

Data sheet

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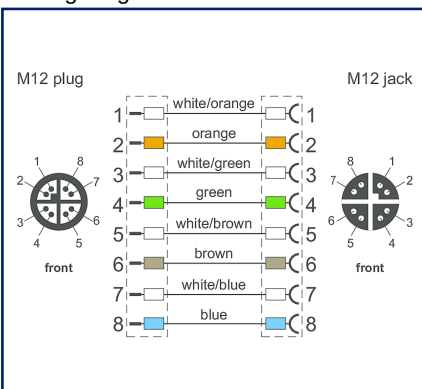
**M12 Industrial Ethernet cable, X-coded, 2.0 m,
M12 jack straight - M12 plug straight, drag chain, PUR**

P/N
142M6X12020
EAN 4251394645674
2025/06/17
Version: G

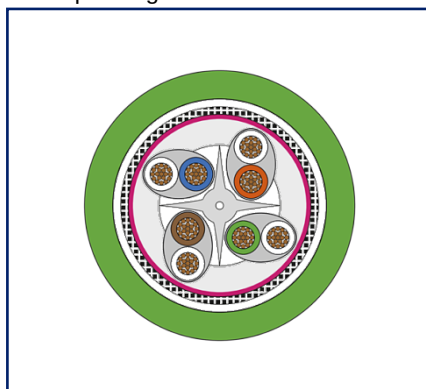
Illustrations



Wiring diagram



Principle diagram



See enlarged drawings at the end of document

Product specification

PROFINET 4x 2x AWG26/19 Type C highly flexible high-speed data cable of transmission category Cat 6. 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 flexible applications, especially in drag chains or on continuously moving machine parts in dry and humid rooms. Special properties: flame-retardant, recyclable, LABS-free, RoHS-compliant, ozone-resistant, UV-resistant, suitable for drag chains, halogen-free, oil-resistant, high flexibility.

- 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 line
Shielding	shielded
Transmission technology	Copper
Cable Type	SF/UTP
Number of twisting elements	4
Twisting element	Pair
Wiring	1 - 1
Color coding fiber/ wire(s)	white, orange, white, green, white, brown, white, blue
Color	green
Dimensions	
Dimension - Interface 1 (L x W x H)	50.5 mm x 15 mm x 15 mm
Dimension - Interface 1 (L x W x H)	1.988 in. x 0.591 in. x 0.591 in.
Dimension - Interface 2 (L x W x H)	48.5 mm x 21.5 mm x 21.5 mm
Dimension - Interface 2 (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	M12-plug
Coding interface 1	X-coded
Coding interface 2	X-coded
Number of positions/contacts interface 1	8
Number of positions/contacts interface 2	8



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Connections/interfaces

Termination data, stranded wire (min. - max.)

Conductor cross section, stranded wire AWG 26/19

Conductor diameter, stranded wire (bare copper) 0.55 mm

Conductor diameter, stranded wire (bare copper) 0.022 in.

Core diameter (min. - max.)

Core diameter (conductor with insulation) 0.98 mm

Core diameter (conductor with insulation) 0.039 in.

Cable sheath diameter (min. - max.)

Cable sheath diameter 7.80

Cable sheath diameter 0.307

Electrical characteristics

Current carrying capacity 0.5 A at 40 °C

Rated voltage 60 V DC

Insulation resistance min. 100 MOhm

Transfer impedance 10 MHz max. 30 mOhm/m

Capacitance at 800 Hz 52 nF/km

Delay skew 30 ns/100 m

Mechanical data

Tensile force 100 N

Life - Number of mating cycles min. 100

Bending radius without load 31.2 mm

Bending radius without load 1.228 in.

Bending radius with load 58.5 mm

Bending radius with load 2.303 in.

Maximum operating bending radius 58.5 mm

Maximum operating bending radius 2.303 in.

Number of alternating bending cycles (mechanical resistance) at: 4 million bending cycles

Alternating bending radius 58.5 mm

velocity 3 m/s

acceleration 3 m/s²

Shielding braid coverage 85 %



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Materials and material properties

Material - Conductor	Cu (copper)
Material - Conductor Insulation	polypropylene
Material - Cable jacket	PUR
Material - Inner cable jacket	FRNC, with an aluminized film
Material - Body interface 1	Plastics
Material - Body interface 2	Plastics
Material - Contact interface 1	CuZnPb (brass)
Material - Contact interface 2	CuZnPb (brass)
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 - 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
Particulate ingress interface 2	IP6X when plugged in
Liquid ingress/immersion interface 2	IPX5, IPX7, IPX8 when plugged in
Pollution degree interface 1	3
Pollution degree interface 2	3



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Approvals

UL listed (file no.)



DUXR.E178484

Standards/Regulations

Generic cabling systems

General requirements

ISO/IEC 11801 | ANSI/TIA-568

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

Determination of the halogen acid gas content

IEC 60754-1

Classifications

ETIM 7.0

EC002599

ETIM 8.0

EC002599

ETIM 9.0

EC002599

Packing details

Type of packaging

1 pc(s) / plastic bag

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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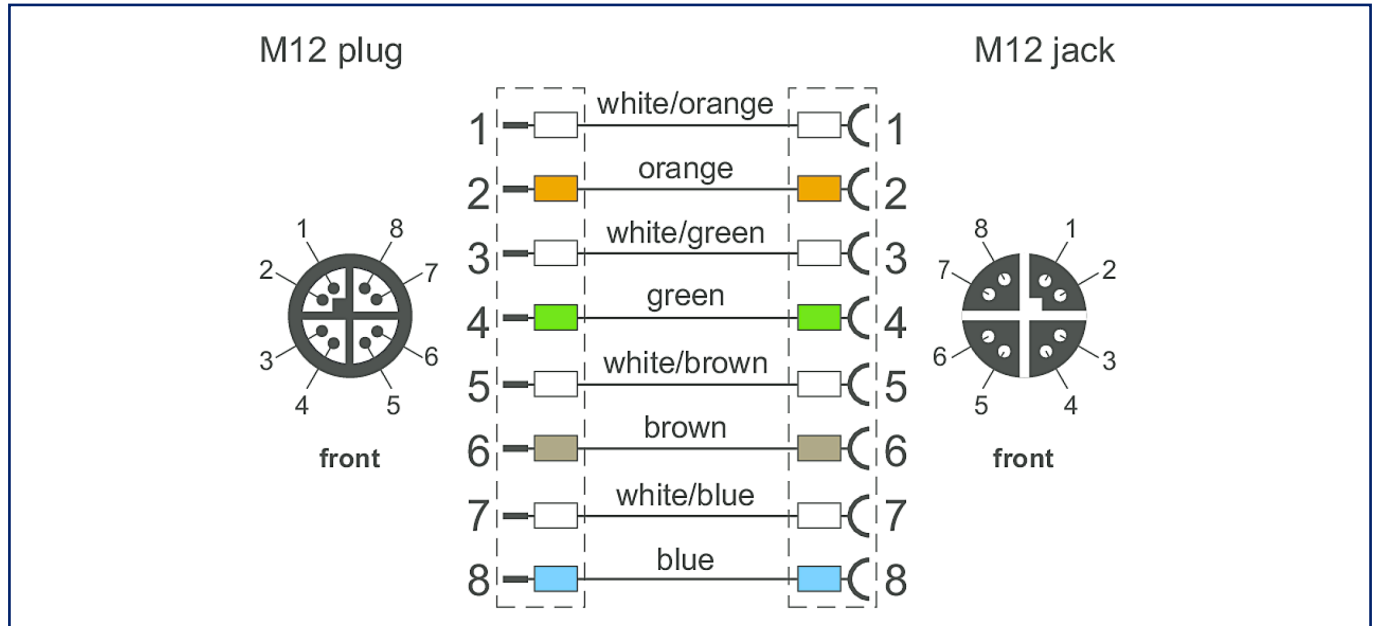
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