

4812 Multi-Conductor - Enhanced Category 6 Nonbonded-Pair Cable



For more Information
please call

1-800-Belden1



General Description:

CAT6+ (600MHz), 4-Pair, U/UTP-Unshielded, Riser-CMR, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, X Spline, Ripcord, PVC Jacket

Usage (Overall)

Suitable Applications:

Premise Horizontal Cable, Gigabit Ethernet, POE, POE+, 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 |
|---------------------|
| PO - Polyolefin |

Outer Shield

Outer Shield Material:

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

Outer Jacket

Outer Jacket Material:

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

Outer Jacket Diameter:

| Nom. Dia. (in.) |
|-----------------|
| 0.255 |

Outer Jacket Ripcord:

Yes

Overall Cable

Overall Cabling Separator Material:

Patented X-Spline Center Member

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 +60°C |
| Bulk Cable Weight: | 31 lbs/1000 ft. |
| Max. Recommended Pulling Tension: | 45 lbs. |
| Min. Bend Radius/Minor Axis: | 1 in. |
| Min. Bend/Installation: | 2.500 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 |
| 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): | 01/01/2004 |
| 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: | C(UL)US CMR 75C OR (UL) CMR-LP (0.5A) OR CL3R-LP (0.5A) |

Applicable Patents:

Country
www.belden.com/p

Flame Test

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

Suitability

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

Plenum/Non-Plenum

| | |
|----------------|------|
| Plenum (Y/N): | No |
| Plenum Number: | 4813 |

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

Capacitance (pF/ft)
15.500

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

Nominal Velocity of Propagation:

VP (%)
68.000

Maximum Delay:

Delay (ns/100 m)
538 @ 100MHz

Max. Delay Skew:

Delay Skew (ns/100 m)
25.000

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
6.600

Max. Operating Voltage - UL:

Voltage
300 V RMS

Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
3

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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 | 1.700 | 83 | 82 | 81.3 | 80.3 | |
| 1 | 1.900 | 81.3 | 80.3 | 79.4 | 78.4 | 20.000 |
| 4 | 3.500 | 72.3 | 71.3 | 68.8 | 67.8 | 23.000 |
| 8 | 4.900 | 67.8 | 66.8 | 62.8 | 61.8 | 24.500 |
| 10 | 5.500 | 66.3 | 65.3 | 60.8 | 59.8 | 25.000 |
| 16 | 7.000 | 63.2 | 62.2 | 56.3 | 55.3 | 25.000 |
| 20 | 7.800 | 61.8 | 60.8 | 54.0 | 53.0 | 25.000 |
| 25 | 8.700 | 60.3 | 59.3 | 51.6 | 50.6 | 25.000 |
| 31.25 | 9.800 | 58.9 | 57.9 | 49.1 | 48.1 | 24.300 |
| 62.5 | 14.100 | 54.4 | 53.4 | 40.3 | 39.3 | 22.200 |
| 100 | 18.000 | 51.3 | 50.3 | 33.3 | 32.3 | 20.800 |
| 155 | 22.700 | 48.4 | 47.4 | 24.8 | 23.8 | 19.500 |
| 200 | 26.200 | 46.8 | 45.8 | 20.6 | 19.6 | 18.700 |
| 250 | 29.600 | 45.3 | 44.3 | 15.8 | 14.8 | 18.000 |
| 300 | 32.700 | 44.1 | 43.1 | 11.4 | 10.4 | 17.500 |
| 350 | 35.600 | 43.1 | 42.1 | 7.5 | 6.5 | 17.000 |
| 400 | 38.400 | 42.3 | 41.3 | 3.9 | 2.9 | 16.600 |
| 450 | 41.000 | 41.5 | 40.5 | 0.5 | -0.5 | 16.200 |
| 500 | 43.600 | 40.8 | 39.8 | -2.8 | -3.8 | 15.900 |
| 550 | 46.000 | 40.2 | 39.2 | -5.8 | -6.8 | 12.900 |
| 600 | 48.400 | 39.6 | 38.6 | -8.7 | -9.7 | 12.700 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ACRF (dB) | Min. PSACRF (dB) |
|-------------|------------------------------|------------------|----------------|------------------|
| 0.772 | | 102 ± 15 | 77.0 | 75.0 |
| 1 | 100 ± 15 | 100 ± 15 | 74.8 | 72.8 |
| 4 | 100 ± 15 | 100 ± 15 | 62.8 | 60.8 |
| 8 | 100 ± 15 | 100 ± 15 | 56.7 | 54.7 |
| 10 | 100 ± 15 | 100 ± 15 | 54.8 | 52.8 |
| 16 | 100 ± 15 | 100 ± 15 | 50.7 | 48.7 |
| 20 | 100 ± 15 | 100 ± 15 | 48.8 | 46.8 |
| 25 | 100 ± 15 | 100 ± 15 | 46.8 | 44.8 |
| 31.25 | 100 ± 15 | 100 ± 15 | 44.9 | 42.9 |
| 62.5 | 100 ± 15 | 100 ± 15 | 38.9 | 36.9 |
| 100 | 100 ± 15 | 100 ± 15 | 34.8 | 32.8 |
| 155 | 100 ± 22 | 100 ± 15 | 31.0 | 29.0 |
| 200 | 100 ± 22 | 100 ± 15 | 28.8 | 26.8 |
| 250 | 100 ± 32 | 100 ± 15 | 26.8 | 24.8 |
| 300 | 100 ± 32 | 100 ± 15 | 25.3 | 23.3 |
| 350 | 100 ± 32 | 100 ± 15 | 23.9 | 21.9 |
| 400 | 100 ± 32 | 100 ± 15 | 22.8 | 20.8 |
| 450 | 100 ± 32 | 100 ± 15 | 21.7 | 19.7 |
| 500 | 100 ± 32 | 100 ± 15 | 20.8 | 18.8 |
| 550 | 100 ± 32 | 100 ± 15 | 20.0 | 18.0 |
| 600 | 100 ± 32 | 100 ± 15 | 19.2 | 17.2 |

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)

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Notes: Belden IBDN. Jacket sequentially marked at 2 ft./1m intervals. Values above 600 MHz are for Engineering Information Only. Third party verified to ANSI/TIA-568-C.2, Category 6.

Reference (Overall)

Previous Part Number: 24586685, 24586685+US, 24586785, 24586785+US, 25086885, 25086885+US, 24586985, 24586985+US, 24586956, 24586956+US, 24586915, 24586915+US, 24586185, 24586385, 24586385+US, 24586315, 24586315+US, 24586451+US

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---------------|----------|-------------|-------------|-------|---------------------------|
| 4812 0021000 | 1,000 FT | 36.000 LB | RED | | CAT6E+ 4PR U/UTP CMR REEL |
| 4812 0041000 | 1,000 FT | 36.000 LB | YELLOW | | CAT6E+ 4PR U/UTP CMR REEL |
| 4812 0051000 | 1,000 FT | 36.000 LB | GREEN, DARK | | CAT6E+ 4PR U/UTP CMR REEL |
| 4812 006A1000 | 1,000 FT | 36.000 LB | BLUE, LIGHT | | CAT6E+ 4PR U/UTP CMR RIB |
| 4812 0061000 | 1,000 FT | 36.000 LB | BLUE, LIGHT | | CAT6E+ 4PR U/UTP CMR REEL |
| 4812 0062500 | 2,500 FT | 82.500 LB | BLUE, LIGHT | | CAT6E+ 4PR U/UTP CMR REEL |
| 4812 0081000 | 1,000 FT | 36.000 LB | GRAY | | CAT6E+ 4PR U/UTP CMR REEL |
| 4812 009A1000 | 1,000 FT | 36.000 LB | WHITE | | CAT6E+ 4PR U/UTP CMR RIB |
| 4812 0091000 | 1,000 FT | 36.000 LB | WHITE | | CAT6E+ 4PR U/UTP CMR REEL |
| 4812 0103000 | 3,000 FT | 102.000 LB | BLACK | | CAT6E+ 4PR U/UTP CMR REEL |

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