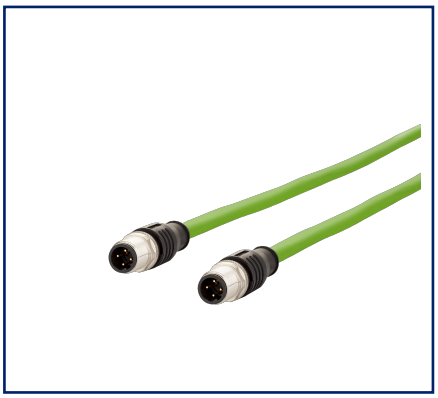
# Data sheet

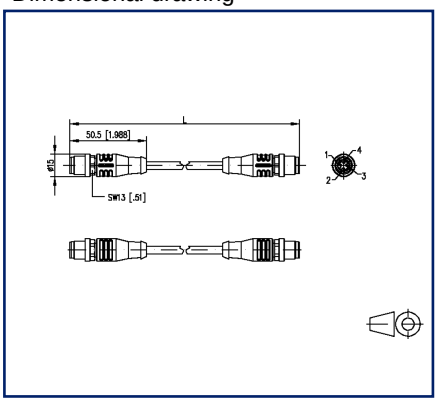
## M12 Industrial Ethernet cable, D-coded, 5.0 m, M12 plug straight - M12 plug straight, drag chain, PUR

**P/N 142M1D11050**
**EAN 4250184139461**
2025/09/17
Version: BO

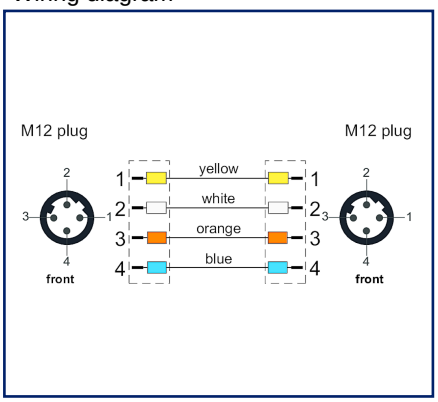
## Illustrations



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) | 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) | 50.5 mm x 15 mm x 15 mm |
| Dimension - Interface 2 (L x W x H) | 1.988 in. x 0.591 in. x 0.591 in. |
| Cable length (m) | 5 m |
| Cable length (ft) | 16.4 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 | M12-plug |
| Coding interface 1 | D-coded |
| Coding interface 2 | D-coded |
| Number of positions/contacts interface 1 | 4 |
| Number of positions/contacts interface 2 | 4 |

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| | |
|---|---|
| **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 |
| 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 |

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| 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) |
| 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 interface 2 | CuZnPb (brass) |
| Material - Union nut finish interface 1 | Ni (nickel) |
| Material - Union nut finish interface 2 | 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 |

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| | |
|---|---|
| **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 |
| **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 |

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### 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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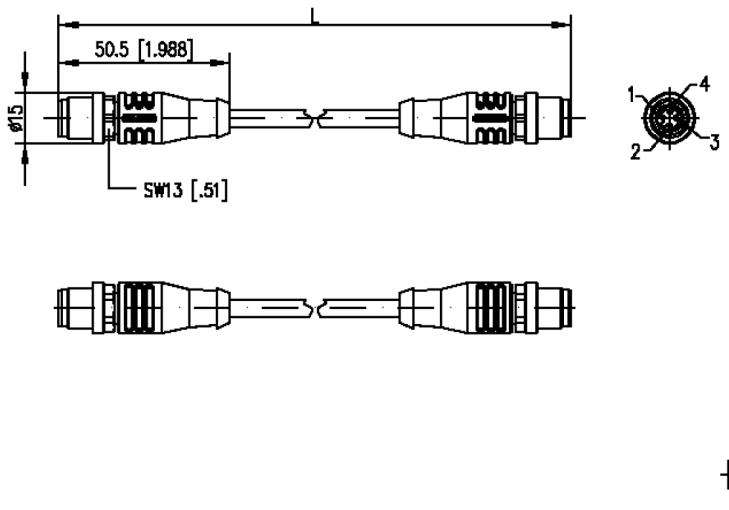
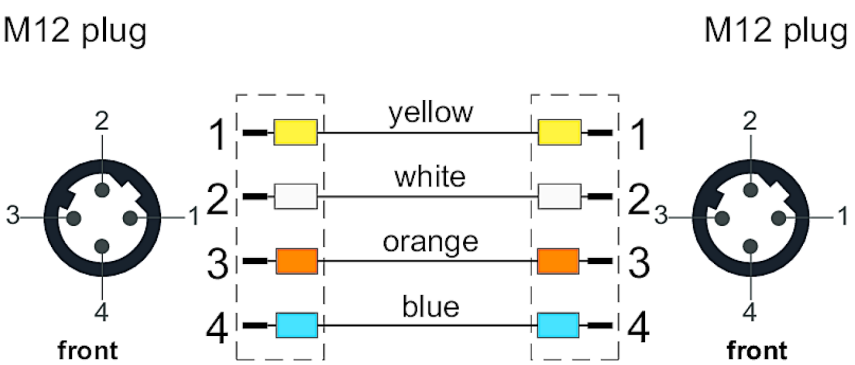
Dimensional drawing




Wiring diagram

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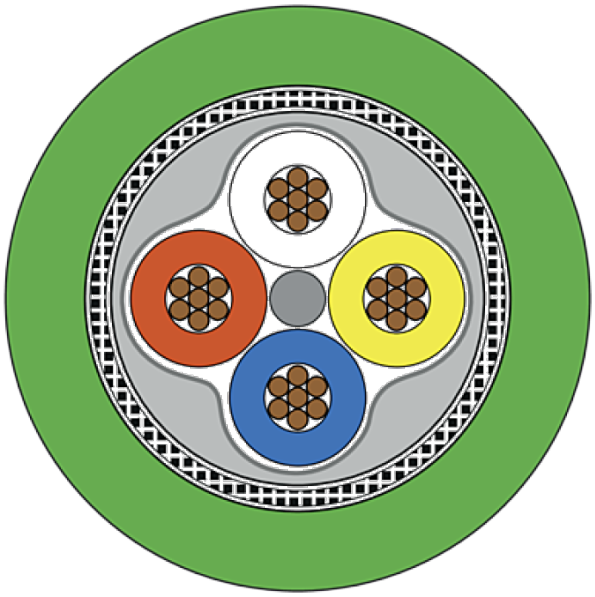
Principle diagram



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