
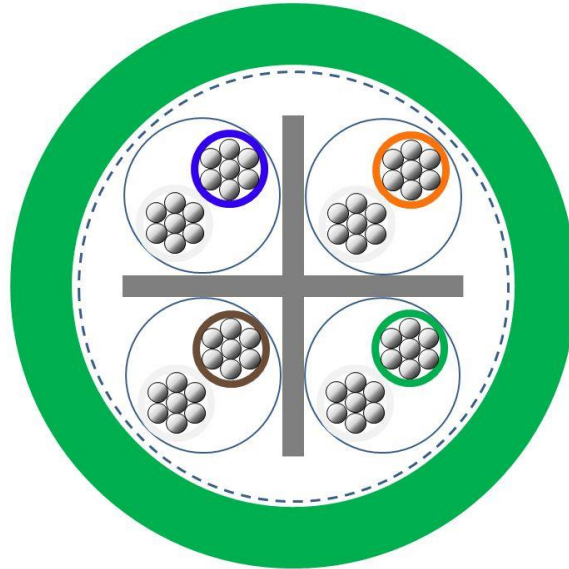


2170481	<b>DATA SHEET</b>	
valid from: 01.01.2019	<b>ETHERLINE® TORSION Cat. 7</b>	

## Application

ETHERLINE® TORSION Cat.7 is a highly flexible CATEGORY 7 high speed data cable of halogen free materials for industrial usage. The screening ensures high transmission reliability in areas with a high load of electromagnetic capacity. The PUR jacket is resistant against mineral oils and abrasion. The cable is designed for applications with torsional stress in dry and damp areas.

## Design




Certification	c(UL)us type CMX acc. to UL 444; UL AWM styles 11117 and 21576 (1000 V, 80 °C) acc. to UL 758 cRU AWM I/II A/B (FT1) acc. to CSA C22.2 No.210-15
Conductor	tinned copper fine-wire stranded 7 x 0.20 mm $\phi$ (7/32 AWG) 0.22 mm <sup>2</sup> (24 AWG)
Insulation	foam-skin polyolefin ca. 1.4 mm outer $\phi$
Core identification code	pair 1: white-blue, pair 2: white-orange, pair 3: white-green, pair 4: white-brown
Stranding	Plastic laminated aluminum foil 2 cores stranded to pair, 4 pairs stranded to bundle with central cross conductive wrapping
Screen	braid of copper wire tinned wire coverage ca. 85 %
Taping	non-woven tape
Outer sheath	PUR compound green similar to RAL 6018 outer $\phi$ : ca. 9.4 mm

## Electrical properties at 20°C

Loop resistance	max. 175,2 $\Omega$ /km
Insulation resistance	min. 5 G $\Omega$ km
Mutual capacitance	nom. 50 nF/km
Characteristic impedance	nom. 100 $\Omega$ nach IEC 61156-6 100 $\pm$ 5 $\Omega$ (@ 100 MHz)
Peak operating voltage	125 V (not for power purposes)
Test voltage	conductor/conductor 750 V conductor/screen 750 V

Creator: TOST / PDC	Document: DB2170481EN	Page 1 of 2
Released: ALTE / PDC	Version: 03	

2170481	<b>DATA SHEET</b>	
valid from: 01.01.2019	<b>ETHERLINE® TORSION Cat. 7</b>	

### Electrical transmission properties at 20°C

f [MHz]	Attenuation [dB/100m]	NEXT [dB]	EL FEXT [dB]	Return Loss [dB]
	standard	standard	standard	standard
4	5,6	75	78	23
10	8,8	75	74	25
16	11,1	75	69,9	25
31,25	15,8	75	64,3	23,3
62,5	22,2	75	58,3	20,8
100	28,6	72,2	54	19
200	41,2	67,9	48	16,5
250	46,4	66,5	46	15,6
300	51,2	65,2	44,5	14,9
350	55,8	64,2	43,1	14,3
500	67,9	62	40,1	13
600	75,2	60,8	38,4	12,3

### Mechanical and thermal properties

Minimum bending radius	moved: 15 x cable Ø fixed installation: 8 x cable Ø
Temperature range	moved: -30° C up to +70° C fixed installation: -40° C up to +80° C
Torsional stress	min. 5.000.000 bending cycles ± 180 °/m
Flammability	flame retardant acc. to IEC 60332-1-2; VW-1 acc. to UL 1581
Halogen free	halogen free acc. to VDE 0472-815; IEC 60754-1
Oil resistance	oil resistant acc. to IEC 60811-404; EN 50363-10-2
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

Creator: TOST / PDC	Document: DB2170481EN	Page 2 of 2
Released: ALTE / PDC	Version: 03	