

## 10GX12 Multi-Conductor - Enhanced Category 6A Nonbonded-Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

CAT6A (625MHz), 4-Pair, U/UTP-Unshielded, Riser-CMR, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented Double-H spline, Ripcord, PVC Jacket

### Usage (Overall)

**Suitable Applications:** Premise Horizontal Cable, 10 Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, PoE

### Physical Characteristics (Overall)

#### Conductor

**AWG:**

# Pairs	AWG	Stranding	Conductor Material
4	23	Solid	BC - Bare Copper

**Total Number of Conductors:** 8

#### Insulation

**Insulation Material:**

Insulation Material
PO - Polyolefin

#### Outer Jacket

**Outer Jacket Material:**

Outer Jacket Material
PVC - Polyvinyl Chloride

**Outer Jacket Ripcord:** Yes

#### Overall Cable

**Overall Cabling Separator Material:** RoundFlex - Double H Cross-Web

**Overall Nominal Diameter:** 0.295 in.

#### Pair

**Pair Color Code Chart:**

Number	Color
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

### Mechanical Characteristics (Overall)

**Storage Temperature Range:** -20°C To +75°C

**Installation Temperature Range:** +5°C To +50°C

**Operating Temperature Range:** -20°C To +60°C

**Bulk Cable Weight:** 35 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 40 lbs.

**Min. Bend Radius/Minor Axis:** 1.200 in.

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Min. Bend/Installation: 3 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMR
CEC/C(UL) Specification:	CMR
EU Directive 2011/65/EU (ROHS II):	Yes
Other Standards:	ISO/IEC 11801 ed 2.1 (2008) Class EA
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2004
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Telecommunications Standards:	Category 6A - TIA 568.C.2

#### Applicable Patents:

Country	Patent
US	6074503
US	7772494
US	7838773
US	8030571

#### Flame Test

UL Flame Test:	UL1666 Vertical Riser
C(UL) Flame Test:	FT4
CSA Flame Test:	FT4
IEEE Flame Test:	1202

#### Suitability

Suitability - Outdoor: No

#### Plenum/Non-Plenum

Plenum (Y/N): No  
 Plenum Number: 10GX13

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/ft)  
 17.000

Maximum Capacitance Unbalance (pF/100 m): 50

#### Nominal Velocity of Propagation:

VP (%)  
 64.000

#### Maximum Delay:

Delay (ns/100 m)  
 537 @ 100MHz

#### Typical Delay Skew:

Delay Skew (ns/ft)  
 35.000

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**Max. Delay Skew:**

Delay Skew (ns/100 m)
45

**Maximum Conductor DC Resistance:**

DCR @ 20°C (Ohm/100 m)
7.400

**Max. Operating Voltage - UL:**

Voltage
300 V RMS

**Maximum DCR Unbalanced:**

DCR Unbalance @ 20°C (%)
3.000

### Electrical Characteristics-Premise (Overall)

**Premise Cable Electrical Table 1:**

Freq. (MHz)	Max. Attenuation (dB/100 m)	Min. PSNEXT (dB)	Min. PSACR (dB)	Min RL (dB)
1	2.100	73.3	71.2	20.000
4	3.800	64.3	60.5	23.000
8	5.300	59.8	54.4	24.500
10	5.900	58.3	52.4	25.000
16	7.500	55.2	47.8	25.000
20	8.400	53.8	45.4	25.000
25	9.400	52.3	43	24.300
31.25	10.500	50.9	40.4	23.600
62.5	15.000	46.4	31.4	21.500
100	19.100	43.3	24.2	20.100
155	24.100	40.4	1.4	18.800
200	27.600	38.8	11.2	18.000
250	31.100	37.3	6.3	17.300
300	34.300	36.1	1.9	16.800
350	37.200	35.1		16.300
400	40.100	34.3		15.900
450	42.700	35.5		15.500
500	45.300	32.8		15.200
550	47.700	32.2		14.900
600	50.100	31.6		14.700
625	51.200	31.4		14.500
750	56.700	30.2		14.000
860	61.200	29.3		13.600

**Premise Cable Electrical Table 2:**

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. PSACRF (dB)
1	100 +/- 15	100 +/- 15	68.8
4	100 +/- 15	100 +/- 10	56.8
8	100 +/- 15	100 +/- 10	50.7
10	100 +/- 15	100 +/- 10	48.8
16	100 +/- 15	100 +/- 10	44.7
20	100 +/- 15	100 +/- 10	42.8
25	100 +/- 15	100 +/- 10	40.8
31.25	100 +/- 15	100 +/- 10	38.9
62.5	100 +/- 15	100 +/- 10	32.9
100	100 +/- 15	100 +/- 10	28.8
200	100 +/- 22	100 +/- 10	22.8
250	100 +/- 32	100 +/- 10	20.8
300	100 +/- 32	100 +/- 10	19.3
350	100 +/- 32	100 +/- 10	17.9
400	100 +/- 32	100 +/- 10	16.8
450	100 +/- 32	100 +/- 10	15.7
500	100 +/- 32	100 +/- 10	14.8

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550	100 +/- 32	100 +/- 10	14.0
600	100 +/- 32	100 +/- 10	13.2
625	100 +/- 32	100 +/- 10	12.9
750			11.3
860			10.1

Premise Cable Electrical Table 4:

Frequency (MHz)	Min. PSANEXT (dB)	Min. PSAACRF (dB)	Min. TCL (dB)	Min. ELTCTL (dB)
1.000	67.000	67.000	40.000	35.000
4.000	67.000	67.000	40.000	23.000
8.000	67.000	61.100	40.000	16.900
10.000	67.000	59.200	40.000	15.000
16.000	67.000	55.100	40.000	10.900
20.000	67.000	53.200	38.000	9.000
25.000	67.000	51.200	36.000	7.000
31.250	67.000	49.300	35.100	
62.500	66.600	43.300	32.000	
100.000	63.500	39.200	30.000	
200.000	59.000	33.200	27.000	
250.000	57.500	31.200	26.000	
300.000	56.300	29.700	25.200	
350.000	55.300	28.300	24.600	
400.000	54.500	27.200	24.000	
450.000	53.700	26.100	23.500	
500.000	53.000	25.200	23.000	
550.000	52.400	24.400		
600.000	51.800	23.600		
625.000	51.600	23.300		
750.000	50.400	21.700		
860.000	49.500	20.500		

### Notes (Overall)

**Notes:** Jacket sequentially printed every 2 ft/1m. 0.295" cable dimension per TIA 6@1 equivalent diameter.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
10GX12 0021000	1,000 FT	35.000 LB	RED		CAT6A 4PR U/UTP CMR REEL
10GX12 0031000	1,000 FT	35.000 LB	ORANGE		CAT6A 4PR U/UTP CMR REEL
10GX12 0041000	1,000 FT	35.000 LB	YELLOW		CAT6A 4PR U/UTP CMR REEL
10GX12 0041500	1,500 FT	52.500 LB	YELLOW		CAT6A 4PR U/UTP CMR REEL
10GX12 0051000	1,000 FT	35.000 LB	GREEN, DARK		CAT6A 4PR U/UTP CMR REEL
10GX12 0061000	1,000 FT	35.000 LB	BLUE, LIGHT		CAT6A 4PR U/UTP CMR REEL
10GX12 0062500	2,500 FT	95.000 LB	BLUE, LIGHT		CAT6A 4PR U/UTP CMR REEL
10GX12 0071000	1,000 FT	35.000 LB	VIOLET		CAT6A 4PR U/UTP CMR REEL
10GX12 0081000	1,000 FT	35.000 LB	GRAY		CAT6A 4PR U/UTP CMR REEL
10GX12 0091000	1,000 FT	35.000 LB	WHITE		CAT6A 4PR U/UTP CMR REEL
10GX12 0091500	1,500 FT	52.500 LB	WHITE		CAT6A 4PR U/UTP CMR REEL
10GX12 0101000	1,000 FT	35.000 LB	BLACK		CAT6A 4PR U/UTP CMR REEL
10GX12 0101500	1,500 FT	52.500 LB	BLACK		CAT6A 4PR U/UTP CMR REEL

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