




Product: [10GX33](#) 

10GX Category 6A Enhanced Cable, 4 Bonded-Pairs, U/UTP, CMP

Product Description

10GX Category 6A Enhanced Premise Horizontal Cable (625MHz), 4 Bonded-Pairs, 23 AWG Solid Bare Copper Conductors, U/UTP, Plenum-CMP, Flamarrest® PVC-LS Jacket

Technical Specifications

Product Overview

Suitable Applications:	Premise Horizontal Cable, Ethernet up to 10GBASE-T, HDBaseT, PoE++, PoE+, PoE
Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/resources/patents .

Construction Details

Conductor

AWG	Stranding	Material	Number of Pairs
23	Solid	BC - Bare Copper	4

Insulation

Material	Color Code
FEP - Fluorinated Ethylene Propylene	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown
Bonded-Pair:	Yes

Outer Jacket Material

Separator Material	Material	Material Trade Name	Nom. Diameter	Ripcord
Double H Cross-Web (Patented RoundFlex®)	PVC-LS - Polyvinyl Chloride (Low Smoke)	Flamarrest®	0.295 in	Yes

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. DCR Unbalanced Between Pairs [%]	Max. Capacitance Unbalance	Nom. Mutual Capacitance	Nom. Velocity of Prop.
7.5 Ohm/1000ft	3%	5%	90 pF/100m	17 pF/ft	68%

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	30 ns/100m	68%

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]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. PSANEXT	Min. PSAACRF	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.1 dB/100m	75.3 dB	73.3 dB	73.3 dB	71.3 dB	70.8 dB	68.8 dB	20.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	67.0 dB	67.0 dB	48.0 dB	43.0 dB
4 MHz	3.8 dB/100m	66.3 dB	64.3 dB	62.5 dB	60.5 dB	58.8 dB	56.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 10.4 Ohm	67.0 dB	67.0 dB	48.0 dB	41.0 dB
8 MHz	5.3 dB/100m	61.8 dB	59.8 dB	56.4 dB	54.4 dB	52.7 dB	50.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 8 Ohm	67.0 dB	61.1 dB	48.0 dB	24.9 dB
10 MHz	5.9 dB/100m	60.3 dB	58.3 dB	54.4 dB	52.4 dB	50.8 dB	48.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 7.3 Ohm	67.0 dB	59.2 dB	48.0 dB	23.0 dB
16 MHz	7.5 dB/100m	57.2 dB	55.2 dB	49.8 dB	47.8 dB	46.7 dB	44.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 5.7 Ohm	67.0 dB	55.1 dB	46.0 dB	18.9 dB

20 MHz	8.4 dB/100m	55.8 dB	53.8 dB	47.4 dB	45.4 dB	44.8 dB	42.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	67.0 dB	53.2 dB	45.0 dB	17.0 dB
25 MHz	9.4 dB/100m	54.3 dB	52.3 dB	45.0 dB	43.0 dB	42.8 dB	40.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	67.0 dB	51.2 dB	44.0 dB	15.0 dB
31.25 MHz	10.5 dB/100m	52.9 dB	50.9 dB	42.4 dB	40.4 dB	40.9 dB	38.9 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	67.0 dB	49.3 dB	43.1 dB	
62.5 MHz	15.0 dB/100m	48.4 dB	46.4 dB	33.4 dB	31.4 dB	34.9 dB	32.9 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	66.6 dB	43.3 dB	40.0 dB	
100 MHz	19.1 dB/100m	45.3 dB	43.3 dB	26.2 dB	24.2 dB	30.8 dB	28.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	63.5 dB	39.2 dB	38.0 dB	
200 MHz	27.6 dB/100m	40.8 dB	38.8 dB	13.2 dB	11.2 dB	24.8 dB	22.8 dB	21.0 dB	100 ± 22 Ohm	100 ± 5 Ohm	59.0 dB	33.2 dB	35.0 dB	
250 MHz	31.1 dB/100m	39.3 dB	37.3 dB	8.3 dB	6.3 dB	22.8 dB	20.8 dB	20.5 dB	100 ± 32 Ohm	100 ± 5 Ohm	57.5 dB	31.2 dB	34.0 dB	
300 MHz	34.3 dB/100m	38.1 dB	36.1 dB	3.9 dB	1.9 dB	21.3 dB	19.3 dB	20.1 dB	100 ± 32 Ohm	100 ± 5 Ohm	56.3 dB	29.7 dB	33.2 dB	
350 MHz	37.2 dB/100m	37.1 dB	35.1 dB			19.9 dB	17.9 dB	19.8 dB	100 ± 32 Ohm	100 ± 5 Ohm	55.3 dB	28.3 dB	32.6 dB	
400 MHz	40.1 dB/100m	36.3 dB	34.3 dB			18.8 dB	16.8 dB	19.5 dB	100 ± 32 Ohm	100 ± 5 Ohm	54.5 dB	27.2 dB	32.0 dB	
450 MHz	42.7 dB/100m	35.5 dB	33.5 dB			17.7 dB	15.7 dB	18.9 dB	100 ± 32 Ohm	100 ± 5 Ohm	53.7 dB	26.1 dB	31.5 dB	
500 MHz	45.3 dB/100m	34.8 dB	32.8 dB			16.8 dB	14.8 dB	18.4 dB	100 ± 32 Ohm	100 ± 5 Ohm	53.0 dB	25.2 dB	31.0 dB	
550 MHz	47.7 dB/100m	34.2 dB	32.2 dB			16.0 dB	14.0 dB	18.0 dB	100 ± 32 Ohm	100 ± 5 Ohm	52.4 dB	24.4 dB		
600 MHz	50.1 dB/100m	33.6 dB	31.6 dB			15.2 dB	13.2 dB	17.6 dB	100 ± 32 Ohm	100 ± 5 Ohm	51.8 dB	23.6 dB		
625 MHz	51.2 dB/100m	33.4 dB	31.4 dB			14.9 dB	12.9 dB	17.4 dB	100 ± 32 Ohm	100 ± 5 Ohm	51.6 dB	23.3 dB		
750 MHz	56.7 dB/100m	32.2 dB	30.2 dB			13.3 dB	11.3 dB	16.5 dB			50.4 dB	21.7 dB		
860 MHz	61.2 dB/100m	31.3 dB	29.3 dB			12.1 dB	10.1 dB	15.8 dB			49.5 dB	20.5 dB		

Voltage

UL Voltage Rating
300 V (CMP), 300 V (CL3P)

Mechanical Characteristics

Temperature

UL Rating	Operating	Installation	Storage
105°C	-20°C To +75°C	0°C To +50°C	-20°C To +75°C

Bend Radius

Stationary Min.	Installation Min.
0.6 in	3.0 in

Max. Pull Tension:	40 lbs
Bulk Cable Weight:	43 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Plenum, Indoor
Sustainability:	Product Lens™, Environmental Product Declaration (EPD) Available
Flammability / Fire Resistance:	NFPA 262, UL 910 (Plenum), FT6, FT6, IEC 60332-1-2
NEC / UL Compliance:	800, CMP;CMP-LP (0.6A);CL3P-LP (0.6A)
CEC / C(UL) Compliance:	CMP
ICEA Compliance:	S-116-732-2013
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
Cenelec Compliance:	Segregation class according EN50174-2=a
CPR Euroclass:	Eca
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU, EU Directive 2011/65/EU (ROHS II), 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

Part Number

Non-Plenum Number: 10GX32

Variants

Item #	Color	Putup Type	Length	UPC
10GX33 D151000	Blue	Reel	1,000 ft	612825102335
10GX33 0081000	Gray	Reel	1,000 ft	612825102359
10GX33 0091000	White	Reel	1,000 ft	612825102366
10GX33 0041000	Yellow	Reel	1,000 ft	612825102342

Product Notes

Notes: Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 625 MHz are for Engineering Information Only. 0.295" Cable Dimension per TIA 6@1 Equivalent Diameter. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.

History

Update and Revision: Revision Number: 0.411 Revision Date: 07-28-2020

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