
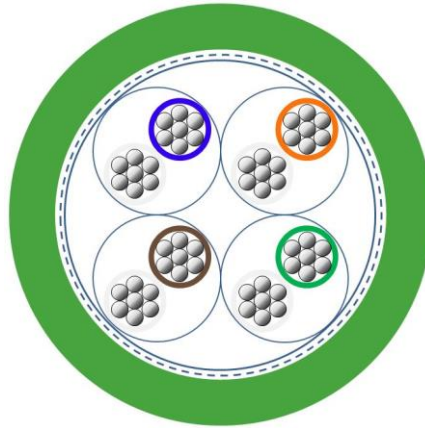


| | | |
|---------------------------|---|---|
| 2170485 | DATA SHEET |  |
| valid from: 01.01.2019 | ETHERLINE® FD CAT.6A 4 x 2 x AWG24/7 | |

Application

ETHERLINE® FD Cat. 6A is a highly flexible CATEGORY 6A high speed data cable for industrial usage. The screening ensures high transmission reliability in areas with a high load of electromagnetic capacity. The cable is designed for applications in power chains and on permanently moved machine parts in dry and damp areas.

Design



| | |
|--------------------------|---|
| Certification | c(UL)us type CM (75 °C) acc. to UL 444 |
| Conductor | fine-stranded, tinned copper wires, AWG24/7 or approx. 0.22 mm ² |
| Insulation | foam-skin polyolefin, outer Ø approx. 1.3 mm |
| Core identification code | pair 1: white-blue, pair 2: white-orange, pair 3: white-green, pair 4: white-brown |
| Stranding | 2 cores twisted to pairs Pair screening with aluminium laminated foil 4 screened pairs twisted around central core element and shielded with aluminium laminated foil |
| Screen | braid of tinned copper wires, coverage approx. 85 % |
| Taping | thin non-woven tape (optional) |
| Outer sheath | PUR compound, Colour: green similar RAL 6018, outer Ø: approx. 8.9 mm |

Electrical properties at 20°C

| | |
|--------------------------|---|
| Loop resistance | max. 175.2 Ω/km |
| Insulation resistance | min. 5 GΩxkm |
| Mutual capacitance | nom. 50 nF/km |
| Characteristic impedance | nom. 100 Ω acc. to IEC 61156-6 |
| Peak operating voltage | 125 V |
| Test voltage | conductor/conductor 750 V conductor/screen 750 V |

| | | |
|----------------------|-----------------------|-------------|
| Creator: TOST / PDC | Document: DB2170485EN | Page 1 of 2 |
| Released: ALTE / PDC | Version: 04 | |

| | | |
|---------------------------|---|---|
| 2170485 | DATA SHEET |  |
| valid from: 01.01.2019 | ETHERLINE® FD CAT.6A 4 x 2 x AWG24/7 | |

Electrical transmission properties at 20°C

| f [MHz] | Attenuation [dB/100m] standard | NEXT [dB] standard | EL FEXT [dB] standard | Return Loss [dB] standard |
|--------------|--------------------------------------|--------------------------|-----------------------------|---------------------------------|
| 4 | 5,7 | 66,3 | 56 | 23 |
| 10 | 9,5 | 59,5 | 46,4 | 25 |
| 16 | 11,5 | 57,1 | 44,1 | 25 |
| 31,25 | 15,8 | 53,1 | 38 | 23,3 |
| 62,5 | 22,4 | 48,4 | 32,2 | 20,8 |
| 100 | 29 | 45,2 | 27,8 | 19 |
| 200 | 41,1 | 40,8 | 22 | 17,3 |
| 250 | 46,6 | 39,3 | 20,1 | 17,3 |
| 300 | 51,4 | 38,2 | 18,5 | 17,3 |
| 350 | 55,8 | 37,1 | 17,1 | 17,3 |
| 500 | 67,9 | 34,8 | 14 | 17,3 |

Mechanical and thermal properties

| | |
|---|---|
| Minimum bending radius | moved: 15 x cable Ø fixed installation: 8 x cable Ø |
| Temperature range | moved: -30° C up to +70° C fixed installation: -40° C up to +80° C |
| Bending cycles and power chain operation parameters | approx. 2.500.000 bending cycles acceleration 3 m/s ² speed 3 m/s |
| Travel distance | 5m |
| Flammability | flame retardant acc. to IEC 60332-1-2, Vertical-Tray acc. to UL 1685 |
| Oil resistance | acc. to IEC 60811-2-1 |
| General requirements | This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances). |

| | | |
|----------------------|-----------------------|-------------|
| Creator: TOST / PDC | Document: DB2170485EN | Page 2 of 2 |
| Released: ALTE / PDC | Version: 04 | |