

## 10GXS12 Multi-Conductor - Category 6A Unbonded-Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

Category 6A Enhanced (625MHz), 4-Unbonded-Pair, Riser CMR-LP (0.6A) or CL3R-LP (0.6A), Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, PO Insulation, Patented EquiSpline™ & EquiBlock™ Technologies, Ripcord, PVC Jacket

### Usage (Overall)

**Suitable Applications:** Premise Horizontal Cable, 10 Gigabit Ethernet, Wireless, Wi-Fi, 100Base TX, 100Base VG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio AES51, RS-422, Noisy Environments, PoE, PoE Plus

### 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

#### Separator

Separator Material: Patented EquiSpline Central Member

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Ripcord: Yes

#### Overall Cable

Overall Cabling Separator Material: Patent Pending EquiBlock Barrier Tape

Overall Nominal Diameter: 0.273 in.

#### Pair

Pair Color Code Chart:

Number	Color
1	White & Blue
2	White & Orange
3	White & Green
4	White & 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 +75°C

UL Temperature Rating: 90C

Bulk Cable Weight: 33 lbs/1000 ft.

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Max. Recommended Pulling Tension:	40 lbs.
Min. Bend Radius/Minor Axis:	1.100 in.
Min. Bend/Installation:	2.500 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMR
NEC Articles:	800
CEC/C(UL) Specification:	CMR
EU Directive 2011/65/EU (ROHS II):	Yes
Other Standards:	ISO/IEC 11801 ed 2 Amendment 2:2010 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):	03/31/2015
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
ANSI Specification:	ANSI/TIA 568-C.2 Category 6A
Other Specification:	C(UL)US CMR 90C OR (UL) CMR-LP (0.6A) OR CL3R-LP (0.6A)

#### Applicable Patents:

Country	
www.belden.com/p	

#### Flame Test

UL Flame Test:	UL1666 Riser
C(UL) Flame Test:	FT4
CSA Flame Test:	FT4

#### Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	No
Suitability - Burial:	No
Sunlight Resistance:	No
Oil Resistance:	No
Non-halogenated:	No

#### Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	10GXS13
Non-Plenum Number:	10GXS12

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/ft)	17.000
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Maximum Capacitance Unbalance (pF/100 m):	90
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#### Nominal Velocity of Propagation:

VP (%)	65.000
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#### Maximum Delay:

Delay (ns/100 m)	537.000
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#### Typical Delay Skew:

Delay Skew (ns/ft)	
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30.000

Max. Delay Skew:

Delay Skew (ns/100 m)

45.000

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)

7.900

Max. Operating Voltage - UL:

Voltage

300 V RMS

Maximum DCR Unbalanced:

Description	DCR Unbalance @ 20°C (%)
Conductor-to-Conductor	3.000
Pair-to-Pair	5.000

### 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	75.3	73.2	20.000
4	3.800	66.3	62.5	23.000
8	5.300	61.8	56.5	24.500
10	5.900	60.3	54.4	25.000
16	7.400	57.2	49.8	25.000
20	8.300	55.8	47.5	25.000
25	9.300	54.3	45.0	24.300
31.25	10.400	52.9	42.5	23.600
62.5	14.800	48.4	33.6	21.500
100	18.900	45.3	26.4	20.100
200	27.000	40.8	13.8	18.000
250	30.400	39.3	9.0	17.300
300	33.500	38.1	4.6	16.800
350	36.300	37.1	0.8	16.300
400	39.000	36.3		15.900
450	41.500	35.5		15.500
500	43.900	34.8		15.200
550	46.200	33.2		14.900
600	48.400	32.6		14.700
625	49.500	32.4		14.500
750	54.700	32.2		14.000
860	58.900	31.3		13.600

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. PSACRF (dB)
1	100 ± 15	105 ± 10	74.8
4	100 ± 15	100 ± 15	62.8
8	100 ± 15	100 ± 15	56.7
10	100 ± 15	100 ± 15	54.8
16	100 ± 15	100 ± 15	50.7
20	100 ± 15	100 ± 15	48.8
25	100 ± 15	100 ± 15	46.8
31.25	100 ± 15	100 ± 10	44.9
62.5	100 ± 15	100 ± 10	38.9
100	100 ± 15	100 ± 10	34.8
200	100 ± 22	100 ± 10	28.8
250	100 ± 32	100 ± 10	26.8
300	100 ± 32	100 ± 10	25.3
350	100 ± 32	100 ± 10	23.9
400	100 ± 32	100 ± 10	22.8
450	100 ± 32	100 ± 10	21.7
500	100 ± 32	100 ± 10	20.8
625	100 ± 32	100 ± 10	18.9
750	100 ± 32	100 ± 10	17.3
860	100 ± 32	100 ± 10	16.1

Premise Cable Electrical Table 4:

Frequency (MHz)	Min. PSANEXT (dB)	Min. PSAACRF (dB)	Min. TCL (dB)	Min. ELTCTL (dB)
1.000	75.000	77.000	40.000	35.000

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4.000	75.000	76.200	40.000	23.000
8.000	75.000	70.100	40.000	16.900
10.000	75.000	68.200	40.000	15.000
16.000	75.000	64.100	38.000	10.900
20.000	75.000	62.200	37.000	9.000
25.000	75.000	60.200	36.000	7.000
31.250	75.000	58.300	35.100	5.100
62.500	73.600	52.300	32.000	
100.000	70.500	48.200	30.000	
200.000	66.000	42.200	27.000	
250.000	64.500	40.200	26.000	
300.000	63.300	38.700	25.200	
350.000	62.300	37.300	24.600	
400.000	61.500	36.200	24.000	
450.000	60.700	35.100	23.500	
500.000	60.000	34.200	23.000	
550.000	59.400	33.400		
600.000	58.800	32.600		
625.000	58.600	32.300		
750.000	57.400	30.700		
860.000	56.500	29.500		

### Notes (Overall)

**Notes:** Jacket sequentially marked at 2 ft. intervals. Meets Component requirements for TIA 568-C.2 Category 6A Horizontal Cable, Values above 625MHz for Engineering Information Only

### Notes (Cont'd.):

C(UL)US CMR-LP (0.6A) OR CL3R-LP (0.6A)

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
10GXS12 0021000	1,000 FT	38.000 LB	RED		CAT6A 4PR U/UTP CMR REEL
10GXS12 0031000	1,000 FT	38.000 LB	ORANGE		CAT6A 4PR U/UTP CMR REEL
10GXS12 0041000	1,000 FT	38.000 LB	YELLOW		CAT6A 4PR U/UTP CMR REEL
10GXS12 0051000	1,000 FT	38.000 LB	GREEN, DARK		CAT6A 4PR U/UTP CMR REEL
10GXS12 0061000	1,000 FT	38.000 LB	BLUE, LIGHT		CAT6A 4PR U/UTP CMR REEL
10GXS12 0071000	1,000 FT	38.000 LB	VIOLET		CAT6A 4PR U/UTP CMR REEL
10GXS12 0081000	1,000 FT	38.000 LB	GRAY		CAT6A 4PR U/UTP CMR REEL
10GXS12 0091000	1,000 FT	38.000 LB	WHITE		CAT6A 4PR U/UTP CMR REEL
10GXS12 0101000	1,000 FT	38.000 LB	BLACK		CAT6A 4PR U/UTP CMR REEL
10GXS12002A1000	1,000 FT	41.000 LB	RED		CAT6A 4PR U/UTP CMR RIB
10GXS12003A1000	1,000 FT	41.000 LB	ORANGE		CAT6A 4PR U/UTP CMR RIB
10GXS12004A1000	1,000 FT	41.000 LB	YELLOW		CAT6A 4PR U/UTP CMR RIB
10GXS12005A1000	1,000 FT	41.000 LB	GREEN, DARK		CAT6A 4PR U/UTP CMR RIB
10GXS12006A1000	1,000 FT	41.000 LB	BLUE, LIGHT		CAT6A 4PR U/UTP CMR RIB
10GXS12007A1000	1,000 FT	41.000 LB	VIOLET		CAT6A 4PR U/UTP CMR RIB
10GXS12008A1000	1,000 FT	41.000 LB	GRAY		CAT6A 4PR U/UTP CMR RIB
10GXS12009A1000	1,000 FT	41.000 LB	WHITE		CAT6A 4PR U/UTP CMR RIB
10GXS12010A1000	1,000 FT	41.000 LB	BLACK		CAT6A 4PR U/UTP CMR RIB

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