



Part Number: 10GX12

CAT6A 10GX, 4pr, UTP, PVC Jkt, CMR

Product Description

CAT6A (625MHz), 4-Pair, U/UTP-unshielded, Riser-CMR 90C OR CMR-LP (0.5A) OR CL3R-LP (0.5A), Premise Horizontal cable, 23 AWG solid bare copper conductors, polyolefin insulation, patented Double-H spline, ripcord, PVC jacket

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Environmental Space: | Riser |
| 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 | Stranding | Material | No. of Pairs |
|-----|-----------|------------------|--------------|
| 23 | Solid | BC - Bare Copper | 4 |

| | |
|-----------------------------|---|
| Total Number of Conductors: | 8 |
|-----------------------------|---|

Insulation

| Material |
|-----------------|
| PO - Polyolefin |

Color Chart

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

Outer Shield Material

| Material |
|----------|
| N/A |

Outer Jacket Material

| Material | Nominal Diameter | Ripcord | Separator Material |
|--------------------------|------------------|---------|---|
| PVC - Polyvinyl Chloride | 0.295 in | Yes | Patented RoundFlex - Double H Cross-Web |

Electrical Characteristics

Capacitance

| Max. Capacitance Unbalance | Nom.Mutual Capacitance |
|----------------------------|------------------------|
| 50 pF/100m | 17 pF/ft |

| | |
|------------|------------------|
| Shielding: | UTP - Unshielded |
|------------|------------------|

Construction and Dimensions

| | |
|------------------------|---|
| Total Number of Pairs: | 4 |
|------------------------|---|

Conductor DCR

| Max. Conductor DCR | Max. DCR Unbalance | Max DCR Unbalanced Between Pairs [%] |
|--------------------|--------------------|--------------------------------------|
| 7.4 Ohm/100m | 3 % | 5 % |

Delay

| Max. Delay | Max. Delay Description | Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] | Typical Delay Skew |
|-------------------------|------------------------|-----------------|--|--------------------|
| @ 100 MHz 537.6 ns/100m | 537 @ 100MHz | 45 ns/100m | 64 % | 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 | 33.5 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 |
|-------------------|
| 300V RMS |

Applicable Standards & Environmental Programs

| | |
|--|---|
| CEC/C(UL) Specification: | CMR |
| EU Directive 2000/53/EC (ELV): | Yes |
| EU Directive 2002/95/EC (RoHS): | 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 |
| Other Standards: | C(UL)US CMR 90C OR (UL) CMR-LP (0.5A) OR CL3R-LP (0.5A) |
| EU CE Mark: | Yes |
| EU REACH SVHC Compliance (yyyy-mm-dd): | 2017-07-10 |

| | |
|---------------------------------------|---|
| EU RoHS Compliance Date (yyyy-mm-dd): | 2004-01-01 |
| CPR Euroclass: | Eca |
| CA Prop 65 (CJ for Wire & Cable): | Yes |
| MII Order #39 (China RoHS): | Yes |
| Telecommunications Standards: | ANSI/TIA-568-C.2 Category 6A |
| Other Specification: | Verified Channel/Category 6A |
| Patent: | http://www.belden.com/p |

Standards

| | |
|-------------------------|---|
| ISO/IEC Compliance: | 11801 ed 2.2 (2011) Class EA |
| ANSI/TIA Category: | Category 6A |
| ANSI Compliance: | S-116-732-2013 Category 6A, ANSI/NEMA WC-66 Category 6A |
| IEEE Specification: | POE per 802.3af & POE+ per 802.3at-2009 |
| NEC Articles: | 800 |
| NEC/(UL) Specification: | CMR |

Flame Test

| | |
|---------------------|---------------|
| C(UL) Flammability: | FT4 |
| UL Flammability: | UL 1666 Riser |

Safety

| | |
|--------------------|-----------|
| UL Voltage Rating: | 300 V RMS |
|--------------------|-----------|

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 |

Mechanical Characteristics

| | |
|----------------------------------|----------------|
| Storage Temp Range: | -20°C To +75°C |
| Installation Temp Range: | +5°C To +50°C |
| Operating Temp Range: | -20°C To +75°C |
| Bulk Cable Weight: | 36(lbs/1000ft) |
| Max Recommended Pulling Tension: | 25(lbs) |
| Min Bend Radius/Minor Axis: | 1.25(in) |
| Min Bend Radius/Installation: | 3.0(in) |

Temperature Range

| | |
|-----------------|------|
| UL Temp Rating: | 90°C |
|-----------------|------|

Plenum/Non-Plenum

| | |
|----------------|--------|
| Plenum (Y/N): | No |
| Plenum Number: | 10GX13 |

History

Variants

| Item # | Color |
|----------------|--------|
| 10GX12 0101000 | BLACK |
| 10GX12 0101500 | BLACK |
| 10GX12 0061000 | BLUE |
| 10GX12 0062500 | BLUE |
| 10GX12 0081000 | GRAY |
| 10GX12 0051000 | GREEN |
| 10GX12 0031000 | ORANGE |
| 10GX12 0071000 | PURPLE |
| 10GX12 0021000 | RED |
| 10GX12 0091000 | WHITE |
| 10GX12 0091500 | WHITE |
| 10GX12 0041000 | YELLOW |
| 10GX12 0041500 | YELLOW |

© 2017 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with EU RoHS(Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be instock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

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