# Detailed Specifications & Technical Data

**ENGLISH MEASUREMENT VERSION**

## 7997A Multi-Conductor - Category 5e Nonbonded-Pair Outside Plant Cable



For more Information please call

1-800-Belden1

## General Description:

CAT5e (200MHz), 4-Pair, U/UTP-Unshielded, OSP Rated, Premise Horizontal Cable, 24 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Gel-Filled, Polyethylene Jacket

## Usage (Overall)

| | |
|---|---|
| **Suitable Applications:** | Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, 200MHz Category 5e, Outside Plant, Duct |

## 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 |
|---|
| PE - Polyethylene |

**Outer Jacket Diameter:**

| Nom. Dia. (in.) |
|---|
| 0.226 |

### 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:** | -40°C To +60°C |
| **Installation Temperature Range:** | -20°C To +60°C |
| **Operating Temperature Range:** | -40°C To +60°C |
| **Bulk Cable Weight:** | 26 lbs/1000 ft. |
| **Max. Recommended Pulling Tension:** | 35 lbs. |
| **Min. Bend Radius/Minor Axis:** | 2.300 in. |
| **Min. Bend/Installation:** | 2.300 in. |

## Applicable Specifications and Agency Compliance (Overall)

### Applicable Standards & Environmental Programs

| | |
|---|---|
| **EU Directive 2011/65/EU (ROHS II):** | Yes |
| **EU Directive 2000/53/EC (ELV):** | Yes |

| | |
|---|---|
| **EU Directive 2002/95/EC (RoHS):** | Yes |
| **EU RoHS Compliance Date (mm/dd/yyyy):** | 07/01/2005 |
| **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:** | REA-200 Approved Jacket Material |

### Suitability

| | |
|---|---|
| **Suitability - Indoor:** | No |
| **Suitability - Outdoor:** | Yes |
| **Suitability - Aerial:** | Yes - Black only, when supported by messenger wire. |
| **Suitability - Burial:** | Yes |
| **Sunlight Resistance:** | Yes |

### Plenum/Non-Plenum

| | |
|---|---|
| **Plenum (Y/N):** | No |

## Electrical Characteristics (Overall)

**Nom. Mutual Capacitance:**

| Capacitance (pF/ft) |
|---|
| 14 |

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

**Nominal Velocity of Propagation:**

| VP (%) |
|---|
| 65 |

**Max. Delay Skew:**

| Delay Skew (ns/100 m) |
|---|
| 25 |

**Maximum Conductor DC Resistance:**

| DCR @ 20°C (Ohm/100 m) |
|---|
| 8.9 |

**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. NEXT (dB) | Min. PSNEXT (dB) | Min. ACR (dB) | Min. PSACR (dB) | Min RL (dB) |
|---|---|---|---|---|---|---|
| 1 | 2.0 | 70.3 | 68.3 | 70.3 | 66.3 | 20.0 |
| 4 | 4.0 | 61.3 | 59.3 | 59.3 | 55.3 | 23.0 |
| 8 | 5.7 | 56.8 | 54.8 | 53.1 | 49.1 | 24.5 |
| 10 | 6.4 | 55.3 | 53.3 | 50.9 | 46.9 | 25.0 |
| 16 | 8.1 | 52.2 | 50.2 | 46.1 | 42.1 | 25.0 |
| 20 | 9.1 | 50.8 | 48.8 | 43.7 | 39.7 | 25.0 |
| 25 | 10.2 | 49.3 | 47.3 | 41.1 | 37.1 | 24.3 |
| 31.25 | 11.4 | 47.9 | 45.9 | 38.5 | 34.5 | 23.6 |
| 62.5 | 16.4 | 43.4 | 41.4 | 29.0 | 25.0 | 21.5 |
| 100 | 21.0 | 40.3 | 38.3 | 21.3 | 17.3 | 20.1 |
| 155 | 26.6 | 37.4 | 35.4 | 12.9 | 8.9 | 18.8 |
| 200 | 30.5 | 35.8 | 33.8 | 7.3 | 3.3 | 18.0 |
| *350 | 41.4 | 32.1 | 30.1 | | | 16.3 |
| *400 | 44.6 | 31.3 | 29.3 | | | 15.9 |

**Premise Cable Electrical Table 2:**

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|---|---|---|---|---|
| 1 | 100 ± 15 | 100 ± 15 | 67.8 | 64.8 |
| 4 | 100 ± 15 | 100 ± 15 | 55.8 | 52.8 |
| 8 | 100 ± 15 | 100 ± 15 | 49.7 | 46.7 |

## 7997A Multi-Conductor - Category 5e Nonbonded-Pair Outside Plant Cable

| | | | | |
|---|---|---|---|---|
| 10 | 100 ± 15 | 100 ± 15 | 47.8 | 44.8 |
| 16 | 100 ± 15 | 100 ± 15 | 43.7 | 40.7 |
| 20 | 100 ± 15 | 100 ± 15 | 41.8 | 38.8 |
| 25 | 100 ± 15 | 100 ± 15 | 39.8 | 36.8 |
| 31.25 | 100 ± 15 | 100 ± 15 | 37.9 | 34.9 |
| 62.5 | 100 ± 15 | 100 ± 15 | 31.9 | 28.9 |
| 100 | 100 ± 15 | 100 ± 15 | 27.8 | 24.8 |
| 155 | 100 ± 22 | 100 ± 15 | 24.0 | 21.0 |
| 200 | 100 ± 22 | 100 ± 15 | 21.8 | 18.8 |
| *350 | 100 ± 22 | 100 ± 15 | | |
| *400 | 100 ± 22 | 100 ± 15 | | |

### Notes (Overall)

**Notes:** Jacket sequentially marked at 2 ft. intervals. Verified to ANSI/TIA-568-C.2, Category 5e. * Frequencies above 200 MHz are for reference only

### Put Ups and Colors:

| Item # | Putup | Ship Weight | Color | Notes | Item Desc |
|---|---|---|---|---|---|
| 7997A 0101000 | 1,000 FT | 27.000 LB | BLACK | C | CAT5E 4PR U/UTP OSP REEL |

**Notes:**
C = CRATE REEL PUT-UP.

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