Product: 10GX52F ⧉

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

Product Description

10GX Category 6A Enhanced Premise Horizontal Cable (625MHz), 4 Pair, 23 AWG Solid Bare Copper Conductors, F/UTP - Foil Shielded, Riser-CMR, PVC 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

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

Outer Shield

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

Outer Jacket

Separator	Material	Nom. Diameter	Ripcord
Center Member (Patented EquiSpline®)	PVC - Polyvinyl Chloride	0.275 in (6.99 mm)	Yes

Overall Cable Diameter (Nominal):	0.275 in (6.99 mm)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
82 Ohm/km	90 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. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. PSANEXT [dB]	Min. PSAACRF [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
1	2.1 dB/100m	73.3	71.2	68.8	20.0	100 ± 15 Ohm	105 ± 10 Ohm	77.0	77.0	40.0	35.0
4	3.8 dB/100m	64.3	60.5	56.8	23.0	100 ± 15 Ohm	100 ± 15 Ohm	77.0	76.2	40.0	23.0
8	5.3 dB/100m	59.8	54.4	50.7	24.5	100 ± 15 Ohm	100 ± 15 Ohm	77.0	70.1	40.0	16.9
10	5.9 dB/100m	58.3	52.4	48.8	25.0	100 ± 15 Ohm	100 ± 15 Ohm	77.0	68.2	40.0	15.0

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

Voltage

UL Voltage Rating
300 V (CMR), 300 V (CL3R)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
90°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 (57.2 mm)	2.75 in (69.9 mm)

Max. Pull Tension:	25 lbs (11 kg)
Bulk Cable Weight:	41 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Riser, Indoor
Sustainability:	Product Lens™, Environmental Product Declaration (EPD) Available
Flammability / Reaction to Fire:	UL 1666 Riser, FT4, FT4, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca
NEC / UL Compliance:	Article 800, CMR;CMR-LP (0.6A);CL3R-LP (0.6A)
CEC / C(UL) Compliance:	CMR
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
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
Plenum Number:	10GX53F

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.

History

Update and Revision:	Revision Number: 0.334 Revision Date: 12-15-2021

Variants

Item #	Color	UPC
10GX52F 0101000	Black	612825003939
10GX52F 0061000	Blue	612825003908
10GX52F 0081000	Gray	612825003915
10GX52F 0021000	Red	612825003885
10GX52F 0091000	White	612825003922
10GX52F 0041000	Yellow	612825003892