



Product: [10GX53F](#) 

10GX Category 6A Enhanced Cable, 4 Pairs, F/UTP, CMP

Product Description

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

Technical Specifications

Product Overview

Suitable Applications:	Premise Horizontal Cable, Ethernet up to 10GBASE-T, Wi-Fi 6, Wi-Fi 5, Surveillance, HDBaseT, PoE++, PoE+, PoE, Noisy Environments
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, White & Orange, White & Green, White & Brown

Bonded-Pair: No

Outer Shield Material

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

Outer Jacket Material

Separator Material	Material	Material Trade Name	Nom. Diameter	Ripcord
Center Member (Patented EquiSpline®)	PVC - Polyvinyl Chloride	Flamarrest®	0.275 in	Yes

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. DCR Unbalanced Between Pairs [%]	Max. Capacitance Unbalance	Nom. Mutual Capacitance
82 Ohm/km	4%	5%	90 pF/100m	17 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	68%

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. PSNEXT [dB]	Min. PSACR [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	73.3 dB	71.2 dB	68.8 dB	20.0 dB	100 ± 15 Ohm	105 ± 10 Ohm	77.0 dB	77.0 dB	40.0 dB	35.0 dB
4 MHz	3.8 dB/100m	64.3 dB	60.5 dB	56.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	76.2 dB	40.0 dB	23.0 dB
8 MHz	5.3 dB/100m	59.8 dB	54.4 dB	50.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	70.1 dB	40.0 dB	16.9 dB
10 MHz	5.9 dB/100m	58.3 dB	52.4 dB	48.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	68.2 dB	40.0 dB	15.0 dB

16 MHz	7.5 dB/100m	55.2 dB	47.8 dB	44.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	64.1 dB	38.0 dB	10.9 dB
20 MHz	8.4 dB/100m	53.8 dB	45.4 dB	42.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	62.2 dB	37.0 dB	9.0 dB
25 MHz	9.4 dB/100m	52.3 dB	43.0 dB	40.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm	77.0 dB	60.2 dB	36.0 dB	7.0 dB
31.25 MHz	10.5 dB/100m	50.9 dB	40.4 dB	38.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 10 Ohm	77.0 dB	58.3 dB	35.1 dB	
62.5 MHz	15.0 dB/100m	46.4 dB	31.4 dB	32.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 10 Ohm	77.0 dB	52.3 dB	32.0 dB	
100 MHz	19.1 dB/100m	43.3 dB	24.2 dB	28.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 10 Ohm	72.5 dB	48.2 dB	30.0 dB	
200 MHz	27.6 dB/100m	38.8 dB	11.2 dB	22.8 dB	18.0 dB	100 ± 22 Ohm	100 ± 10 Ohm	68.5 dB	42.2 dB	27.0 dB	
250 MHz	31.1 dB/100m	37.3 dB	6.3 dB	20.8 dB	17.3 dB	100 ± 32 Ohm	100 ± 10 Ohm	66.5 dB	40.2 dB	26.0 dB	
300 MHz	34.3 dB/100m	36.1 dB	1.9 dB	19.3 dB	16.8 dB	100 ± 32 Ohm	100 ± 10 Ohm	65.3 dB	38.7 dB	25.2 dB	
350 MHz	37.2 dB/100m	35.1 dB		17.9 dB	16.3 dB	100 ± 32 Ohm	100 ± 10 Ohm	64.3 dB	37.3 dB	24.6 dB	
400 MHz	40.1 dB/100m	34.3 dB		16.8 dB	15.9 dB	100 ± 32 Ohm	100 ± 10 Ohm	63.5 dB	36.2 dB	24.0 dB	
450 MHz	42.7 dB/100m	33.5 dB		15.7 dB	15.5 dB	100 ± 32 Ohm	100 ± 10 Ohm	62.7 dB	35.1 dB	23.5 dB	
500 MHz	45.3 dB/100m	32.8 dB		14.8 dB	15.2 dB	100 ± 32 Ohm	100 ± 10 Ohm	62.0 dB	34.2 dB	23.0 dB	
550 MHz	47.7 dB/100m	32.2 dB		14.0 dB	14.9 dB	100 ± 32 Ohm	100 ± 10 Ohm	62.4 dB	34.4 dB		
600 MHz	50.1 dB/100m	31.6 dB		13.2 dB	14.7 dB	100 ± 32 Ohm	100 ± 10 Ohm	61.8 dB	33.6 dB		
625 MHz	51.2 dB/100m	31.4 dB		12.9 dB	14.5 dB	100 ± 32 Ohm	100 ± 10 Ohm	61.6 dB	33.3 dB		
750 MHz	56.7 dB/100m	30.2 dB		11.3 dB	14.0 dB	100 ± 32 Ohm	100 ± 10 Ohm	60.4 dB	31.7 dB		
860 MHz	61.2 dB/100m	29.3 dB		10.1 dB	13.6 dB	100 ± 32 Ohm	100 ± 10 Ohm	59.5 dB	30.5 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.
2.25 in	2.75 in

Max. Pull Tension:	25 lbs
Bulk Cable Weight:	38 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Plenum, Indoor
Flammability / Fire Resistance:	NFPA 262, UL 910 (Plenum), FT6, FT6, IEC 60332-1-2
NEC / UL Compliance:	Article 800, CMP;CMP-LP (0.7A);CL3P-LP (0.7A)
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
CPR Euroclass:	Eca
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), 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

Part Number

Non-Plenum Number:	10GX52F
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Variants

Item #	Color	UPC
10GX53F 0101000	Black	612825377795
10GX53F D151000	Blue	612825377757
10GX53F 0081000	Gray	612825377771
10GX53F 0091000	White	612825377788

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. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.
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History

Update and Revision:	Revision Number: 0.266 Revision Date: 03-16-2021
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