



Part Number: 10GXS33

Category 6A Enhanced (625MHz), 4 Bonded-Pairs, U/UTP, CMP

Product Description

Category 6A Enhanced (625MHz), 4 Bonded-Pairs, U/UTP, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, FEP Teflon® Insulation, Patented EquiSpline™ & EquiBlock™ Technologies, Ripcord, Flamarrest® LS-PVC Jacket, Sequential Markings at 2 Foot/1 Meter Intervals.

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Environmental Space: | Plenum |
| Suitable Applications: | Premise Horizontal Cable, 10 Gigabit Ethernet, Wireless, Wi-Fi, 100Base TX, 100Base VG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio AES51, RS-422, Noisy Environments, PoE, PoE Plus |

Physical Characteristics (Overall)

Conductor

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

| | |
|------------------------|---|
| Conductor Count: | 8 |
| Total Number of Pairs: | 4 |

Insulation

| Material | |
|--------------------------------------|-----|
| FEP - Fluorinated Ethylene Propylene | |
| Bonded-Pair: | Yes |

Color Chart

| Number | Color |
|--------|------------------------------|
| 1 | White/Blue Stripe & Blue |
| 2 | White/Orange Stripe & Orange |
| 3 | White/Green Stripe & Green |
| 4 | White/Brown Stripe & Brown |

Outer Jacket Material

| Material | Material Trade Name | Nominal Diameter | Ripcord |
|---------------------------------------|---------------------|------------------|---------|
| LS PVC - Low Smoke Polyvinyl Chloride | Flamarrest® | 0.265 in | Yes |

Electrical Characteristics

Conductor DCR

| Max. Conductor DCR | Max. DCR Unbalance | Max DCR Unbalanced Between Pairs [%] |
|--------------------|--------------------|--------------------------------------|
| 75 Ohm/km | 3 % | 5 % |

Capacitance

| Max. Capacitance Unbalance | Nom. Mutual Capacitance |
|----------------------------|-------------------------|
| 90 pF/100m | 17 pF/ft |

Delay

| Frequency [MHz] | Max. Delay | Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|-----------------|------------|-----------------|--|
|-----------------|------------|-----------------|--|

| | | | |
|---------|---------------|------------|------|
| 100 MHz | 537.6 ns/100m | 45 ns/100m | 69 % |
|---------|---------------|------------|------|

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 | 75.3 dB | 73.2 dB | 79.8 dB | 20.0 dB | 100 ± 15 Ohm | 105 ± 10 Ohm | 75.0 dB | 77.0 dB | 40.0 dB | 43.0 dB |
| 4 MHz | 3.8 dB/100m | 66.3 dB | 62.5 dB | 67.8 dB | 23.0 dB | 100 ± 15 Ohm | 100 ± 15 Ohm | 75.0 dB | 76.2 dB | 40.0 dB | 41.0 dB |
| 8 MHz | 5.3 dB/100m | 61.8 dB | 56.5 dB | 61.7 dB | 24.5 dB | 100 ± 15 Ohm | 100 ± 15 Ohm | 75.0 dB | 70.1 dB | 40.0 dB | 24.9 dB |
| 10 MHz | 5.9 dB/100m | 60.3 dB | 54.4 dB | 59.8 dB | 25.0 dB | 100 ± 15 Ohm | 100 ± 15 Ohm | 75.0 dB | 68.2 dB | 40.0 dB | 23.0 dB |
| 16 MHz | 7.4 dB/100m | 57.2 dB | 49.8 dB | 55.7 dB | 25.0 dB | 100 ± 15 Ohm | 100 ± 15 Ohm | 75.0 dB | 64.1 dB | 38.0 dB | 18.9 dB |
| 20 MHz | 8.3 dB/100m | 55.8 dB | 47.4 dB | 53.8 dB | 25.0 dB | 100 ± 15 Ohm | 100 ± 15 Ohm | 75.0 dB | 62.2 dB | 37.0 dB | 17.0 dB |
| 25 MHz | 9.3 dB/100m | 54.3 dB | 45.0 dB | 51.8 dB | 24.3 dB | 100 ± 15 Ohm | 100 ± 15 Ohm | 75.0 dB | 60.2 dB | 36.0 dB | 15.0 dB |
| 31.25 MHz | 10.4 dB/100m | 52.9 dB | 42.5 dB | 49.9 dB | 23.6 dB | 100 ± 15 Ohm | 100 ± 10 Ohm | 75.0 dB | 58.3 dB | 35.1 dB | 13.1 dB |
| 62.5 MHz | 14.8 dB/100m | 48.4 dB | 33.6 dB | 43.9 dB | 21.5 dB | 100 ± 15 Ohm | 100 ± 10 Ohm | 73.6 dB | 52.3 dB | 32.0 dB | |
| 100 MHz | 18.9 dB/100m | 45.3 dB | 26.4 dB | 39.8 dB | 20.1 dB | 100 ± 15 Ohm | 100 ± 10 Ohm | 70.5 dB | 48.2 dB | 30.0 dB | |
| 200 MHz | 27.0 dB/100m | 40.8 dB | 13.8 dB | 33.8 dB | 18.9 dB | 100 ± 22 Ohm | 100 ± 10 Ohm | 66.0 dB | 42.2 dB | 27.0 dB | |
| 250 MHz | 30.4 dB/100m | 39.3 dB | 9.0 dB | 31.8 dB | 17.3 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 64.5 dB | 40.2 dB | 26.0 dB | |
| 300 MHz | 33.5 dB/100m | 38.1 dB | 4.6 dB | 30.3 dB | 16.8 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 63.3 dB | 38.7 dB | 25.2 dB | |
| 350 MHz | 36.3 dB/100m | 37.1 dB | 0.8 dB | 28.9 dB | 16.3 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 62.3 dB | 37.3 dB | 24.6 dB | |
| 400 MHz | 39.0 dB/100m | 36.3 dB | | 27.8 dB | 15.9 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 61.5 dB | 36.2 dB | 24.0 dB | |
| 450 MHz | 41.5 dB/100m | 35.5 dB | | 26.7 dB | 15.5 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 60.7 dB | 35.1 dB | 23.5 dB | |
| 500 MHz | 43.9 dB/100m | 34.8 dB | | 25.8 dB | 15.2 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 60.0 dB | 34.2 dB | 23.0 dB | |
| 550 MHz | 46.2 dB/100m | 33.2 dB | | 25.0 dB | 14.9 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 59.4 dB | 33.4 dB | | |
| 600 MHz | 48.4 dB/100m | 32.6 dB | | 24.2 dB | 14.7 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 58.8 dB | 32.6 dB | | |
| 625 MHz | 49.5 dB/100m | 32.4 dB | | 23.9 dB | 14.5 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 58.6 dB | 32.3 dB | | |
| 750 MHz | 54.7 dB/100m | 32.2 dB | | 22.3 dB | 14.0 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 57.4 dB | 30.7 dB | | |
| 860 MHz | 58.9 dB/100m | 31.3 dB | | 21.1 dB | 13.6 dB | 100 ± 32 Ohm | 100 ± 10 Ohm | 56.5 dB | 29.5 dB | | |

Segregation class according EN50174-2: a

Voltage

UL Voltage Rating

300 V RMS

Temperature Range

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

Mechanical Characteristics

| | |
|--------------------------------------|---------------|
| Bulk Cable Weight: | 38 lbs/1000ft |
| Max Recommended Pulling Tension: | 40 lbs |
| Min Bend Radius During Installation: | 2.5 in |
| Min Bend Radius/Minor Axis: | 0.5 in |

Standards

| | |
|-------------------------------|--|
| NEC/(UL) Specification: | CMP |
| CEC/C(UL) Specification: | CMP |
| ISO/IEC Compliance: | 11801 ed 2.2 (2011) Class EA |
| Data Category: | Category 6A |
| ANSI Compliance: | S-116-732-2013 Category 6A, ANSI/NEMA WC-66 Category 6A |
| Telecommunications Standards: | ANSI/TIA-568-C.2 Category 6A |
| IEEE Specification: | IEEE 802.3bt Type 1, Type 2, Type 3, Type 4 |
| Other Specification: | Verified Channel/Category 6A |
| Other Standards: | C(UL)US CMP 105C OR (UL) CMP-LP (0.7A) OR CL3P-LP (0.7A) |

Applicable Environmental and Other Programs

| | |
|---------------------------------|-----|
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/96/EC (WEEE): | Yes |

| | |
|--|------------|
| EU Directive 2003/11/EC (BFR): | Yes |
| EU Directive 2003/96/EC (BFR): | Yes |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| EU Directive 2012/19/EU (WEEE): | Yes |
| EU Directive 2015/863/EU: | Yes |
| EU Directive Compliance: | Yes |
| EU CE Mark: | Yes |
| EU REACH SVHC Compliance (yyyy-mm-dd): | 2017-07-10 |
| EU RoHS Compliance Date (yyyy-mm-dd): | 2015-12-31 |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |

Suitability

| | |
|------------------------------------|-----|
| Suitability - Aerial: | No |
| Suitability - Burial: | No |
| Suitability - Hazardous Locations: | No |
| Suitability - Indoor: | Yes |
| Suitability - Non-Halogenated: | No |
| Suitability - Oil Resistance: | No |
| Suitability - Outdoor: | No |
| Suitability - Sunlight Resistance: | No |

Flammability, LSOH, Toxicity Testing

| | |
|--------------------|--------------------------|
| UL Flammability: | NFPA 262 Plenum (UL 910) |
| CSA Flammability: | FT6 |
| UL voltage rating: | 300 V RMS |

Plenum/Non-Plenum

| | |
|---------------|-----|
| Plenum (Y/N): | Yes |
|---------------|-----|

Part Number

| | |
|--------------------|-----------------------------|
| Non-Plenum Number: | 10GXS12 (Nonbonded)/10GXS32 |
|--------------------|-----------------------------|

Variants

| Item # | Color | UPC |
|-----------------|--------|--------------|
| 10GXS33 0101000 | Black | 612825377238 |
| 10GXS33010A1000 | Black | 612825377207 |
| 10GXS33 D151000 | Blue | 612825377276 |
| 10GXS33D15A1000 | Blue | 612825377122 |
| 10GXS33 0081000 | Gray | 612825377221 |
| 10GXS33008A1000 | Gray | 612825377184 |
| 10GXS33009A1000 | Gray | 612825377191 |
| 10GXS33 0051000 | Green | 612825377283 |
| 10GXS33005A1000 | Green | 612825377160 |
| 10GXS33 0031000 | Orange | 612825373322 |
| 10GXS33003A1000 | Orange | 612825377146 |
| 10GXS33 0021000 | Red | 612825373308 |
| 10GXS33002A1000 | Red | 612825377139 |
| 10GXS33 0071000 | Violet | 612825377290 |
| 10GXS33007A1000 | Violet | 612825377177 |
| 10GXS33 0091000 | White | 612825373315 |
| 10GXS33 0041000 | Yellow | 612825377214 |
| 10GXS33004A1000 | Yellow | 612825377153 |

| | |
|---------|---|
| Patent: | https://www.belden.com/resources/patents |
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Product Notes

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| Notes: | 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: 0.236 Revision Date: 08-22-2019

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