



Product: [10GXS12](#)

10GXS Category 6A Enhanced Cable, 4 Pair, U/UTP, CMR

Product Description

10GXS Category 6A Enhanced Premise Horizontal Cable (625MHz), 4 Pair, 23 AWG Solid Bare Copper Conductors, U/UTP, Riser-CMR, PVC Jacket

Technical Specifications

Product Overview

|                        |  |
|------------------------|--|
| Suitable Applications: | Premise Horizontal Cable, Ethernet up to 10GBASE-T, Wi-Fi 6, Wi-Fi 5, PoE++, PoE+, PoE, Noisy Environments, Data Center EoR and MoR, Network Backbone, HDBaseT, HDBaseT 4K UHD |
| Patent:                | This product has one or more applicable patents. More information on patents can be found at <a href="https://www.belden.com/patents">https://www.belden.com/patents</a> .     |

Construction Details

Conductor

| Size   | Stranding | Material         | Number of Pairs |
|--------|-----------|------------------|-----------------|
| 23 AWG | Solid     | BC - Bare Copper | 4               |

Insulation

| Material        | Color Code   |
|-----------------|--|
| PO - Polyolefin | White & Blue, White & Orange, White & Green, White & Brown |

Outer Jacket

| Separator   | Material                 | Nom. Diameter      | Ripcord |
|---|--------------------------|--------------------|---------|
| Center Member (Patented EquiSpline®), EquiBlock™ Barrier Technology | PVC - Polyvinyl Chloride | 0.275 in (6.99 mm) | Yes     |

|                                   |                    |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.275 in (6.99 mm) |
|-----------------------------------|--------------------|

Electrical Characteristics

Electricals

| Max. Conductor DCR        | Max. Capacitance Unbalance |
|---------------------------|----------------------------|
| 82 Ohm/km (25 Ohm/1000ft) | 45 pF/100m                 |

Delay

| Frequency | Max. Delay    | Max. Delay Skew | Nom. Velocity of Prop. | Typical Delay Skew |
|-----------|---------------|-----------------|------------------------|--------------------|
| 100 MHz   | 537.6 ns/100m | 45 ns/100m      | 65%                    | 30 ns/100m         |

High Frequency

| 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) [Ohm] | Max./Min. Fitted Impedance [Ohm] | Min. PSANEXT [dB] | Min. PSAACRF [dB] | Min. TCL [dB] | Min. ELTCTL [dB] |
|-----------------|-----------------------------------|------------------|-----------------|-----------------------------|----------------------------|--|----------------------------------|-------------------|-------------------|---------------|------------------|
| 1               | 2.1 dB/100m                       | 75.3             | 73.2            | 74.8                        | 20.0                       | 100 ± 15                                   | 105 ± 10                         | 75.0              | 77.0              | 40.0          | 35.0             |
| 4               | 3.8 dB/100m                       | 66.3             | 62.5            | 62.8                        | 23.0                       | 100 ± 15                                   | 100 ± 15                         | 75.0              | 76.2              | 40.0          | 23.0             |
| 8               | 5.3 dB/100m                       | 61.8             | 56.5            | 56.7                        | 24.5                       | 100 ± 15                                   | 100 ± 15                         | 75.0              | 70.1              | 40.0          | 16.9             |
| 10              | 5.9 dB/100m                       | 60.3             | 54.4            | 54.8                        | 25.0                       | 100 ± 15                                   | 100 ± 15                         | 75.0              | 68.2              | 40.0          | 15.0             |
| 16              | 7.4 dB/100m                       | 57.2             | 49.8            | 50.7                        | 25.0                       | 100 ± 15                                   | 100 ± 15                         | 75.0              | 64.1              | 38.0          | 10.9             |
| 20              | 8.3 dB/100m                       | 55.8             | 47.5            | 48.8                        | 25.0                       | 100 ± 15                                   | 100 ± 15                         | 75.0              | 62.2              | 37.0          | 9.0              |
| 25              | 9.3 dB/100m                       | 54.3             | 45.0            | 46.8                        | 24.3                       | 100 ± 15                                   | 100 ± 15                         | 75.0              | 60.2              | 36.0          | 7.0              |
| 31.25           | 10.4 dB/100m                      | 52.9             | 42.5            | 44.9                        | 23.6                       | 100 ± 15                                   | 100 ± 10                         | 75.0              | 58.3              | 35.1          | 5.1              |

|      |              |      |      |      |      |          |          |      |      |      |  |
|------|--------------|------|------|------|------|----------|----------|------|------|------|--|
| 62.5 | 14.8 dB/100m | 48.4 | 33.6 | 38.9 | 21.5 | 100 ± 15 | 100 ± 10 | 73.6 | 52.3 | 32.0 |  |
| 100  | 18.9 dB/100m | 45.3 | 26.4 | 34.8 | 20.1 | 100 ± 15 | 100 ± 10 | 70.5 | 48.2 | 30.0 |  |
| 200  | 27.0 dB/100m | 40.8 | 13.8 | 28.8 | 18.0 | 100 ± 22 | 100 ± 10 | 66.0 | 42.2 | 27.0 |  |
| 250  | 30.4 dB/100m | 39.3 | 9.0  | 26.8 | 17.3 | 100 ± 32 | 100 ± 10 | 64.5 | 40.2 | 26.0 |  |
| 300  | 33.5 dB/100m | 38.1 | 4.6  | 25.3 | 16.8 | 100 ± 32 | 100 ± 10 | 63.3 | 38.7 | 25.2 |  |
| 350  | 36.3 dB/100m | 37.1 | 0.8  | 23.9 | 16.3 | 100 ± 32 | 100 ± 10 | 62.3 | 37.3 | 24.6 |  |
| 400  | 39.0 dB/100m | 36.3 |      | 22.8 | 15.9 | 100 ± 32 | 100 ± 10 | 61.5 | 36.2 | 24.0 |  |
| 450  | 41.5 dB/100m | 35.5 |      | 21.7 | 15.5 | 100 ± 32 | 100 ± 10 | 60.7 | 35.1 | 23.5 |  |
| 500  | 43.9 dB/100m | 34.8 |      | 20.8 | 15.2 | 100 ± 32 | 100 ± 10 | 60.0 | 34.2 | 23.0 |  |
| 550  | 46.2 dB/100m | 33.2 |      | 20.0 | 14.9 | 100 ± 32 | 100 ± 10 | 59.4 | 33.4 |      |  |
| 600  | 48.4 dB/100m | 32.6 |      | 19.2 | 14.7 | 100 ± 32 | 100 ± 10 | 58.8 | 32.6 |      |  |
| 625  | 49.5 dB/100m | 32.4 |      | 18.9 | 14.5 | 100 ± 32 | 100 ± 10 | 58.6 | 32.3 |      |  |
| 750  | 54.7 dB/100m | 32.2 |      | 17.3 | 14.0 |          |          | 57.4 | 30.7 |      |  |
| 860  | 58.9 dB/100m | 31.3 |      | 16.1 | 13.6 |          |          | 56.5 | 29.5 |      |  |

Voltage

| UL Voltage Rating         |
|---------------------------|
| 300 V (CMR), 300 V (CL3R) |

Mechanical Characteristics

Temperature

| UL Temperature | Operating      | Installation | Storage        |
|----------------|----------------|--------------|----------------|
| 90°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 (31.8 mm) | 2.75 in (69.9 mm) |

|                    |                |
|--------------------|----------------|
| Max. Pull Tension: | 25 lbs (11 kg) |
| Bulk Cable Weight: | 35 lbs/1000ft  |

Standards and Compliance

|                                  |   |
|----------------------------------|---|
| Environmental Suitability:       | Riser, Indoor   |
| Sustainability:                  | Product Lens™, Environmental Product Declaration (EPD) Available  |
| Flammability / Reaction to Fire: | UL 1666 Riser, FT4, FT4, IEC 60332-1-2  |
| CPR Compliance:                  | CPR Euroclass: Eca; CPR UKCA Class: Eca   |
| NEC / UL Compliance:             | Article 800, CMR;CMR-LP (0.6A);CL3R-LP (0.6A)   |
| CEC / C(UL) Compliance:          | CMR   |
| ICEA Compliance:                 | S-116-732   |
| 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  |
| ISO/IEC Compliance:              | ISO/IEC 11801-1, IEC 61156-5  |
| CENELEC Compliance:              | Segregation class according EN50174-2 = a   |
| European Directive Compliance:   | EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16 |
| UK Regulation Compliance:        | UKCA Mark   |
| APAC Compliance:                 | China RoHS II (GB/T 26572-2011)   |
| Other Standard Compliance(s):    | Verified Channel/Category 6A  |
| Plenum Number:                   | 10GXS13   |

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. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0. |
|--------|--|

History

|                      |  |
|----------------------|--|
| Update and Revision: | Revision Number: 0.317 Revision Date: 05-04-2022 |
|----------------------|--|

Variants

| Item #          | Color       | Putup Type  | Length   | UPC          |
|-----------------|-------------|-------------|----------|--------------|
| 10GXS12 0101000 | Black       | Reel        | 1,000 ft | 612825004226 |
| 10GXS12010A1000 | Black       | Reel-in-Box | 1,000 ft | 612825004318 |
| 10GXS12 0061000 | Blue, Light | Reel        | 1,000 ft | 612825004189 |
| 10GXS12006A1000 | Blue, Light | Reel-in-Box | 1,000 ft | 612825004271 |
| 10GXS12 0081000 | Gray        | Reel        | 1,000 ft | 612825004202 |
| 10GXS12008A1000 | Gray        | Reel-in-Box | 1,000 ft | 612825004295 |
| 10GXS12 0051000 | Green       | Reel        | 1,000 ft | 612825004172 |
| 10GXS12005A1000 | Green       | Reel-in-Box | 1,000 ft | 612825004264 |
| 10GXS12 0031000 | Orange      | Reel        | 1,000 ft | 612825004158 |
| 10GXS12003A1000 | Orange      | Reel-in-Box | 1,000 ft | 612825004240 |
| 10GXS12 0071000 | Purple      | Reel        | 1,000 ft | 612825004196 |
| 10GXS12007A1000 | Purple      | Reel-in-Box | 1,000 ft | 612825004288 |
| 10GXS12 0021000 | Red         | Reel        | 1,000 ft | 612825004141 |
| 10GXS12002A1000 | Red         | Reel-in-Box | 1,000 ft | 612825004233 |
| 10GXS12 0091000 | White       | Reel        | 1,000 ft | 612825004219 |
| 10GXS12009A1000 | White       | Reel-in-Box | 1,000 ft | 612825004301 |
| 10GXS12 0041000 | Yellow      | Reel        | 1,000 ft | 612825004165 |
| 10GXS12004A1000 | Yellow      | Reel-in-Box | 1,000 ft | 612825004257 |

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