

# Data sheet

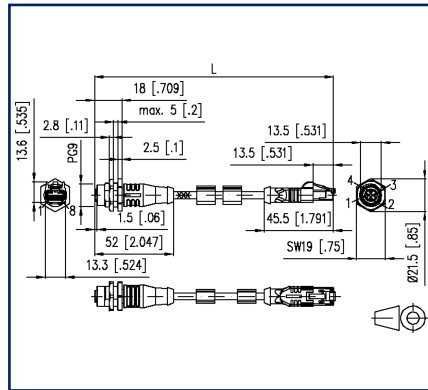
**M12 Industrial Ethernet cable, D-coded, 10.0 m,  
M12 jack straight - RJ45 plug straight, drag chain, PUR**

**P/N**  
**142M1D25100**  
**EAN 4251122186325**  
2025/07/09  
Version: C

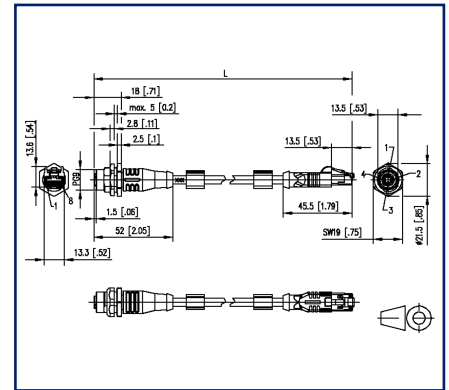
## Illustrations



## Dimensional drawing



## Dimensional drawing



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

|                                     |                                   |
|-------------------------------------|-----------------------------------|
| Design                              | Ethernet-Connection cable         |
| 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) | 52 mm x 21.5 mm x 21.5 mm         |
| Dimension - Interface 1 (L x W x H) | 2.047 in. x 0.846 in. x 0.846 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)                    | 10 m                              |
| Cable length (ft)                   | 32.81 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-jack  |
| 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 22/7

Conductor diameter, stranded wire (bare copper) 0.75 mm

Conductor diameter, stranded wire (bare copper) 0.03 in.

Cable sheath diameter (min. - max.)

Cable sheath diameter 6.5 mm

**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 installation load 52 mm

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

Alternating bending radius 100 mm

velocity 4 m/s

acceleration 4 m/s<sup>2</sup>

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 - Body interface 2 Plastics

Material - Contact interface 1 CuZnPb (brass)



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### Materials and material properties

|                                         |                            |
|-----------------------------------------|----------------------------|
| 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 - 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                        |
| 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 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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### Approvals

UL listed (file no.)



DUXR.E178484

### 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

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

### 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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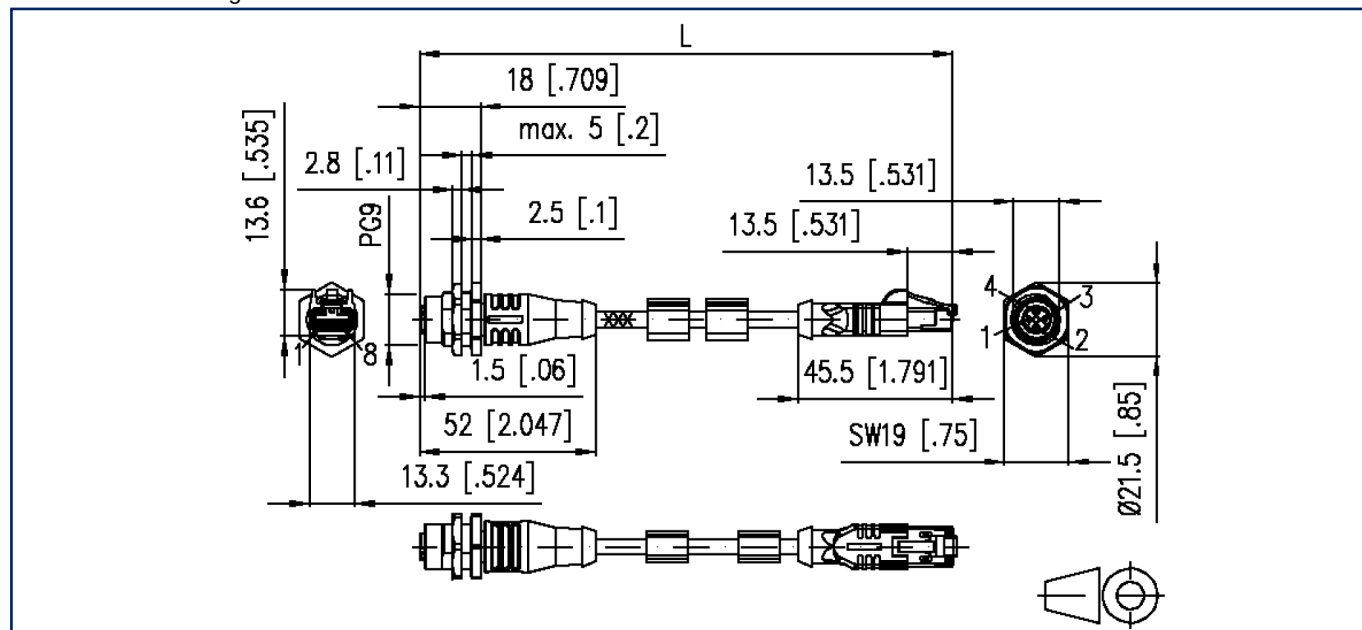
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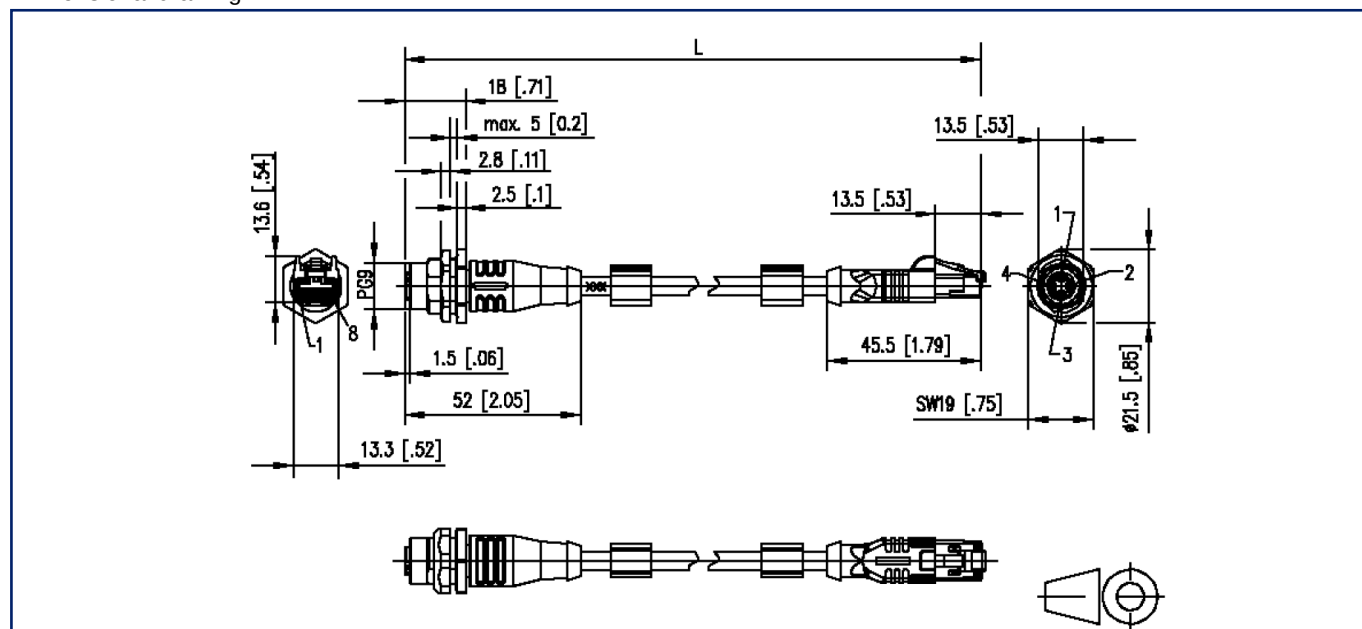
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**Illustrations**

Dimensional drawing



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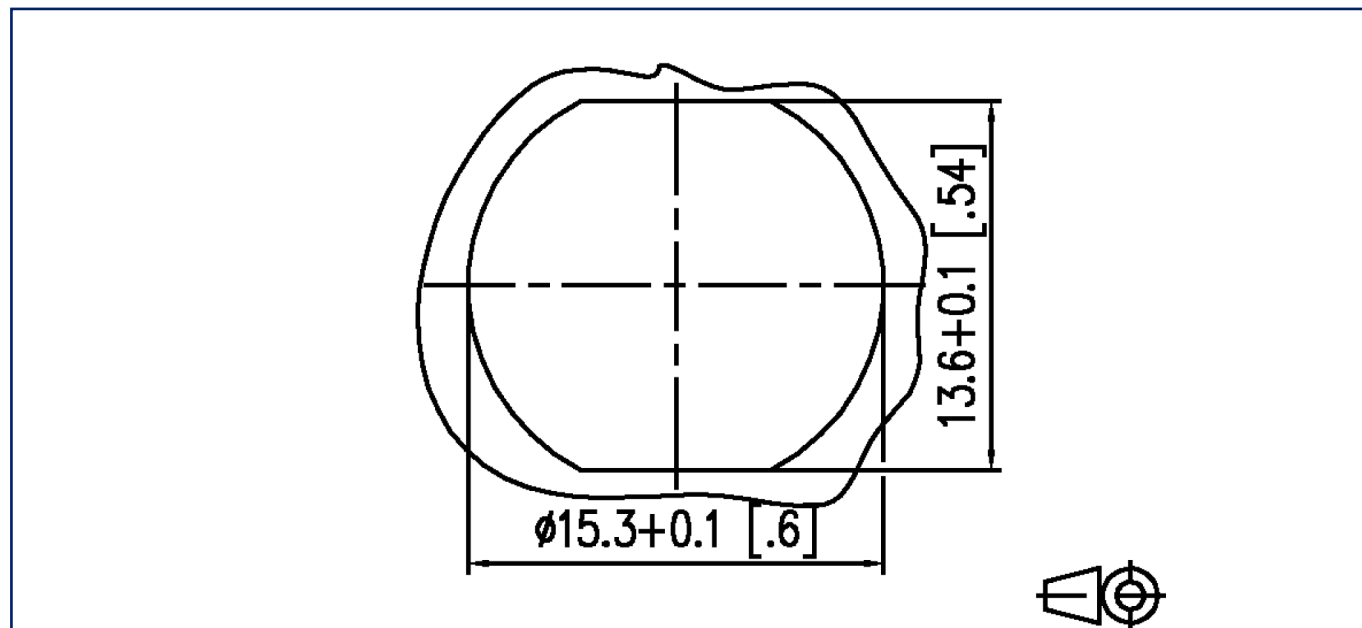
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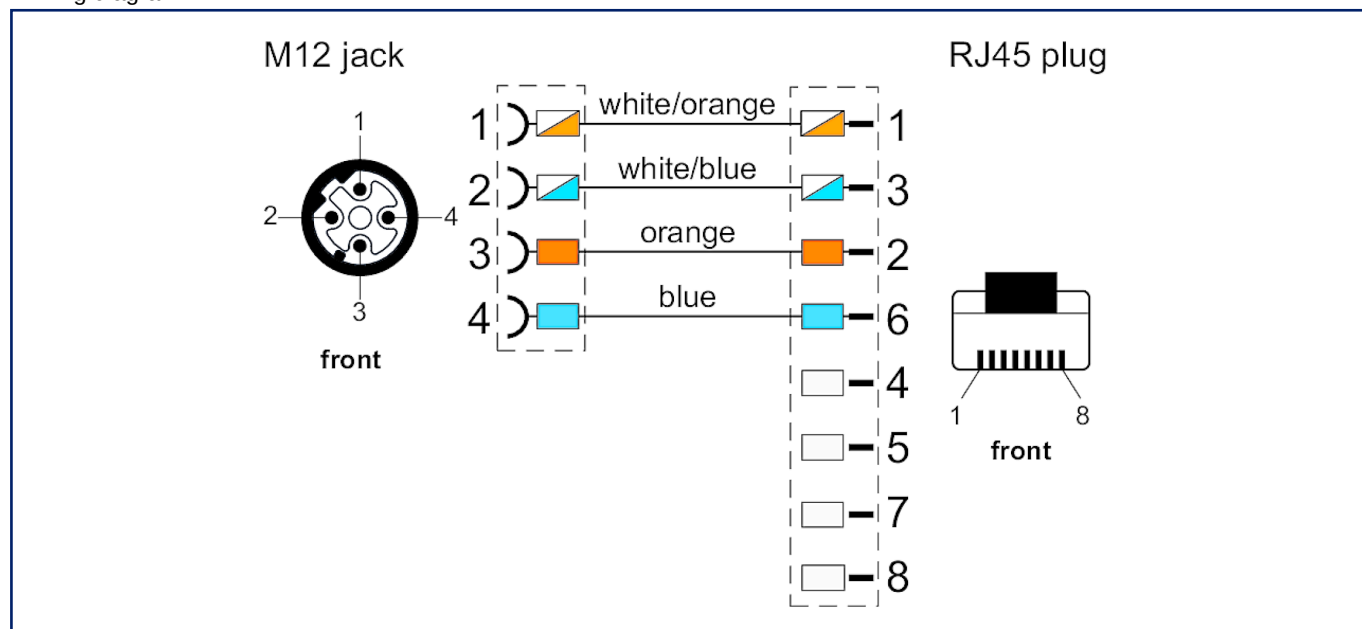
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### Cut-out



### Wiring diagram



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Principle diagram

