



Product: [7813LC](#) 

Category 6 Cable, 4 Bonded-PairS, U/UTP, LC, CMP

Product Description

Category 6 Premise Horizontal Cable (250MHz), 4 Bonded-Pairs, 23 AWG Solid Bare Copper Conductors, U/UTP, Limited Combustible, Plenum-CMP, FEP Jacket

Technical Specifications

Product Overview

Suitable Applications:	Premise Horizontal Cable, Ethernet 1000BASE-T, Ethernet 100BASE-TX, Ethernet 10BASE-T, PoE++, PoE+, PoE, Environments Requiring Limited Combustible Cable
Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/resources/patents .

Construction Details

Conductor

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

Insulation

Material	Color Code
FEP - Fluorinated Ethylene Propylene	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair:	Yes
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Outer Jacket

Separator Material	Material	Nom. Diameter	Ripcord
Central Filler	FEP - Fluorinated Ethylene Propylene	0.214 in	No

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. Capacitance Unbalance	Nom. Mutual Capacitance
82 Ohm/km	5%	90 pF/100m	15 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]
537 ns/100m	45 ns/100m	72%

High Frequency

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]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2 dB/100m	74.3 dB	72.3 dB	72.3 dB	70.3 dB	67.8 dB	64.8 dB	20 dB	100 ± 15 Ohm	100 ± 15 Ohm
4 MHz	3.8 dB/100m	65.3 dB	63.3 dB	61.5 dB	59.5 dB	55.8 dB	52.8 dB	23 dB	100 ± 15 Ohm	100 ± 15 Ohm
8 MHz	5.3 dB/100m	60.8 dB	58.8 dB	55.4 dB	53.4 dB	49.7 dB	46.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
10 MHz	6 dB/100m	59.3 dB	57.3 dB	53.3 dB	51.3 dB	47.8 dB	44.8 dB	25 dB	100 ± 15 Ohm	100 ± 15 Ohm
16 MHz	7.6 dB/100m	56.2 dB	54.3 dB	48.7 dB	46.7 dB	43.7 dB	40.7 dB	25 dB	100 ± 15 Ohm	100 ± 15 Ohm
20 MHz	8.5 dB/100m	54.8 dB	52.8 dB	46.3 dB	44.3 dB	41.8 dB	38.8 dB	25 dB	100 ± 15 Ohm	100 ± 15 Ohm
25 MHz	9.5 dB/100m	53.3 dB	51.3 dB	43.8 dB	41.8 dB	39.8 dB	36.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm
31.25 MHz	10.7 dB/100m	51.9 dB	49.9 dB	41.2 dB	39.2 dB	37.9 dB	34.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 15 Ohm
62.5 MHz	15.4 dB/100m	47.4 dB	45.4 dB	32 dB	30 dB	31.9 dB	28.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 15 Ohm

100 MHz	19.8 dB/100m	44.3 dB	42.3 dB	24.5 dB	22.5 dB	27.8 dB	24.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 15 Ohm
155 MHz	25.2 dB/100m	41.5 dB	39.5 dB	16.3 dB	14.3 dB	23.9 dB	20.9 dB	18.8 dB	100 ± 22 Ohm	100 ± 15 Ohm
200 MHz	29 dB/100m	39.8 dB	37.8 dB	10.8 dB	8.8 dB	21.8 dB	18.8 dB	18 dB	100 ± 22 Ohm	100 ± 15 Ohm
250 MHz	32.8 dB/100m	38.3 dB	36.3 dB	5.5 dB	3.5 dB	19.8 dB	16.8 dB	17.3 dB	100 ± 32 Ohm	100 ± 15 Ohm

Voltage

UL Voltage Rating
300 V (CMP)

Mechanical Characteristics

Temperature

Operating	Installation	Storage
-40°C To +150°C	0°C To +50°C	-20°C To +75°C

Bend Radius

Installation Min.
2.1 in

Max. Pull Tension:	40 lbs
Bulk Cable Weight:	28 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Plenum, Indoor
Flammability / Fire Resistance:	NFPA 262 Plenum Flame Test (UL910),UL723 (NFPA 255), FT6, FT6, IEC 60332-1-2
NEC / UL Compliance:	Article 800, CMP
CEC / C(UL) Compliance:	CMP
ICEA Compliance:	S-116-732-2013
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
CPR Euroclass:	Eca
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Part Number

Non-Plenum Number:	2412
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Variants

Item #	Color	Putup Type	Length	UPC
7813LC 006U1000	Blue	UnReel	1,000 ft	612825189855
7813LC 006U1000	Blue	UnReel	1,000 ft	612825189855
7813LC 0061000	Blue	Reel	1,000 ft	612825189862
7813LC 0061000	Blue	Reel	1,000 ft	612825189862
7813LC 009U1000	White	UnReel	1,000 ft	612825189879
7813LC 009U1000	White	UnReel	1,000 ft	612825189879
7813LC 0091000	White	Reel	1,000 ft	612825189886
7813LC 0091000	White	Reel	1,000 ft	612825189886

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Jacket sequentially marked at 2 ft. intervals.
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History

Update and Revision:	Revision Number: 0.278 Revision Date: 09-08-2021
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