



DATA SHEET	2170890
ETHERLINE® PN Cat.5e FRNC FLEX FC	Valid from: 28.10.2016

Application

ETHERLINE® PN Cat.5e FRNC FLEX FC is a CATEGORY 5e 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 sunlight resistant and flame retardant.

Approvals: (UL) PLTC, c(UL)us CMG 75 °C

Cable design

Conductor	tinned copper-wire ca. 0.75 mm ϕ (22 AWG)
Insulation	PP, ca. 1.5 mm outer ϕ
Core identification code	white, yellow, blue, orange
Stranding	star quad (optional with central filler)
Wrapping	plastic tape (overlapping)
Inner sheath	FRNC
Screening	plastic laminated aluminum foil (overlapping) on top: braid of copper wire tinned wire, coverage ca. 85 %
Outer sheath	FRNC, green similar to RAL 6018, wall thickness ca. 0.9 mm, outer ϕ : ca. 6.5 mm

Electrical characteristics at 20° C

Resistance (loop)		max. Ω /km	120
Insulation resistance		min. $G\Omega \times km$	5
Characteristic impedance	1 up to 100 MHz	Ω	100 ± 15
signal run time		ns/m	$\leq 5,3$
relative velocity of propagation		nom.	67 %
Test voltage (rms 50 Hz, 1 minute)	core/core	V	700
	core/screening	V	700

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Transmission properties acc. to IEC 61156-5; 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	2.1	65.3	62.3	-	-	-
4	4.1	56.3	53.3	52.0	49.0	-
10	6.5	50.3	47.3	44.0	41.0	-
16	8.3	47.2	44.2	39.9	36.9	-
31.25	11.7	42.9	39.9	34.1	31.1	23.6
62.5	17.0	38.4	35.4	28.1	25.1	21.5
100	22.0	35.3	32.3	24.0	21.0	20.1

Mechanical and thermal characteristics

Minimum bending radius	during laying: 7,5 x cable \varnothing fixed installation: 3 x cable \varnothing
Permissible temperature range	during laying: 0° C up to +50° C fixed installation: -25° C up to +70° C
Flame propagation	flame retardant acc. to UL 1685 (CSA FT 4)
General requirements	Dangerous and forbidden substances acc. to RoHS directive (2011/65/EU) are not allowed to the manufacturing

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