

Data sheet

**M12 Industrial Ethernet cable, X-coded, 2.0 m,
M12 jack straight - free line end,
without flange, torsion, PUR**

P/N

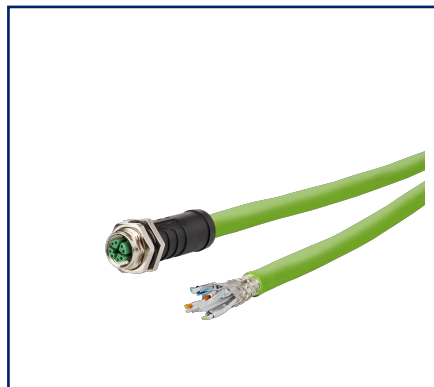
142M7X20020

EAN 4250184199373

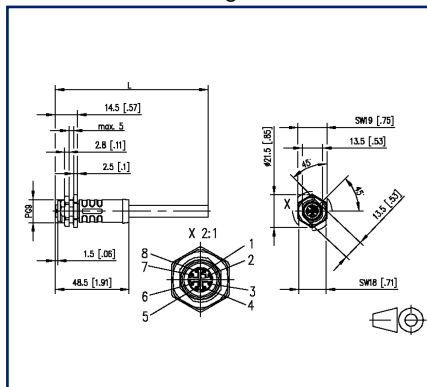
2025/07/07

Version: L

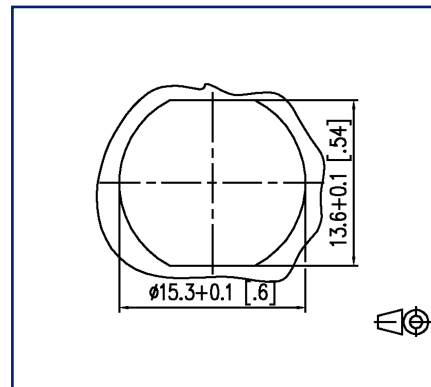
Illustrations



Dimensional drawing



Cut-out



See enlarged drawings at the end of document

Product specification

PROFINET 4x2xAWG24/7 Type C torsion-resistant high-speed data cable of transmission category Cat 7. The cable is halogen-free, flame-retardant, oil-resistant and resistant to abrasion due to the PUR outer jacket. It is ideally suited for use in industrial environments. High-quality shielding ensures high transmission reliability of the data in electromagnetically stressed areas. Suitable for use in dry and humid rooms. Special properties: c(UL)us type CMX according to UL 444, UL AWM styles 11117 and 21576 (1000 V, 80 °C) according to UL 758, flame retardant, recyclable. LABS-free, RoHs compliant, ozone resistant, UV resistant, torsion resistant, halogen free, oil resistant.

- 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 harsh environment
Design	Ethernet-Connection cable
Shielding	shielded
Transmission technology	Copper
Cable Type	S/FTP
Number of twisting elements	4
Twisting element	Pair
Wiring	1 - 1
Color coding fiber/ wire(s)	white/orange, orange, white/green, green, white/brown, brown, white/blue, blue
Color	green
Dimensions	
Dimension - Interface 1 (L x W x H)	48.5 mm x 21.5 mm x 21.5 mm
Dimension - Interface 1 (L x W x H)	1.909 in. x 0.846 in. x 0.846 in.
Cable length (m)	2 m
Cable length (ft)	6.56 ft

Transmission characteristics

Category (ISO)	6 _A
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Connections/interfaces

Connector technology interface 1	M12-jack
Connector technology interface 2	free line end
Coding interface 1	X-coded
Number of positions/contacts interface 1	8
Termination data, stranded wire (min. - max.)	
Conductor cross section, stranded wire	AWG 24/7
Conductor diameter, stranded wire (bare copper)	0.2 mm
Conductor diameter, stranded wire (bare copper)	0.008 in.



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Connections/interfaces

Cable sheath diameter (min. - max.)

Cable sheath diameter 9.4 mm

Cable sheath diameter 0.37 in.

Electrical characteristics

Current carrying capacity 0.5 A at 40 °C

Rated voltage 60 V DC

Insulation resistance min. 100 MOhm

Mechanical data

Life - Number of mating cycles min. 100

Torsion at least 5.000.000 cycles

Maximum operating bending radius 75 mm

Maximum operating bending radius 2.953 in.

Maximum installation load 141 mm

Maximum installation load 5.551 in.

Shielding braid coverage 85 %

Materials and material properties

Material - Conductor Cu (copper)

Material - Conductor Insulation foamed Polyolefin

Material - Cable jacket PUR

Material - Body interface 1 Plastics

Material - Contact interface 1 CuZnPb (brass)

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)

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



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Materials and material properties

Oil resistance	yes
torsional	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 when plugged in
Pollution degree interface 1	2

Approvals

UL listed (file no.)



DUXR.E178484

Standards/Regulations

Generic cabling systems	
General requirements	ISO/IEC 11801-1 DIN EN 50173-1
Connectors for electronic equipment	
circular connector	DIN EN 61076-2-109
Multi-element metallic cables used in analogue and digital communication and control	DIN EN 50288-5-2
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
Determination of the halogen acid gas content	IEC 60754-1

Classifications

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



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Technical Data**Packing details**

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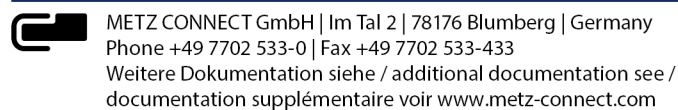
Application note

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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Dimensional drawing



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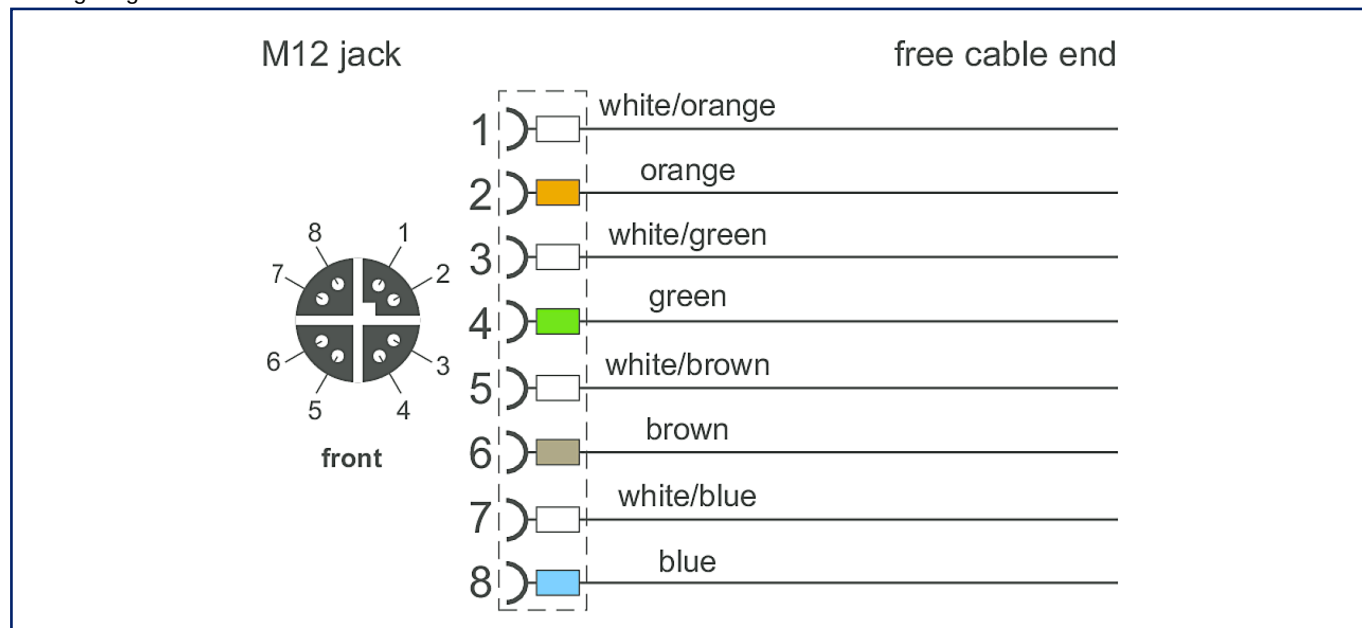
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Illustrations

Wiring diagram



Principle diagram

