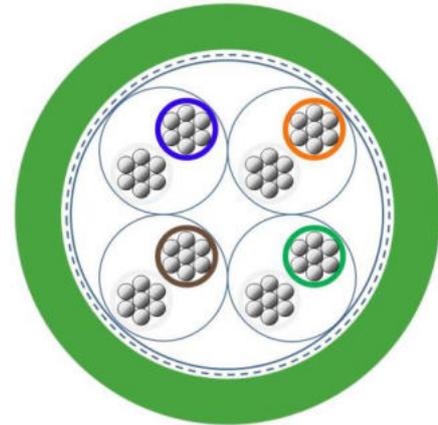


2170485	<b>DATA SHEET</b>	
valid from: 18.10.2022	<b>ETHERLINE® FD CAT.6A 4x2x24/7 AWG</b>	

### 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 <sup>2</sup>
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	PVC, 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
Velocity of propagation	100 MHz: 0.72 c
Maximum operating voltage	125 V
Test voltage	conductor/conductor 750 V conductor/screen 750 V

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### Electrical transmission properties at 20°C

f [MHz]	max. Attenuation [dB/100m] standard	min. NEXT [dB] standard	min. EL FEXT [dB] standard	min. 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 <sup>2</sup> 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).

#### Environmental information

These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

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