



ETHERLINE® TORSION Cat. 5

DB2170888

valid from: 11.07.2012

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.

Approvals: UL AWM Style 21161 (80 °C)

Design

Conductor	tinned copper, fine-wire stranded (19 x 0.15 mm ϕ), ca. 0.75 mm conductor ϕ
Insulation	Foam-Skin PE, ca. 1.5 mm outer ϕ
Core identification code	white, yellow, blue, orange
Stranding	star quad (optional with central filler)
Wrapping	non-woven tape (overlapping)
Screening	braid of copper wire, tinned wire, coverage ca. 85 %
Wrapping	non-woven tape (overlapping)
Outer sheath	PUR, green, wall thickness ca. 1.0 mm, outer ϕ : ca. 6.5 mm

Electrical properties at 20° C

Resistance (loop)	max. 120 Ω /km
Insulation resistance	min. 500 M Ω xkm
Characteristic impedance	100 Ω \pm 15 Ω (1MHz up to 100 MHz)
Signal propagation time	<5,3 ns/m
Test voltage (rms 50 Hz, 1 minute)	core/core: 700 V core/screening: 700 V

Transmission properties

f [MHz]	Attenuation max. [dB/100m]	NEXT [dB/100m]
1	2.9	65.3
4	5.0	56.3
10	8.1	50.3
16	10.4	47.2
20	11.9	45.8
31.25	15.5	42.9
62.5	26.5	38.4
100	41	35.3

Electrical requirements acc. to EN 50288-2-2



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Mechanical and thermal properties

Minimum bending radius	5 x cable \varnothing
Permissible temperature range	-40° C up to +80° C
Torsional stress	1 million cycles at ± 180 °C/meter (not suitable for festoon-applications)
Halogen free	halogen free acc. to VDE 0472-815
Flame retardance	flame retardant acc. to IEC 60332-1-2; UL 1581 (horizontal flame test)
General requirements	Dangerous and forbidden substances acc. to RoHS directive (2002/95/EG) are not allowed to the manufacturing.