



**Product:** [10GX13](#) 

10GX Category 6A Enhanced Cable, 4 Pair, U/UTP, CMP

## Product Description

10GX Category 6A Enhanced Premise Horizontal Cable (625MHz), 4 Pair, 23 AWG Solid Bare Copper Conductors, U/UTP, Plenum-CMP, Flamarrest® PVC-LS Jacket

## Technical Specifications

### Product Overview

|                        |                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------|
| Suitable Applications: | Premise Horizontal Cable, Ethernet up to 10GBASE-T, HDBaseT, PoE++, PoE+, PoE                   |
| Patent:                | <a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a> |

### Construction Details

#### Conductor

| AWG | Stranding | Material         | No. of Pairs |
|-----|-----------|------------------|--------------|
| 23  | Solid     | BC - Bare Copper | 4            |

#### Insulation

| Material                             | Color Code                                                 |
|--------------------------------------|------------------------------------------------------------|
| FEP - Fluorinated Ethylene Propylene | White & Blue, White & Orange, White & Green, White & Brown |

Bonded-Pair: No

#### Outer Jacket Material

| Separator Material                       | Material                                | Material Trade Name | Nominal Diameter | Ripcord |
|------------------------------------------|-----------------------------------------|---------------------|------------------|---------|
| Double H Cross-Web (Patented RoundFlex®) | PVC-LS - Polyvinyl Chloride (Low Smoke) | Flamarrest®         | 0.295 in         | Yes     |

### Electrical Characteristics

#### Electricals

| Max. Conductor DCR | Max. DCR Unbalance | Max. DCR Unbalanced Between Pairs [%] | Max. Capacitance Unbalance | Nom. Mutual Capacitance | Nom. Velocity of Prop. |
|--------------------|--------------------|---------------------------------------|----------------------------|-------------------------|------------------------|
| 74 Ohm/km          | 3%                 | 5%                                    | 50 pF/100m                 | 17 pF/ft                | 68%                    |

#### Delay

| Frequency [MHz] | Max. Delay    | Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] | Typical Delay Skew |
|-----------------|---------------|-----------------|------------------------------------------|--------------------|
| 100 MHz         | 537.6 ns/100m | 45 ns/100m      | 68%                                      | 35 ns/100m         |

#### High Freq

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. PSNEXT [dB] | Min. PSACR [dB] | Min. PSACRF (PSELFEXT) [dB] | Min. RL (Return Loss) [dB] | Max./Min. Input Impedance (unFitted) | Max./Min. Fitted Impedance | Min. PSANEXT | Min. PSAACRF | Min. TCL [dB] | Min. ELTCTL [dB] |
|-----------------|-----------------------------------|------------------|-----------------|-----------------------------|----------------------------|--------------------------------------|----------------------------|--------------|--------------|---------------|------------------|
| 1 MHz           | 2.1 dB/100m                       | 73.3 dB          | 71.2 dB         | 68.8 dB                     | 20.0 dB                    | 100 ± 15 Ohm                         | 100 ± 15 Ohm               | 67.0 dB      | 67.0 dB      | 40.0 dB       | 35.0 dB          |
| 4 MHz           | 3.8 dB/100m                       | 64.3 dB          | 60.5 dB         | 56.8 dB                     | 23.0 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 67.0 dB      | 40.0 dB       | 23.0 dB          |
| 8 MHz           | 5.3 dB/100m                       | 59.8 dB          | 54.4 dB         | 50.7 dB                     | 24.5 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 61.1 dB      | 40.0 dB       | 16.9 dB          |
| 10 MHz          | 5.9 dB/100m                       | 58.3 dB          | 52.4 dB         | 48.8 dB                     | 25.0 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 59.2 dB      | 40.0 dB       | 15.0 dB          |
| 16 MHz          | 7.5 dB/100m                       | 55.2 dB          | 47.8 dB         | 44.7 dB                     | 25.0 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 55.1 dB      | 40.0 dB       | 10.9 dB          |
| 20 MHz          | 8.4 dB/100m                       | 53.8 dB          | 45.4 dB         | 42.8 dB                     | 25.0 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 53.2 dB      | 38.0 dB       | 9.0 dB           |
| 25 MHz          | 9.4 dB/100m                       | 52.3 dB          | 43.0 dB         | 40.8 dB                     | 24.3 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 51.2 dB      | 36.0 dB       | 7.0 dB           |
| 31.25 MHz       | 10.5 dB/100m                      | 50.9 dB          | 40.4 dB         | 38.9 dB                     | 23.6 dB                    | 100 ± 15 Ohm                         | 100 ± 10 Ohm               | 67.0 dB      | 49.3 dB      | 35.1 dB       |                  |

|          |              |         |         |         |         |              |              |         |         |         |  |
|----------|--------------|---------|---------|---------|---------|--------------|--------------|---------|---------|---------|--|
| 62.5 MHz | 15.0 dB/100m | 46.4 dB | 31.4 dB | 32.9 dB | 21.5 dB | 100 ± 15 Ohm | 100 ± 10 Ohm | 66.6 dB | 43.3 dB | 32.0 dB |  |
| 100 MHz  | 19.1 dB/100m | 43.3 dB | 24.2 dB | 28.8 dB | 20.1 dB | 100 ± 15 Ohm | 100 ± 10 Ohm | 63.5 dB | 39.2 dB | 30.0 dB |  |
| 200 MHz  | 27.6 dB/100m | 38.8 dB | 11.2 dB | 22.8 dB | 18.0 dB | 100 ± 22 Ohm | 100 ± 10 Ohm | 59.0 dB | 33.2 dB | 27.0 dB |  |
| 250 MHz  | 31.1 dB/100m | 37.3 dB | 6.3 dB  | 20.8 dB | 17.3 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 57.5 dB | 31.2 dB | 26.0 dB |  |
| 300 MHz  | 34.3 dB/100m | 36.1 dB | 1.9 dB  | 19.3 dB | 16.8 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 56.3 dB | 29.7 dB | 25.2 dB |  |
| 350 MHz  | 37.2 dB/100m | 35.1 dB |         | 17.9 dB | 16.3 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 55.3 dB | 28.3 dB | 24.6 dB |  |
| 400 MHz  | 40.1 dB/100m | 34.3 dB |         | 16.8 dB | 15.9 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 54.5 dB | 27.2 dB | 24.0 dB |  |
| 450 MHz  | 42.7 dB/100m | 35.5 dB |         | 15.7 dB | 15.5 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 53.7 dB | 26.1 dB | 23.5 dB |  |
| 500 MHz  | 45.3 dB/100m | 32.8 dB |         | 14.8 dB | 15.2 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 53.0 dB | 25.2 dB | 23.0 dB |  |
| 550 MHz  | 47.7 dB/100m | 32.2 dB |         | 14.0 dB | 14.9 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 52.4 dB | 24.4 dB |         |  |
| 600 MHz  | 50.1 dB/100m | 31.6 dB |         | 13.2 dB | 14.7 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 51.8 dB | 23.6 dB |         |  |
| 625 MHz  | 51.2 dB/100m | 31.4 dB |         | 12.9 dB | 14.5 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 51.6 dB | 23.3 dB |         |  |
| 750 MHz  | 56.7 dB/100m | 30.2 dB |         | 11.3 dB | 14.0 dB |              |              | 50.4 dB | 21.7 dB |         |  |
| 860 MHz  | 61.2 dB/100m | 29.3 dB |         | 10.1 dB | 13.6 dB |              |              | 49.5 dB | 20.5 dB |         |  |

Voltage

| UL Voltage Rating         |
|---------------------------|
| 300 V (CMP), 300 V (CL3P) |

Mechanical Characteristics

Temperature

| UL Rating | Operating      | Installation | Storage        |
|-----------|----------------|--------------|----------------|
| 105°C     | -20°C To +75°C | 0°C To +50°C | -20°C To +75°C |

Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 1.25 in         | 3.0 in            |

|                    |               |
|--------------------|---------------|
| Max. Pull Tension: | 25 lbs        |
| Bulk Cable Weight: | 43 lbs/1000ft |

Standards and Compliance

|                                 |                                                                                                                            |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| Environmental Suitability:      | Plenum, Indoor                                                                                                             |
| Sustainability:                 | Product Lens™, Environmental Product Declaration (EPD) Available                                                           |
| Flammability / Fire Resistance: | NFPA 262, UL 910 (Plenum), FT6, FT6, IEC 60332-1-2                                                                         |
| NEC / UL Compliance:            | 800, CMP;CMP-LP (0.6A);CL3P-LP (0.6A)                                                                                      |
| CEC / C(UL) Compliance:         | CMP                                                                                                                        |
| ICEA Compliance:                | S-116-732-2013                                                                                                             |
| IEEE Compliance:                | IEEE 802.3bt Type 1, Type 2, Type 3, Type 4                                                                                |
| NEMA Compliance:                | ANSI/NEMA WC-66                                                                                                            |
| Data Category:                  | Category 6A                                                                                                                |
| TIA/EIA Compliance:             | ANSI/TIA-568.2-D Category 6A                                                                                               |
| Cenelec Compliance:             | Segregation class according EN50174-2=a                                                                                    |
| CPR Euroclass:                  | Eca                                                                                                                        |
| European Directive Compliance:  | EU CE Mark, EU Directive 2015/863/EU, EU Directive 2011/65/EU (ROHS II), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16 |
| APAC Compliance:                | China RoHS II (GB/T 26572-2011)                                                                                            |
| Other Standard Compliance(s):   | Verified Channel/Category 6A                                                                                               |

Part Number

|                    |        |
|--------------------|--------|
| Non-Plenum Number: | 10GX12 |
|--------------------|--------|

Variants

| Item #         | Color | Putup Type | Length   | UPC          |
|----------------|-------|------------|----------|--------------|
| 10GX13 0101000 | Black | Reel       | 1,000 ft | 612825102274 |
| 10GX13 0101500 | Black | Reel       | 1,500 ft | 612825102281 |
| 10GX13 D151000 | Blue  | Reel       | 1,000 ft | 612825102182 |
| 10GX13 D152500 | Blue  | Reel       | 2,500 ft | 612825102199 |
| 10GX13 0081000 | Gray  | Reel       | 1,000 ft | 612825102250 |

|                |        |      |          |              |
|----------------|--------|------|----------|--------------|
| 10GX13 0051000 | Green  | Reel | 1,000 ft | 612825102236 |
| 10GX13 0071000 | Purple | Reel | 1,000 ft | 612825102243 |
| 10GX13 0091000 | White  | Reel | 1,000 ft | 612825102267 |
| 10GX13 0041000 | Yellow | Reel | 1,000 ft | 612825102205 |
| 10GX13 0042500 | Yellow | Reel | 2,500 ft | 612825102212 |
| 10GX13 0045000 | Yellow | Reel | 5,000 ft | 612825102229 |

Product Notes

|        |                                                                                                                                                                                                                                                                                                                                    |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes: | Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 625 MHz are for Engineering Information Only. 0.295" Cable Dimension per TIA 6@1 Equivalent Diameter. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0. |
|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

History

|                      |                                                  |
|----------------------|--------------------------------------------------|
| Update and Revision: | Revision Number: 0.438 Revision Date: 06-05-2020 |
|----------------------|--------------------------------------------------|

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