



**Part Number:** 1886ELV

Cat 7A+ Cable, F/FTP, LSZH, 4 Pair, AWG 23, Indoor CPR B2ca

## Product Description

Cat. 7A (1200MHz), 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          |

|              |    |
|--------------|----|
| Bonded-Pair: | No |
|--------------|----|

#### 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

| Min. Coverage [%] |
|-------------------|
| 30 %              |

#### Outer Jacket Material

| Material    | Color           | Nominal Diameter | Diameter +/- Tolerance | Ripcord |
|-------------|-----------------|------------------|------------------------|---------|
| LSZH / FRNC | Grey (RAL 7032) | 7.7 mm           | 0.3 mm                 | Yes     |

### Construction and Dimensions

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

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

Cabling

| Description              |
|--------------------------|
| 4 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                 |

Impedance

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

Delay

| Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|-----------------|------------------------------------------|
| 25 ns/100m      | 76 %                                     |

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           | 2.1 dB/100m                       | 78 dB          | 75 dB            | 75.9 dB       | 72.9 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          | 5.8 dB/100m                       | 78 dB          | 75 dB            | 72.2 dB       | 69.2 dB         | 75.3 dB                 | 72.3 dB                     | 25 dB                      | 30 dB         | 15 dB            |
| 16 MHz          | 7.3 dB/100m                       | 78 dB          | 75 dB            | 70.7 dB       | 67.7 dB         | 71.2 dB                 | 68.2 dB                     | 25 dB                      | 28 dB         | 10.9 dB          |
| 31.2 MHz        | 10.3 dB/100m                      | 78 dB          | 75 dB            | 67.7 dB       | 64.7 dB         | 65.4 dB                 | 62.4 dB                     | 23.6 dB                    | 25.2 dB       | 5.1 dB           |
| 62.5 MHz        | 14.6 dB/100m                      | 78 dB          | 75 dB            | 63.4 dB       | 60.4 dB         | 59.4 dB                 | 56.4 dB                     | 21.5 dB                    | 22 dB         |                  |
| 100 MHz         | 18.5 dB/100m                      | 75.4 dB        | 72.4 dB          | 56.9 dB       | 53.9 dB         | 55.3 dB                 | 52.3 dB                     | 20.1 dB                    | 20 dB         |                  |
| 155 MHz         | 23.2 dB/100m                      | 72.5 dB        | 69.5 dB          | 49.3 dB       | 46.3 dB         | 51.5 dB                 | 48.5 dB                     | 18.8 dB                    | 18.1 dB       |                  |
| 250 MHz         | 29.7 dB/100m                      | 69.4 dB        | 66.4 dB          | 39.7 dB       | 36.7 dB         | 47.3 dB                 | 44.3 dB                     | 17.3 dB                    | 16 dB         |                  |
| 500 MHz         | 42.8 dB/100m                      | 64.9 dB        | 61.9 dB          | 22.2 dB       | 19.2 dB         | 41.3 dB                 | 38.3 dB                     | 17.3 dB                    | 16 dB         |                  |
| 600 MHz         | 47.1 dB/100m                      | 63.7 dB        | 60.7 dB          | 16.6 dB       | 13.6 dB         | 39.7 dB                 | 36.7 dB                     | 17.3 dB                    |               |                  |
| 1000 MHz        | 61.9 dB/100m                      | 60.4 dB        | 57.4 dB          | 10.6 dB       | -4.5 dB         | 35.3 dB                 | 32.3 dB                     | 15.1 dB                    |               |                  |
| 1200 MHz        | 68.4 dB/100m                      | 59.2 dB        | 56.2 dB          | -9.5 dB       | -12.1 dB        | 33.7 dB                 | 30.7 dB                     | 14.3 dB                    |               |                  |

|                                        |                                                                                         |
|----------------------------------------|-----------------------------------------------------------------------------------------|
| High Freq Table Note:                  | Limits below 4MHz are for information only; Values at 1200 MHz are for information only |
| Coupling Attenuation Class:            | Type Ib                                                                                 |
| Segregation class according EN50174-2: | d                                                                                       |

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] |
|--------------------|
| 75 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: | 58 mm    |
| Min Bend Radius During Operation:    | 29 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 7A                                |
| ANSI Compliance:    | ANSI/TIA/EIA 568-C.2 (2009)                |

Applicable Environmental and Other Programs

|                                       |            |
|---------------------------------------|------------|
| EU RoHS Compliance Date (yyyy-mm-dd): | 2016-12-19 |
|---------------------------------------|------------|

Flammability, LS0H, Toxicity Testing

|                                                    |             |
|----------------------------------------------------|-------------|
| ISO/IEC Flammability:                              | IEC 60332-1 |
| Burning Load:                                      | 625 kJ/m    |
| Amount of Halogen acc. to IEC 60754-1 & EN50267-1: | Zero        |

Part Number

Variants

| Item #        | Color |
|---------------|-------|
| 1886ELV.00500 | Gray  |

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

History

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

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