Belden



Product: 2147A

Category 6A Indoor/Outdoor Cable, 4 Pair, U/UTP, OSP/CM-LS, LSZH

Product Description

Category 6A Premise Horizontal Cable (500 MHz), Indoor/Outdoor OSP/CM-LS, 4 Pair, 23 AWG Solid Bare Copper Conductors, U/UTP, Haloarrest® LSZH Inner Jacket, Gel-Filled, UV Resistant Flame Retardant Haloarrest® LSZH Outer Jacket

Technical Specifications

Product Overview

Suitable Applications:	OSP-Outdoor, Indoor/Outdoor, Premise Horizontal Cable, Ethernet up to 10GBASE-T, Wi-Fi 6, Wi-Fi 5, PoE++, PoE+, PoE, HDBaseT
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

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

Insulation

Material	Color Code
PO - Polyolefin	White & Blue, White & Orange, White & Green, White & Brown

Inner Jacket

Material	Nom. Diameter	Ripcord	Color
LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.270 in (6.86 mm)	Yes	Black

Waterblocking:	Gel Filled

Outer Jacket

Separator	Material	Material Trade Name	Nom. Diameter	Ripcord
Center Member (Patented X-Spline®), EquiBlock™ Barrier Technology	LSZH - Low Smoke Zero Halogen (Flame Retardant)	Haloarrest®	0.370 in (9.40 mm)	Yes

Overall Cable Diameter (Nominal):	0.370 in (9.40 mm)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
82 Ohm/km (25 Ohm/1000ft)	45 pF/100m

Delay

Frequency	Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
100 MHz	537.6 ns/100m	45 ns/100m	64%

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]	Max./Min. Input Impedance (unFitted) [Ohm]	Max./Min. Fitted Impedance [Ohm]	Min. PSANEXT [dB]	Min. PSAACRF [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
1	2.1 dB/100m	74.3	72.3	72.2	70.2	67.8	64.8	20.0	100 +/- 5	115 +/- 15	67.0	67.0	40.0	35.0
4	3.8 dB/100m	65.3	63.3	61.5	59.5	55.8	52.8	23.0	100 +/- 5	100 +/- 7	67.0	66.2	40.0	23.0
8	5.3 dB/100m	60.8	58.8	55.4	53.4	49.7	46.7	24.5	100+/- 22	100 +/- 7	67.0	60.1	40.0	16.9

10	5.9 dB/100m	59.3	57.3	53.4	51.4	47.8	44.8	25.0	100+/- 22	100 +/- 7	67.0	58.2	40.0	15.0
16	7.5 dB/100m	56.2	54.2	48.8	46.8	43.7	40.7	25.0	100+/- 22	100 +/- 7	67.0	54.1	38.0	10.9
20	8.4 dB/100m	54.8	52.8	46.4	44.4	41.8	38.8	25.0	100+/- 22	100 +/- 7	67.0	52.2	37.0	9.0
25	9.4 dB/100m	53.3	51.3	44.0	42.0	39.8	36.8	24.3	100+/- 22	100 +/- 7	67.0	50.2	36.0	7.0
31.25	10.5 dB/100m	51.9	49.9	41.4	39.4	37.9	34.9	23.6	100+/- 22	100 +/- 7	67.0	48.3	35.1	5.1
62.5	15.0 dB/100m	47.4	45.4	32.4	30.4	31.9	28.9	21.5	100+/- 22	100 +/- 7	65.6	42.3	32.0	
100	19.1 dB/100m	44.3	42.3	25.2	23.2	27.8	24.8	20.1	100+/- 22	100 +/- 7	62.5	38.2	30.0	
200	27.6 dB/100m	39.8	37.8	12.2	10.2	21.8	18.8	18.0	100+/- 22	100 +/- 7	58.0	32.2	27.0	
250	31.1 dB/100m	38.3	36.3	7.3	5.3	19.8	16.8	17.3	100 +/- 32	100 +/- 7	56.5	30.2	26.0	
300	34.3 dB/100m	37.1	35.1	2.9	0.9	18.3	15.3	16.8	100 +/- 32	100 +/- 7	55.3	28.7	25.2	
350	37.2 dB/100m	36.1	34.1			16.9	13.9	16.3	100 +/- 32	100 +/- 7	54.3	27.3	24.6	
400	40.1 dB/100m	35.3	33.3			15.8	12.8	15.9	100 +/- 32	100 +/- 7	53.5	26.2	24.0	
450	42.7 dB/100m	34.5	32.5			14.7	11.7	15.5	100 +/- 32	100 +/- 7	52.7	25.1	23.5	
500	45.3 dB/100m	33.8	31.8			13.8	10.8	15.2	100 +/- 32	100 +/- 7	52.0	24.2	23.0	

Voltage

UL Voltage Rating
300 V (CM-LS)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
75°C	-40°C To +75°C	-20°C To +75°C	-40°C To +75°C

Bend Radius

Stationary Min.	Installation Min.
3.0 in (76 mm)	3.75 in (95.3 mm)

Max. Pull Tension:	25 lbs (11 kg)
Bulk Cable Weight:	67 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Non-Halogenated, Sunlight Resistance, Aerial - When supported by messenger wire
Flammability / Reaction to Fire:	UL 1685 (UL Loading-Limited Smoke)
NEC / UL Compliance:	Article 800, CM-LS
CEC / C(UL) Compliance:	CM-LS
ICEA Compliance:	S-116-732, S-56-434, S-99-689, S-100-685
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
NEMA Compliance:	ANSI/NEMA WC-66
Data Category:	Category 6A
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6A
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
CENELEC Compliance:	Segregation class according EN50174-2 = a
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0. Fully Water Blocked. Suitable for burial or use in Buildings in Wet Locations. Not recommended for Direct Burial applications without additional crush and impact protection.

History

Update and Revision:	Revision Number: 0.429 Revision Date: 09-07-2025

Part Numbers

Variants

Item #	Color	UPC
2147A 0101000	Black	612825379485

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