

(830-0Px00)

FieldLink[®]

Industrial Ethernet Cat 5e ES



Design

Wire:

Bare copper wire

ø 0.64 mm

Insulation of Polyethylene (PE)

ø 1.5 mm

Core:

Filler as central element

1. layer: 4 wires twisted

Sequence of colors: WH-YE-BU-OG

Plastic tape, overlapped

Inner jacket: Polyvinylchloride (PVC)

ø 3.9 mm

Aluminum foil overlapped, applied longitudinally

Shield braiding of tinned copper wires 0.13 mm dia

Coverage about 90%

ø 4.5 mm

Jacket:

Polyvinylchloride (PVC) GN

Wall thickness about 0.9 mm

ø (6.5 ±0.2) mm

Electrical data at 20°C

Loop resistance

≤ 115 Ohm/km

Signal run time

≤ 5.3 ns/m

Insulation resistance

≥ 500 MOhm*km

Characteristic impedance 1 – 100 MHz

(100 ±15) Ohm

Surface transfer impedance 10 MHz

≤ 10 mOhm/m

Test voltage (wire/wire/screen rms 50Hz 1min)

= 2000 V

Near-end crosstalk attenuation

Frequency (MHz)	1	4	10	16	20	31.25	62.5	100
typ. value (dB - 100m)	80	75	70	65	63	60	55	50

Attenuation

Frequency (MHz)	1	4	10	16	20	31.25	62.5	100
typ. value (dB/100m) (dB/100ft)	1,6 (0,5)	3,2 (1,0)	5,2 (1,6)	6,9 (2,1)	7,8 (2,4)	10,5 (3,2)	15 (4,6)	19,5 (5,9)

The electrical requirements acc. to EN 50288-2-1

Mechanical and thermal characteristics

Conductor material acc. to DIN EN 13602 Cu-ETP-A...

Screen material acc. to DIN EN 13602 Cu-ETP-A...-B

Insulating material acc. to DIN EN 50290-2-23 (VDE 0819), table L/MD (HD 624.3)

Jacket material acc. to DIN EN 50290-2-22 (VDE 0819), compoundtype TM52 (HD 624.2)

Flame retardant acc. to IEC 60332-1-2

Flame retardant acc. to UL 1685 (CSA FT 4)

UL-File E119100 Vol.1 Sec.12 Page 1

UL-File E352715 Vol.1 Sec. 1 Page 2 Verified CAT 5E

UL-File E116441 Vol.1 Sec. 6 Page 8

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UL-Style 21694

Other characteristics:

RoHS compliant (Directive 2011/65/EC)

Sunlight resistant acc. to UL 1581 Sec.1200

Limited oil resistance

Tensile loading: ≤ 150 N

Permissible temperature range : - 40°C up to +75°C

During laying : - 20°C up to +60°C

Transport temperature range : -40°C up to +75°C

Min. bending radius allowed : repeated 7,5X ø , single 3X ø

PVC weight with Phthalate : 30.4 Kg/km

PVC weight without Phthalate : 0.0 Kg/km

Weight about : 66 Kg/km (45 lb/1000ft)

Application:

Cable for permanent installation

Designation of order:

830-0PC00 100 m

830-0PD00 200 m

830-0PE00 500 m