
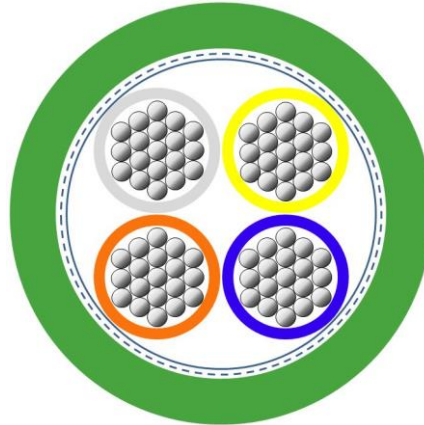


2170888	DATA SHEET	
valid from: 01.01.2019	ETHERLINE® TORSION P CAT.5a	

Application

ETHERLINE® TORSION Cat. 5 is a CATEGORY 5 high speed data cable for industrial applications with torsional stress. The high quality screening ensures high transmission reliability in areas with a high load of electromagnetic capacity. The cable is flame retardant and halogen free.

Design




Certification	UL AWM Style 21161 (80 °C)
Conductor	fine-stranded tinned copper wires, ca. 0.75 mm conductor \varnothing
Insulation	Foam-Skin PE, approx. 1.5 mm outer \varnothing
Core identification code	white, yellow, blue, orange
Stranding	star quad (optional with central filler) with non-woven tape
Screen	braiding of tinned copper wires, coverage ca. 85 % on top: non-woven tape wrapping
Outer sheath	PUR compound, Colour green, outer \varnothing : ca. 6.5 mm

Electrical properties at 20°C

Loop resistance	max. 120 Ω /km
Insulation resistance	min. 500 M Ω xkm
Characteristic impedance	100 Ω \pm 15 Ω (1MHz up to 100 MHz)
Signal transit time	<5,3 ns/m
Peak operating voltage	125 V
Test voltage	conductor/conductor 700 V conductor/screen 700 V

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Electrical transmission properties at 20°C

f [MHz]	Attenuation [dB/100m]		NEXT [dB]	EL FEXT [dB]	Return Loss [dB]
	Standard D1	Standard D2	Standard	Standard	Standard
1			65,3		
4	6	6,7	56,3	52	23
10	9,8	10,8	50,3	44	25
16	12,1	13,6	47,2	39,9	25
31,25	17,1	19,1	42,9	34,1	23,7
62,5	24,7	27,6	38,4	28,1	21,6
100	32	35,6	35,3	24	20,1

Mechanical and thermal properties

Minimum bending radius	5 x cable Ø
Temperature range	-40° C up to +80° C
Torsional stress	ca. 1.000.000 cycles at ±180 °/m (no festoon applications)
Flammability	flame retardant acc. to IEC 60332-1-2; UL 1581 (horizontal flame test)
Halogen free	acc. to VDE 0472-815
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

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