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Data sheet

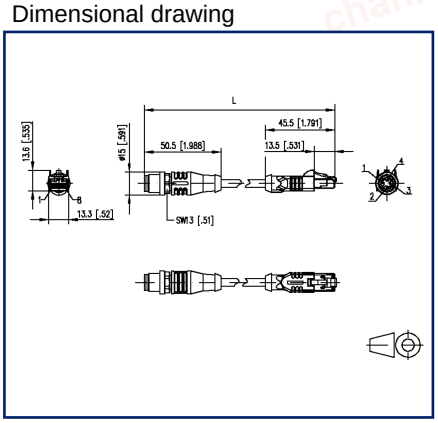
M12 Industrial Ethernet cable, D-coded, 2.0 m, M12 plug straight - RJ45 plug straight, drag chain, torsion, PUR

P/N 142M4D15020
EAN 4250184172697
2023/06/21
Version: M

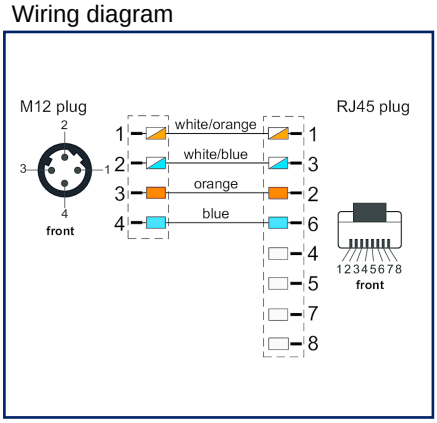
Illustrations



Dimensional drawing



Wiring diagram



See enlarged drawings at the end of document

Product specification

Shielded Ethernet cable made of PUR for safe and industrial data transmission in automation and fieldbus technology. Real-time requirements based on IEC61158 can be realized. The cable meets the requirements of UL-Style 21815 (80°/300V) and the specifications of Cat5 (electrical properties based on EN50288-2-2). Materials and design for increased mechanical stress (abrasion, bending, vibration, etc.) of the cable. Can be used in drag chain operation/torsion. High tensile strength due to incorporated Kevlar thread. Special properties: 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.

- 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	S/UTP
Number of twisting elements	4
Twisting element	single core
Wiring	Profinet
Color coding fiber/ wire(s)	white/orange, white/blue, orange, 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)	45.5 mm x 13.3 mm x 13.6 mm
Dimension - Interface 2 (L x W x H)	1.791 in. x 0.524 in. x 0.535 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
Connector technology interface 2	RJ45 plug
Coding interface 1	D-coded
Number of positions/contacts interface 1	4
Number of positions/contacts interface 2	8P/4C

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Technical Data

Connections/interfaces	
Termination data, stranded wire (min. - max.)	
Conductor cross section, stranded wire	AWG 26/19
Conductor diameter, stranded wire (bare copper)	0.5 mm
Conductor diameter, stranded wire (bare copper)	0.02 in.
Cable sheath diameter (min. - max.)	
Cable sheath diameter	4.8 mm
Cable sheath diameter	0.189 in.
Electrical characteristics	
Current carrying capacity	1 A at 40 °C
Rated voltage	60 V DC
Insulation resistance	min. 100 MOhm
Mechanical data	
Life - Number of mating cycles	min. 100
Torsion	min. ± 30 °/m
Bending radius without load	min. 36 mm
Maximum operating bending radius	19.2 mm
Maximum operating bending radius	0.748 in.
Maximum installation load	36 mm
Maximum installation load	1.417 in.
Number of alternating bending cycles (mechanical resistance) at:	5 million bending cycles
Alternating bending radius	36 mm
velocity	180 m/s
acceleration	5 m/s²
Shielding braid coverage	85 %
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

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Materials and material properties

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 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 (tin)
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	-30 °C - 70 °C
Temperature - Operating °F	-22 °F - 158 °F
Particulate ingress interface 1	IP6X when plugged in
Liquid ingress/immersion interface 1	IPX5, IPX7, IPX8 when plugged in
Particulate ingress interface 2	IP2X when plugged in
Liquid ingress/immersion interface 2	IPX0 when plugged in
Pollution degree interface 1	3
Pollution degree interface 2	1

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Technical Data

Approvals	
UL listed (file no.)	Approval pending
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 50288-4-1
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 5.0	EC002599
ETIM 6.0	EC002599
ETIM 7.0	EC002599
ETIM 8.0	EC002599
ETIM 9.0	EC002599
Packing details	
Type of packaging	1 pc(s) / plastic bag

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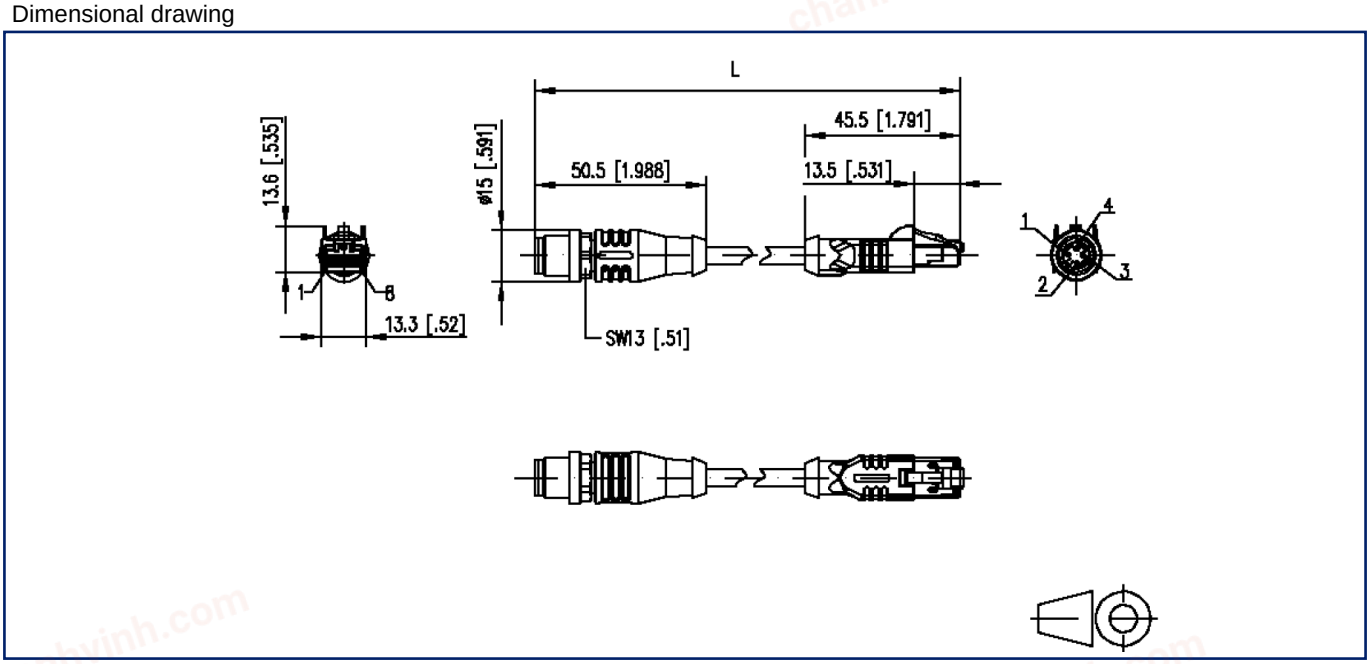
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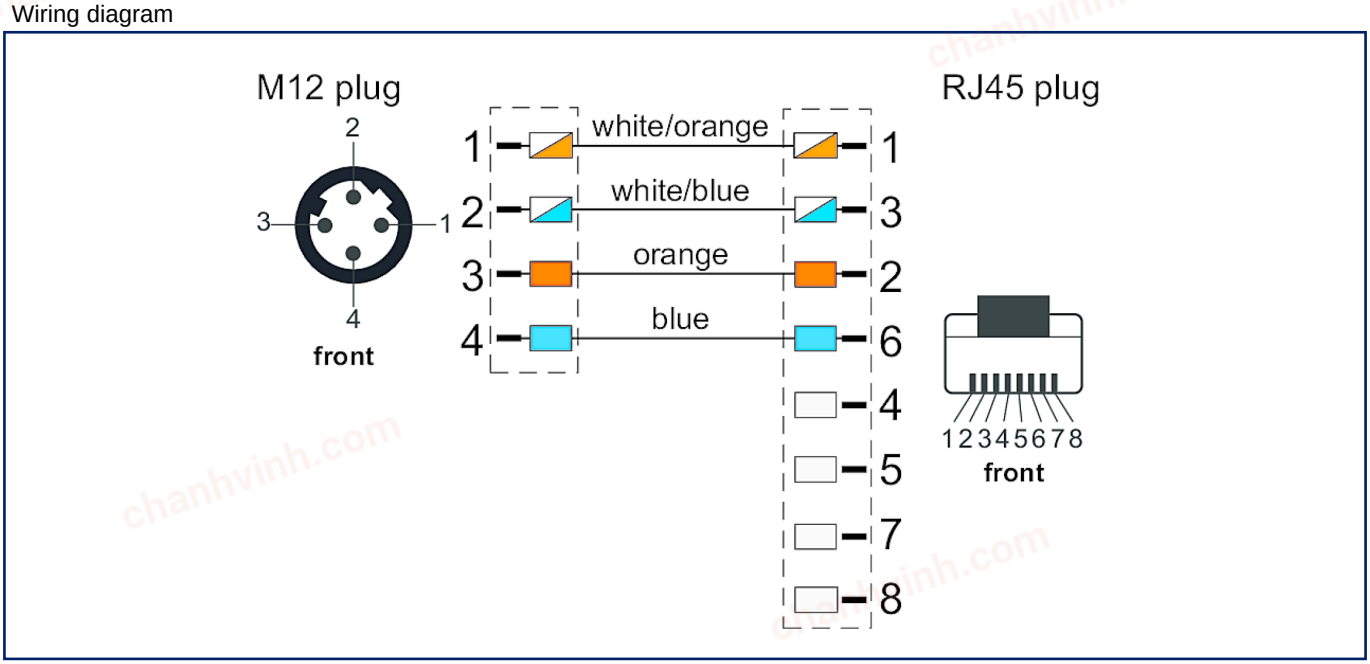
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Dimensional drawing



Wiring diagram



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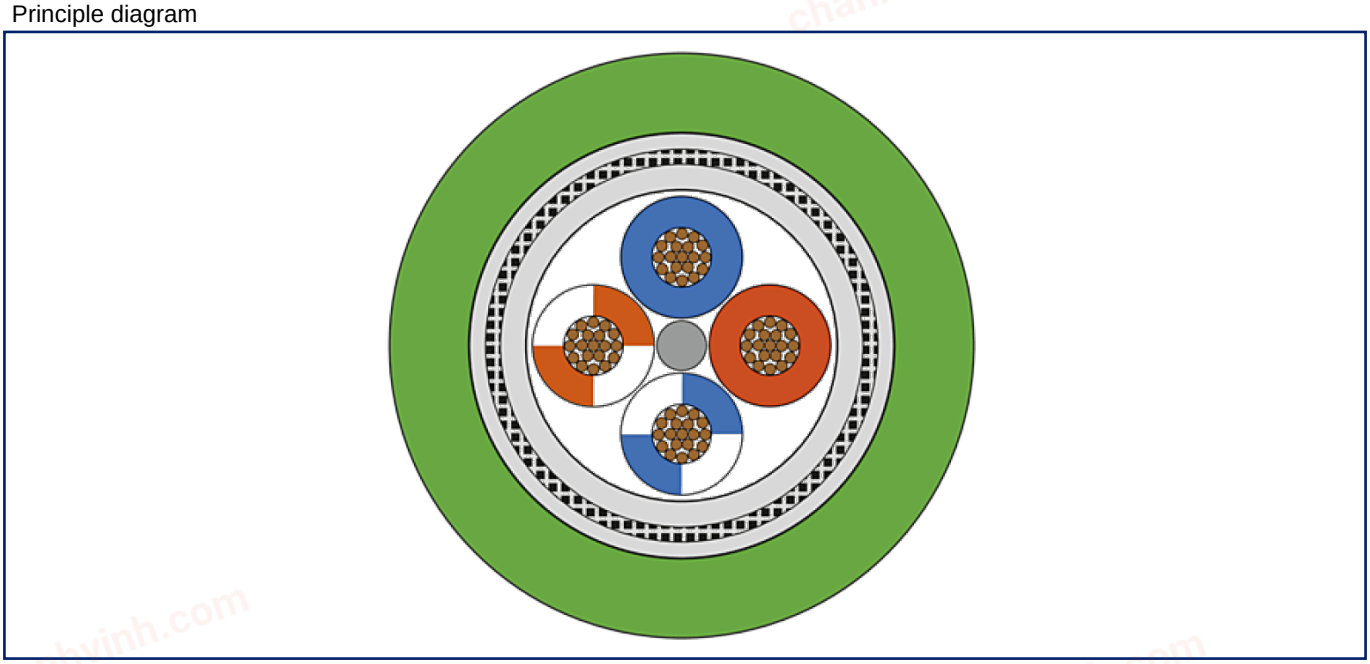
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Principle diagram



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Weitere Dokumentation siehe / additional documentation see / documentation supplémentaire voir www.metz-connect.com

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