



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/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 (25 Ohm/1000ft)	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) [Ohm]	Max./Min. Fitted Impedance [Ohm]	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	105 ± 10	77.0	77.0	40.0	35.0
4	3.8 dB/100m	64.3	60.5	56.8	23.0	100 ± 15	100 ± 15	77.0	76.2	40.0	23.0
8	5.3 dB/100m	59.8	54.4	50.7	24.5	100 ± 15	100 ± 15	77.0	70.1	40.0	16.9
10	5.9 dB/100m	58.3	52.4	48.8	25.0	100 ± 15	100 ± 15	77.0	68.2	40.0	15.0

16	7.5 dB/100m	55.2	47.8	44.7	25.0	100 ± 15	100 ± 15	77.0	64.1	38.0	10.9
20	8.4 dB/100m	53.8	45.4	42.8	25.0	100 ± 15	100 ± 15	77.0	62.2	37.0	9.0
25	9.4 dB/100m	52.3	43.0	40.8	24.3	100 ± 15	100 ± 15	77.0	60.2	36.0	7.0
31.25	10.5 dB/100m	50.9	40.4	38.9	23.6	100 ± 15	100 ± 10	77.0	58.3	35.1	
62.5	15.0 dB/100m	46.4	31.4	32.9	21.5	100 ± 15	100 ± 10	77.0	52.3	32.0	
100	19.1 dB/100m	43.3	24.2	28.8	20.1	100 ± 15	100 ± 10	72.5	48.2	30.0	
200	27.6 dB/100m	38.8	11.2	22.8	18.0	100 ± 22	100 ± 10	68.5	42.2	27.0	
250	31.1 dB/100m	37.3	6.3	20.8	17.3	100 ± 32	100 ± 10	66.5	40.2	26.0	
300	34.3 dB/100m	36.1	1.9	19.3	16.8	100 ± 32	100 ± 10	65.3	38.7	25.2	
350	37.2 dB/100m	35.1		17.9	16.3	100 ± 32	100 ± 10	64.3	37.3	24.6	
400	40.1 dB/100m	34.3		16.8	15.9	100 ± 32	100 ± 10	63.5	36.2	24.0	
450	42.7 dB/100m	33.5		15.7	15.5	100 ± 32	100 ± 10	62.7	35.1	23.5	
500	45.3 dB/100m	32.8		14.8	15.2	100 ± 32	100 ± 10	62.0	34.2	23.0	
550	47.7 dB/100m	32.2		14.0	14.9	100 ± 32	100 ± 10	62.4	34.4		
600	50.1 dB/100m	31.6		13.2	14.7	100 ± 32	100 ± 10	61.8	33.6		
625	51.2 dB/100m	31.4		12.9	14.5	100 ± 32	100 ± 10	61.6	33.3		
750	56.7 dB/100m	30.2		11.3	14.0	100 ± 32	100 ± 10	60.4	31.7		
860	61.2 dB/100m	29.3		10.1	13.6	100 ± 32	100 ± 10	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, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca; CPR UKCA Class: Eca
NEC / UL Compliance:	Article 800
CEC / C(UL) Compliance:	CMR
ICEA Compliance:	S-116-732
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
UK Regulation Compliance:	UKCA Mark
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: 0.430 Revision Date: 01-20-2023

Part Numbers

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

© 2023 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.