**Part Number:** 7860ENH.001000

Category 6 Bonded-Pair ScTP Cable

## Product Description

Cat. 6 (250MHz), 4-Pair, F/UTP Foil shielded, Premise Horizontal Cable, 23 AWG solid bare copper conductors, Polyethylene insulation, Beldfoil® shield, AWG 26 solid tinned copper drainwire, LSZH jacket

## Product Specifications

### AG.Filter Attributes

| | |
|---|---|
| **Total Number of Conductors:** | 8 |

### Application

| | |
|---|---|
| **Suitable Applications:** | Horizontal and building backbone cable; Support current and future Category 6 and 5e applications, such as: 1000Base - T (Gigabit Ethernet), 100 Base - T, 10 Base - T, FDDI, ATM |

### Cabling1

| | |
|---|---|
| **Description@Cabling1:** | 4 pairs twisted together covered with a polyester foil |
| **Filler@Cabling1:** | Cross Web of Polyolefin |

### Conductor

| | |
|---|---|
| **Total Number of Pairs:** | 4 |

## Technical Specifications

### Applicable Patents

| | |
|---|---|
| **Patent:** | http://www.belden.com/p |

## Bend Radius

| | |
|---|---|
| **Min Bend Radius During Installation:** | 58 mm |
| **Min Bend Radius During Operation:** | 29 mm |

## CCB-Sub-Material

| | |
|---|---|
| **Min Elongation at Breakof Conductors:** | 10 % |
| **Min Elongation at Breakof Insulation:** | 100 % |
| **Min Elongation at Breakof Jacket:** | 100 % |
| **Min Tensile Strength of Jacket:** | 9 MPa |

## Coupling Attenuation

| | |
|---|---|
| **Coupling Attenuation Class:** | Type II |

## EMEA Standard

| | |
|---|---|
| **CENELEC Compliance:** | EN 50173-1 (2011) |

## General Electrical Parameters

| | |
|---|---|
| **General Electrical Parameters Header:** | Reference standard: ISO/IEC 61156 - 5 ed. 2.0 (2009) |
| **Min Insulation Resistance:** | 5000 MOhm*km |
| **Dielectric Strength Cond-Cond (2 sec. ):** | 2.5 kV DC |
| **Dielectric Strength Cond-Screen (2 sec. ):** | 2.5 kV DC |

## Global Standard

| | |
|---|---|
| **ISO/IEC Compliance:** | ISO/IEC 11801 2nd edition (2002) and ISO/IEC 11801 Amendment 2 (2010) |

## History

| | |
|---|---|
| **Revision Number:** | 4 |

## North American Standard

| | |
|---|---|
| **ANSI Compliance:** | ANSI/TIA/EIA 568-B.2-1 (2002) |

## Safety

| | |
|---|---|
| **ISO/IEC Flammability:** | IEC 60332-1 |
| **Amt of Halogen Acid Gas; MaxConductivity:** | 10 µS/mm |
| **Amt of Halogen Acid Gas; Min pH:** | 4.3 |
| **Smoke Density; Min Transmittance:** | 60% |
| **Amt of Halogen IEC 60754-1 /EN50267-1:** | Zero |

## Use

| | |
|---|---|
| **Burning Load:** | 745 kJ/m |
| **Max Recommended Pulling Tension:** | 80 N |

### Impedance:

| Nominal Characteristic Impedance |
|---|
| 100 Ohm |

### Conductor DCR:

| Max. Conductor DCR | Max DCR Unbalanced Between Pairs [%] | Max. DCR Unbalanced Within Pair [%] |
|---|---|---|
| 95 Ohm/km | 4 % | 2 Ohm |

### Color Chart 1:

| Number | Color |
|---|---|
| Pair 1 | White/Blue & Blue |
| Pair 2 | White/Orange & Orange |
| Pair 3 | White/Green & Green |
| Pair 4 | White/Brown & Brown |

### Delay:

| Max. Delay Skew | Min. Velocity of Propagation |
|---|---|
| 40 ns/100m | 60 % |

### Voltage:

| Voltage Rating [V] |
|---|
| 72 V |

### Current:

| Max. Recommended Current [A] |
|---|
| 1.5 A |

## High Freq:

| Element | 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] | Min. TCL [dB] | Min. ELTCTL [dB] |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 MHz | 2.1 dB/100m | 75.3 dB | 72.3 dB | 73.2 dB | 70.2 dB | 70 dB | 67 dB | 20 dB | 40 dB | 35 dB | |
| 4 MHz | 3.8 dB/100m | 66.3 dB | 63.3 dB | 62.4 dB | 59.4 dB | 58 dB | 55 dB | 23 dB | 34 dB | 23 dB | |
| 10 MHz | 6 dB/100m | 60.3 dB | 57.3 dB | 54.3 dB | 51.3 dB | 50 dB | 47 dB | 25 dB | 30 dB | 15 dB | |
| 16 MHz | 7.6 dB/100m | 57.2 dB | 54.2 dB | 49.6 dB | 46.6 dB | 45.9 dB | 42.9 dB | 25 dB | 28 dB | 10.9 dB | |
| 20 MHz | 8.5 dB/100m | 55.8 dB | 52.8 dB | 47.3 dB | 44.3 dB | 44 dB | 41 dB | 25 dB | 27 dB | 9 dB | |
| 31.2 MHz | 10.7 dB/100m | 52.9 dB | 49.9 dB | 42.1 dB | 39.1 dB | 40.1 dB | 37.1 dB | 23.6 dB | 25.1 dB | 5.1 dB | |
| 62.5 MHz | 15.5 dB/100m | 48.4 dB | 45.4 dB | 32.9 dB | 29.9 dB | 34.1 dB | 31.1 dB | 21.5 dB | 22 dB | | |
| 100 MHz | 19.9 dB/100m | 45.3 dB | 42.3 dB | 25.4 dB | 22.4 dB | 30 dB | 27 dB | 20.1 dB | 20 dB | | |
| 155 MHz | 25.3 dB/100m | 42.4 dB | 39.4 dB | 17.1 dB | 14.1 dB | 26.2 dB | 23.2 dB | 18.8 dB | 18.1 dB | | |
| 200 MHz | 29.1 dB/100m | 40.8 dB | 37.8 dB | 11.6 dB | 8.6 dB | 24 dB | 21 dB | 18 dB | 17 dB | | |
| 250 MHz | 33 dB/100m | 39.3 dB | 36.3 dB | 6.3 dB | 3.3 dB | 22 dB | 19 dB | 17.3 dB | 16 dB | | |
| ): Limits below 4MHz are for information only. | | | | | | | | | | | |

## Transfer Impedance:

| Frequency [MHz] | Description | Transfer Impedance |
|---|---|---|
| 1 Mhz | Grade 2 | Max.50 mOhm/m |
| 10 Mhz | | Max. 100 mOhm/m |
| 30 Mhz | | Max. 200 mOhm/m |
| 100 Mhz | | Max. 1000 mOhm/m |

## Capacitance:

| Max. Capacitance Unbalance | Max. Mutual Capacitance |
|---|---|
| 1,600 pF/m | 56 pF/m |

## Insulation:

| Element | Type | Material | Nominal Diameter |
|---|---|---|---|
| Individual pair | Dielectric | Polyethylene | 1.35 mm |

## Outerjacket 1:

| Material | Color | Nominal Diameter | Diameter +/- Tolerance |
|---|---|---|---|
| FRNC / LSZH | Grey or Blue | 7.3 mm | 0.3 mm |

## Conductor:

| Element | AWG | Stranding | Material | No. of Pairs |
|---|---|---|---|---|
| Individual pair | 23 | Solid | Bare copper | 4 |

## Other Electrical Information:

| | |
|---|---|
| Min Insulation Resistance | 5000 MOhm*km |
| Dielectric Strength Cond-Cond (2 sec.) | 2.5 kV DC |
| Dielectric Strength Cond-Screen (2 sec.) | 2.5 kV DC |

## Outershield 1:

| Type | Material | Coverage [%] | Drainwire Material | Drainwire AWG | Drainwire Position |
|---|---|---|---|---|---|
| Tape | Aluminum / Polyester | 100 % | Solid tinned copper | 26 | Over foil |

Aluminum facing outside in contact with drain wire in in

## Coupling Attenuation:

| Element | Coupling Attenuation [dB] |
|---|---|
| | Type II V dB |

Type II

## Product Variants

| Part Number | Color | Put-Up Type | Length |
|---|---|---|---|
| 7860ENH.001000 | GRAY | Reel | 1000 m |
| 7860ENH.002000 | GRAY | Reel | 2000 m |
| 7860ENH.002100 | GRAY | Reel | 2100 m |
| 7860ENH.00305 | GRAY | Reel | 305 m |
| 7860ENH.00500 | GRAY | Reel | 500 m |
| 7860ENH.00B100 | GRAY | Flat Box | 100 m |
| 7860ENH.011000 | BLUE, RAL 5015 | Reel | 1000 m |
| 7860ENH.01500 | BLUE, RAL 5015 | Reel | 500 m |
| 7860ENH.01B100 | BLUE, RAL 5015 | Flat Box | 100 m |
| 7860ENH.02500 | PURPLE | Reel | 500 m |
| 7860ENH.03500 | BLACK, RAL 9005 | Reel | 500 m |
| 7860ENH.04500 | YELLOW | Reel | 500 m |
| 7860ENH.001000 | GRAY | Reel | 1000 m |
| 7860ENH.001000 | GRAY | Reel | 305 m |
| 7860ENH.001000 | GRAY | Reel | 500 m |
| 7860ENH.001000 | BLUE, RAL 5015 | Reel | 1000 m |
| 7860ENH.001000 | BLUE, RAL 5015 | Reel | 500 m |
| 7860ENH.001000 | Black | Reel | 500 m |
| 7860ENH.001000 | | | |