

## 10GXS12 Multi-Conductor - Category 6A Unbonded-Pair Cable



For more Information  
please call

1-800-Belden1

**General Description:**

Category 6A Enhanced (625MHz), 4-Unbonded-Pair, Riser-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 Diameter:**

| Nom. Dia. (in.) |
|-----------------|
| 0.273           |

Outer Jacket Ripcord:

Yes

**Overall Cable**

Overall Cabling Separator Material:

Patent Pending EquiBlock Barrier Tape

**Pair****Pair Color Code Chart:**

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

75C

## 10GXS12 Multi-Conductor - Category 6A Unbonded-Pair Cable

|                                   |                 |
|-----------------------------------|-----------------|
| Bulk Cable Weight:                | 33 lbs/1000 ft. |
| 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 &amp; 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                 |

## 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:

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**Delay Skew (ns/ft)**

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                      | 34.2             |                 | 14.900      |
| 600         | 48.400                      | 33.6             |                 | 14.700      |
| 625         | 49.500                      | 33.4             |                 | 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) |
|-----------------|-------------------|-------------------|---------------|------------------|
|-----------------|-------------------|-------------------|---------------|------------------|

## 10GXS12 Multi-Conductor - Category 6A Unbonded-Pair Cable

|         |        |        |        |        |
|---------|--------|--------|--------|--------|
| 1.000   | 75.000 | 77.000 | 40.000 | 35.000 |
| 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. Third party channel verified to TIA/EIA-568-C.2, Category 6A. Meets Component requirements for TIA 568-C.2 Category 6A Horizontal Cable, Values above 625MHz for Engineering Information Only

## 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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Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А