



ETHERLINE® FD P Cat. 5e 4x2x26/19 AWG

DB2170489

valid from: 25.11.2013

Application

ETHERLINE® FD P Cat. 5e 4x2x26/19 AWG is a CATEGORY 5e high speed data transmission cable for industrial environments. This data cable meets the requirements of Standards EIA/TIA-568, TSB-36 and ISO/IEC 11801 „Generic Cabling for Customer Premises“ for CLASS D Links. The high quality screen ensures high transmission reliability of data transfer in electromagnetically polluted areas. The PUR sheath is widely resistant against mineral oils and abrasion. The cable is intended for highly flexible application in power chains or permanently moving machines and linear robots in dry and damp interiors and in harsh industrial environment.

Approvals: UL AWM styles 11117 and 21576 (1000 V, 80 °C) acc. to UL 758
cRU AWM I/II A/B (FT2) acc. to CSA C22.2 No.210-05

Design

Conductor	bare copper, fine-wire stranded (26/19 AWG)
Insulation	foam-skin polyolefin, core Ø ca. 1.00 mm
Core identification code	acc. to IEC 708-1 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
Inner sheath	halogen free TPE compound
Screening	braid of tinned copper wire, coverage ca. 85 %
Outer sheath	PUR halogen free compound, blue (similar to RAL 5021), outer Ø: ca. 6.3 mm

Electrical properties at 20° C

Resistance (loop)	max. 290 Ω/km
Insulation resistance	min. 5 GΩxkm
Mutual capacitance	nom. 50 nF/km (at 800 Hz)
Characteristic impedance	100 Ω ±15 Ω (1MHz up to 100 MHz)
Operating peak voltage	125 V (not for power purposes)
Velocity of propagation	ca. 0.65 c
Signal propagation time	<520 ns/100m
Delay difference	<45 ns/100m
Test voltage (rms 50 Hz, 1 minute)	core/core: 1000 V core/screening: 500 V



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Transmission properties

Transmission properties acc. to IEC 61156-6: abstract of the minimum requirements shown in the table:

f [MHz]	Attenuation [dB/100m]	NEXT [dB]	PS NEXT [dB]	EL FEXT [dB/100m]	PS EL FEXT [dB/100m]	RL
1	3,2	65,3	62,3	-	-	-
4	6,1	56,3	53,3	52,0	49,0	-
10	9,6	50,3	47,3	44,0	41,0	-
16	12,1	47,2	44,2	39,9	36,9	-
31.25	17,2	42,9	39,9	34,1	31,1	23,3
62.5	24,9	38,4	35,4	28,1	25,1	20,7
100	32,2	35,3	32,3	24,0	21,0	19,0

Mechanical and thermal properties

Minimum bending radius

moved: 15 x cable Ø
fixed installation: 8 x cable Ø

Permissible temperature range

moved (VDE): -5° C up to +70° C
fixed installation (VDE): -30° C up to +80° C
moved (UL): -5° C up to +80° C
fixed installation (UL): -30° C up to +80° C

Halogen free

acc. to VDE 0472-815

General requirements

Dangerous and forbidden substances acc. to RoHS directive (2011/65/EU)
are not allowed to the manufacturing.