Product: 1633E

Cat 5e Cable, F/UTP, PVC, 4 Pair, AWG 24, Indoor CPR Eca

Product Description

CAT5e (100MHz), 4-Pair, F/UTP Foil shielded, Premise Horizontal Cable, 24 AWG solid bare copper conductors, Polyethylene insulation, Beldfoil® shield, AWG 26 solid tinned copper drainwire, PVC jacket, RJ-45 compatible

Technical Specifications

Product Overview

Suitable Applications:	Horizontal and building backbone cable; Support current and future Category 5e applications, such as: 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
24	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Type	Material	Nominal Diameter
Dielectric	PO - Polyolefin	1.05 mm

Bonded-Pair:	No

Color Chart

Number	Color
Pair 1	White/Blue & Blue
Pair 2	White/Green & Green
Pair 3	White/Orange & Orange
Pair 4	White/Brown & Brown

Outer Shield Material

Type	Material	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D	Drainwire Position
Tape	Bi-Laminate (Alum+Poly)	100%	TC - Tinned Copper	26	Solid	Over foil

Table Notes:	Aluminum facing outside in contact with drain wire

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance
PVC - Polyvinyl Chloride	6.0 mm	0.3 mm

Construction and Dimensions

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %
Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	9 MPa

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max DCR Unbalanced Between Pairs [%]	Max. DCR Unbalanced Within Pair [%]
95 Ohm/km	4 %	2 %

Capacitance

Max. Capacitance Unbalance	Max. Mutual Capacitance
1,600 pF/m	56 pF/m

Impedance

Nominal Characteristic Impedance
100 Ohm

Delay

Max. Delay Skew	Min. Velocity of Propagation
40 ns/100m	60%

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.1 dB/100m	65.3 dB	62.3 dB	63.2 dB	60.2 dB	64 dB	61 dB	20 dB	40 dB	35 dB
4 MHz	4 dB/100m	56.3 dB	53.3 dB	52.32 dB	49.3 dB	52 dB	49 dB	23 dB	34 dB	23 dB
10 MHz	6.3 dB/100m	50.3 dB	47.3 dB	44 dB	41 dB	44 dB	41 dB	25 dB	30 dB	15 dB
16 MHz	8 dB/100m	47.2 dB	44.2 dB	39.2 dB	36.2 dB	39.9 dB	36.9 dB	25 dB	28 dB	10.9 dB
20 MHz	9 dB/100m	45.8 dB	42.8 dB	36.8 dB	33.8 dB	38 dB	35 dB	25 dB	27 dB	9 dB
31.25 MHz	11.4 dB/100m	42.9 dB	39.9 dB	31.5 dB	28.5 dB	34.1 dB	31.5 dB	23.6 dB	25.1 dB	5.5 dB
62.5 MHz	16.5 dB/100m	38.4 dB	35.4 dB	21.9 dB	18.9 dB	28.1 dB	25.1 dB	21.5 dB	22 dB	
100 MHz	21.3 dB/100m	35.3 dB	32.3 dB	14 dB	11 dB	24 dB	21 dB	20.1 dB	20 dB	

Table Notes:	Limits below 4 MHz are for information only. Reference standard: IEC 61156-5
General Electrical Parameters Notes:	Reference standard: ISO/IEC 61156-5
Coupling Attenuation Class:	Type II
Segregation class according EN50174-2:	c

Transfer Impedance

Frequency [MHz]	Description	Transfer Impedance
1 Mhz	Grade 2	Max. 50 mOhm/m
10 Mhz		Max. 100 mOhm/m
30 Mhz		Max. 200 mOhm/m
100 Mhz		Max. 1000 mOhm/m

Current

Max. Recommended Current [A]
1.5 Amps per Conductor

Voltage

Voltage Rating [V]
72 V

Temperature Range

Installation Temp Range:	0°C To +50°C
Operating Temp Range:	-30°C To +60°C

Mechanical Characteristics

Bulk Cable Weight:	39 kg/km
Max. Pull Tension:	72 N
Min Bend Radius During Installation:	48 mm
Min Bend Radius During Operation:	24 mm

Standards

IEC Compliance:	ISO/IEC 11801-1
CPR Euroclass:	Eca
CENELEC Compliance:	EN 50173-1
Data Category:	Category 5e

ANSI Compliance:	ANSI/TIA 568.2-D (2018)
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3

Applicable Environmental and Other Programs

Environmental Space:	Indoor - Euroclass Eca
EU RoHS Compliance Date (yyyy-mm-dd):	2005-01-01

Flammability, LS0H, Toxicity Testing

IEC Flammability:	IEC 60332-1-2
Burning Load:	450 kJ/m

Part Number

Variants

Item #	Color	Putup Type	Length	EAN
1633E.01305	Blue	Reel	305 m	8719605002730
1633E.01500	Blue	Reel	500 m	8719605002747
1633E.011000	Blue	Reel	1,000 m	8719605002723
1633E.00B100	Gray	Flat Box	100 m	8719605002716
1633E.00305	Gray	Reel	305 m	8719605002686
1633E.00500	Gray	Reel	500 m	8719605002709
1633E.001000	Gray	Reel	1,000 m	8719605002679
1633E.003070	Gray	Reel	3,070 m	8719605002693

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system.

History

Update and Revision:	Revision Number: 0.249 Revision Date: 09-30-2020