

2170431	<b>DATA SHEET</b>	
valid from: 18.02.2020	<b>ETHERLINE® P EC FLEX Cat. 5e 1x4x26/7AWG</b>	

## Application

ETHERLINE® P EC FLEX Cat. 5e is a flexible CATEGORY 5e high speed data transmission cable for industrial environments. The high quality screen ensures high transmission reliability of data transfer in electromagnetically polluted areas.

## Design



Certification	c(UL)us CMX 75°C acc. to UL 444
Conductor	stranded tinned copper 26/7 AWG
Insulation	PE core Ø: ca. 1.03 mm
Core identification code	pair 1: white-orange/orange, pair 2: white-green/green
Stranding	star quad (optional: with central filler) wrapped by plastic tape
Screen	plastic laminated aluminum foil on top: braid of copper wire (coverage ca. 85 %)
Taping	non-woven tape (overlapping)
Outer sheath	PUR green, similar RAL 6018 outer Ø ca. 4.8 mm

## Electrical properties at 20°C

Loop resistance	max. 29 Ω/100 m
Insulation resistance	min. 2 GΩxkm
Mutual capacitance	nom 53 nF/km
Characteristic impedance	nom. 100 Ω acc. to IEC 61156-6
Velocity of propagation	0,67 c
Peak operating voltage	VDE: 50 V UL: 300 V
Test voltage	core/core: 1000 V core/screen: 1000 V

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### Electrical transmission properties at 20°C

The transmission characteristics meet the requirements of the standards EN 50288-2-2 and IEC 61156-6 for category 5e. The normative requirements for the transmission properties are shown in the following table:

f [MHz]		4	10	16	20	31,25	62,5	100
(max.) Attenuation	[dB/100 m]	6	9,5	12,1	13,5	17,1	24,8	32
(min.) TCL	[dB]	34	30	28	27	25,1	22	20
(min.) EL TCTL	[dB/100 m]	23	15	10,9	9	5,1	—	—
(min.) NEXT	[dB]	53,3	47,3	44,2	42,8	39,9	35,4	32,3
(min.) PS EL FEXT	[dB/100 m]	49	41	36,9	35	31,1	25,1	21
(min.) ACR-F/EL FEXT	[dB/100 m]	52	44	39,9	38	34,1	28,1	24
(min.) Return Loss	[dB]	23	25	25	25	23,6	21,5	20,1

### Mechanical and thermal properties

Minimum bending radius	fixed:	4x cable Ø
	occasional flexing:	8x cable Ø
Temperature range	fixed:	-40 °C up to +80 °C
	occasional flexing:	-30 °C up to +50 °C
	UL:	75 °C
Flammability	VW-1 acc. to UL 1581 §1080	
Halogen free	acc. to VDE 0472-815	
General requirements	These cables are conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances) and the LV-Directive 2014/35/EU (Low voltage Directive).	
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).	

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