



**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, LSOH, 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: | <a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a> |
|---------|---|

## History

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

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