
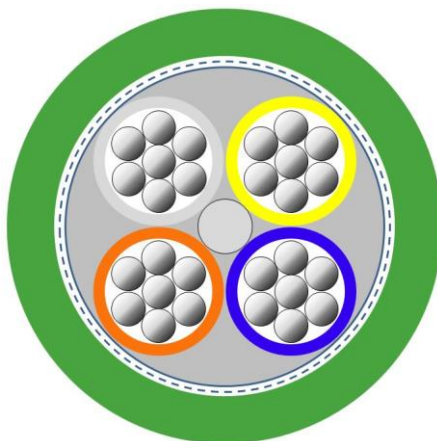


2170936	DATA SHEET	
valid from: 01.01.2019	ETHERLINE® FESTOON PN Cat.5e	

Application

ETHERLINE® FESTOON PN Cat.5e is a high speed data transmission cable suitable for application in the industrial environments. This data cable meets the requirements in accordance to the Standards EIA/TIA-568 TSB-36 and ISO/IEC 11801 „Generic Cabling for Customer Premises“, for CLASS D Links. The high quality double screening ensures a high security during data transmission in areas with electromagnetic fields. The ETHERLINE® FESTOON PN Cat.5e is conform to the PROFINET® standard for type C cabling in highly flexible applications. The cable is specially designed for festoon applications in dry and wet rooms and for use outside.

Design




Certification	(UL) PLTC, c(UL)us CMG 75°C acc. to UL444, cRUus UL AWM Style 21694
Conductor	Tinned copper, 7-wire stranded AWG 22/7
Insulation	PE, core diameter nom. 1.55 mm
Core identification code	White, yellow, blue, orange
Stranding	Star quad, plastic tape, overlapping
Inner sheath	Special PVC-based compound, natural-coloured Diameter nom. 4.1 mm
Screen	Plastic laminated aluminum foil, overlapping on top: braid of tinned copper wires, coverage approx. 85 %
Outer sheath	PVC compound acc. to UL 444, tables 9 and 10 (75 °C) outer \varnothing : approx. 6.5 mm colour: green similar to RAL 6018

Electrical properties at 20°C

Loop resistance	max. 110,8 Ω /km
Insulation resistance	min. 5 G Ω x km
Mutual capacitance	nom. 46 nF/km at 800 Hz
Characteristic impedance	nom. 100 Ω acc. to IEC 61156-6, 100 \pm 5 Ω (@ 100 MHz)
Velocity of propagation	ca. 0,67 c
Signal transit time	< 534 ns/100 m
Peak operating voltage	125 V (not for power purposes)
Test voltage	conductor/conductor 2000 V conductor/screen 2000 V

AbN
automation

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Electrical transmission properties at 20°C

f [MHz]	Attenuation [dB/100m] standard	NEXT [dB] standard	EL FEXT [dB] standard	Return Loss [dB] standard
4	4,1	56,3	52	23
10	6,7	50	43,3	25
16	8,3	47,2	40	25
31,25	11,7	42,8	34	23,6
62,5	17	38,4	28,1	21,6
100	22	35,3	24	20,1

Mechanical and thermal properties

Minimum bending radius	moved: 10 x cable Ø fixed installation: 4 x cable Ø
Temperature range	moved: -10 °C up to +70 °C fixed installation: -40 °C up to +80 °C
Flammability	flame retardant acc. to UL 1685 (CSA FT4), IEC 60332-3-24 FT1 and horizontal flame test acc. to UL 2556
UV resistance	Sunlight resistant acc. to UL 2556
Oil resistance	Oil resistant I acc. to UL 2556
General requirements	This cable is conform to the EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).

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