

1700A Multi-Conductor - Enhanced Category 5E Bonded-Pair Cable

For more Information
please call

1-800-Belden1



General Description:

CAT5e+ (350MHz), 4-Bonded-Pair, U/UTP-Unshielded, Riser-CMR, Premise Horizontal Cable, 24 AWG Solid Bare Copper Conductors, Polyolefin Insulation, 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 Video, RS-422, Noisy Environments, CMR, Riser

Physical Characteristics (Overall)

Conductor

AWG:

| # Pairs | AWG | Stranding | Conductor Material |
|---------|-----|-----------|--------------------|
| 4 | 24 | 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. (mm) |
|----------------|
| 5.080 |

Outer Jacket Ripcord: Yes

Overall Cable

Overall Nominal Diameter: 5.080 mm

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: | 0°C To +60°C |
| Operating Temperature Range: | -20°C To +60°C |
| Bulk Cable Weight: | 31.252 Kg/Km |
| Max. Recommended Pulling Tension: | 177.928 N |
| Min. Bend Radius/Minor Axis: | 12.700 mm |
| Min. Bend/Installation: | 50.800 mm |

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 5e - TIA 568.C.2 |
| Other Specification: | NEMA WC-63.1 Category 5e, UL Verified to Category 5e |

Applicable Patents:

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

Flame Test

| | |
|-------------------|-------------------------|
| UL Flame Test: | UL1666 Vertical Riser |
| C(UL) Flame Test: | FT4 |
| IEC Flame Test: | 60332-3-24 (Category C) |
| IEEE Flame Test: | 1202 |

Plenum/Non-Plenum

| | |
|----------------|-------|
| Plenum (Y/N): | No |
| Plenum Number: | 1701A |

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

| |
|--------------------|
| Capacitance (pF/m) |
| 49.215 |

| | |
|---|----|
| Maximum Capacitance Unbalance (pF/100 m): | 66 |
|---|----|

Nominal Velocity of Propagation:

| |
|--------|
| VP (%) |
| 70 |

Maximum Delay:

| |
|------------------|
| Delay (ns/100 m) |
| 510 |

Max. Delay Skew:

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

METRIC MEASUREMENT VERSION

1700A Multi-Conductor - Enhanced Category 5E Bonded-Pair Cable

25

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)

9

Max. Operating Voltage - UL:

Voltage

300 V RMS

Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)

3

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 | 2.000 | 69.3 | 67.3 | 20.000 |
| 4 | 4.000 | 60.3 | 56.3 | 23.000 |
| 8 | 5.700 | 55.8 | 50.1 | 24.500 |
| 10 | 6.400 | 54.3 | 47.9 | 25.000 |
| 16 | 8.100 | 51.2 | 43.1 | 25.000 |
| 20 | 9.100 | 49.8 | 40.7 | 25.000 |
| 25 | 10.200 | 48.3 | 38.2 | 25.000 |
| 31.25 | 11.400 | 46.9 | 35.5 | 25.000 |
| 62.5 | 16.400 | 42.4 | 26.0 | 25.000 |
| 100 | 21.000 | 39.3 | 18.3 | 25.000 |
| 155 | 26.600 | 36.4 | 9.8 | 19.000 |
| 200 | 30.400 | 34.8 | 4.4 | 19.000 |
| 250 | 34.400 | 32.3 | >0 | 18.000 |
| 300 | 38.000 | 28.1 | | 18.000 |
| 350 | 41.400 | 27.1 | | 17.000 |
| 400 | 44.500 | 26.3 | | 17.000 |
| 450 | 47.600 | 25.5 | | 17.000 |

Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. PSACRF (dB) |
|-------------|------------------------------|------------------|------------------|
| 1 | 100 ± 12 | 105 ± 10 | 65.8 |
| 4 | 100 ± 12 | 100 ± 10 | 53.8 |
| 8 | 100 ± 12 | 100 ± 10 | 47.7 |
| 10 | 100 ± 12 | 100 ± 10 | 45.8 |
| 16 | 100 ± 12 | 100 ± 10 | 41.7 |
| 20 | 100 ± 12 | 100 ± 10 | 39.8 |
| 25 | 100 ± 15 | 100 ± 10 | 37.8 |
| 31.25 | 100 ± 15 | 100 ± 10 | 35.9 |
| 62.5 | 100 ± 15 | 100 ± 10 | 29.9 |
| 100 | 100 ± 15 | 100 ± 10 | 25.8 |
| 155 | 100 ± 18 | 100 ± 10 | 22.0 |
| 200 | 100 ± 18 | 100 ± 10 | 19.8 |
| 250 | 100 ± 20 | 100 ± 10 | 17.8 |
| 300 | 100 ± 20 | 100 ± 10 | 14.3 |
| 350 | 100 ± 22 | 100 ± 10 | 12.9 |
| 400 | 100 ± 22 | 100 ± 10 | 11.8 |
| 450 | 100 ± 22 | 100 ± 10 | 10.7 |

Premise Cable Electrical Table 4:

| Frequency (MHz) | Min. TCL (dB) | Min. ELTCTL (dB) |
|-----------------|---------------|------------------|
| 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 |

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| | | |
|---------|--------|-------|
| 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: Belden IBDN. Jacket sequentially marked at 2 ft. intervals. Third party verified to ANSI/TIA-568-C.2 Category 5e. Values above 350 MHz are for Engineering Information Only

Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|----------------|----------|-------------|-------------|-------|----------------------------|
| 1700A B02U1000 | 1,000 FT | 22.000 LB | PURPLE | | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A B021000 | 1,000 FT | 22.000 LB | PURPLE | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A F2VU1000 | 1,000 FT | 22.000 LB | GRAY, DEC | | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A F2V1000 | 1,000 FT | 22.000 LB | GRAY, DEC | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A F2V3000 | 3,000 FT | 66.000 LB | GRAY, DEC | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A 002U1000 | 1,000 FT | 22.000 LB | RED | | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A 0021000 | 1,000 FT | 22.000 LB | RED | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A 0023000 | 3,000 FT | 66.000 LB | RED | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A 003U1000 | 1,000 FT | 22.000 LB | ORANGE | | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A 0031000 | 1,000 FT | 22.000 LB | ORANGE | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A 004U1000 | 1,000 FT | 22.000 LB | YELLOW | | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A 005U1000 | 1,000 FT | 22.000 LB | GREEN, DARK | | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A 0051000 | 1,000 FT | 22.000 LB | GREEN, DARK | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A 006U1000 | 1,000 FT | 22.000 LB | BLUE, LIGHT | | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A 0061640 | 1,640 FT | 36.080 LB | BLUE, LIGHT | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A 0063000 | 3,000 FT | 66.000 LB | BLUE, LIGHT | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A 008U1000 | 1,000 FT | 22.000 LB | GRAY | | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A 009U1000 | 1,000 FT | 22.000 LB | WHITE | C | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A 0091000 | 1,000 FT | 22.000 LB | WHITE | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A 0093000 | 3,000 FT | 66.000 LB | WHITE | C | CAT5E+ 4PRB U/UTP CMR REEL |
| 1700A 010U1000 | 1,000 FT | 22.000 LB | BLACK | | CAT5E+ 4PRB U/UTP CMR BOX |
| 1700A 0101000 | 1,000 FT | 22.000 LB | BLACK | C | CAT5E+ 4PRB U/UTP CMR REEL |

Notes:

C = CRATE REEL PUT-UP.

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