



Product: [1213F](#)

Category 5E+ Cable, 4 Pair, F/UTP, CMP

Product Description

Category 5E+ Premise Horizontal Cable (350MHz), 4 Pair, 24 AWG Solid Bare Copper Conductors, F/UTP - Foil Shielded, Plenum-CMP, Flamarrest® PVC-LS Jacket

Technical Specifications

Product Overview

| | |
|------------------------|--|
| Suitable Applications: | Premise Horizontal Cable, Ethernet 1000BASE-T, Ethernet 100BASE-TX, Ethernet 10BASE-T, PoE++, PoE+, PoE , Noisy Environments |
|------------------------|--|

Construction Details

Conductor

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

Insulation

| Material | Color Code |
|--------------------------------------|--|
| FEP - Fluorinated Ethylene Propylene | White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown |

Outer Shield

| Shield Type | Material | Coverage | Drainwire Type |
|-------------|-------------------------------------|----------|------------------|
| Tape | Polyester + Bi-Laminate (Alum+Poly) | 100% | 24 AWG (7x32) TC |

Outer Jacket

| Material | Material Trade Name | Nom. Diameter | Ripcord |
|--------------------------|---------------------|--------------------|---------|
| PVC - Polyvinyl Chloride | Flamarrest® | 0.235 in (5.97 mm) | No |

| | |
|-----------------------------------|--------------------|
| Overall Cable Diameter (Nominal): | 0.235 in (5.97 mm) |
|-----------------------------------|--------------------|

Electrical Characteristics

Electricals

| Max. Conductor DCR | Max. Capacitance Unbalance |
|-------------------------------|----------------------------|
| 93.8 Ohm/km (28.6 Ohm/1000ft) | 330 pF/100m |

Delay

| Frequency | Max. Delay | Max. Delay Skew | Nom. Velocity of Prop. |
|-----------|---------------|-----------------|------------------------|
| 100 MHz | 537.6 ns/100m | 45 ns/100m | 70% |

High Frequency

| Frequency [MHz] | Max. Insertion Loss (Attenuation) | Min. NEXT [dB] | Min. PSNEXT [dB] | Min. ACR [dB] | Min. PSACR [dB] | Min. ACRF (ELFEXT) [dB] | Min. PSACRF (PSELFEXT) [dB] | Min. RL (Return Loss) [dB] | Max./Min. Input Impedance (unFitted) [Ohm] | Max./Min. Fitted Impedance [Ohm] |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|--|----------------------------------|
| 1 | 2.0 dB/100m | 70.3 | 69.3 | 68.3 | 67.3 | 67.8 | 65.8 | 20.0 | 100 ± 15 | 100 ± 15 |
| 4 | 4.0 dB/100m | 61.3 | 60.3 | 57.3 | 56.3 | 55.8 | 53.8 | 23.0 | 100 ± 15 | 100 ± 15 |
| 8 | 5.7 dB/100m | 56.8 | 55.8 | 51.1 | 50.1 | 49.7 | 47.7 | 24.5 | 100 ± 15 | 100 ± 15 |
| 10 | 6.4 dB/100m | 55.3 | 54.3 | 48.9 | 47.9 | 47.8 | 45.8 | 25.0 | 100 ± 15 | 100 ± 15 |
| 16 | 8.1 dB/100m | 52.2 | 51.2 | 44.1 | 43.1 | 43.7 | 41.7 | 25.0 | 100 ± 15 | 100 ± 15 |

| | | | | | | | | | | |
|-------|--------------|------|------|------|------|------|------|------|----------|----------|
| 20 | 9.1 dB/100m | 50.8 | 49.8 | 41.7 | 40.7 | 41.8 | 39.8 | 25.0 | 100 ± 15 | 100 ± 15 |
| 25 | 10.2 dB/100m | 49.3 | 48.3 | 39.1 | 38.1 | 39.8 | 37.8 | 24.3 | 100 ± 15 | 100 ± 15 |
| 31.25 | 11.4 dB/100m | 47.9 | 46.9 | 36.4 | 35.4 | 37.9 | 35.9 | 23.6 | 100 ± 15 | 100 ± 15 |
| 62.5 | 16.4 dB/100m | 43.4 | 42.4 | 27.0 | 26.0 | 31.9 | 29.9 | 21.5 | 100 ± 15 | 100 ± 15 |
| 100 | 21.0 dB/100m | 40.3 | 39.3 | 19.3 | 18.3 | 27.8 | 25.8 | 20.1 | 100 ± 15 | 100 ± 15 |
| 155 | 26.6 dB/100m | 37.4 | 36.4 | 10.9 | 9.9 | 24.0 | 22.0 | 18.8 | 100 ± 22 | 100 ± 15 |
| 200 | 30.5 dB/100m | 35.8 | 34.8 | 5.3 | 4.3 | 21.8 | 19.8 | 18.0 | 100 ± 22 | 100 ± 15 |
| 250 | 34.4 dB/100m | 34.3 | 33.3 | -0.1 | -1.1 | 19.8 | 17.8 | 17.3 | 100 ± 32 | 100 ± 15 |
| 300 | 38.0 dB/100m | 33.1 | 32.1 | | | 18.3 | 16.3 | 14.4 | 100 ± 32 | 100 ± 15 |
| 350 | 41.4 dB/100m | 32.1 | 31.1 | | | 16.9 | 14.9 | 13.8 | 100 ± 32 | 100 ± 15 |
| 400 | 44.6 dB/100m | 31.3 | 30.3 | | | 15.8 | 13.8 | 13.3 | 100 ± 32 | 100 ± 15 |
| 450 | 47.7 dB/100m | 30.5 | 29.5 | | | 14.7 | 12.7 | 12.8 | 100 ± 32 | 100 ± 15 |

Voltage

| UL Voltage Rating |
|-------------------|
| 300 V (CMP) |

Mechanical Characteristics

Temperature

| UL Temperature | Operating | Installation | Storage |
|----------------|----------------|--------------|----------------|
| 75°C | -20°C To +75°C | 0°C To +50°C | -20°C To +75°C |

Bend Radius

| Stationary Min. | Installation Min. |
|-------------------|-------------------|
| 2.25 in (57.2 mm) | 2.75 in (69.9 mm) |

| | |
|--------------------|----------------|
| Max. Pull Tension: | 25 lbs (11 kg) |
| Bulk Cable Weight: | 32 lbs/1000ft |

Standards and Compliance

| | |
|---------------------------------------|---|
| Environmental Suitability: | Plenum, Indoor |
| Sustainability: | Product Lens™, Environmental Product Declaration (EPD) Available |
| Flammability / Reaction to Fire: | NFPA 262, UL 910 (Plenum), FT6, IEC 60332-1-2 |
| CPR Compliance: | CPR Euroclass: Eca; CPR UKCA Class: Eca |
| NEC / UL Compliance: | Article 800, CMP |
| CEC / C(UL) Compliance: | CMP |
| ICEA Compliance: | S-90-661 |
| 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 |
| Third Party Performance Verification: | Category 5e |
| ISO/IEC Compliance: | ISO/IEC 11801-1, IEC 61156-5 |
| European Directive Compliance: | EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16 |
| UK Regulation Compliance: | UKCA Mark |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |
| Non-Plenum Number: | 1212F |

Product Notes

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| Notes: | Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 350 MHz are for Engineering Information Only. Shield is Bonded to Jacket Inner Wall for Electrical Stability. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0. |
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History

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| Update and Revision: | Revision Number: 0.527 Revision Date: 01-20-2023 |
|----------------------|--|

Part Numbers

Variants

| Item # | Color | Putup Type | Length | UPC |
|--------|-------|------------|--------|-----|
|--------|-------|------------|--------|-----|

| | | | | |
|----------------|--------|-------------|----------|--------------|
| 1213F 0101000 | Black | Reel | 1,000 ft | 612825108863 |
| 1213F 010A1000 | Black | Reel-in-Box | 1,000 ft | 612825108856 |
| 1213F D15500 | Blue | Reel | 500 ft | 612825108719 |
| 1213F D15A500 | Blue | Reel-in-Box | 500 ft | 612825108696 |
| 1213F D151000 | Blue | Reel | 1,000 ft | 612825108702 |
| 1213F D15A1000 | Blue | Reel-in-Box | 1,000 ft | 612825108689 |
| 1213F 0081000 | Gray | Reel | 1,000 ft | 612825108818 |
| 1213F 008A1000 | Gray | Reel-in-Box | 1,000 ft | 612825108801 |
| 1213F 0051000 | Green | Reel | 1,000 ft | 612825108795 |
| 1213F 005A1000 | Green | Reel-in-Box | 1,000 ft | 612825108788 |
| 1213F 0031000 | Orange | Reel | 1,000 ft | 612825108757 |
| 1213F 003A1000 | Orange | Reel-in-Box | 1,000 ft | 612825108740 |
| 1213F 0021000 | Red | Reel | 1,000 ft | 612825108733 |
| 1213F 002A1000 | Red | Reel-in-Box | 1,000 ft | 612825108726 |
| 1213F 009A500 | White | Reel-in-Box | 500 ft | 612825108832 |
| 1213F 0091000 | White | Reel | 1,000 ft | 612825108849 |
| 1213F 009A1000 | White | Reel-in-Box | 1,000 ft | 612825108825 |
| 1213F 0041000 | Yellow | Reel | 1,000 ft | 612825108771 |
| 1213F 004A1000 | Yellow | Reel-in-Box | 1,000 ft | 612825108764 |

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