

Product: 10GB24

10GB Category 6A Small Diameter Cable, 4 Pair, U/UTP, LSZH Indoor CPR Eca

Product Description

Category 6A Premise Horizontal Cable (550MHz), 4-Pair, 23 AWG Solid Bare Copper Conductors, U/UTP, Polyethylene Insulation, LSZH Jacket

Technical Specifications

Product Overview

Suitable Applications:	Horizontal and building backbone cable; Support current and future Category 6A and 6 applications, such as: 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

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

Insulation

Material	Nom. Insulation Diameter	Color Code
PE - Polyethylene	1.20 mm (0.0472 in)	White / Blue & Blue, White / Orange & Orange, White / Green & Green, White / Brown & Brown

Cable Core

Description	Separator
4 pairs twisted to cable core covered with a polyester foil	Center Member (Patented X-Spline®), EquiBlock™ Barrier Technology

Outer Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	7.0 mm (0.28 in)

Overall Cable Diameter (Nominal):	7.0 mm (0.28 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

Frequency	Max. Delay Skew	Nom. Velocity of Prop.
100 MHz	45 ns/100m	67%

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	75.3	72.3	73.2	70.2	68	65.0	20	67.0	67.0	40	35
4	3.8 dB/100m	66.3	63.3	62.5	59.5	56	53.0	23	67.0	66.2	40	23
10	5.9 dB/100m	60.3	57.3	54.4	51.4	48	45.0	25	67.0	58.2	40	15
16	7.5 dB/100m	57.2	54.2	49.8	46.8	43.9	40.9	25	67.0	54.1	38	10.9

31.2	10.5 dB/100m	52.9	49.9	42.4	39.4	38.1	35.1	23.6	67.0	48.3	35.1	5.1
62.5	15 dB/100m	48.4	45.4	33.4	30.4	32.1	29.1	21.5	65.6	42.3	32	
100	19.1 dB/100m	45.3	42.3	26.2	23.2	28	25.0	20.1	62.5	38.2	30	
125	21.5 dB/100m	43.8	40.8	22.3	19.3	26.1	23.1	19.4	61.0	36.3	29	
200	27.6 dB/100m	40.8	37.8	13.2	10.2	22	19.0	18	58.0	32.2	27	
250	31.1 dB/100m	39.3	36.3	8.3	5.3	20	17.0	17.3	56.5	30.2	26	
300	34.3 dB/100m	38.1	35.1	3.9	0.9	18.5	15.5	17.3	55.3	28.7		
500	45.3 dB/100m	34.8	31.8	-10.4	-13.4	14	11.0	17.3	52.0	24.2		
550	47.7 dB/100m	34.2	31.2	-13.5	-16.5	13.2	10.2	14.9	51.4	23.4		

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.
29 mm (1.1 in)	58 mm

Max. Pull Tension:	110 N (25 lbf)
Bulk Cable Weight:	50 kg/km

Standards and Compliance

Environmental Suitability:	Euroclass Eca
Flammability / Reaction to Fire:	IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca; CPR UKCA Class: Eca
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Data Category:	Category 6A
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 = b
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: 0.398 Revision Date: 01-13-2025

Part Numbers

Variants

Item #	Color	Putup Type	Length	EAN
10GB24.06B100	Blue	Reel	100 m	8719605000040
10GB24.06305	Blue	Reel	305 m	8719605000026
10GB24.06500	Blue	Reel	500 m	8719605000033
10GB24.08305	Gray	Reel	305 m	8719605000071
10GB24.05500	Green	Reel	500 m	8719605224309
10GB24.03500	Orange	Reel	500 m	8719605224286
10GB24.07B100	Purple	Reel	100 m	8719605000064
10GB24.07305	Purple	Reel	305 m	8719605169679
10GB24.07500	Purple	Reel	500 m	8719605000057
10GB24.09500	White	Reel	500 m	8719605000088
10GB24.04500	Yellow	Reel	500 m	8719605224293

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