

## 10GX13 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, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, FEP Insulation, Patented Double-H Splines, 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 Jacket

Outer Jacket Material:

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

**Outer Jacket Ripcord:** Yes

#### Overall Cable

**Overall Cabling Separator Material:** Patented 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:** 38 lbs/1000 ft.

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

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

**Min. Bend/Installation:** 3 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

**NEC/(UL) Specification:** CMP

**CEC/C(UL) Specification:** CMP

**EU Directive 2011/65/EU (ROHS II):** Yes

**Other Standards:** ISO/IEC 11801 ed 2.1 (2008) Class EA

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|                                       |                           |
|---------------------------------------|---------------------------|
| 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:**

|                  |
|------------------|
| <b>Country</b>   |
| 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 |
| Sunlight Resistance:   | No |

**Plenum/Non-Plenum**

|                    |        |
|--------------------|--------|
| Plenum (Y/N):      | Yes    |
| Non-Plenum Number: | 10GX12 |

### Electrical Characteristics (Overall)

**Nom. Mutual Capacitance:**

|                            |
|----------------------------|
| <b>Capacitance (pF/ft)</b> |
| 17.000                     |

|   |    |
|---|----|
| Maximum Capacitance Unbalance (pF/100 m): | 50 |
|---|----|

**Nominal Velocity of Propagation:**

|               |
|---------------|
| <b>VP (%)</b> |
| 68.000        |

**Maximum Delay:**

|                         |
|-------------------------|
| <b>Delay (ns/100 m)</b> |
| 537 @ 100MHz            |

**Typical Delay Skew:**

|                           |
|---------------------------|
| <b>Delay Skew (ns/ft)</b> |
| 35.000                    |

**Max. Delay Skew:**

|                              |
|------------------------------|
| <b>Delay Skew (ns/100 m)</b> |
| 45                           |

**Maximum Conductor DC Resistance:**

|                               |
|-------------------------------|
| <b>DCR @ 20°C (Ohm/100 m)</b> |
| 7.400                         |

**Max. Operating Voltage - UL:**

|                |
|----------------|
| <b>Voltage</b> |
| 300 V RMS      |

**Maximum DCR Unbalanced:**

|                                 |
|---------------------------------|
| <b>DCR Unbalance @ 20°C (%)</b> |
| 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      |

## 10GX13 Multi-Conductor - Enhanced Category 6A Nonbonded-Pair Cable

|       |        |      |      |        |
|-------|--------|------|------|--------|
| 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 |
| 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 | 33.5 |      | 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                    | 105+/- 10        | 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             |
| 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            | 38.000        | 10.900           |
| 20.000          | 67.000            | 53.200            | 37.000        | 9.000            |
| 25.000          | 67.000            | 51.200            | 32.000        | 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            |               |                  |

## 10GX13 Multi-Conductor - Enhanced Category 6A Nonbonded-Pair Cable

### Notes (Overall)

**Notes:** Jacket sequentially printed every 2 ft/1m. 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                |
|----------------|----------|-------------|-------------|-------|--------------------------|
| 10GX13 D151000 | 1,000 FT | 43.000 LB   | BLUE        |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 D152500 | 2,500 FT | 115.000 LB  | BLUE        |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 0041000 | 1,000 FT | 43.000 LB   | YELLOW      |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 0042500 | 2,500 FT | 115.000 LB  | YELLOW      |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 0045000 | 5,000 FT | 215.000 LB  | YELLOW      |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 0051000 | 1,000 FT | 43.000 LB   | GREEN, DARK |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 0071000 | 1,000 FT | 43.000 LB   | VIOLET      |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 0081000 | 1,000 FT | 43.000 LB   | GRAY        |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 0091000 | 1,000 FT | 43.000 LB   | WHITE       |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 0101000 | 1,000 FT | 43.000 LB   | BLACK       |       | CAT6A 4PR U/UTP CMP REEL |
| 10GX13 0101500 | 1,500 FT | 64.500      | BLACK       |       | CAT6A 4PR U/UTP CMP REEL |

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