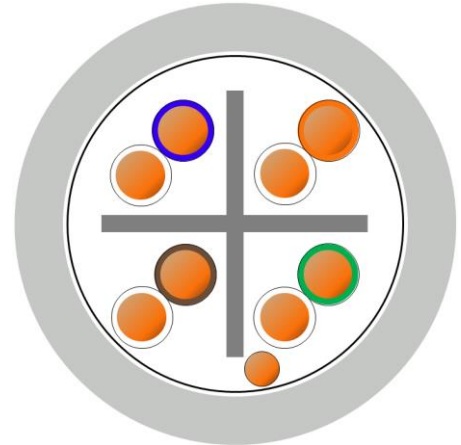


2170961	<b>DATA SHEET</b>	
Valid from: 01.05.2018	<b>ETHERLINE® LAN 500 Cat.6<sub>A</sub> F/UTP</b>	

## Description

**ETHERLINE® LAN 500 Cat.6<sub>A</sub> F/UTP** is an installation cable for structured horizontal cabling. These cables are ideal for LAN data transmission in all Ethernet (IEEE 802.3) applications up to 10GBase-T. The foil screen prevents electromagnetic interference making them suitable for use in industrial environments.  
IEC 61156-5/ISO/IEC 11801, EN 50173-1, EIA/TIA 568C.2



## General characteristics

Conductor	Solid bare copper wire, AWG 23/1
Insulation	solid polyethylene
Core identification code	Pair 1: white – blue      Pair 2: white - orange Pair 3: white – green      Pair 4: white - brown
Stranding	two cores stranded to pairs, pairs are separated by a central cross element
Screening	Aluminum laminated plastic foil with tinned copper drain wire
Outer sheath	PVC compound outer Ø: approx. 7.4 mm color: grey, similar to RAL 7035

## Mechanical characteristics

Minimum bending radius	at installation: 4 x cable Ø fixed installation: 8 x cable Ø
Permissible temperature range	at installation: 0 °C up to +50 °C fixed installation: -20 °C up to +60 °C
Flame propagation	flame retardant acc. to IEC 60332-1-2
Classification of fire behaviour acc. to EU Regulation 305/2011 (CPR)	Eca (acc. to EN13501-6 and EN50575)

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### Electrical characteristics

DC-Resistance (loop)	max. 160.0 Ω/km
Insulation resistance	min. 5 GΩ x km
Mutual capacitance	nom. 50 nF/km at 1 kHz
Characteristic impedance	nom. 100 Ω acc. to IEC 61156-5
Operating peak voltage	100 V (not for power purposes)
velocity of propagation	approx. 0.67 c
Test voltage	core/core: 1000 V

### Transmission properties

Transmission properties acc. to IEC 61156-5 for Category Cat.6<sub>A</sub>:

f [MHz]	Attenuation [dB/100m]		PS NEXT [dB]		EL FEXT [dB]		Return Loss [dB]	
	standard	typical	standard	typical	standard	typical	standard	typical
<b>1*</b>	2.1	1.9	75	90	68	86	20.0	30
<b>4</b>	3.8	3.6	66	79	56	79	23.0	29
<b>10</b>	5.9	5.6	60	76	48	76	25.0	33
<b>16</b>	7.5	7.0	57	72	44	68	25.0	30
<b>31,25</b>	10.5	9.9	53	67	38	64	23.6	29
<b>62,5</b>	15.0	14.0	48	63	32	58	21.5	27
<b>100</b>	19.1	17.8	45	62	28	52	20.1	26
<b>250</b>	31.1	28.4	39	57	20	49	17.3	25
<b>300</b>	34.3	31.2	37	51	18	44	16.8	30
<b>500</b>	45.3	39.1	34	46	14	41	15.2	21

\* Extract of normative minimum requirements

### Standard

EU-Directive	Dangerous and forbidden substances acc. to RoHS directive (2011/65/EU) are not allowed to the manufacturing.
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