## 2170936

# DATA SHEET

valid from: 01.01.2019

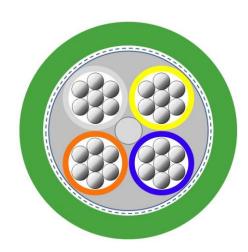
ETHERLINE® FESTOON PN Cat.5e



#### **Application**

ETHERLINE® FESTOON PN Cat.5e is a high speed data transmission cable suitable for application in the industrial envi-ronments. 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 % PVC compound acc. to UL 444, tables 9 and 10 (75  $^{\circ}\text{C})$ 

outer Ø: approx. 6.5 mm

colour: green similar to RAL 6018

#### Electrical properties at 20°C

Outer sheath

 Loop resistance
 max. 110,8  $\Omega$ /km

 Insulation resistance
 min. 5 GΩ x km

Mutual capacitance nom. 46 nF/km at 800 Hz

Characteristic impedance nom. 100  $\Omega$  acc. to IEC 61156-6, 100  $\pm$  5  $\Omega$  (@ 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

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# Electrical transmission properties at 20°C

f [MHz]	Attenuation [dB/100m]	NEXT [dB]	EL FEXT [dB]	Return Loss [dB]
	standard	standard	standard	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:  $10 \times \text{cable } \emptyset$ 

fixed installation: 4 x cable Ø

Temperature range moved:  $-10 \,^{\circ}\text{C}$  up to  $+70 \,^{\circ}\text{C}$ 

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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