

|                           |                                              |                                                                                     |
|---------------------------|----------------------------------------------|-------------------------------------------------------------------------------------|
| 2171736                   | <b>DATA SHEET</b>                            |  |
| Valid from:<br>30.03.2021 | <b>IE-EC-5-M12DF-S-L(*)-P-2-26-FD-M12D-S</b> |                                                                                     |

## Product description

Industrial Ethernet Patchcord, EtherCat, Cat.5e, straight socket M12 on straight plug M12, D-coded, PUR, for drag chain



This datasheet is also valid for other lengths configurations.  
Other lengths configurations on request.

## Product variations

| Article number | Article description                  | Length (L*) [m] |
|----------------|--------------------------------------|-----------------|
| 2171736        | IE-EC-5-M12DF-S-0,5-P-2-26-FD-M12D-S | 0.5             |
| 2171737        | IE-EC-5-M12DF-S-1-P-2-26-FD-M12D-S   | 1               |
| 2171738        | IE-EC-5-M12DF-S-2-P-2-26-FD-M12D-S   | 2               |
| 2171739        | IE-EC-5-M12DF-S-3-P-2-26-FD-M12D-S   | 3               |
| 2171922        | IE-EC-5-M12DF-S-3,5-P-2-26-FD-M12D-S | 3.5             |
| 2171740        | IE-EC-5-M12DF-S-5-P-2-26-FD-M12D-S   | 5               |
| 2171741        | IE-EC-5-M12DF-S-10-P-2-26-FD-M12D-S  | 10              |
| 2171742        | IE-EC-5-M12DF-S-20-P-2-26-FD-M12D-S  | 20              |

## General properties, Patchcord

|                              |                           |
|------------------------------|---------------------------|
| Outer diameter, cable        | 4.8 mm                    |
| Number of cores              | 4                         |
| Outer sheath                 | PUR                       |
| Outer sheath, color          | green similar to RAL 6018 |
| Mating cycles, M12 connector | 100                       |
| Screening                    | SF/UTP                    |

## General properties, cable

|                              |                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------|
| LAPP-Article number of cable | 2170433                                                                              |
| LAPP-Description of cable    | ETHERLINE P EC FD Cat.5e                                                             |
| Conductor, outer diameter    | ca. 0.15 mm                                                                          |
| Conductor, material          | tinned stranded copper                                                               |
| Insulation, outer diameter   | ca. 1.00 mm                                                                          |
| Insulation, material         | Polyolefin                                                                           |
| Core identification code     | pair 1: white-orange, orange; pair 2: white-green, green                             |
| Stranding                    | star quad                                                                            |
| Wrapping                     | PET tape                                                                             |
| Screening                    | plastic laminated aluminum foil<br>on top: braid of copper wire,<br>coverage ca. 85% |

|                                           |                                      |             |
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### Electrical properties, cable at 20°C

|                                                     |                                          |
|-----------------------------------------------------|------------------------------------------|
| Resistance (loop)                                   | $\leq 142 \Omega/\text{km}$              |
| Insulation material, specific electrical resistance | $\geq 5 \text{ G}\Omega \cdot \text{km}$ |
| Characteristic impedance (1 MHz to 100 MHz)         | $100 \Omega \pm 15 \Omega$               |
| Operating peak voltage                              | 125 V (not for power purposes)           |
| Test voltage (rms 50 Hz, 1 min.), core-core         | 1500 V                                   |
| Test voltage (rms 50 Hz, 1 min.), core-screening    | 1500 V                                   |

### Mechanical and thermal properties, cable

|                                                   |                                                                                                            |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Minimum bending radius, during laying             | 16 x cable diameter                                                                                        |
| Minimum bending radius, fixed installation        | 4 x cable diameter                                                                                         |
| Permissible temperature range, during laying      | -30 °C to +50 °C                                                                                           |
| Permissible temperature range, fixed installation | -40 °C to +80 °C                                                                                           |
| Flame propagation                                 | flame retardant acc. UL 1581 (FT1)                                                                         |
| Halogen free                                      | halogen free acc. to VDE 0472-815                                                                          |
| General requirements                              | Dangerous and forbidden substance acc. to RoHS directive (2011/65/EU) are not allowed to the manufacturing |

### General properties, M12 connector

|                                       |                            |
|---------------------------------------|----------------------------|
| Coding                                | D                          |
| Protection degree                     | IP67/IP69 locked connector |
| Rated voltage max.                    | 250 V                      |
| Rated current at 40 °C                | 4 A                        |
| Ambient temperature                   | -30 °C to +90 °C           |
| Insulation resistance                 | $\geq 10^8 \Omega$         |
| Locking nut with vibration protection | Yes                        |
| Tightening torque                     | 1.0 Nm                     |

### Materials, M12 connector

|                            |      |
|----------------------------|------|
| Contacts, base material    | CuZn |
| Contacts, surface          | Au   |
| Grip body                  | TPU  |
| Locking nut, base material | CuZn |
| Locking nut, surface       | Ni   |

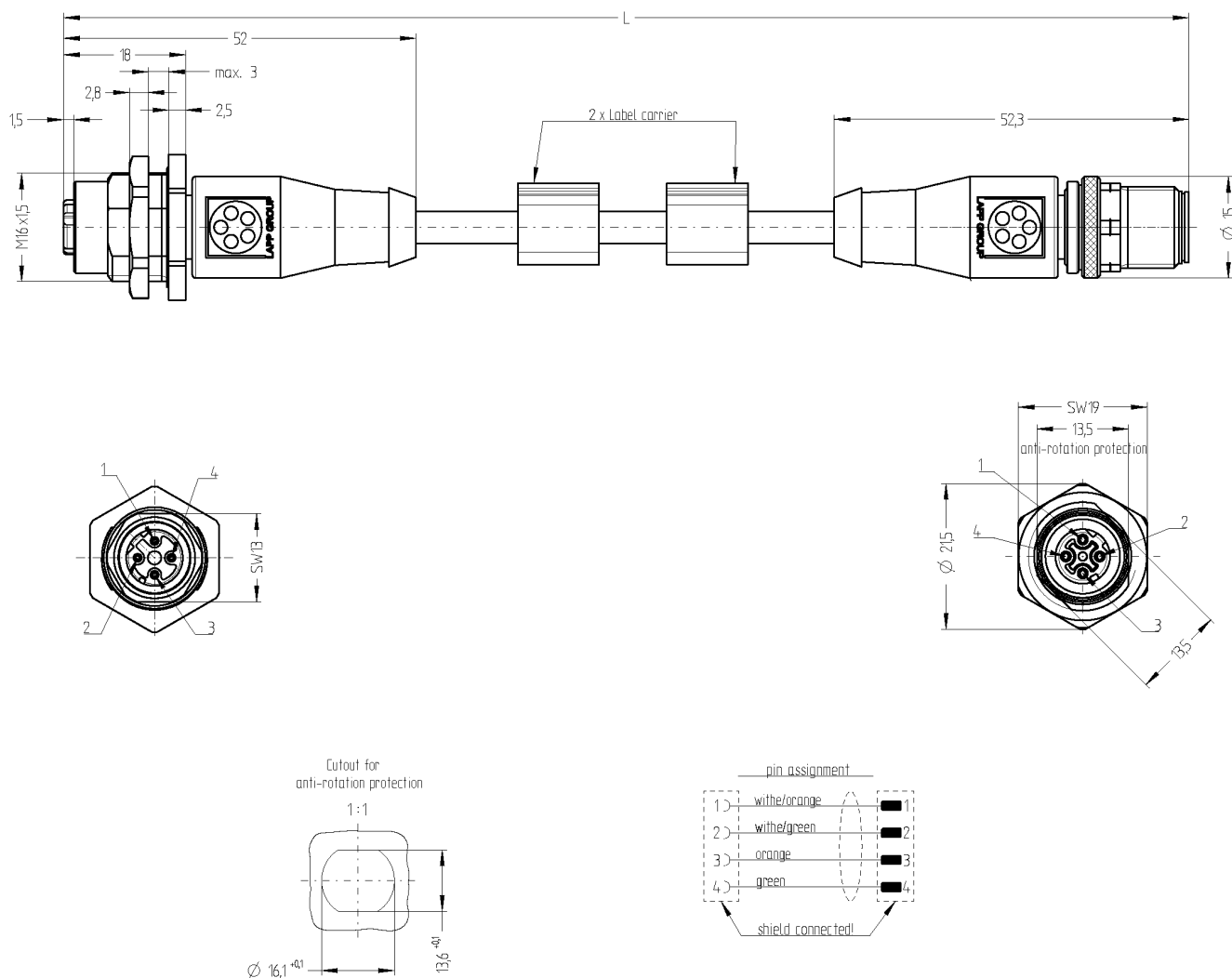
### Standards

|                                                              |                                 |
|--------------------------------------------------------------|---------------------------------|
| Product standard, M12 connector                              | DIN EN 61076-2-101              |
| Generic cabling for customer premises - General requirements | DIN EN 50173-1<br>ISO/IEC 11801 |

|                                           |                                      |             |
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## Drawings



## Certification

Certified acc. to ECE R118

## Application range

Automation, industrial machinery and plant engineering

## Note

Photographs are not true to scale and do not represent detailed images of the respective products.

|                                           |                                      |             |
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