



Product: [7769ENH](#)

Category 7A Enhanced Cable, 4 Pair, S/FTP, LSZH Indoor CPR Eca

Product Description

Category 7A Enhanced Premise Horizontal Cable (1600MHz), 4-Pair, 22 AWG solid bare copper conductors, S/FTP, Foam Polyethylene insulation, each pair with Beldfoil® shield, overall tinned copper braid shield (50% coverage), LSZH jacket

Technical Specifications

Product Overview

Suitable Applications:	Horizontal and building backbone cable; Support current and future Category 6a, 7 and 7a applications: 10GBase-T (10 Gigabit Ethernet), 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM
Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/patents .

Construction Details

Conductor

Element	Size	Stranding	Material	No. of Pairs	No. of Elements
Individual Shielded Pair	22 AWG	Solid	BC - Bare Copper	4	8

Insulation

Element	Material	Nom. Insulation Diameter	Color Code
Individual Shielded Pair	PE - Polyethylene (Foam)	1.6 mm (0.063 in)	White & Blue, White & Orange, White & Green, White & Brown

Cable Core

Description
4 shielded pairs twisted together

Inner Shield

Element	Shield Type	Material	Coverage
Individual Shielded Pair	Tape	Bi-Laminate (Alum+Poly)	100%

Table Notes: Aluminum facing outside

Outer Shield

Shield Type	Material
Braid	Tinned Copper (TC)

Outer Jacket

Material	Nom. Diameter	Ripcord
LSZH - Low Smoke Zero Halogen (Flame Retardant)	8.0 mm (0.31 in)	Yes

Overall Cable Diameter (Nominal): 8.0 mm (0.31 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.
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25 ns/100m	76%
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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. PSANEXT [dB]	Min. PSAACRF [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
1	2.1 dB/100m	78	75	75.9	72.9	78	75	20	67	67	40	23
4	3.7 dB/100m	78	75	74.3	71.3	78	75	23	67	67	34	15
10	5.8 dB/100m	78	75	72.2	69.2	75.3	72.3	25	67	67	30	10.9
16	7.3 dB/100m	78	75	70.7	67.7	71.2	68.2	25	67	67	28	5.1
31.2	10.3 dB/100m	78	75	67.7	64.7	65.4	62.4	23.6	67	63.3	25.2	
62.5	14.6 dB/100m	78	75	63.4	60.4	59.4	56.4	21.5	67	57.3	22	
100	18.5 dB/100m	72.5	69.5	56.9	46.3	55.3	48.5	18.8	67	53.2	18.1	
250	29.7 dB/100m	69.4	66.4	39.7	36.7	47.3	44.3	17.3	67	45.2	16	
500	42.8 dB/100m	64.9	61.9	22.2	19.2	41.3	38.3	17.3	67	39.2		
600	47.1 dB/100m	63.7	60.7	16.6	13.6	39.7	36.7	17.3	65.8	37.6		
1000	61.9 dB/100m	60.4	57.4			35.3	32.3	15.1	62.5	33.2		
1200	68.4 dB/100m	59.2	56.2			33.7	30.7	14.3				
1600	80.0 dB/100m	57.3	54.3			31.2	28.2	13.0				

Table Notes: Limits below 4 MHz and above 1000 MHz are for information only. Reference standard: IEC 61156-5

Transfer Impedance

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

Transfer Impedance Class:	Grade 1
Screening Class:	Type I
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.
33 mm (1.3 in)	65 mm

Max. Pull Tension:	105 N (23.6 lbf)
Bulk Cable Weight:	67 kg/km

Standards and Compliance

Environmental Suitability:	Indoor - Euroclass Eca
Flammability / Reaction to Fire:	IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Data Category:	Category 7A
TIA/EIA Compliance:	ANSI/TIA 568.2-D
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61034-2 - Smoke Density Min Transmittance = 60%
GENELEC Compliance:	EN 50173-1, Segregation class according EN50174-2 = d
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: 0.92 Revision Date: 12-12-2023

Part Numbers

Variants

Item #	Color	Putup Type	Length	EAN
7769ENH.00500	Blue	Reel	500 m	8719605161635

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