



<b>DATA SHEET</b>	<b>2170888</b>
<b>ETHERLINE<sup>®</sup> TORSION CAT.5</b>	Valid from: <b>26.10.2006</b>

## Industrial Ethernet CAT.5



### Design

#### Wire

Stranded tinned copper wire 19 X 0.15 (22 AWG)  
Insulation of foamed Polyethylene (PE) with skin

ø 0.76 mm (0.030 in)  
ø 1.5 mm (0.059 in)

#### Core


Filler as central element  
4 wires  
Sequence of colours: white-yellow-blue-orange (WH-YE-BU-OG)  
Plastic tape, overlapped  
Aluminium laminated foil, overlapped  
Plastic tape, conductive  
Shield braiding of tinned copper wires 0.13 mm diameter (36 AWG)  
Coverage approx. 85%  
Plastic tape, overlapped

ø 4.6 mm (0,181 in)

#### Jacket

Polyurethane (PUR) green (GN)  
Wall thickness approx. 0.95 mm

ø (6.5 ±0.2) mm (0,256 ±0,008 in)

Marking: LAPP KABEL STUTTGART **ETHERLINE<sup>®</sup> TORSION CAT.5**  
2 x 2 x AWG22/19 \* 22AWG (SHIELDED) E63634  AWM 21161 80°C  
OIL RESISTANT \* ROHS ART. 2170888

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**Electrical data at 20°C**

Loop resistance	≤	120	Ohm/km
Signal run time	≤	4.7	ns/m
Insulation resistance	≥	500	MOhm*km
Characteristic impedance 1 - 100 MHz		100 (±15)	Ohm
Operating voltage (peak)	≤	100	V
Test voltage (wire/wire/screen rms 50Hz 1min)	=	700	V

Frequency (MHz)	1	4	10	16	20	31.25	62.5	100
ELFEXT (dB) ≤	63.8	51.8	43.8	39.7	37.8	33.9	24	20
Attenuation max. (dB/100m) (dB/100ft)	2.9 (0.9)	4.3 (1.3)	7.6 (2.0)	10 (2.7)	11.5 (3.0)	15.5 (4.1)	26.5 (6.8)	41 (10.4)

Other electrical requirements according to EN 50288-2-2

**Mechanical and thermal characteristics**

Conductor/Screen material acc. to DIN EN 13602 Cu-ETP-A...-B  
Insulating material acc. to DIN EN 50290-2-23 (VDE 0819), table 2/A (HD 624.3)  
Jacket material acc. F45052-F5 100 (similar to DIN VDE 0282)  
Flame retardant acc. to IEC 60332-1-2

UL AWM Style 21161 (80°C)

**Other characteristics:**

Halogen free  
RoHS compliant

Torsional strength  
- 1 million cycles at ± 180° on 1 meter  
- not adapted for garland mounting (festoon)

Permissible temperature range : -40 °C (-40 °F) up to 80 °C (176 °F)  
Min. bending radius allowed : single 5 X Ø  
Weight approx. : 55 kg/km (37 lb/1000ft)

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