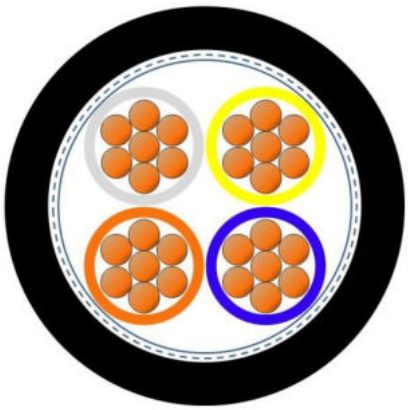
2170454	DATA SHEET	LAPP
valid from: 01.01.2019	ETHERLINE® ROBUST PN FR Cat. 5e	

Application

ETHERLINE® ROBUST PN FR Cat. 5e is a flame retardant CATEGORY 5e high speed data transmission cable for industrial envi-ronments. This data cable meets the requirements of Standards EIA/TIA-568, TSB-36 and ISO/IEC 11801 „Generic Cabling for Customer Premises“ for CLASS D Links. The high quality screen ensures high transmission reliability of data transfer in electromagnetically polluted areas.

Design



Conductor	bare stranded copper, 22/7 AWG
Insulation	polyolefin, core Ø ca. 1.5 mm
Core identification code	white, yellow, blue, orange
Stranding	star quad
Screen	plastic laminated aluminum foil on top: braid of copper wire, coverage ca. 85 %
Outer sheath	flame retardant TPE-V special compound, black (similar to RAL 9005), outer ø ca. 6.5 mm

Electrical properties at 20°C

Conductor resistance	max. 118 Ω/km
Specific volume resistivity	min. 5 GΩxkm
Velocity of propagation	ca. 0,64 c
Signal transit time	nom. 530 ns/100 m
Peak operating voltage	125 V (not for power purposes)
Test voltage	conductor/conductor 1000 V conductor/screen 1000 V

Electrical transmission properties at 20°C

f [MHz]	Attenuation [dB/100m]	NEXT [dB]	EL FEXT [dB]	Return Loss [dB]
	standard	standard	standard	standard
4	6	56,3	52	23
10	9,5	50,6	43,6	25
16	12,1	47,2	39,8	25
31,25	17,1	42,9	34,1	23,3
62,5	24,8	38,4	28,1	20,8
100	32	35,3	24,0	19

Mechanical and thermal properties

Minimum bending radius	moved: 10 x cable ø fixed installation: 8 x cable ø
Temperature range	moved: -40˚ C up to +80˚ C fixed installation: -50˚ C up to +80˚ C
Flammability	acc. to 60332-1-2
UV resistance	acc. to EN 50525-1 / VDE 0285-525-1: Cables with black sheath are suitable for per-manent outdoor use. VDE 0276-605, EN ISO 4892-2-2013, method A (change of colour allowed)
Ozone resistance	acc. to VDE 0473-396 / EN 50396, method B
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).