



**Product:** <u>2143A</u> ☑

Category 6 Indoor/Outdoor Cable, 4 Pair, U/UTP, OSP/CM-LS, LSZH

### **Product Description**

Category 6 Premise Horizontal Cable (350MHz), Indoor/Outdoor OSP/CM-LS, 4-Pair, 23 AWG Solid Bare Copper Conductors, U/UTP, Gel-filled, Haloarrest® UV Resistant Flame Retardant LSZH Jacket

### **Technical Specifications**

#### **Product Overview**

| Suitable Applications: | OSP-Outdoor, Indoor/Outdoor, Premise Horizontal Cable, Ethernet 1000BASE-T, Ethernet 100BASE-TX, Ethernet 10BASE-T, PoE++, PoE+, PoE |
|------------------------|--|
| Patent:                | This product has one or more applicable patents. More information on patents can be found at <a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a> .   |

#### **Construction Details**

#### Conductor

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

#### Insulation

| Material        | Color Code   |  |  |  |  |
|-----------------|--|--|--|--|--|
| PO - Polyolefin | PO - Polyolefin White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown |  |  |  |  |
| Bonded-Pair:    | No   |  |  |  |  |
| Waterblocking:  | Gel Filled   |  |  |  |  |

### **Outer Jacket Material**

| Separator Material                 | Material  | Material Trade Name | Nom. Diameter | Ripcord |
|------------------------------------|---|---------------------|---------------|---------|
| Center Member (Patented X-Spline®) | LSZH - Low Smoke Zero Halogen (Flame Retardant) | Haloarrest®         | 0.275 in      | No      |

### **Electrical Characteristics**

#### Electricals

| Max. Conductor DCR | Max. DCR Unbalance | Max. Capacitance Unbalance | Nom. Mutual Capacitance |
|--------------------|--------------------|----------------------------|-------------------------|
| 93.8 Ohm/km        | 3.0%               | 160 pF/100m                | 15.7 pF/ft              |

### Delay

| Frequency [MHz] | Max. Delay    | Max. Delay Skew | Nom. Velocity of Propagation (VP) [%] |
|-----------------|---------------|-----------------|---------------------------------------|
| 100 MHz         | 537.6 ns/100m | 45 ns/100m      | 65%                                   |

#### High Freq

| Frequency<br>[MHz] | Max. Insertion Loss<br>(Attenuation) | Min.<br>NEXT<br>[dB] | Min.<br>PSNEXT<br>[dB] | Min.<br>PSACR<br>[dB] | Min. ACRF<br>(ELFEXT) [dB] | Min. PSACRF<br>(PSELFEXT) [dB] | Min. RL<br>(Return Loss)<br>[dB] | Max./Min. Input<br>Impedance (unFitted) | Max./Min. Fitted<br>Impedance | Min.<br>TCL<br>[dB] | Min.<br>ELTCTL<br>[dB] |
|--------------------|--------------------------------------|----------------------|------------------------|-----------------------|----------------------------|--------------------------------|----------------------------------|---|-------------------------------|---------------------|------------------------|
| 1 MHz              | 2.0 dB/100m                          | 74.3 dB              | 72.3 dB                | 70.3 dB               | 67.8 dB                    | 64.8 dB                        | 20.0 dB                          | 100 ± 15 Ohm                            | 100 ± 15 Ohm                  | 40.0 dB             | 35.0 dB                |
| 4 MHz              | 3.8 dB/100m                          | 65.3 dB              | 63.3 dB                | 59.5 dB               | 55.7 dB                    | 52.7 dB                        | 23.0 dB                          | 100 ± 15 Ohm                            | 100 ± 15 Ohm                  | 40.0 dB             | 23.0 dB                |
| 8 MHz              | 5.3 dB/100m                          | 60.8 dB              | 58.8 dB                | 53.4 dB               | 49.7 dB                    | 46.7 dB                        | 24.5 dB                          | 100 ± 15 Ohm                            | 100 ± 15 Ohm                  | 40.0 dB             | 16.9 dB                |
| 10 MHz             | 6.0 dB/100m                          | 59.3 dB              | 57.3 dB                | 51.4 dB               | 47.8 dB                    | 44.8 dB                        | 25.0 dB                          | 100 ± 15 Ohm                            | 100 ± 15 Ohm                  | 40.0 dB             | 15.0 dB                |
| 16 MHz             | 7.6 dB/100m                          | 56.3 dB              | 54.3 dB                | 46.7 dB               | 43.7 dB                    | 40.7 dB                        | 25.0 dB                          | 100 ± 15 Ohm                            | 100 ± 15 Ohm                  | 38.0 dB             | 10.9 dB                |
| 20 MHz             | 8.5 dB/100m                          | 54.8 dB              | 52.8 dB                | 44.3 dB               | 41.7 dB                    | 38.7 dB                        | 25.0 dB                          | 100 ± 15 Ohm                            | 100 ± 15 Ohm                  | 37.0 dB             | 9.0 dB                 |
| 25 MHz             | 9.5 dB/100m                          | 53.3 dB              | 51.3 dB                | 41.8 dB               | 39.8 dB                    | 36.8 dB                        | 24.3 dB                          | 100 ± 15 Ohm                            | 100 ± 15 Ohm                  | 36.0 dB             | 7.0 dB                 |

| 31.25 MHz | 10.7 dB/100m | 51.9 dB | 49.9 dB | 39.2 dB | 37.9 dB | 34.9 dB | 23.6 dB | 100 ± 15 Ohm | 100 ± 15 Ohm | 35.1 dB | 5.1 dB |
|-----------|--------------|---------|---------|---------|---------|---------|---------|--------------|--------------|---------|--------|
| 62.5 MHz  | 15.4 dB/100m | 47.4 dB | 45.4 dB | 30.0 dB | 31.8 dB | 28.8 dB | 21.5 dB | 100 ± 15 Ohm | 100 ± 15 Ohm | 32.0 dB |        |
| 100 MHz   | 19.8 dB/100m | 44.3 dB | 42.3 dB | 22.5 dB | 27.8 dB | 24.8 dB | 20.1 dB | 100 ± 15 Ohm | 100 ± 15 Ohm | 30.0 dB |        |
| 155 MHz   | 25.2 dB/100m | 41.5 dB | 39.5 dB | 14.3 dB | 23.9 dB | 20.9 dB | 18.8 dB | 100 ± 22 Ohm | 100 ± 15 Ohm | 28.1 dB |        |
| 200 MHz   | 29.0 dB/100m | 39.8 dB | 37.8 dB | 8.8 dB  | 21.7 dB | 18.7 dB | 18.0 dB | 100 ± 22 Ohm | 100 ± 15 Ohm | 27.0 dB |        |
| 250 MHz   | 32.8 dB/100m | 38.3 dB | 36.3 dB | 3.5 dB  | 19.8 dB | 16.8 dB | 17.3 dB | 100 ± 32 Ohm | 100 ± 15 Ohm | 26.0 dB |        |

# Voltage

UL Voltage Rating 300 V (CM-LS)

# **Mechanical Characteristics**

# Temperature

| UL Rating. | Operating      | Installation   | Storage        |
|------------|----------------|----------------|----------------|
| 75°C       | -40°C To +75°C | -20°C To +75°C | -40°C To +75°C |

# Bend Radius

| Stationary Min. | Installation Min. |
|-----------------|-------------------|
| 1.25 in         | 2.75 in           |
|                 |                   |

| Max. Pull Tension: | 25 lbs        |
|--------------------|---------------|
| Bulk Cable Weight: | 39 lbs/1000ft |

# **Standards and Compliance**

| Environmental Suitability:        | Indoor/Outdoor, Indoor, Outdoor, Non-Halogenated, Sunlight Resistance  |
|-----------------------------------|--|
| Sustainability:                   | Product Lens™, Environmental Product Declaration (EPD) Available   |
| Flammability / Fire Resistance:   | UL 1685 (UL Loading-Limited Smoke), IEC 60332-1-2  |
| NEC / UL Compliance:              | 800, CM-LS   |
| CEC / C(UL)<br>Compliance:        | CM-LS  |
| ICEA Compliance:                  | S-116-732-2013   |
| ICEA Compliance:                  | S-56-434   |
| ICEA Compliance:                  | S-99-689   |
| ICEA Compliance:                  | S-100-685  |
| IEEE Compliance:                  | IEEE 802.3bt Type 1, Type 2, Type 3, Type 4  |
| NEMA Compliance:                  | ANSI/NEMA WC-66  |
| Data Category:                    | Category 6   |
| TIA/EIA Compliance:               | ANSI/TIA-568.2-D Category 6  |
| Marine Compliance:                | ABS certificate 18-HS1803790-PDA   |
| Cenelec Compliance:               | Segregation class according EN50174-2=a  |
| CPR Euroclass:                    | Eca  |
| European Directive<br>Compliance: | EU CE Mark, EU Directive 2015/863/EU, EU Directive 2011/65/EU (ROHS II), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16 |
| APAC Compliance:                  | China RoHS II (GB/T 26572-2011)  |

# **Part Number**

### Variants

| Item #        | Color | UPC          |
|---------------|-------|--------------|
| 2143A 0101000 | Black | 612825130437 |

# **Product Notes**

| - 1 |        |   |
|-----|--------|---|
| Not | Notes: | Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Print Includes Descending Footage/Meter Markings |
|     | Notes. | from Max. Put-Up Length to 0. Suitable for use in Buildings in Wet Locations. Not Suitable for Direct Burial. Fully Water Blocked and Sunlight Resistant (Black Jacket Only).     |

### History

| Update and Revision: | Revision Number: 0.304 Revision Date: 09-30-2020 |
|----------------------|--|

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