



Part Number: 1683ENH

Cat 6A Cable, U/UTP, LSZH, 4 Pair, AWG 23, Indoor CPR Eca

Product Description

Cat. 6A (500MHz), 4-Pair, U/UTP Unshielded, Premise Horizontal Cable, 23 AWG solid bare copper conductors, Polyethylene insulation, LSZH jacket

Technical Specifications

Product Overview

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

Physical Characteristics (Overall)

Conductor

| AWG | Material | No. of Pairs |
|-----|------------------|--------------|
| 23 | BC - Bare Copper | 4 |

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

Insulation

| Material | Nominal Diameter |
|--------------|------------------|
| Polyethylene | 1.18 mm |

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

Color Chart

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

Outer Shield Material

| Type | Material |
|------|----------------------|
| Foil | Special barrier tape |

Outer Jacket Material

| Material | Nominal Diameter | Diameter +/- Tolerance |
|-------------|------------------|------------------------|
| LSZH / FRNC | 7.2 mm | 0.3 mm |

Construction and Dimensions

Cabling

| Description |
|---|
| 4 pairs twisted together + Cross Web of Polyolefin + Overlapping polyester foil over cable core |

Electrical Characteristics

Conductor DCR

| Max. Conductor DCR | Max DCR Unbalanced Between Pairs [%] | Max. DCR Unbalanced Within Pair [%] |
|--------------------|--------------------------------------|-------------------------------------|
| 9.5 Ohm/km | 4 % | 2 % |

Capacitance

| Max. Capacitance Unbalanced Pair to Pair | Max. Mutual Capacitance |
|--|-------------------------|
| 1,600 pF/m | 56 pF/m |

Delay

| Max. Delay Skew | Nominal Velocity of Propagation (VP) [%] |
|-----------------|--|
| 45 ns/100m | 67 % |

High Freq

| Frequency [MHz] | Max. Insertion Loss (Attenuation) |
|-----------------|-----------------------------------|
| 1 MHz | 2.1 dB/100m |
| 4 MHz | 3.8 dB/100m |
| 10 MHz | 5.9 dB/100m |
| 16 MHz | 7.5 dB/100m |
| 31.2 MHz | 10.5 dB/100m |
| 62.5 MHz | 15.0 dB/100m |
| 100 MHz | 19.1 dB/100m |
| 125 MHz | 21.5 dB/100m |
| 200 MHz | 27.6 dB/100m |
| 250 MHz | 31.1 dB/100m |
| 300 MHz | 34.3 dB/100m |
| 500 MHz | 35.3 dB/100m |

Current

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

Voltage

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

Temperature Range

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

Mechanical Characteristics

| | |
|----------------------------------|----------|
| Bulk Cable Weight: | 50 kg/km |
| Max Recommended Pulling Tension: | 80 N |

Standards

| | |
|---------------------|--|
| ISO/IEC Compliance: | ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011 |
| CPR Euroclass: | Eca |
| CENELEC Compliance: | EN 50173-1 Ed. 3:2011 |
| Data Category: | Category 6A |
| ANSI Compliance: | ANSI/TIA/EIA 568-C.2 (2009) |

Applicable Environmental and Other Programs

| | |
|---------------------------------------|------------|
| EU RoHS Compliance Date (yyyy-mm-dd): | 2015-08-25 |
|---------------------------------------|------------|

Flammability, LS0H, Toxicity Testing

| | |
|--|-------------|
| ISO/IEC Flammability: | IEC 60332-1 |
| Burning Load: | 745 kJ/m |
| Amount of Halogen acc. to IEC 60754-1 & EN50267-1: | Zero |

Part Number

Variants

| Item # | Color |
|----------------|--------|
| 1683ENH.00500 | Blue |
| 1683ENH.01500 | Purple |
| 1683ENH.01B100 | Purple |

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

| | |
|------------------|----|
| Revision Number: | 2a |
|------------------|----|

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