

10GX33 Multi-Conductor - Enhanced Category 6A Bonded-Pair Cable



For more Information
please call

1-800-Belden1



General Description:

CAT6A (625MHz), 4-Bonded-Pair, U/UTP-Unshielded, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, FEP Insulation, Patented Double-H Spline, Ripcord, Flamarrest® 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 |
|--------------------------------------|
| FEP - Fluorinated Ethylene Propylene |

Outer Shield

Outer Shield Material:

| Outer Shield Material |
|-----------------------|
| Unshielded |

Outer Jacket

Outer Jacket Material:

| Outer Jacket Trade Name | Outer Jacket Material |
|-------------------------|---------------------------------------|
| Flamarrest® | LS PVC - Low Smoke Polyvinyl Chloride |

Outer Jacket Ripcord: Yes

Overall Cable

Overall Cabling Separator Material: Patented RoundFlex H-Spline Center Member

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: 40 lbs/1000 ft.

Max. Recommended Pulling Tension: 45 lbs.

Min. Bend Radius/Minor Axis: 0.600 in.

Min. Bend/Installation: 3 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMP

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| | |
|---------------------------------------|---------------------------|
| CEC/C(UL) Specification: | CMP |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| 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): | 08/20/2008 |
| 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 |
| www.belden.com/p |

Flame Test

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

Suitability

| | |
|------------------------|----|
| Suitability - Outdoor: | No |
| Suitability - Burial: | No |

Plenum/Non-Plenum

| | |
|--------------------|--------|
| Plenum (Y/N): | Yes |
| Non-Plenum Number: | 10GX32 |

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

| |
|----------------------------|
| Capacitance (pF/ft) |
| 17.000 |

| | |
|-------------------------------------------|----|
| Maximum Capacitance Unbalance (pF/100 m): | 90 |
|-------------------------------------------|----|

Nominal Velocity of Propagation:

| |
|---------------|
| VP (%) |
| 68.000 |

Maximum Delay:

| |
|-------------------------|
| Delay (ns/100 m) |
| 538 @ 100MHz |

Max. Delay Skew:

| |
|------------------------------|
| Delay Skew (ns/100 m) |
| 30.000 |

Nom. Conductor DC Resistance:

| |
|---------------------------------|
| DCR @ 20°C (Ohm/1000 ft) |
| 7.500 |

Max. Operating Voltage - UL:

| |
|----------------|
| Voltage |
| 300 V RMS |

Maximum DCR Unbalanced:

| |
|---------------------------------|
| DCR Unbalance @ 20°C (%) |
| 2.000 |

Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. NEXT (dB) | Min. PSNEXT (dB) | Min. ACR (dB) | Min. PSACR (dB) | Min RL (dB) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|
| 1 | 2.100 | 75.3 | 73.3 | 73.3 | 71.3 | 20.000 |
| 4 | 3.800 | 66.3 | 64.3 | 62.5 | 60.5 | 23.000 |
| 8 | 5.300 | 61.8 | 59.8 | 56.4 | 54.4 | 24.500 |
| 10 | 5.900 | 60.3 | 58.3 | 54.4 | 52.4 | 25.000 |
| 16 | 7.500 | 57.2 | 55.2 | 49.8 | 47.8 | 25.000 |

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| | | | | | | |
|-------|--------|------|------|------|------|--------|
| 20 | 8.400 | 55.8 | 53.8 | 47.4 | 45.4 | 25.000 |
| 25 | 9.400 | 54.3 | 52.3 | 45.0 | 43.0 | 25.000 |
| 31.25 | 10.500 | 52.9 | 50.9 | 42.4 | 40.4 | 25.000 |
| 62.5 | 15.000 | 48.4 | 46.4 | 33.4 | 31.4 | 25.000 |
| 100 | 19.100 | 45.3 | 43.3 | 26.2 | 24.2 | 25.000 |
| 200 | 27.600 | 40.8 | 38.8 | 13.2 | 11.2 | 21.000 |
| 250 | 31.100 | 39.3 | 37.3 | 8.3 | 6.3 | 20.500 |
| 300 | 34.300 | 38.1 | 36.1 | 3.9 | 1.9 | 20.100 |
| 350 | 37.200 | 37.1 | 35.1 | N/A | N/A | 19.800 |
| 400 | 40.100 | 36.3 | 34.3 | N/A | N/A | 19.500 |
| 450 | 42.700 | 35.5 | 33.5 | N/A | N/A | 18.900 |
| 500 | 45.300 | 34.8 | 32.8 | N/A | N/A | 18.400 |
| 550 | 47.700 | 34.2 | 32.2 | N/A | N/A | 18.000 |
| 600 | 50.100 | 33.6 | 31.6 | N/A | N/A | 17.600 |
| 625 | 51.200 | 33.4 | 31.4 | N/A | N/A | 17.400 |
| 750 | 56.700 | 32.2 | 30.2 | N/A | N/A | 16.500 |
| 860 | 61.200 | 31.3 | 29.3 | N/A | N/A | 15.800 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ACRF (dB) | Min. PSACRF (dB) |
|-------------|------------------------------|------------------|----------------|------------------|
| 1 | 100 ± 15 | 100 ± 15 | 70.8 | 68.8 |
| 4 | 100 ± 15 | 100 ± 10.4 | 58.8 | 56.8 |
| 8 | 100 ± 15 | 100 ± 8 | 52.7 | 50.7 |
| 10 | 100 ± 15 | 100 ± 7.3 | 50.8 | 48.8 |
| 16 | 100 ± 15 | 100 ± 5.7 | 46.7 | 44.7 |
| 20 | 100 ± 15 | 100 ± 5 | 44.8 | 42.8 |
| 25 | 100 ± 15 | 100 ± 5 | 42.8 | 40.8 |
| 31.25 | 100 ± 15 | 100 ± 5 | 40.9 | 38.9 |
| 62.5 | 100 ± 15 | 100 ± 5 | 34.9 | 32.9 |
| 100 | 100 ± 15 | 100 ± 5 | 30.8 | 28.8 |
| 200 | 100 ± 22 | 100 ± 5 | 24.8 | 22.8 |
| 250 | 100 ± 32 | 100 ± 5 | 22.8 | 20.8 |
| 300 | 100 ± 32 | 100 ± 5 | 21.3 | 19.3 |
| 350 | 100 ± 32 | 100 ± 5 | 19.9 | 17.9 |
| 400 | 100 ± 32 | 100 ± 5 | 18.8 | 16.8 |
| 450 | 100 ± 32 | 100 ± 5 | 17.7 | 15.7 |
| 500 | 100 ± 32 | 100 ± 5 | 16.8 | 14.8 |
| 550 | 100 ± 32 | 100 ± 5 | 16.0 | 14.0 |
| 600 | 100 ± 32 | 100 ± 5 | 15.2 | 13.2 |
| 625 | 100 ± 32 | 100 ± 5 | 14.9 | 12.9 |
| 750 | | | 13.3 | 11.3 |
| 860 | | | 12.1 | 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 | 48.000 | 43.000 |
| 4.000 | 67.000 | 67.000 | 48.000 | 41.000 |
| 8.000 | 67.000 | 61.100 | 48.000 | 24.900 |
| 10.000 | 67.000 | 59.200 | 48.000 | 23.000 |
| 16.000 | 67.000 | 55.100 | 46.000 | 18.900 |
| 20.000 | 67.000 | 5.200 | 45.000 | 17.000 |
| 25.000 | 67.000 | 51.200 | 44.000 | 15.000 |
| 31.250 | 67.000 | 49.300 | 43.100 | |
| 62.500 | 66.600 | 43.300 | 40.000 | |
| 100.000 | 63.500 | 39.200 | 38.000 | |
| 200.000 | 59.000 | 33.200 | 35.000 | |
| 250.000 | 57.500 | 31.200 | 34.000 | |
| 300.000 | 56.300 | 29.700 | 33.200 | |
| 350.000 | 55.300 | 28.300 | 32.600 | |
| 400.000 | 54.500 | 27.200 | 32.000 | |
| 450.000 | 53.700 | 26.100 | 31.500 | |
| 500.000 | 53.000 | 25.200 | 31.000 | |
| 550.000 | 52.400 | 2.400 | | |
| 600.000 | 51.800 | 23.600 | | |
| 625.000 | 51.600 | 23.300 | | |
| 750.000 | 50.400 | 21.700 | | |
| 860.000 | 49.500 | 20.500 | | |

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Notes (Overall)

Notes: Jacket sequentially marked at 2 ft/1m. intervals. 0.295" cable dimension per TIA 6@1 equivalent diameter. Third party channel verified to TIA/EIA-568-C.2, Category 6A

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|----------------|----------|-------------|-------------|-------|---------------------------|
| 10GX33 D151000 | 1,000 FT | 47.000 LB | BLUE | C | CAT6A 4PRB U/UTP CMP REEL |
| 10GX33 0041000 | 1,000 FT | 47.000 LB | YELLOW | C | CAT6A 4PRB U/UTP CMP REEL |
| 10GX33 0051000 | 1,000 FT | 47.000 LB | GREEN, DARK | | CAT6A 4PRB U/UTP CMP REEL |
| 10GX33 0071000 | 1,000 FT | 47.000 LB | VIOLET | | CAT6A 4PRB U/UTP CMP REEL |
| 10GX33 0081000 | 1,000 FT | 47.000 LB | GRAY | C | CAT6A 4PRB U/UTP CMP REEL |
| 10GX33 0091000 | 1,000 FT | 47.000 LB | WHITE | C | CAT6A 4PRB U/UTP CMP REEL |
| 10GX33 0101000 | 1,000 FT | 47.000 LB | BLACK | | CAT6A 4PRB U/UTP CMP REEL |

Notes:
C = CRATE REEL PUT-UP.

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