Product: 10GB24D

10GB Cat 6A Cable, U/UTP, LSZH, 4 Pair, AWG 23, Indoor CPR Dca

Product Description

Category 6A (500MHz), 4-Pair, U/UTP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyethylene Insulation, LSZH Jacket

Technical Specifications

Product Overview

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

Physical Characteristics (Overall)

Conductor

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

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Material	Nominal Diameter
PO - Polyolefin	1.2 mm

Bonded-Pair:	No

Color Chart

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

Outer Shield Material

Type	Material
Tape	EquiBlock®

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance
LSZH - Low Smoke Zero Halogen (Flame Retardant)	7.1 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 Unbalanced Pair to Pair	Max. Mutual Capacitance
1,600 pF/m	56 pF/m

Delay

Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
45 ns/100m	67%

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. PSANEXT	Min. PSAACRF	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.1 dB/100m	75.3 dB	72.3 dB	73.2 dB	70.2 dB	68 dB	65.0 dB	20 dB	67.0 dB	67 dB	40 dB	35 dB
4 MHz	3.8 dB/100m	66.3 dB	63.3 dB	62.5 dB	59.5 dB	56 dB	53.0 dB	23 dB	67.0 dB	66.2 dB	40 dB	23 dB
10 MHz	5.9 dB/100m	60.3 dB	57.3 dB	54.4 dB	51.4 dB	48 dB	45.0 dB	25 dB	67.0 dB	58.2 dB	40 dB	15 dB
16 MHz	7.5 dB/100m	57.2 dB	54.2 dB	49.8 dB	46.8 dB	43.9 dB	40.9 dB	25 dB	67.0 dB	54.1 dB	38 dB	10.9 dB
31.2 MHz	10.5 dB/100m	52.9 dB	49.9 dB	42.4 dB	39.4 dB	38.1 dB	35.1 dB	23.6 dB	67.0 dB	48.3 dB	35.1 dB	5.1 dB
62.5 MHz	15 dB/100m	48.4 dB	45.4 dB	33.4 dB	30.4 dB	32.1 dB	29.1 dB	21.5 dB	65.6 dB	42.3 dB	32 dB	
100 MHz	19.1 dB/100m	45.3 dB	42.3 dB	26.2 dB	23.2 dB	28 dB	25.0 dB	20.1 dB	62.5 dB	38.2 dB	30 dB	
125 MHz	21.5 dB/100m	43.8 dB	40.8 dB	22.3 dB	19.3 dB	26.1 dB	23.1 dB	19.4 dB	61.0 dB	36.3 dB	29 dB	
200 MHz	27.6 dB/100m	40.8 dB	37.8 dB	13.2 dB	10.2 dB	22 dB	19.0 dB	18 dB	58.0 dB	32.2 dB	27 dB	
250 MHz	31.1 dB/100m	39.3 dB	36.3 dB	8.3 dB	5.3 dB	20 dB	17.0 dB	17.3 dB	56.5 dB	30.2 dB	26 dB	
300 MHz	34.3 dB/100m	38.1 dB	35.1 dB	3.9 dB	0.9 dB	18.5 dB	15.5 dB	17.3 dB	55.3 dB	28.7 dB		
500 MHz	45.3 dB/100m	34.8 dB	31.8 dB	-10.4 dB	-13.4 dB	14 dB	11.0 dB	17.3 dB	52.0 dB	24.2 dB		

Segregation class according EN50174-2:	b

Current

Max. Recommended Current [A]
1.5 Amps per Conductor

Temperature Range

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

Mechanical Characteristics

Bulk Cable Weight:	50 kg/km
Max. Pull Tension:	110 N
Min Bend Radius During Installation:	58 mm
Min Bend Radius During Operation:	29 mm

Standards

IEC Compliance:	ISO/IEC 11801-1
CPR Euroclass:	Dca-s2,d2,a1
CENELEC Compliance:	EN 50173-1
Data Category:	Category 6A
ANSI Compliance:	ANSI/TIA 568.2-D (2018)
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4

Applicable Environmental and Other Programs

Environmental Space:	Indoor - Euroclass Dca
EU RoHS Compliance Date (yyyy-mm-dd):	2015-08-24

Flammability, LS0H, Toxicity Testing

IEC Flammability:	IEC 60332-1-2
Burning Load:	520 kJ/m
IEC 60754-1 (EN50267-1)- Halogen Amount:	Zero

IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Max. Conductivity:	2.5 µS/mm
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Min. pH:	4.3

Part Number

Variants

Item #	Color	Putup Type	Length	EAN
10GB24D.06500	Blue	Reel	500 m	8719605182098

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: 0.45 Revision Date: 11-12-2020