

## 10GXS33 Multi-Conductor - Category 6A Bonded-Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

Category 6A Enhanced (625MHz), 4-Bonded-Pair, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, FEP Insulation, Patented EquiSpline™ & EquiBlock™ Technologies, Ripcord, Flamarrrest® 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
FEP - Fluorinated Ethylene Propylene

#### Separator

**Separator Material:** Patented EquiSpline Central Member

#### Outer Jacket

**Outer Jacket Material:**

Outer Jacket Trade Name	Outer Jacket Material
Flamarrrest (R)	LS-PVC - Low Smoke Polyvinyl Chloride

**Outer Jacket Ripcord:** Yes

#### Overall Cable

**Overall Cabling Separator Material:** Patent Pending EquiBlock Barrier Tape

**Overall Nominal Diameter:** 6.731 mm

#### Pair

**Pair Color Code Chart:**

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

### 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

## 10GXS33 Multi-Conductor - Category 6A Bonded-Pair Cable

UL Temperature Rating:	105C
Bulk Cable Weight:	58.040 Kg/Km
Max. Recommended Pulling Tension:	177.928 N
Min. Bend Radius/Minor Axis:	27.940 mm
Min. Bend/Installation:	63.500 mm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMP
NEC Articles:	800
CEC/C(UL) Specification:	CMP
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):	12/31/2015
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 CMP 105C OR (UL) CMP-LP (0.7A) OR CL3P-LP (0.7A)

#### Applicable Patents:

Country
<a href="http://www.belden.com/p">www.belden.com/p</a>

#### Flame Test

UL Flame Test:	NFPA 262 Plenum Flame Test (UL910)(FT6)
C(UL) Flame Test:	FT6
CSA Flame Test:	FT6

#### 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):	Yes
Plenum Number:	10GXS33 / 10GXS13 (nonbonded)
Non-Plenum Number:	10GXS32 / 10GXS12 (nonbonded)

### Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

METRIC MEASUREMENT VERSION

## 10GXS33 Multi-Conductor - Category 6A Bonded-Pair Cable

**Capacitance (pF/m)**

55.777

**Maximum Capacitance Unbalance (pF/100 m):** 90

**Nominal Velocity of Propagation:**

**VP (%)**

69.000

**Maximum Delay:**

**Delay (ns/100 m)**

537.000

**Typical Delay Skew:**

**Delay Skew (ns/m)**

98.430

**Max. Delay Skew:**

**Delay Skew (ns/100 m)**

45.000

**Maximum Conductor DC Resistance:**

**DCR @ 20°C (Ohm/100 m)**

7.500

**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	79.8
4	100 ± 15	100 ± 15	67.8

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8	100 ± 15	100 ± 15	61.7
10	100 ± 15	100 ± 15	59.8
16	100 ± 15	100 ± 15	55.7
20	100 ± 15	100 ± 15	53.8
25	100 ± 15	100 ± 15	51.8
31.25	100 ± 15	100 ± 10	49.9
62.5	100 ± 15	100 ± 10	43.9
100	100 ± 15	100 ± 10	39.8
200	100 ± 22	100 ± 10	33.8
250	100 ± 32	100 ± 10	31.8
300	100 ± 32	100 ± 10	30.3
350	100 ± 32	100 ± 10	28.9
400	100 ± 32	100 ± 10	27.8
450	100 ± 32	100 ± 10	26.7
500	100 ± 32	100 ± 10	25.8
625	100 ± 32	100 ± 10	23.9
750	100 ± 32	100 ± 10	22.3
860	100 ± 32	100 ± 10	21.1

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	43.000
4.000	75.000	76.200	40.000	31.000
8.000	75.000	70.100	40.000	24.900
10.000	75.000	68.200	40.000	23.000
16.000	75.000	64.100	38.000	18.900
20.000	75.000	62.200	37.000	17.000
25.000	75.000	60.200	36.000	15.000
31.250	75.000	58.300	35.100	13.100
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. Third party channel verified to TIA/EIA-568-C.2, Category 6A. Meets Component requirements for TIA 568-C.2 Category 6A Horizontal Cable, Values above 625MHz for Engineering Information Only

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
10GXS33 D151000	1,000 FT	41.000 LB	BLUE		CAT6A 4PRB U/UTP CMP REEL
10GXS33 0021000	1,000 FT	41.000 LB	RED		CAT6A 4PRB U/UTP CMP REEL
10GXS33 0031000	1,000 FT	41.000 LB	ORANGE		CAT6A 4PRB U/UTP CMP REEL
10GXS33 0041000	1,000 FT	43.000 LB	YELLOW		CAT6A 4PRB U/UTP CMP REEL
10GXS33 0051000	1,000 FT	41.000 LB	GREEN, DARK		CAT6A 4PRB U/UTP CMP REEL
10GXS33 0071000	1,000 FT	41.000 LB	VIOLET		CAT6A 4PRB U/UTP CMP REEL
10GXS33 0081000	1,000 FT	41.000 LB	GRAY		CAT6A 4PRB U/UTP CMP REEL
10GXS33 0091000	1,000 FT	41.000 LB	WHITE		CAT6A 4PRB U/UTP CMP REEL
10GXS33 0101000	1,000 FT	41.000 LB	BLACK		CAT6A 4PRB U/UTP CMP REEL
10GXS33D15A1000	1,000 FT	44.000 LB	BLUE		CAT6A 4PRB U/UTP CMP RIB

## METRIC MEASUREMENT VERSION

### 10GXS33 Multi-Conductor - Category 6A Bonded-Pair Cable

10GXS33D15U1000	1,000 FT	0.000	BLUE		CAT6A 4PRB U/UTP CMP BOX
10GXS33002A1000	1,000 FT	44.000 LB	RED		CAT6A 4PRB U/UTP CMP RIB
10GXS33002U1000	1,000 FT	0.000	RED		CAT6A 4PRB U/UTP CMP BOX
10GXS33003A1000	1,000 FT	44.000 LB	ORANGE		CAT6A 4PRB U/UTP CMP RIB
10GXS33003U1000	1,000 FT	0.000	ORANGE		CAT6A 4PRB U/UTP CMP BOX
10GXS33004A1000	1,000 FT	44.000 LB	YELLOW		CAT6A 4PRB U/UTP CMP RIB
10GXS33004U1000	1,000 FT	0.000	YELLOW		CAT6A 4PRB U/UTP CMP BOX
10GXS33005A1000	1,000 FT	44.000 LB	GREEN, DARK		CAT6A 4PRB U/UTP CMP RIB
10GXS33005U1000	1,000 FT	0.000	GREEN, DARK		CAT6A 4PRB U/UTP CMP BOX
10GXS33007A1000	1,000 FT	44.000 LB	VIOLET		CAT6A 4PRB U/UTP CMP RIB
10GXS33007U1000	1,000 FT	0.000	VIOLET		CAT6A 4PRB U/UTP CMP BOX
10GXS33008A1000	1,000 FT	44.000 LB	GRAY		CAT6A 4PRB U/UTP CMP RIB
10GXS33008U1000	1,000 FT	0.000	GRAY		CAT6A 4PRB U/UTP CMP BOX
10GXS33009A1000	1,000 FT	44.000 LB	WHITE		CAT6A 4PRB U/UTP CMP RIB
10GXS33009U1000	1,000 FT	0.000	WHITE		CAT6A 4PRB U/UTP CMP BOX
10GXS33010A1000	1,000 FT	44.000 LB	BLACK		CAT6A 4PRB U/UTP CMP RIB
10GXS33010U1000	1,000 FT	0.000	BLACK		CAT6A 4PRB U/UTP CMP BOX
10GXS33010Z1000	1,000 FT	43.000 LB	BLACK		CAT6A 4PRB U/UTP CMP

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