# **Detailed Specifications & Technical Data**



METRIC MEASUREMENT VERSION

# 1588A Multi-Conductor - Category 5e Nonbonded-Pair Cable



For more Information please call

1-800-Belden1



| + +  | on-plenum Polyolefin insulation, twisted pairs, rip cord, see color  |
|--|--|
| le chart (below), PVC jacket (dark gray                                | or blue).  |
| age (Overall)  |  |
| Suitable Applications:   | Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG<br>ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video,<br>AES/EBU, Digital Video, RS-422 |
| vsical Characteristics (Overall)                                       |  |
| nductor  |  |
| AWG:   |  |
| # Pairs AWG Stranding Conductor Material   2 24 Solid BC - Bare Copper |  |
|  |  |
| sulation<br>nsulation Material:  |  |
| Insulation Material  |  |
| PO - Polyolefin  |  |
| ter Shield   |  |
| Duter Shield Material:   |  |
| Outer Shield Material  |  |
| Unshielded   |  |
| ter Jacket   |  |
| Outer Jacket Material:   |  |
| Outer Jacket Material  |  |
| PVC - Polyvinyl Chloride   |  |
| Outer Jacket Ripcord:  | Yes  |
| erall Cabling  |  |
| Overall Nominal Diameter:  | 4.648 mm   |
| ir   |  |
| Pair Color Code Chart:   |  |
| Number Color   1 White/Blue Stripe & Blue                              |  |
| 2 White/Orange Stripe & Orange   |  |
| · · · · · · · · · · · · · · · · · · ·                                  |  |
| chanical Characteristics (Overall)                                     |  |
| Operating Temperature Range:   | -20°C To +75°C   |
| Bulk Cable Weight:   | 22.323 Kg/Km   |
| Max. Recommended Pulling Tension:                                      | 57.827 N   |
| Max. Recommended Fulling Tension.                                      |  |

## Applicable Specifications and Agency Compliance (Overall) Applicable Standards & Environmental Programs

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| NEC/(UL) Specification:   | CM, UL444  |
|---|--|
| CEC/C(UL) Specification:  | СМ   |
| 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:   | 568-B.2 Category 5e                                  |
| Other Specification:  | NEMA WC-63.1 Category 5e, UL verified to Category 5e |
| Flame Test  |  |
| UL Flame Test:  | UL1685 UL Loading                                    |
| CSA Flame Test:   | FT1  |
| Plenum/Non-Plenum   |  |
| Plenum (Y/N):   | No   |
| Plenum Number:  | 1590A  |
| Capacitance (pF/m)<br>49.215  |  |
|   | 200  |
| Maximum Capacitance Unbalance (pF/100 m):<br>Nominal Velocity of Propagation: | 330  |
| <b>VP (%)</b><br>70   |  |
| Maximum Delay:<br>Delay (ns/100 m)<br>538 @ 100MHz                            |  |
| Max. Delay Skew:<br>Delay Skew (ns/100 m)<br>45                               |  |
| Maximum Conductor DC Resistance:<br>DCR @ 20°C (Ohm/100 m)<br>9.38            |  |
| Max. Operating Voltage - UL:<br>Voltage<br>300 V RMS                          |  |
| Maximum DCR Unbalanced:<br>DCR Unbalance @ 20°C (%)<br>5                      |  |
| 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) |
|-------------|-----------------------------|----------------|------------------|---------------|-----------------|-------------|---------------|
| 1           | 2.0                         | 65.3           | 62.3             | 63.0          | 60.3            | 20.0        | 23.0          |
| 4           | 4.1                         | 56.3           | 53.3             | 51.0          | 49.2            | 23.0        | 23.0          |
| 8           | 5.8                         | 51.8           | 48.8             | 46.0          | 43.0            | 24.5        | 24.5          |



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| 10    | 6.5  | 50.3 | 47.3 | 43.0 | 40.8 | 25.0 | 25.0 |
|-------|------|------|------|------|------|------|------|
| 16    | 8.2  | 47.3 | 44.3 | 39.0 | 36.0 | 25.0 | 25.0 |
| 20    | 9.3  | 45.8 | 42.8 | 36.5 | 33.5 | 25.0 | 25.0 |
| 25    | 10.4 | 44.3 | 41.3 | 33.9 | 30.9 | 24.3 | 24.3 |
| 31.25 | 11.7 | 42.9 | 39.9 | 31.0 | 28.2 | 23.6 | 23.6 |
| 62.5  | 17.0 | 38.4 | 35.4 | 22.0 | 19.0 | 21.5 | 21.5 |
| 100   | 22.0 | 35.3 | 32.3 | 14.0 | 10.3 | 20.1 | 20.1 |
| 155   | 28.1 | 32.5 | 29.5 | 4.4  | 1.4  | 15.8 |      |
| 200   | 32.0 | 30.8 | 27.8 | 4.0  | 1.0  | 15.0 |      |
|       |      |      |      |      |      |      |      |

#### Premise Cable Electrical Table 2:

| Freq. (MHz) | Input (Unfitted) Imp. (Ohms) | Fitted Impedance | Min. ELFEXT (dB) | Min. PSELFEXT (dB) |
|-------------|------------------------------|------------------|------------------|--------------------|
| 1           | 100 ± 15                     | 100 ± 15         | 63.8             | 60.8               |
| 4           | 100 ± 15                     | 100 ± 15         | 51.7             | 48.7               |
| 8           | 100 ± 15                     | 100 ± 15         | 45.7             | 42.7               |
| 10          | 100 ± 15                     | 100 ± 15         | 43.8             | 40.8               |
| 16          | 100 ± 15                     | 100 ± 15         | 39.7             | 36.7               |
| 20          | 100 ± 15                     | 100 ± 15         | 37.7             | 34.7               |
| 25          | 100 ± 15                     | 100 ± 15         | 35.8             | 32.8               |
| 31.25       | 100 ± 15                     | 100 ± 15         | 33.9             | 30.9               |
| 62.5        | 100 ± 15                     | 100 ± 15         | 27.8             | 24.9               |
| 100         | 100 ± 15                     | 100 ± 15         | 23.8             | 20.8               |
| 155         | 100 ± 25                     | 100 ± 15         | 19.9             | 16.9               |
| 200         | 100 ± 25                     | 100 ± 15         | 17.7             | 14.7               |

#### Notes (Overall)

Notes: Jacket sequentially marked at 2 ft. intervals. Third party verified to TIA/EIA-568-B.2, Category 5e.

#### **Put Ups and Colors:**

| Item #         | Putup  | Ship Weight | Color            | Notes | Item Desc          |
|----------------|--------|-------------|------------------|-------|--------------------|
| 1588A F6HU1000 | 305 MT | 6.804 KG    | GRAY, DARK PEARL | Z     | 2 PR #24 PP FR PVC |
| 1588A F6H1000  | 305 MT | 6.804 KG    | GRAY, DARK PEARL | С     | 2 PR #24 PP FR PVC |
| 1588A F6H1640  | 500 MT | 11.158 KG   | GRAY, DARK PEARL |       | 2 PR #24 PP FR PVC |
| 1588A 006U1000 | 305 MT | 6.804 KG    | BLUE, LIGHT      |       | 2 PR #24 PP FR PVC |
| 1588A 0061000  | 305 MT | 6.804 KG    | BLUE, LIGHT      | С     | 2 PR #24 PP FR PVC |

Notes:

C = CRATE REEL PUT-UP.

Z = FINAL PUT-UP LENGTH MAY VARY (+ OR -) 10% FOR SPOOLS OR REELS AND(+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.

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