SENDING ALL THE RIGHT SIGNALS

## Product Description

Category 5e Premise Horizontal Cable (200MHz), Indoor/Outdoor, 4-Pair, 24 AWG Solid Bare Copper Conductors, U/UTP, Riser-CMR/CMX Outdoor, UV Resistant PVC Jacket

## Technical Specifications

Product Overview

| Suitable Applications: | Indoor/Outdoor, Premise Horizontal Cable, Ethernet 1000BASE-T, PoE++, PoE+, PoE |
| :---: | :---: |
|  |  |

Construction Details

Conductor

| AWG | Stranding | Material | Number of Pairs |
| :--- | :--- | :--- | :--- |
| 24 | Solid | BC - Bare Copper | 4 |

Insulation

| Material | Color Code |
| :---: | :---: |
| PO - Polyolefin | White/Blue Stripe \& Blue, White/Orange Stripe \& Orange, White/Green Stripe \& Green, White/Brown Stripe \& Brown |

Bonded-Pair: No

Outer Jacket Material

| Material | Nom. Diameter | Ripcord |
| :--- | :--- | :--- |
| PVC - Polyvinyl Chloride | 0.220 in | Yes |

Electrical Characteristics
Electricals

| Max. Conductor DCR | Max. DCR Unbalance | Max. Capacitance Unbalance | Nom. Mutual Capacitance |
| :--- | :--- | :--- | :--- |
| 93.8 Ohm/km | $3 \%$ | $330 \mathrm{pF} / 100 \mathrm{~m}$ | $15 \mathrm{pF} / \mathrm{ft}$ |

Delay

| Frequency [MHz] | Max. Delay | Max. Delay Skew | Nom. Velocity of Propagation (VP) [\%] |
| :--- | :---: | :--- | :--- |
| 100 MHz | $537.6 \mathrm{~ns} / 100 \mathrm{~m}$ | $45 \mathrm{~ns} / 100 \mathrm{~m}$ | $68 \%$ |

## High Freq

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | $\underset{\text { Min. }}{\text { NEXT }} \text { [dB] }$ | $\begin{gathered} \text { Min. } \\ \text { PSNEXT [dB] } \end{gathered}$ | $\begin{gathered} \text { Min. } \\ \text { ACR [dB] } \end{gathered}$ | $\begin{gathered} \text { Min. } \\ \text { PSACR [dB] } \end{gathered}$ | $\begin{aligned} & \text { Min. ACRF } \\ & \text { (ELFEXT) [dB] } \end{aligned}$ | Min. PSACRF (PSELFEXT) [dB] | Min. RL (Return Loss) [dB] | Max./Min. Input Impedance (unFitted) | Max./Min. Fitted Impedance |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 MHz | 2.0 dB/100m | 65.3 dB | 62.3 dB | 63.3 dB | 60.3 dB | 63.8 dB | 60.8 dB | 20.0 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |
| 4 MHz | 4.1 dB/100m | 56.3 dB | 53.3 dB | 52.2 dB | 49.2 dB | 51.7 dB | 48.7 dB | 23.0 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |
| 8 MHz | $5.8 \mathrm{~dB} / 100 \mathrm{~m}$ | 51.8 dB | 48.8 dB | 46.0 dB | 43.0 dB | 45.7 dB | 42.7 dB | 24.5 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |
| 10 MHz | $6.5 \mathrm{~dB} / 100 \mathrm{~m}$ | 50.3 dB | 47.3 dB | 43.8 dB | 40.8 dB | 43.8 dB | 40.8 dB | 25.0 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |
| 16 MHz | $8.2 \mathrm{~dB} / 100 \mathrm{~m}$ | 47.3 dB | 44.2 dB | 39.0 dB | 36.0 dB | 39.7 dB | 36.7 dB | 25.0 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |
| 20 MHz | $9.3 \mathrm{~dB} / 100 \mathrm{~m}$ | 45.8 dB | 42.8 dB | 36.5 dB | 33.5 dB | 37.7 dB | 34.7 dB | 25.0 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |
| 25 MHz | 10.4 dB/100m | 44.3 dB | 41.3 dB | 33.9 dB | 30.9 dB | 35.8 dB | 32.8 dB | 24.3 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |
| 31.25 MHz | 11.7 dB/100m | 42.9 dB | 39.9 dB | 31.2 dB | 28.2 dB | 33.9 dB | 30.9 dB | 23.6 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |
| 62.5 MHz | 17.0 dB/100m | 38.4 dB | 35.4 dB | 21.4 dB | 18.4 dB | 27.8 dB | 24.8 dB | 21.5 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |
| 100 MHz | 22.0 dB/100m | 35.3 dB | 32.3 dB | 13.3 dB | 10.3 dB | 23.8 dB | 20.8 dB | 20.1 dB | $100 \pm 15$ Ohm | $100 \pm 15$ Ohm |


| 155 MHz | 28.1 dB/100m | 32.5 dB | 29.4 dB | 4.4 dB | 1.4 dB | 19.9 dB | 16.9 dB | 15.8 dB | $100 \pm 25$ Ohm | $100 \pm 15 \mathrm{Ohm}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 200 MHz | 32.4 dB/100m | 30.8 dB | 27.8 dB |  |  | 17.7 dB | 14.7 dB | 15.0 dB | $100 \pm 25 \mathrm{Ohm}$ | $100 \pm 15 \mathrm{Ohm}$ |

## Voltage

| UL Voltage Rating |
| :---: |
| 300 V (CMR), 300 V (CMX-Outdoor) |

Mechanical Characteristics

## Temperature

| UL Rating. | Operating | Installation | Storage |
| :--- | :---: | :---: | :---: |
| $90^{\circ} \mathrm{C}$ | $-40^{\circ} \mathrm{C}$ To $+75^{\circ} \mathrm{C}$ | $-25^{\circ} \mathrm{C}$ To $+75^{\circ} \mathrm{C}$ | $-40^{\circ} \mathrm{C}$ To $+75^{\circ} \mathrm{C}$ |

## Bend Radius

| Stationary Min. | Installation Min. |
| :--- | :--- |
| 1.0 in | 2.25 in |
| Max. Pull Tension: | 25 lbs |
| Bulk Cable Weight: | $23 \mathrm{lbs} / 1000 \mathrm{ft}$ |

Standards and Compliance

| Environmental Suitability: | Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance |
| :---: | :---: |
| Sustainability: | Product Lens ${ }^{\text {TM }}$, Environmental Product Declaration (EPD) Available |
| Flammability / Fire Resistance: | UL 1666 Riser, FT4, FT4, IEC 60332-1-2 |
| NEC / UL Compliance: | 800, CMR;CMX-Outdoor |
| CEC / C(UL) Compliance: | CMX-Outdoor |
| ICEA Compliance: | S-90-661-2012 |
| ICEA Compliance: | S-56-434 |
| ICEA Compliance: | S-99-689 |
| ICEA Compliance: | S-100-685 |
| IEEE Compliance: | IEEE 802.3bt Type 1, Type 2, Type 3 |
| NEMA Compliance: | NEMA WC-63.1 |
| Data Category: | Category 5e |
| TIA/EIA Compliance: | ANSI/TIA-568.2-D Category 5e |
| CPR Euroclass: | Eca |
| European Directive Compliance: | EU CE Mark, EU Directive 2015/863/EU, EU Directive 2011/65/EU (ROHS II), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16 |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |

Part Number

| Plenum Number: | 1585A |
| :---: | :---: |
| Non-Plenum Number: | 1583A |

Variants

| Item \# | Color | Putup Type | Length | UPC |
| :---: | :---: | :--- | :--- | :---: |
| 1594A 008U1000 | Gray | UnReel | $1,000 \mathrm{ft}$ | 612825118756 |
| 1594A 1GFU1000 | Ivory | UnReel | $1,000 \mathrm{ft}$ | 612825118770 |
| 1594A 009U1000 | White | UnReel | $1,000 \mathrm{ft}$ | 612825118763 |

Product Notes

| Notes: | Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Print Includes Descending Footage/Meter <br> Markings from Max. Put-Up Length to 0. |
| :--- | :--- |

## History

Update and Revision: Revision Number: 0.396 Revision Date: 09-30-2020

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