

10GXS12 Multi-Conductor - Category 6A Nonbonded-Pair Cable



For more Information
please call

1-800-Belden1



General Description:

Category 6A Enhanced (625MHz), 4-Unbonded-Pair, CMR, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, PO Insulation, Patented EquiSpline™ & EquiBlock™ Technologies, Ripcord, PVC Jacket

Usage (Overall)

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:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4 | 23 | Solid | BC - Bare Copper |

Total Number of Conductors: 8

Insulation

Insulation Material:

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

Separator

Separator Material: Patented EquiSpline Central Member

Outer Jacket

Outer Jacket Material:

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

Outer Jacket Ripcord: Yes

Overall Cable

Overall Cabling Separator Material: Patent Pending EquiBlock Barrier Tape

Overall Nominal Diameter: 0.273 in.

Pair

Pair Color Code Chart:

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

Mechanical Characteristics (Overall)

Storage Temperature Range: -20°C To +75°C

Installation Temperature Range: +5°C To +50°C

Operating Temperature Range: -20°C To +75°C

UL Temperature Rating: 90C

Bulk Cable Weight: 33 lbs/1000 ft.

10GXS12 Multi-Conductor - Category 6A Nonbonded-Pair Cable

| | |
|-----------------------------------|-----------|
| Max. Recommended Pulling Tension: | 40 lbs. |
| Min. Bend Radius/Minor Axis: | 1.100 in. |
| Min. Bend/Installation: | 2.500 in. |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|---------------------------------------|---|
| NEC/(UL) Specification: | CMR |
| NEC Articles: | 800 |
| CEC/C(UL) Specification: | CMR |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| Other Standards: | ISO/IEC 11801 ed 2 Amendment 2:2010 Class EA |
| 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): | 03/31/2015 |
| 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 |
| ANSI Specification: | ANSI/TIA 568-C.2 Category 6A |
| Other Specification: | C(UL)US CMR 90C OR (UL) CMR-LP (0.6A) OR CL3R-LP (0.6A) |

Applicable Patents:

| | |
|------------------|--|
| Country | |
| www.belden.com/p | |

Flame Test

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

Suitability

| | |
|------------------------|-----|
| Suitability - Indoor: | Yes |
| Suitability - Outdoor: | No |
| Suitability - Burial: | No |
| Sunlight Resistance: | No |
| Oil Resistance: | No |
| Non-halogenated: | No |

Plenum/Non-Plenum

| | |
|--------------------|---------|
| Plenum (Y/N): | No |
| Plenum Number: | 10GXS13 |
| Non-Plenum Number: | 10GXS12 |

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

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

| | |
|---|----|
| Maximum Capacitance Unbalance (pF/100 m): | 90 |
|---|----|

Nominal Velocity of Propagation:

| | |
|--------|--------|
| VP (%) | 65.000 |
|--------|--------|

Maximum Delay:

| | |
|------------------|---------|
| Delay (ns/100 m) | 537.000 |
|------------------|---------|

Typical Delay Skew:

| | |
|--------------------|--|
| Delay Skew (ns/ft) | |
|--------------------|--|

10GXS12 Multi-Conductor - Category 6A Nonbonded-Pair Cable

30.000

Max. Delay Skew:

Delay Skew (ns/100 m)

45.000

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)

7.900

Max. Operating Voltage - UL:

Voltage

300 V RMS

Maximum DCR Unbalanced:

| Description | DCR Unbalance @ 20°C (%) |
|------------------------|--------------------------|
| Conductor-to-Conductor | 3.000 |
| Pair-to-Pair | 5.000 |

Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. PSNEXT (dB) | Min. PSACR (dB) | Min RL (dB) |
|-------------|-----------------------------|------------------|-----------------|-------------|
| 1 | 2.100 | 75.3 | 73.2 | 20.000 |
| 4 | 3.800 | 66.3 | 62.5 | 23.000 |
| 8 | 5.300 | 61.8 | 56.5 | 24.500 |
| 10 | 5.900 | 60.3 | 54.4 | 25.000 |
| 16 | 7.400 | 57.2 | 49.8 | 25.000 |
| 20 | 8.300 | 55.8 | 47.5 | 25.000 |
| 25 | 9.300 | 54.3 | 45.0 | 24.300 |
| 31.25 | 10.400 | 52.9 | 42.5 | 23.600 |
| 62.5 | 14.800 | 48.4 | 33.6 | 21.500 |
| 100 | 18.900 | 45.3 | 26.4 | 20.100 |
| 200 | 27.000 | 40.8 | 13.8 | 18.000 |
| 250 | 30.400 | 39.3 | 9.0 | 17.300 |
| 300 | 33.500 | 38.1 | 4.6 | 16.800 |
| 350 | 36.300 | 37.1 | 0.8 | 16.300 |
| 400 | 39.000 | 36.3 | | 15.900 |
| 450 | 41.500 | 35.5 | | 15.500 |
| 500 | 43.900 | 34.8 | | 15.200 |
| 550 | 46.200 | 33.2 | | 14.900 |
| 600 | 48.400 | 32.6 | | 14.700 |
| 625 | 49.500 | 32.4 | | 14.500 |
| 750 | 54.700 | 32.2 | | 14.000 |
| 860 | 58.900 | 31.3 | | 13.600 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. PSACRF (dB) |
|-------------|------------------------------|------------------|------------------|
| 1 | 100 ± 15 | 105 ± 10 | 74.8 |
| 4 | 100 ± 15 | 100 ± 15 | 62.8 |
| 8 | 100 ± 15 | 100 ± 15 | 56.7 |
| 10 | 100 ± 15 | 100 ± 15 | 54.8 |
| 16 | 100 ± 15 | 100 ± 15 | 50.7 |
| 20 | 100 ± 15 | 100 ± 15 | 48.8 |
| 25 | 100 ± 15 | 100 ± 15 | 46.8 |
| 31.25 | 100 ± 15 | 100 ± 10 | 44.9 |
| 62.5 | 100 ± 15 | 100 ± 10 | 38.9 |
| 100 | 100 ± 15 | 100 ± 10 | 34.8 |
| 200 | 100 ± 22 | 100 ± 10 | 28.8 |
| 250 | 100 ± 32 | 100 ± 10 | 26.8 |
| 300 | 100 ± 32 | 100 ± 10 | 25.3 |
| 350 | 100 ± 32 | 100 ± 10 | 23.9 |
| 400 | 100 ± 32 | 100 ± 10 | 22.8 |
| 450 | 100 ± 32 | 100 ± 10 | 21.7 |
| 500 | 100 ± 32 | 100 ± 10 | 20.8 |
| 625 | 100 ± 32 | 100 ± 10 | 18.9 |
| 750 | 100 ± 32 | 100 ± 10 | 17.3 |
| 860 | 100 ± 32 | 100 ± 10 | 16.1 |

Premise Cable Electrical Table 4:

| Frequency (MHz) | Min. PSANEXT (dB) | Min. PSAACRF (dB) | Min. TCL (dB) | Min. ELTCTL (dB) |
|-----------------|-------------------|-------------------|---------------|------------------|
| 1.000 | 75.000 | 77.000 | 40.000 | 35.000 |

10GXS12 Multi-Conductor - Category 6A Nonbonded-Pair Cable

| | | | | |
|---------|--------|--------|--------|--------|
| 4.000 | 75.000 | 76.200 | 40.000 | 23.000 |
| 8.000 | 75.000 | 70.100 | 40.000 | 16.900 |
| 10.000 | 75.000 | 68.200 | 40.000 | 15.000 |
| 16.000 | 75.000 | 64.100 | 38.000 | 10.900 |
| 20.000 | 75.000 | 62.200 | 37.000 | 9.000 |
| 25.000 | 75.000 | 60.200 | 36.000 | 7.000 |
| 31.250 | 75.000 | 58.300 | 35.100 | 5.100 |
| 62.500 | 73.600 | 52.300 | 32.000 | |
| 100.000 | 70.500 | 48.200 | 30.000 | |
| 200.000 | 66.000 | 42.200 | 27.000 | |
| 250.000 | 64.500 | 40.200 | 26.000 | |
| 300.000 | 63.300 | 38.700 | 25.200 | |
| 350.000 | 62.300 | 37.300 | 24.600 | |
| 400.000 | 61.500 | 36.200 | 24.000 | |
| 450.000 | 60.700 | 35.100 | 23.500 | |
| 500.000 | 60.000 | 34.200 | 23.000 | |
| 550.000 | 59.400 | 33.400 | | |
| 600.000 | 58.800 | 32.600 | | |
| 625.000 | 58.600 | 32.300 | | |
| 750.000 | 57.400 | 30.700 | | |
| 860.000 | 56.500 | 29.500 | | |

Notes (Overall)

Notes: Jacket sequentially marked at 2 ft. intervals. Meets Component requirements for TIA 568-C.2 Category 6A Horizontal Cable, Values above 625MHz for Engineering Information Only

Notes (Cont'd.):

C(UL)US CMR-LP (0.6A) OR CL3R-LP (0.6A)

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|-----------------|----------|-------------|-------------|-------|--------------------------|
| 10GXS12 0021000 | 1,000 FT | 38.000 LB | RED | | CAT6A 4PR U/UTP CMR REEL |
| 10GXS12 0031000 | 1,000 FT | 38.000 LB | ORANGE | | CAT6A 4PR U/UTP CMR REEL |
| 10GXS12 0041000 | 1,000 FT | 38.000 LB | YELLOW | | CAT6A 4PR U/UTP CMR REEL |
| 10GXS12 0051000 | 1,000 FT | 38.000 LB | GREEN, DARK | | CAT6A 4PR U/UTP CMR REEL |
| 10GXS12 0061000 | 1,000 FT | 38.000 LB | BLUE, LIGHT | | CAT6A 4PR U/UTP CMR REEL |
| 10GXS12 0071000 | 1,000 FT | 38.000 LB | VIOLET | | CAT6A 4PR U/UTP CMR REEL |
| 10GXS12 0081000 | 1,000 FT | 38.000 LB | GRAY | | CAT6A 4PR U/UTP CMR REEL |
| 10GXS12 0091000 | 1,000 FT | 38.000 LB | WHITE | | CAT6A 4PR U/UTP CMR REEL |
| 10GXS12 0101000 | 1,000 FT | 38.000 LB | BLACK | | CAT6A 4PR U/UTP CMR REEL |
| 10GXS12002A1000 | 1,000 FT | 41.000 LB | RED | | CAT6A 4PR U/UTP CMR RIB |
| 10GXS12003A1000 | 1,000 FT | 41.000 LB | ORANGE | | CAT6A 4PR U/UTP CMR RIB |
| 10GXS12004A1000 | 1,000 FT | 41.000 LB | YELLOW | | CAT6A 4PR U/UTP CMR RIB |
| 10GXS12005A1000 | 1,000 FT | 41.000 LB | GREEN, DARK | | CAT6A 4PR U/UTP CMR RIB |
| 10GXS12006A1000 | 1,000 FT | 41.000 LB | BLUE, LIGHT | | CAT6A 4PR U/UTP CMR RIB |
| 10GXS12007A1000 | 1,000 FT | 41.000 LB | VIOLET | | CAT6A 4PR U/UTP CMR RIB |
| 10GXS12008A1000 | 1,000 FT | 41.000 LB | GRAY | | CAT6A 4PR U/UTP CMR RIB |
| 10GXS12009A1000 | 1,000 FT | 41.000 LB | WHITE | | CAT6A 4PR U/UTP CMR RIB |
| 10GXS12010A1000 | 1,000 FT | 41.000 LB | BLACK | | CAT6A 4PR U/UTP CMR RIB |

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