



Product: [OSP6AF](#)

Category 6A Outside Plant F/UTP Cable

Product Description

CAT6A (500 MHz), 4 Pair, F/UTP-Foil Shielded, Outdoor OSP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented X-Spline, Gel-Filled, UV resistant LLDPE Inner Jacket, Overall Beldfoil® Shield with Drain Wire, Ripcord, UV Resistance LLDPE Outer Jacket

Technical Specifications

Product Overview

| | |
|------------------------|---|
| Suitable Applications: | OSP-Outside Plant, 10 Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, PoE, PoE+ |
| Patent: | This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/resources/patents . |

Construction Details

Conductor

| Size | Stranding | Material | Number of Pairs |
|------|-----------|------------------|-----------------|
| 23 | Solid | BC - Bare Copper | 4 |

Insulation

| Material | Color Code |
|-----------------|--|
| PO - Polyolefin | White & Blue, White & Orange, White & Green, White & Brown |

Inner Jacket

| Material | Nom. Diameter |
|-------------------|------------------|
| PE - Polyethylene | 0.26 in (6.6 mm) |

Outer Shield

| Shield Type | Material | Coverage | Drainwire Type |
|-------------|-------------------------|----------|------------------|
| Tape | Bi-Laminate (Alum+Poly) | 100% | 26 AWG (7x34) TC |

Outer Jacket

| Material | Nom. Diameter | Ripcord |
|-----------------|--------------------|---------|
| PO - Polyolefin | 0.360 in (9.14 mm) | Yes |

Overall Cable Diameter (Nominal): 0.360 in (9.14 mm)

Electrical Characteristics

Electricals

| Max. Conductor DCR | Max. Capacitance Unbalance |
|--------------------|----------------------------|
| 82 Ohm/km | 45 pF/100m |

Delay

| Frequency | Max. Delay | Max. Delay Skew | Nom. Velocity of Prop. |
|-----------|---------------|-----------------|------------------------|
| 100 MHz | 537.6 ns/100m | 45 ns/100m | 64% |

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) | Max./Min. Fitted Impedance | Min. PSANEXT [dB] | Min. PSAACRF [dB] | Min. TCL [dB] | Min. ELTCTL [dB] |
|-----------------|-----------------------------------|----------------|------------------|---------------|-----------------|-------------------------|-----------------------------|----------------------------|--------------------------------------|----------------------------|-------------------|-------------------|---------------|------------------|
| 1 | 2.1 dB/100m | 74.3 | 72.3 | 72.2 | 70.2 | 67.8 | 64.8 | 20.0 | 105 +/- 10 | 115 +/- 15 | 67.0 | 67.0 | 40.0 | 35.0 |
| 4 | 3.8 dB/100m | 65.3 | 63.3 | 61.5 | 59.5 | 55.8 | 52.8 | 23.0 | 105 +/- 10 | 100 +/- 7 | 67.0 | 66.2 | 40.0 | 23.0 |
| 8 | 5.3 dB/100m | 60.8 | 58.8 | 55.4 | 53.4 | 49.7 | 46.7 | 24.5 | 100 +/- 22 | 100 +/- 7 | 67.0 | 60.1 | 40.0 | 16.9 |
| 10 | 5.9 dB/100m | 59.3 | 57.3 | 53.4 | 51.4 | 47.8 | 44.8 | 25.0 | 100 +/- 22 | 100 +/- 7 | 67.0 | 58.2 | 40.0 | 15.0 |
| 16 | 7.5 dB/100m | 56.2 | 54.2 | 48.8 | 46.8 | 43.7 | 40.7 | 25.0 | 100 +/- 22 | 100 +/- 7 | 67.0 | 54.1 | 38.0 | 10.9 |
| 20 | 8.4 dB/100m | 54.8 | 52.8 | 46.4 | 44.4 | 41.8 | 38.8 | 25.0 | 100 +/- 22 | 100 +/- 7 | 67.0 | 52.2 | 37.0 | 9.0 |
| 25 | 9.4 dB/100m | 53.3 | 51.3 | 44.0 | 42.0 | 39.8 | 36.8 | 24.3 | 100 +/- 22 | 100 +/- 7 | 67.0 | 50.2 | 36.0 | 7.0 |
| 31.25 | 10.5 dB/100m | 51.9 | 49.9 | 41.4 | 39.4 | 37.9 | 34.9 | 23.6 | 100 +/- 22 | 100 +/- 7 | 67.0 | 48.3 | 35.1 | 5.1 |
| 62.5 | 15.0 dB/100m | 47.4 | 45.4 | 32.4 | 30.4 | 31.9 | 28.9 | 21.5 | 100 +/- 22 | 100 +/- 7 | 65.6 | 42.3 | 32.0 | |
| 100 | 19.1 dB/100m | 44.3 | 42.3 | 25.2 | 23.2 | 27.8 | 24.8 | 20.1 | 100 +/- 22 | 100 +/- 7 | 62.5 | 38.2 | 30.0 | |
| 200 | 27.6 dB/100m | 39.8 | 37.8 | 12.2 | 10.2 | 21.8 | 18.8 | 18.0 | 100 +/- 22 | 100 +/- 7 | 58.0 | 32.2 | 27.0 | |
| 250 | 31.1 dB/100m | 38.3 | 36.3 | 7.3 | 5.3 | 19.8 | 16.8 | 17.3 | 100 +/- 32 | 100 +/- 7 | 56.5 | 30.2 | 26.0 | |
| 300 | 34.3 dB/100m | 37.1 | 35.1 | 2.9 | 0.9 | 18.3 | 15.3 | 16.8 | 100 +/- 32 | 100 +/- 7 | 55.3 | 28.7 | 25.2 | |
| 350 | 37.2 dB/100m | 36.1 | 34.1 | | | 16.9 | 13.9 | 16.3 | 100 +/- 32 | 100 +/- 7 | 54.3 | 27.3 | 24.6 | |
| 400 | 40.1 dB/100m | 35.3 | 33.3 | | | 15.8 | 12.8 | 15.9 | 100 +/- 32 | 100 +/- 7 | 53.5 | 26.2 | 24.0 | |
| 450 | 42.7 dB/100m | 34.5 | 32.5 | | | 14.7 | 11.7 | 15.5 | 100 +/- 32 | 100 +/- 7 | 52.7 | 25.1 | 23.5 | |
| 500 | 45.3 dB/100m | 33.8 | 31.8 | | | 13.8 | 10.8 | 15.2 | 100 +/- 32 | 100 +/- 7 | 52.0 | 24.2 | 23.0 | |

Voltage

| Voltage Rating |
|----------------|
| 300 V |

Mechanical Characteristics

Temperature

| Operating | Installation | Storage |
|----------------|----------------|----------------|
| -40°C To +75°C | -40°C To +60°C | -40°C To +75°C |

Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 3.0 in (76 mm) | 3.75 in |

Max. Pull Tension: 25 lbs (11 kg)

Bulk Cable Weight: 49 lbs/1000ft

Standards and Compliance

| | |
|--------------------------------|--|
| Environmental Suitability: | Outdoor, Outdoor, Sunlight Resistance |
| NEC / UL Compliance: | N/A |
| IEEE Compliance: | IEEE 802.3bt Type 1, Type 2, Type 3, Type 4 |
| Data Category: | Category 6A |
| TIA/EIA Compliance: | ANSI/TIA-568.2-D Category 6A |
| ISO/IEC Compliance: | 11801 ed 2.2 (2011) Class EA |
| GENELEC Compliance: | Segregation class according EN50174-2 = a |
| European Directive Compliance: | EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2017-07-10 |
| APAC Compliance: | China RoHS II (GB/T 26572-2011) |
| Other Standard Compliance(s): | Outdoor Use ANSI/ICEA S-56-434, Broadband Outdoor Use ANSI/ICEA S-99-689, Verified Channel/Category 6A |

Product Notes

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|--------|---|
| Notes: | Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0. Not Suitable for Direct Burial. Belden recommends using an entrance demarcation point when transitioning inside buildings with gel-filled OSP cables due to the cable design containing gel specific for wet outdoor environments. The suggested transition point is the REVConnect core coupler, part number RVACPKUBK-S1. |
|--------|---|

History

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|----------------------|--|
| Update and Revision: | Revision Number: 0.229 Revision Date: 11-15-2021 |
|----------------------|--|

Variants

| Item # | Color | Putup Type | Length | UPC |
|----------------|-------|------------|----------|--------------|
| OSP6AF 0101000 | Black | Reel | 1,000 ft | 612825378839 |

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