

3613 Multi-Conductor - Enhanced Category 6 Nonbonded-Pair Cable



For more Information
please call

1-800-Belden1



Description:

23 AWG Solid Bare Copper Conductors, Dual FRPO/FEP Insulation, X-Spline Center Member, Rip Cord, Flamarrest® 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 |
|--|
| FRPO/FEP - Flame Retardant Polyolefin/Fluorinated Ethylene Propylene |

Outer Shield

Outer Shield Material:

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

Outer Jacket

Outer Jacket Material:

| Outer Jacket Trade Name | Outer Jacket Material | Nom. Wall Thickness (in.) |
|-------------------------|---------------------------------------|---------------------------|
| Flamarrest(R) | LS PVC - Low Smoke Polyvinyl Chloride | 0.017 |

Outer Jacket Diameter:

| Nom. Dia. (in.) |
|-----------------|
| 0.237 |

Outer Jacket Ripcord: Yes

Overall Cable

Overall Cabling Separator Material: X-Spline Center Member

Overall Nominal Diameter: 0.237 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: -20°C To +75°C

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| | |
|-----------------------------------|-----------------|
| Installation Temperature Range: | +5°C To +50°C |
| Operating Temperature Range: | 0°C To +75°C |
| UL Temperature Rating: | 75°C |
| Bulk Cable Weight: | 32 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 45 lbs. |
| Min. Bend Radius/Minor Axis: | 1 in. |
| Min. Bend/Installation: | 2.400 in. |

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

| | |
|---------------------------------------|-------------------------------------|
| NEC/(UL) Specification: | CMP |
| CEC/C(UL) Specification: | CMP |
| 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 |
| Other Specification: | UL Verified to Category 6 |

Applicable Patents:

| Country | Patent |
|---------|---------|
| US | 5563377 |
| US | 6074503 |
| US | 7663061 |
| US | 7977575 |

Flame Test

| | |
|-------------------|----------|
| UL Flame Test: | NFPA 262 |
| C(UL) Flame Test: | FT6 |

Suitability

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

Plenum/Non-Plenum

| | |
|--------------------|------|
| Plenum (Y/N): | Yes |
| Non-Plenum Number: | 3612 |

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

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

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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 (%)
5.000

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) | Min. SRL (dB) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|---------------|
| 0.772 | 1.800 | 81.00 | 79.00 | 79.2 | 77.2 | | |
| 1 | 2.000 | 79.31 | 77.31 | 77.3 | 75.3 | 20.000 | 27.0 |
| 4 | 3.700 | 70.28 | 68.28 | 66.6 | 64.6 | 23.000 | 27.0 |
| 8 | 5.200 | 65.77 | 63.77 | 60.6 | 58.6 | 24.500 | 27.0 |
| 10 | 5.800 | 64.31 | 62.31 | 58.5 | 56.5 | 25.000 | 27.0 |
| 16 | 7.400 | 61.25 | 59.25 | 53.9 | 51.9 | 25.000 | 27.0 |
| 20 | 8.300 | 59.80 | 57.80 | 51.5 | 49.5 | 25.000 | 27.0 |
| 25 | 9.300 | 58.35 | 56.35 | 49.1 | 47.1 | 24.300 | 26.0 |
| 31.25 | 10.400 | 56.89 | 54.89 | 46.5 | 44.5 | 23.600 | 25.1 |
| 62.5 | 15.000 | 52.38 | 50.38 | 37.4 | 35.4 | 21.500 | 22.1 |
| 100 | 19.300 | 49.31 | 47.31 | 30.0 | 28.0 | 20.800 | 20.0 |
| 155 | 24.600 | 46.46 | 44.46 | 21.9 | 19.9 | 19.500 | 18.1 |
| 200 | 28.300 | 44.80 | 42.80 | 16.5 | 14.5 | 18.700 | 17.0 |
| 250 | 32.100 | 43.35 | 41.35 | 11.2 | 9.2 | 18.000 | 16.0 |
| 300 | 35.600 | 42.16 | 40.16 | 6.5 | 4.5 | 17.500 | 15.2 |
| 350 | 38.900 | 41.15 | 39.15 | 2.3 | 0.3 | 17.000 | 14.6 |
| 400 | 42.000 | 40.28 | 38.28 | | | 16.600 | 14.0 |
| 450 | 45.000 | 39.52 | 37.52 | | | 16.200 | 13.5 |
| 500 | 47.900 | 38.83 | 36.83 | | | 15.900 | 13.0 |
| 550 | 50.600 | 38.21 | 36.21 | | | 15.600 | 12.6 |
| 600 | 53.300 | 37.64 | 35.64 | | | 15.400 | 12.2 |
| 650 | 55.900 | 37.12 | 35.12 | | | 15.100 | 11.9 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Min. ACRF (dB) | Min. PSACRF (dB) |
|-------------|------------------------------|----------------|------------------|
| .772 | | 75.0 | 72.0 |
| 1 | 100 ± 15 | 72.8 | 69.8 |
| 4 | 100 ± 15 | 60.8 | 57.8 |
| 8 | 100 ± 15 | 54.7 | 51.7 |
| 10 | 100 ± 15 | 52.8 | 49.8 |
| 16 | 100 ± 15 | 48.7 | 45.7 |
| 20 | 100 ± 15 | 46.8 | 43.8 |
| 25 | 100 ± 15 | 44.8 | 41.8 |
| 31.25 | 100 ± 15 | 42.9 | 39.9 |

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| | | | |
|------|----------|------|------|
| 62.5 | 100 ± 15 | 36.9 | 33.9 |
| 100 | 100 ± 15 | 32.8 | 29.8 |
| 155 | 100 ± 22 | 28.9 | 25.9 |
| 200 | 100 ± 22 | 26.8 | 23.8 |
| 250 | 100 ± 32 | 24.8 | 21.8 |
| 300 | 100 ± 32 | 23.3 | 20.3 |
| 350 | 100 ± 32 | 21.9 | 18.9 |
| 400 | 100 ± 32 | 20.8 | 17.8 |
| 450 | 100 ± 32 | 19.7 | 16.7 |
| 500 | 100 ± 32 | 18.8 | 15.8 |
| 550 | 100 ± 32 | 18.0 | 15.0 |
| 600 | 100 ± 32 | 17.2 | 14.2 |
| 650 | 100 ± 32 | 16.5 | 13.5 |

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 | |

Notes (Overall)

Notes: Jacket sequentially marked at 2 ft./1m intervals. Third party verified to ANSI/TIA-568-C.2 Category 6. Values above 350MHz are for engineering information only.

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|-------------|-------------|-------|--------------------------|
| 3613 D15A1000 | 1,000 FT | 33.000 LB | BLUE | | CAT6E 4PR U/UTP CMP RIB |
| 3613 D15U1000 | 1,000 FT | 30.000 LB | BLUE | | CAT6E 4PR U/UTP CMP BOX |
| 3613 D151000 | 1,000 FT | 31.000 LB | BLUE | | CAT6E 4PR U/UTP CMP REEL |
| 3613 D152500 | 2,500 FT | 72.500 LB | BLUE | | CAT6E 4PR U/UTP CMP REEL |
| 3613 002A1000 | 1,000 FT | 33.000 LB | RED | | CAT6E 4PR U/UTP CMP RIB |
| 3613 003A1000 | 1,000 FT | 33.000 LB | ORANGE | | CAT6E 4PR U/UTP CMP RIB |
| 3613 0031000 | 1,000 FT | 31.000 LB | ORANGE | | CAT6E 4PR U/UTP CMP REEL |
| 3613 004A1000 | 1,000 FT | 33.000 LB | YELLOW | | CAT6E 4PR U/UTP CMP RIB |
| 3613 004U1000 | 1,000 FT | 30.000 LB | YELLOW | | CAT6E 4PR U/UTP CMP BOX |
| 3613 0041000 | 1,000 FT | 31.000 LB | YELLOW | | CAT6E 4PR U/UTP CMP REEL |
| 3613 0042500 | 2,500 FT | 72.500 LB | YELLOW | | CAT6E 4PR U/UTP CMP REEL |
| 3613 005A1000 | 1,000 FT | 33.000 LB | GREEN, DARK | | CAT6E 4PR U/UTP CMP RIB |
| 3613 0051000 | 1,000 FT | 31.000 LB | GREEN, DARK | | CAT6E 4PR U/UTP CMP REEL |
| 3613 0052500 | 2,500 FT | 72.500 LB | GREEN, DARK | | CAT6E 4PR U/UTP CMP REEL |
| 3613 007A1000 | 1,000 FT | 33.000 LB | VIOLET | | CAT6E 4PR U/UTP CMP RIB |
| 3613 008A1000 | 1,000 FT | 33.000 LB | GRAY | | CAT6E 4PR U/UTP CMP RIB |
| 3613 008U1000 | 1,000 FT | 30.000 LB | GRAY | | CAT6E 4PR U/UTP CMP BOX |
| 3613 0081000 | 1,000 FT | 31.000 LB | GRAY | | CAT6E 4PR U/UTP CMP REEL |
| 3613 009A1000 | 1,000 FT | 33.000 LB | WHITE | | CAT6E 4PR U/UTP CMP RIB |
| 3613 009U1000 | 1,000 FT | 30.000 LB | WHITE | | CAT6E 4PR U/UTP CMP BOX |
| 3613 0091000 | 1,000 FT | 31.000 LB | WHITE | | CAT6E 4PR U/UTP CMP REEL |
| 3613 0092500 | 2,500 FT | 72.500 LB | WHITE | | CAT6E 4PR U/UTP CMP REEL |
| 3613 010A1000 | 1,000 FT | 33.000 LB | BLACK | | CAT6E 4PR U/UTP CMP RIB |

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|---------------|----------|-----------|-------|--|--------------------------|
| 3613 0101000 | 1,000 FT | 31.000 LB | BLACK | | CAT6E 4PR U/UTP CMP REEL |
| 3613 0102500 | 2,500 FT | 72.500 LB | BLACK | | CAT6E 4PR U/UTP CMP REEL |
| 3613 012A1000 | 1,000 FT | 33.000 LB | PINK | | CAT6E 4PR U/UTP CMP RIB |

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