multi-element metallic cables used in analogue and digital communication and control	DIN EN 50288-2-1



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Standards/Regulations

Common test methods for cables under fire conditions

UN ECE-R 118.01	R118
Test for vertical flame propagation for a single insulated wire or cable	IEC 60332-1-2
Measurement of smoke density of cables burning	DIN EN 61034

Classifications

ETIM 7.0	EC002599
ETIM 8.0	EC002599
ETIM 9.0	EC002599
ETIM 10.0	EC002599

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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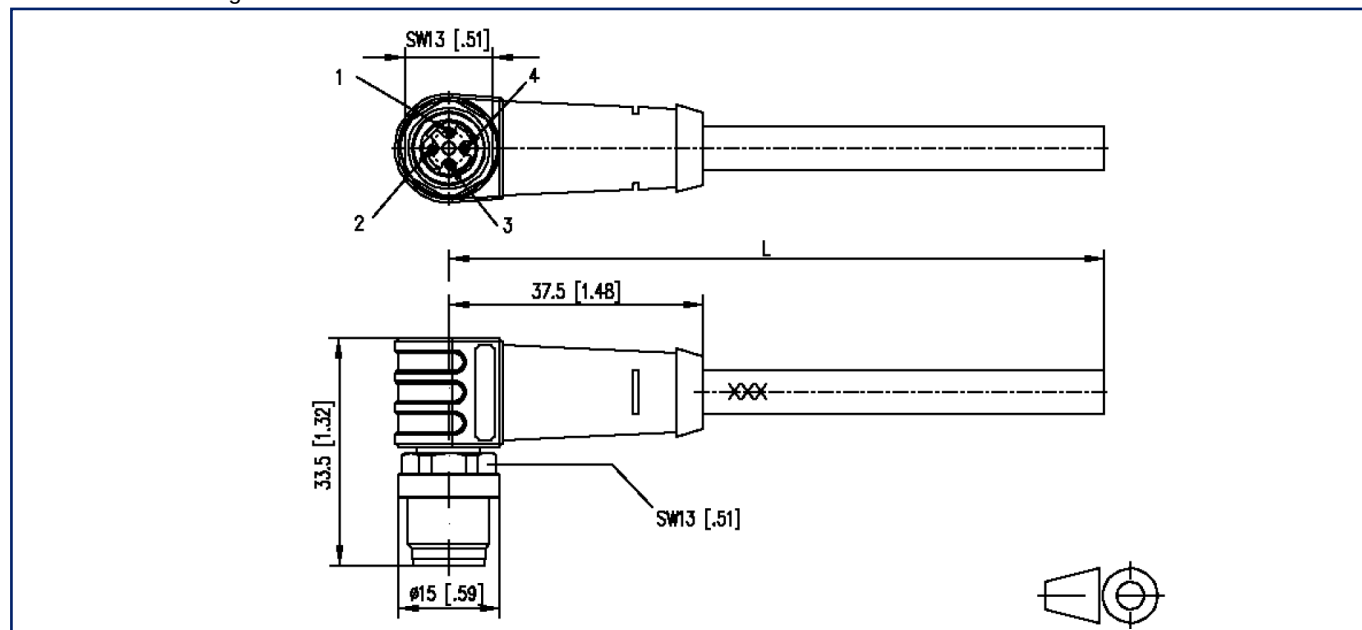
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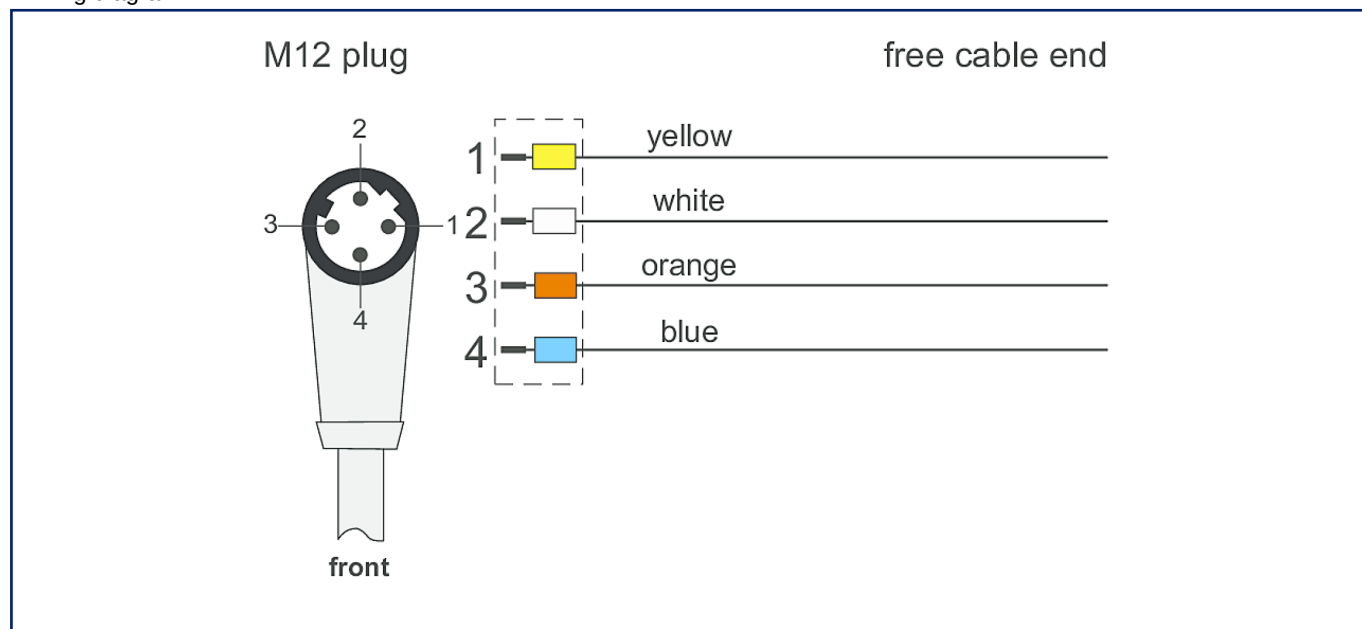
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Illustrations

Dimensional drawing



Wiring diagram



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Principle diagram

