



Product: [2141A](#)

Category 6A Indoor/Outdoor Cable, 4 Pair, F/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, Haloarrest® LSZH Inner Jacket, F/UTP - Foil Shielded, 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, Noisy Environments, 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	Number 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

Separator	Material	Nom. Diameter
Center Member (Patented X-Spline®)	PE - Polyethylene	0.270 in (6.86 mm)

Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	100%	26 AWG (7x34) TC

Waterblocking:	Gel Filled
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Outer Jacket

Material	Material Trade Name	Nom. Diameter	Ripcord
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)
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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. PSNEXT [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	72.3	70.2	67.8	64.8	20.0	105 +/- 10	115 +/- 15	67.0	67.0	40.0	35.0
4	3.8 dB/100m	63.3	59.5	55.8	52.8	23.0	105 +/- 10	100 +/- 7	67.0	66.2	40.0	23.0
8	5.3 dB/100m	58.8	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	57.3	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	54.2	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	52.8	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	51.3	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	49.9	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	45.4	30.4	31.9	28.9	21.5	100 +/- 22	100 +/- 7	65.6	42.3	32.0	
100	19.1 dB/100m	42.3	23.2	27.8	24.8	20.1	100 +/- 22	100 +/- 7	62.5	38.2	30.0	
200	27.6 dB/100m	37.8	10.2	21.8	18.8	18.0	100 +/- 22	100 +/- 7	58.0	32.2	27.0	
250	31.1 dB/100m	36.3	5.3	19.8	16.8	17.3	100 +/- 32	100 +/- 7	56.5	30.2	26.0	
300	34.3 dB/100m	35.1	0.9	18.3	15.3	16.8	100 +/- 32	100 +/- 7	55.3	28.7	25.2	
350	37.2 dB/100m	34.1		16.9	13.9	16.3	100 +/- 32	100 +/- 7	54.3	27.3	24.6	
400	40.1 dB/100m	33.3		15.8	12.8	15.9	100 +/- 32	100 +/- 7	53.5	26.2	24.0	
450	42.7 dB/100m	32.5		14.7	11.7	15.5	100 +/- 32	100 +/- 7	52.7	25.1	23.5	
500	45.3 dB/100m	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:	48 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
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)
Other Standard Compliance(s):	Verified Channel/Category 6A

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. Not Suitable for Direct Burial.
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History

Update and Revision:	Revision Number: 0.279 Revision Date: 11-09-2022
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Part Numbers

Variants

Item #	Color	UPC
2141A 0101000	Black	612825400998

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