

Product: 1633ENS

Category 5e Cable, 4 Pair, SF/UTP, LSZH Indoor CPR Dca

Product Description

Category 5e Premise Horizontal Cable (100MHz), 4-Pair, 24 AWG solid bare copper conductors, SF/UTP, Polyethylene insulation, Beldfoil® shield, AWG 26 solid tinned copper drainwire, tinned copper braid shield (30% coverage), LSZH jacket

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

Construction Details

Conductor

Element	Size	Stranding	Material	No. of Pairs	No. of Elements
Individual Pair	24 AWG	Solid	BC - Bare Copper	4	8

Insulation

Element	Material	Nom. Insulation Diameter	Color Code
Individual Pair	PE - Polyethylene	1.05 mm (0.0413 in)	White/Blue & Blue, White/Green & Green, White/Orange & Orange, White/Brown & Brown

Cable Core

Description
4 pairs twisted together covered with a polyester foil

Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	100%	26 AWG (Solid) TC
Braid	Tinned Copper (TC)	30%	

Table Notes:	Aluminum facing outside in contact with drain wire

Outer Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	6.0 mm (0.24 in)

Overall Cable Diameter (Nominal):	6.0 mm (0.24 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Mutual Capacitance	Max. Capacitance Unbalance	Nom. Characteristic Impedance
95 Ohm/km	56 pF/m (17 pF/ft)	160 pF/100m	100 Ohm

Delay

Max. Delay Skew	Nom. Velocity of Prop.
40 ns/100m	69%

High Frequency

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	2.1 dB/100m	65.3	62.3	63.2	60.2	64	61	20	40	35
4	4 dB/100m	56.3	53.3	52.32	49.3	52	49	23	34	23
10	6.3 dB/100m	50.3	47.3	44	41	44	41	25	30	15
16	8 dB/100m	47.2	44.2	39.2	36.2	39.9	36.9	25	28	10.9
20	9 dB/100m	45.8	42.8	36.8	33.8	38	35	25	27	9
31.25	11.4 dB/100m	42.9	39.9	31.5	28.5	34.1	31.5	23.6	25.1	5.5
62.5	16.5 dB/100m	38.4	35.4	21.9	18.9	28.1	25.1	21.5	22	
100	21.3 dB/100m	35.3	32.3	14	11	24	21	20.1	20	

Table Notes:	Limits below 4 MHz are for information only. Reference standard: IEC 61156-5

Transfer Impedance

Frequency	Max. Transfer Impedance
1 Mhz	Max. 50 mOhm/m
10 Mhz	Max. 100 mOhm/m
30 Mhz	Max. 200 mOhm/m
100 Mhz	Max. 1000 mOhm/m

Transfer Impedance Class:	Grade 2
Screening Class:	Type II
Table Notes:	Coupling Attenuation

Voltage

Voltage Rating
72 V DC

Mechanical Characteristics

Temperature

Operating	Installation
-30°C to +60°C	0°C To +50°C

Bend Radius

Stationary Min.	Installation Min.
24 mm (0.94 in)	48 mm

Max. Pull Tension:	72 N (16 lbf)
Bulk Cable Weight:	45 kg/km

Standards and Compliance

Environmental Suitability:	Indoor - Euroclass Dca
Flammability / Reaction to Fire:	IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Dca-s1,d1,a1; CPR UKCA Class: Dca-s1,d1,a1
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3
Data Category:	Category 5e
TIA/EIA Compliance:	ANSI/TIA 568.2-D
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61034-2 - Smoke Density Min Transmittance = 60%
CENELEC Compliance:	EN 50173-1, Segregation class according EN50174-2 = c
European Halogen Free Standards:	IEC 62821-1 Halogen Free Compliance = Yes, IEC 60754-1 - Halogen Amount = Zero, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 2.5 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3
European Directive Compliance:	EU CE Mark
UK Regulation Compliance:	UKCA Mark

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: 0.292 Revision Date: 05-31-2024

Part Numbers

Variants

Item #	Color	Putup Type	Length	EAN
1633ENS.01305	Blue	Reel	305 m	8719605002990

1633ENS.00B100	Gray, RAL 7032	Flat Box	100 m	8719605002983
1633ENS.00305	Gray, RAL 7032	Reel	305 m	8719605002969
1633ENS.00500	Gray, RAL 7032	Reel	500 m	8719605002976
1633ENS.001000	Gray, RAL 7032	Reel	1,000 m	8719605002952
1633ENS.03500	Purple	Reel	500 m	8719605003010

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