

## 10GX32 Multi-Conductor - Enhanced Category 6A Bonded-Pair Cable



For more Information  
please call

1-800-Belden1



### Description:

23 AWG solid bare copper conductors, twisted pairs, see color code chart (below), Jacket (yellow, blue, gray, white, green, or black).

### Usage (Overall)

**Suitable Applications:**

Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, Noisy Environments, 10G Category 6A

### 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 Shield

**Outer Shield Material:**

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

#### Outer Jacket

**Outer Jacket Material:**

| Outer Jacket Material    |
|--------------------------|
| PVC - Polyvinyl Chloride |

#### Overall Cable

**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)

**Operating Temperature Range:** 0°C To +75°C

**Bulk Cable Weight:** 40 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 45 lbs.

**Min. Bend Radius/Minor Axis:** 2 in.

**Min. Bend/Installation:** 3.100 in.

## 10GX32 Multi-Conductor - Enhanced Category 6A Bonded-Pair Cable

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

|                                       |                                             |
|---------------------------------------|---------------------------------------------|
| NEC/(UL) Specification:               | CMR                                         |
| CEC/C(UL) Specification:              | CMR                                         |
| 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): | 12/09/2011                                  |
| 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                   |
| Other Specification:                  | Third Party Channel Verified to Category 6A |

#### Applicable Patents:

| Country | Patent  |
|---------|---------|
| US      | 5606151 |
| US      | 5734126 |
| US      | 7772494 |
| US      | 7838773 |
| US      | 8030571 |

#### Flame Test

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

#### Suitability

|                        |             |
|------------------------|-------------|
| Suitability - Indoor:  | Yes         |
| Suitability - Outdoor: | No          |
| Suitability - Aerial:  | No          |
| Suitability - Burial:  | No          |
| Sunlight Resistance:   | No - Indoor |

#### Plenum/Non-Plenum

|                |        |
|----------------|--------|
| Plenum (Y/N):  | No     |
| Plenum Number: | 10GX33 |

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

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

|                                           |     |
|-------------------------------------------|-----|
| Maximum Capacitance Unbalance (pF/100 m): | 330 |
|-------------------------------------------|-----|

#### Nominal Velocity of Propagation:

| VP (%) |
|--------|
| 64.000 |

#### Maximum Delay:

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

## 10GX32 Multi-Conductor - Enhanced Category 6A Bonded-Pair Cable

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             | 73.2          | 71.2            | 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      |
| 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          | 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             |

## 10GX32 Multi-Conductor - Enhanced Category 6A Bonded-Pair Cable

|     |          |         |      |      |
|-----|----------|---------|------|------|
| 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            | 53.200            | 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            | 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 marked at 2 ft. intervals. Third party channel verified to TIA/EIA-568-C.2, Category 6A. 0.295" cable dimension per TIA 6@1 equivalent diameter.

### Put Ups and Colors:

| Item #         | Putup    | Ship Weight | Color       | Notes | Item Desc                 |
|----------------|----------|-------------|-------------|-------|---------------------------|
| 10GX32 0041000 | 1,000 FT | 40.000 LB   | YELLOW      | C     | CAT6A 4PRB U/UTP CMR REEL |
| 10GX32 0061000 | 1,000 FT | 40.000 LB   | BLUE, LIGHT | C     | CAT6A 4PRB U/UTP CMR REEL |
| 10GX32 0081000 | 1,000 FT | 40.000 LB   | GRAY        | C     | CAT6A 4PRB U/UTP CMR REEL |
| 10GX32 0091000 | 1,000 FT | 40.000 LB   | WHITE       | C     | CAT6A 4PRB U/UTP CMR REEL |

**Notes:**  
C = CRATE REEL PUT-UP.

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Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.

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