# Part Number: 1885ELV

## Category 7 Nonbonded-Pair ScTP Cable

### Product Description

CAT7 (1000MHz), 4-Pair, S/FTP shielded, Premise Horizontal Cable, 23 AWG solid bare copper conductors, Foam Polyolefin insulation, each pair with Beldfoil® shield, overall tinned copper braid shield (30% coverage), LSZH jacket

### Technical Specifications

#### Product Overview

| | |
|---|---|
| Environmental Space: | Indoor - Euroclass B2ca |
| Suitable Applications: | Horizontal and building backbone cable; Support current and future Category 6a and 7 applications, such as: 10GBase-T (10 Gigabit Ethernet), 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM |

#### Physical Characteristics (Overall)

**Conductor**

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

| | |
|---|---|
| Conductor Count: | 8 |
| Total Number of Pairs: | 4 |
| Conductor Size: | 23 AWG |

**Insulation**

| Element | Type | Material | Nominal Diameter |
|---|---|---|---|
| Individual shielded pair | Dielectric | FPE - Foamed Polyethylene | 1.45 mm |

**Color Chart**

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

**Inner Shield Material**

| Element | Type | Material | Coverage [%] |
|---|---|---|---|
| Individual shielded pair | Tape | Aluminum / Polyester | 100 % |

| | |
|---|---|
| InnerShield, Table Note: | Aluminum facing outside |

**Outer Shield Material**

| Type | Material | Min. Coverage [%] |
|---|---|---|
| Braid | TC - Tinned Copper | 30 % |

**Outer Jacket Material**

| Material | Nominal Diameter | Diameter +/- Tolerance | Ripcord |
|---|---|---|---|
| LSZH / FRNC | 7.6 mm | 0.3 mm | Yes |

#### Construction and Dimensions

| | |
|---|---|
| Min Elongation at Breakof Conductors: | 10 % |
| Min Elongation at Breakof Insulation: | 100 % |

**Cabling**

| Description |
| --- |
| 4 shielded pairs twisted together |

| | |
| --- | --- |
| Min Elongation at Breakof Jacket: | 100 % |
| Min Tensile Strength of Jacket: | 9 MPa |

## Electrical Characteristics

**Conductor DCR**

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

**Capacitance**

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

| | |
| --- | --- |
| Shielding: | S/FTP - Overall Braid / Individual Foil |

**Impedance**

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

**High Frequency (Nominal/Typical)**

| Frequency [MHz] | Nom. Insertion Loss | Nom. NEXT [dB] | Nom. PSNEXT [dB] | Nom. ACR [dB] | Nom. PSACR [dB] | Nom. ACRF (ELFEXT) [dB] | Nom. PSACRF (PSELFEXT) [dB] |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 MHz | 1.8 dB/100m | 103 dB | 100 dB | 101 dB | 98 dB | 95 dB | 92 dB |
| 4 MHz | 3.4 dB/100m | 100 dB | 97 dB | 97 dB | 94 dB | 94 dB | 91 dB |
| 10 MHz | 5.5 dB/100m | 98 dB | 95 dB | 92 dB | 89 dB | 93 dB | 92 dB |
| 16 MHz | 6.9 dB/100m | 97 dB | 94 dB | 90 dB | 87 dB | 91 dB | 88 dB |
| 31.2 MHz | 9.7 dB/100m | 95 dB | 92 dB | 85 dB | 82 dB | 90 dB | 87 dB |
| 62.5 MHz | 13.9 dB/100m | 94 dB | 91 dB | 80 dB | 77 dB | 87 dB | 84 dB |
| 100 MHz | 17.7 dB/100m | 93 dB | 90 dB | 75 dB | 72 dB | 85 dB | 82 dB |
| 125 MHz | 19.9 dB/100m | 92 dB | 89 dB | 72 dB | 69 dB | 83 dB | 80 dB |
| 200 MHz | 25.6 dB/100m | 91 dB | 88 dB | 65 dB | 64 dB | 77 dB | 74 dB |
| 250 MHz | 28.8 dB/100m | 90 dB | 87 dB | 61 dB | 58 dB | 74 dB | 71 dB |
| 300 MHz | 31.8 dB/100m | 90 dB | 87 dB | 58 dB | 55 dB | 74 dB | 71 dB |
| 600 MHz | 46.6 dB/100m | 89 dB | 86 dB | 42 dB | 39 dB | 60 dB | 57 dB |
| 1000 MHz | 62.2 dB/100m | 88 dB | 85 dB | 26 dB | 23 dB | 50 dB | 47 dB |

**Delay**

| Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
| --- | --- |
| 25 ns/100m | 78 % |

**High Freq**

| 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 dB/100m | 78 dB | 75 dB | 76 dB | 73 dB | 78 dB | 75 dB | 20 dB | 40 dB | 35 dB |
| 4 MHz | 3.7 dB/100m | 78 dB | 75 dB | 74.3 dB | 71.3 dB | 78 dB | 75 dB | 23 dB | 34 dB | 23 dB |
| 10 MHz | 5.9 dB/100m | 78 dB | 75 dB | 72.1 dB | 69.1 dB | 75.3 dB | 72.3 dB | 25 dB | 30 dB | 15 dB |
| 16 MHz | 7.4 dB/100m | 78 dB | 75 dB | 70.6 dB | 67.6 dB | 71.2 dB | 68.2 dB | 25 dB | 28 dB | 10.9 dB |
| 31.2 MHz | 10.4 dB/100m | 78 dB | 75 dB | 67.6 dB | 64.6 dB | 65.4 dB | 62.4 dB | 23.6 dB | 25.1 dB | 5.1 dB |
| 62.5 MHz | 14.9 dB/100m | 75.5 dB | 72.5 dB | 60.6 dB | 57.6 dB | 59.4 dB | 56.4 dB | 21.5 dB | 22 dB | |
| 100 MHz | 19 dB/100m | 72.4 dB | 69.4 dB | 53.4 dB | 50.4 dB | 55.3 dB | 52.3 dB | 20.1 dB | 20 dB | |
| 125 MHz | 21.4 dB/100m | 70.9 dB | 67.9 dB | 49.6 dB | 46.6 dB | 53.4 dB | 50.4 dB | 19.4 dB | 19 dB | |
| 200 MHz | 27.5 dB/100m | 67.9 dB | 64.9 dB | 40.4 dB | 37.4 dB | 49.3 dB | 46.3 dB | 18 dB | 17 dB | |
| 250 MHz | 31 dB/100m | 66.4 dB | 63.4 dB | 35.5 dB | 32.5 dB | 47.3 dB | 44.3 dB | 17.3 dB | 16 dB | |
| 300 MHz | 34.2 dB/100m | 65.2 dB | 62.2 dB | 31.1 dB | 28.1 dB | 45.8 dB | 42.8 dB | 17.3 dB | | |
| 600 MHz | 50.1 dB/100m | 60.7 dB | 57.7 dB | 10.6 dB | 7.6 dB | 39.7 dB | 36.7 dB | 17.3 dB | | |
| 1000 MHz | 66.9 dB/100m | 57.4 dB | 54.4 dB | | | 35.3 dB | 32.3 dB | 15.1 dB | | |

| | |
| --- | --- |
| High Freq Table Note: | Limits below 4MHz are for information only; Values at 1000 MHz are for information only |

**Coupling Attenuation**

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

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

**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 |

**Current**

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

**Voltage**

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

## Temperature Range

| | |
|---|---|
| Installation Temp Range: | 0°C To +50°C |
| Operating Temp Range: | -30°C To +60°C |

## Mechanical Characteristics

| | |
|---|---|
| Bulk Cable Weight: | 61 kg/km |
| Max Recommended Pulling Tension: | 85 N |
| Min Bend Radius During Installation: | 60 mm |
| Min Bend Radius During Operation: | 30 mm |

## Standards

| | |
|---|---|
| ISO/IEC Compliance: | ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011 |
| CPR Euroclass: | B2ca-s1,d1,a1 |
| CENELEC Compliance: | EN 50173-1 Ed. 3:2011 |
| Data Category: | Category 7 |

## Applicable Environmental and Other Programs

| | |
|---|---|
| EU RoHS Compliance Date (yyyy-mm-dd): | 2016-12-15 |

## Flammability, LS0H, Toxicity Testing

| | |
|---|---|
| ISO/IEC Flammability: | IEC 60332-1 |
| Burning Load: | 650 kJ/m |
| Amount of Halogen acc. to IEC 60754-1 & EN50267-1: | Zero |

## Part Number

**Variants**

| Item # | Color |
|---|---|
| 1885ELV.00500 | Gray |
| 1885ELV.01500 | Orange |

| | |
|---|---|
| Patent: | https://www.belden.com/resources/patents |

## History

| | |
|---|---|
| Revision Number: | 1 |