

2170488	DATA SHEET	
valid from: 23.03.2020	ETHERLINE® FD P CAT.6 4x2x26/19AWG	

Application

Field of use: Connecting cable for generic cabling systems acc. to ISO/IEC 11801 and EN 50173

Performance: Bandwidth up to 500 MHz acc. to IEC 61156-6 Category 6 and EN 50288 5-2

Characteristics: halogen free, flame retardant, oil resistant, UV resistant and largely resistant to acids, alkalis and certain oils, the "Fast Connect" design allows easy stripping and assembly of the cable

Applications: EtherCAT, EtherNet/IP, Power over Ethernet (IEEE 802.3af) and many others



Design

Certification c(UL)us CMX 75°C acc. to. UL 444 and CSA C22.2 No.214 certified for CC-Link IE Field Network

Conductor fine-wire stranded tinned copper
26/19 AWG

Insulation Polypropylene (PP)
core Ø: ca. 0.98 mm

Core identification code pair 1: white-blue/blue; pair 2: white-orange/orange;
pair 3: white-green/green; pair 4: white-brown/brown

Stranding cores twisted to pairs,
pairs stranded together with central separating element
on top:
plastic tape (overlapping)

Inner sheath FRNC
outer Ø: ca. 5.7 mm

Screen plastic laminated aluminium foil (overlapping)
on top:
braid of tinned copper wires (coverage 85 % ±5 %)

Outer sheath PUR
green, similar RAL 6018
outer Ø: ca. 7.8 mm

Electrical properties at 20°C

Loop resistance max. 28,0 Ω/100 m

Insulation resistance min. 5 GΩxkm

Mutual capacitance nom. 48 nF/km (800 Hz)

Characteristic impedance nom. 100 Ω acc. to IEC 61156-6

Velocity of propagation 0.68 c

Signal propagation time <480 ns/100 m

Delay skew <20 ns/100 m

Peak operating voltage VDE: 100 V (not for power purposes)
UL: 300 V

Test voltage core/core: 1500 V
core/screen: 1500 V

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Electrical transmission properties at 20°C

The transmission characteristics meet the requirements of the standards EN 50288-5-2 and IEC 61156-6 for category 6. The normative requirements for the transmission properties are shown in the following table:

f [MHz]		4	10	20	31,25	62,5	100	200	250
(max.) Attenuation	[dB/100 m]	5,7	9,0	12,8	16,1	23,2	29,9	43,7	49,5
(min.) TCL	[dB]	34	30	27	25,1	22	20	17	16
(min.) EL TCTL	[dB/100 m]	23	15	9	5,1	—	—	—	—
(min.) NEXT	[dB]	66,3	60,3	55,8	52,9	48,4	45,3	40,8	39,3
(min.) PS EL FEXT	[dB/100 m]	55	47	41	37,1	31,1	27	21	19
(min.) ACR-F/EL FEXT	[dB/100 m]	58	50	44	40,1	34,1	30	24	22
(min.) Return Loss	[dB]	23	25	25,8	24,6	22,8	21,6	19,8	19,2

Mechanical and thermal properties

Minimum bending radius	fixed:	4x cable Ø
	continuous flexing:	8x cable Ø
Temperature range	fixed:	-40 °C up to +80 °C
	continuous flexing:	-30 °C up to +70 °C
Flammability	flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2 VW-1 acc. to UL 1581 §1080	
Halogen free	acc. to VDE 0472-815	
UV resistance	acc. to ISO 4892-2, method A	
Oil resistance	acc. to EN 50363-10-2	
General requirements	This cable is conform to EU-Directive 2014/35/EU (Low Voltage Directive) and to 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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