

## ETHERLINE® T1 FD

Single Pair Ethernet data cable for highly flexible use

Highly flexible, shielded single pair Ethernet data cable with PUR outer jacket and UL approval. Suitable for continuous flexing use in drag chains.

### Info

Single Pair Ethernet  
Industrial Ethernet at the Edge  
For highly flexible applications



Supplementary automation components from Lapp



Mechanical and plant engineering



Suitable for outdoor use



Flame-retardant



Halogen-free



Mechanical resistance



Assembly time



Low weight

Last Update (25.04.2024)

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You can find the current technical data in the corresponding data sheet.

PN 0456 / 02\_03.16

## ETHERLINE® T1 FD



Space requirement



Power chain



Interference signals

### Benefits

Successfully tested to over 3.0 million bending cycles in the drag chain.

Fast information exchange through future-proof Single Pair Ethernet (SPE) technology for a continuous and uniform network infrastructure down to the field level.

A single-pair cable design saves weight and space. Small bending radii and outer diameters are essential for the connection to the field level.

Power-over-Data-Line (PoDL)-capable line according to IEEE 802.3bu for simultaneous power and data supply of SPE terminals with low power requirements (up to 50 W).

Ideal protection against electromagnetic interference due to double shielding of aluminum-clad foil and copper braided shield with high coverage (SF/UTP).

### Application range

For Single-Pair-Ethernet applications 100Base-T1 according to IEEE 802.3bw and 1000Base-T1 according to IEEE 802.3bp.

Cable design allows highly flexible, continuously moving use in moving machine parts and in the drag chain.

Can be used in dry, damp and especially in harsh and oily environments.

PUR outer sheath withstands high mechanical loads

PUR outer sheath is insensitive to mineral oil-based lubricants and chemically resistant in many cases

### Product features

UV-resistant according to ISO 4892-2

PUR versions: UL AWM Style 20549

Flame-retardant according to IEC 60332-1-2, UL FT-2 flame test

Halogen-free according to IEC 60754-1

Oil-resistant according to EN 50363-10-2

### Norm references / Approvals

IEEE 802.3cg: 10BASE-T1

IEEE 802.3bw: 100BASE-T1

IEEE 802.3bp: 1000BASE-T1

Electrical performance acc. to IEC 61156-12

### Product Make-up

fine-wire stranded bare copper, 19-wire

Core insulation: Based on Polyolefin

Screening: wrapping of laminated aluminium foil in combination with tinned copper braiding

Outer sheath: PUR compound, halogen-free

### Technical Data

Classification ETIM 5:

ETIM 5.0 Class-ID: EC000830

ETIM 5.0 Class-Description: Data cable

Classification ETIM 6:

ETIM 6.0 Class-ID: EC000830

ETIM 6.0 Class-Description: Data cable

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|                           |                                                                        |
|---------------------------|------------------------------------------------------------------------|
| Peak operating voltage:   | (not for power applications) 125 V                                     |
| Minimum bending radius:   | Fixed installation: 4 x outer diameter<br>Flexing: 15 x outer diameter |
| Test voltage:             | C/C: 2000 V<br>C/S: 2000 V                                             |
| Characteristic impedance: | nom. 100 $\Omega$                                                      |

**Note**

Photographs and graphics are not to scale and do not represent detailed images of the respective products.  
Prices are net prices without VAT and surcharges. Sale to business customers only.

**ETHERLINE® T1 FD**

| Article number | Article designation               | Number of pairs<br>and AWG per conductor | Core diameter in mm | Outer diameter mm | Copper index (kg/km) | Weight (kg/km) |
|----------------|-----------------------------------|------------------------------------------|---------------------|-------------------|----------------------|----------------|
| 2170920        | ETHERLINE T1 FD P<br>1x2x26/19AWG | 1x2x26/19AWG                             | 1.05                | 4.6               | 12.3                 | 27.4           |