



Part Number: 1683ENH

Category 6A Nonbonded-Pair Cable

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
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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
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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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