

3612 Multi-Conductor - Enhanced Category 6 Nonbonded-Pair Cable



For more Information
please call

1-800-Belden1



General Description:

CAT6+ (400MHz), 4-Pair, U/UTP-Unshielded, Riser-CMR, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented X-Spline, Ripcord, PVC jacket

Usage (Overall)

Suitable Applications: Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments

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 |
|---------------------|
| Polyolefin |

Outer Shield

Outer Shield Material:

| Outer Shield Material |
|-----------------------|
| Unshielded |

Outer Jacket

Outer Jacket Material:

| Outer Jacket Material | Nom. Wall Thickness (in.) |
|-----------------------|---------------------------|
| PVC | 0.017 |

Outer Jacket Diameter:

| Nom. Dia. (in.) |
|-----------------|
| 0.235 |

Outer Jacket Ripcord: Yes

Overall Cable

Overall Cabling Separator Material: Patented X-Spline Center Member

Overall Nominal Diameter: 0.235 in.

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: -30°C To +75°C

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

Operating Temperature Range: 0°C To +75°C

UL Temperature Rating: 75°C

Bulk Cable Weight: 28 lbs/1000 ft.

Max. Recommended Pulling Tension: 45 lbs.

Min. Bend Radius/Minor Axis: 0.750 in.

Min. Bend/Installation: 2.250 in.

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Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|---------------------------------------|-------------------------------------|
| NEC/UL Specification: | CMR |
| CEC/C(UL) Specification: | CMR |
| EU Directive 2011/65/EU (ROHS II): | Yes |
| Other Standards: | ISO/IEC 11801 ed 2.1 (2008) Class E |
| 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): | 04/03/2009 |
| 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 6 - TIA 568.C.2 |

Applicable Patents:

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

Flame Test

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

Suitability

| | |
|------------------------|-----|
| Suitability - Indoor: | Yes |
| Suitability - Outdoor: | No |
| Suitability - Aerial: | No |
| Suitability - Burial: | No |
| Sunlight Resistance: | No |

Plenum/Non-Plenum

| | |
|----------------|------|
| Plenum (Y/N): | No |
| Plenum Number: | 3613 |

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

| |
|---------------------|
| Capacitance (pF/ft) |
| 15.5 |

| | |
|---|-----|
| Maximum Capacitance Unbalance (pF/100 m): | 330 |
|---|-----|

Nominal Velocity of Propagation:

| |
|--------|
| VP (%) |
| 70.000 |

Maximum Delay:

| Freq. (MHz) | Delay (ns/100 m) |
|-------------|------------------|
| 100.000 | 537.600 |

Typical Delay Skew:

| |
|--------------------|
| Delay Skew (ns/ft) |
| 35.000 |

Maximum Conductor DC Resistance:

| |
|------------------------|
| DCR @ 20°C (Ohm/100 m) |
| 7.700 |

Max. Operating Voltage - UL:

| |
|-----------|
| Voltage |
| 300 V RMS |

Maximum DCR Unbalanced:

| |
|--------------------------|
| DCR Unbalance @ 20°C (%) |
| 3.000 |

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Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

| Freq. (MHz) | Max. Attenuation (dB/100 m) | Min. NEXT (dB) | Min. PSNEXT (dB) | Min. ACR (dB) | Min. PSACR (dB) | Min RL (dB) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|
| 0.772 | 1.800 | 81.0 | 81.0 | 79.2 | 79.2 | |
| 1 | 2.000 | 79.3 | 79.3 | 77.3 | 77.3 | 20.000 |
| 4 | 3.700 | 70.3 | 70.3 | 66.6 | 66.6 | 23.000 |
| 8 | 5.200 | 65.8 | 65.8 | 60.6 | 60.6 | 24.500 |
| 10 | 5.800 | 64.3 | 64.3 | 58.5 | 58.5 | 25.000 |
| 16 | 7.400 | 61.2 | 61.2 | 53.9 | 53.9 | 25.000 |
| 20 | 8.300 | 59.8 | 59.8 | 51.5 | 51.5 | 25.000 |
| 25 | 9.300 | 58.3 | 58.3 | 49.1 | 49.1 | 24.300 |
| 31.25 | 10.400 | 56.9 | 56.9 | 46.5 | 46.5 | 23.600 |
| 62.5 | 15.000 | 52.4 | 52.4 | 37.4 | 37.4 | 21.500 |
| 100 | 19.300 | 49.3 | 49.3 | 30.0 | 30.0 | 20.800 |
| 155 | 24.600 | 46.5 | 46.5 | 21.8 | 21.8 | 19.500 |
| 200 | 28.300 | 44.8 | 44.8 | 16.5 | 16.5 | 18.700 |
| 250 | 32.100 | 43.3 | 43.3 | 11.2 | 11.2 | 18.000 |
| 300 | 35.600 | 42.1 | 42.1 | 6.5 | 6.5 | 17.500 |
| 350 | 38.900 | 41.1 | 40.1 | 2.3 | 2.3 | 17.000 |
| 400 | 42.000 | 38.3 | 38.3 | -3.7 | -3.7 | 16.600 |
| 450 | 45.000 | 37.5 | 37.5 | | | 16.200 |
| 500 | 47.900 | 36.8 | 36.8 | | | 15.900 |
| 550 | 50.600 | 36.2 | 36.2 | | | 15.600 |
| 600 | 53.300 | 35.6 | 35.6 | | | 15.400 |
| 650 | 55.900 | 35.1 | 35.1 | | | 15.100 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Min. ACRF (dB) | Min. PSACRF (dB) |
|-------------|------------------------------|----------------|------------------|
| .772 | | 75.0 | 73.0 |
| 1 | 100 ± 15 | 72.8 | 70.8 |
| 4 | 100 ± 15 | 60.8 | 58.8 |
| 8 | 100 ± 15 | 54.7 | 52.7 |
| 10 | 100 ± 15 | 52.8 | 50.8 |
| 16 | 100 ± 15 | 48.7 | 46.7 |
| 20 | 100 ± 15 | 46.8 | 44.8 |
| 25 | 100 ± 15 | 44.8 | 42.8 |
| 31.25 | 100 ± 15 | 42.9 | 40.9 |
| 62.5 | 100 ± 15 | 36.9 | 34.9 |
| 100 | 100 ± 15 | 32.8 | 30.8 |
| 155 | 100 ± 22 | 28.9 | 26.9 |
| 200 | 100 ± 22 | 26.8 | 24.8 |
| 250 | 100 ± 32 | 24.8 | 22.8 |
| 300 | 100 ± 32 | 23.3 | 21.3 |
| 350 | 100 ± 32 | 21.9 | 19.9 |
| 400 | 100 ± 32 | 20.8 | 18.8 |
| 450 | 100 ± 32 | 19.7 | 17.7 |
| 500 | 100 ± 32 | 18.8 | 16.8 |
| 550 | 100 ± 32 | 18.0 | 16.0 |
| 600 | 100 ± 32 | 17.2 | 15.2 |
| 650 | 100 ± 32 | 16.5 | 14.5 |

Premise Cable Electrical Table 4:

| Frequency (MHz) | Min. TCL (dB) | Min. ELTCTL (dB) |
|-----------------|---------------|------------------|
| 0.772 | 40.000 | 37.200 |
| 1.000 | 40.000 | 35.000 |
| 4.000 | 40.000 | 23.000 |
| 8.000 | 40.000 | 16.900 |
| 10.000 | 40.000 | 15.000 |
| 16.000 | 38.000 | 10.900 |
| 20.000 | 37.000 | 9.000 |
| 25.000 | 36.000 | 7.000 |
| 31.250 | 35.100 | |
| 62.500 | 32.000 | |
| 100.000 | 30.000 | |
| 155.000 | 28.100 | |
| 200.000 | 27.000 | |
| 250.000 | 26.000 | |

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Notes (Overall)

Notes: Jacket sequentially marked at 2 ft/1m. intervals. Third party verified to ANSI/TIA-568-C.2 Category 6. Values above 400 MHz are for engineering information only.

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|-------------|-------------|-------|--------------------------|
| 3612 003A1000 | 1,000 FT | 29.000 LB | ORANGE | C | CAT6E 4PR U/UTP CMR RIB |
| 3612 003U1000 | 1,000 FT | 27.000 LB | ORANGE | | CAT6E 4PR U/UTP CMR BOX |
| 3612 004A1000 | 1,000 FT | 29.000 LB | YELLOW | C | CAT6E 4PR U/UTP CMR RIB |
| 3612 004U1000 | 1,000 FT | 27.000 LB | YELLOW | | CAT6E 4PR U/UTP CMR BOX |
| 3612 0041000 | 1,000 FT | 27.000 LB | YELLOW | C | CAT6E 4PR U/UTP CMR REEL |
| 3612 0042500 | 2,500 FT | 67.500 LB | YELLOW | | CAT6E 4PR U/UTP CMR REEL |
| 3612 005A1000 | 1,000 FT | 29.000 LB | GREEN, DARK | C | CAT6E 4PR U/UTP CMR RIB |
| 3612 005U1000 | 1,000 FT | 27.000 LB | GREEN, DARK | | CAT6E 4PR U/UTP CMR BOX |
| 3612 0051000 | 1,000 FT | 27.000 LB | GREEN, DARK | C | CAT6E 4PR U/UTP CMR REEL |
| 3612 006A1000 | 1,000 FT | 29.000 LB | BLUE, LIGHT | C | CAT6E 4PR U/UTP CMR RIB |
| 3612 006U1000 | 1,000 FT | 27.000 LB | BLUE, LIGHT | | CAT6E 4PR U/UTP CMR BOX |
| 3612 0061000 | 1,000 FT | 27.000 LB | BLUE, LIGHT | C | CAT6E 4PR U/UTP CMR REEL |
| 3612 0062500 | 2,500 FT | 67.500 LB | BLUE, LIGHT | | CAT6E 4PR U/UTP CMR REEL |
| 3612 007A1000 | 1,000 FT | 29.000 LB | VIOLET | C | CAT6E 4PR U/UTP CMR RIB |
| 3612 007U1000 | 1,000 FT | 27.000 LB | VIOLET | | CAT6E 4PR U/UTP CMR BOX |
| 3612 008A1000 | 1,000 FT | 29.000 LB | GRAY | C | CAT6E 4PR U/UTP CMR RIB |
| 3612 008U1000 | 1,000 FT | 27.000 LB | GRAY | | CAT6E 4PR U/UTP CMR BOX |
| 3612 0081000 | 1,000 FT | 27.000 LB | GRAY | C | CAT6E 4PR U/UTP CMR REEL |
| 3612 009A1000 | 1,000 FT | 29.000 LB | WHITE | C | CAT6E 4PR U/UTP CMR RIB |
| 3612 009U1000 | 1,000 FT | 27.000 LB | WHITE | | CAT6E 4PR U/UTP CMR BOX |
| 3612 0091000 | 1,000 FT | 27.000 LB | WHITE | C | CAT6E 4PR U/UTP CMR REEL |
| 3612 0092500 | 2,500 FT | 67.500 LB | WHITE | | CAT6E 4PR U/UTP CMR REEL |
| 3612 010A1000 | 1,000 FT | 29.000 LB | BLACK | C | CAT6E 4PR U/UTP CMR RIB |
| 3612 010U1000 | 1,000 FT | 27.000 LB | BLACK | | CAT6E 4PR U/UTP CMR BOX |
| 3612 0101000 | 1,000 FT | 27.000 LB | BLACK | C | CAT6E 4PR U/UTP CMR REEL |

Notes:

C = CRATE REEL PUT-UP.

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