



Product: [4812](#)

Category 6+ Enhanced Cable, 4 Pair, U/UTP, CMR

Product Description

Category 6+ Enhanced Premise Horizontal Cable (600MHz), 4 Pair, 23 AWG Solid Bare Copper Conductors, U/UTP, Riser-CMR, PVC Jacket

Technical Specifications

Product Overview

Suitable Applications:	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 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
PO - Polyolefin	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair: No

Outer Jacket Material

Separator Material	Material	Nom. Diameter	Ripcord
Center Member (Patented X-Spline®)	PVC - Polyvinyl Chloride	0.255 in	Yes

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. DCR Unbalanced Between Pairs [%]	Max. Capacitance Unbalance	Nom. Mutual Capacitance
67 Ohm/km	3%	5%	90 pF/100m	15.5 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	68%

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]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. TCL [dB]	Min. ELTCTL [dB]
0.772 MHz	1.7 dB/100m	83.0 dB	82.0 dB	81.3 dB	80.3 dB	77.0 dB	75.0 dB			102 ± 15 Ohm	40.0 dB	37.2 dB
1 MHz	1.9 dB/100m	81.3 dB	80.3 dB	79.4 dB	78.4 dB	74.8 dB	72.8 dB	20.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	35.0 dB
4 MHz	3.5 dB/100m	72.3 dB	71.3 dB	68.8 dB	67.8 dB	62.8 dB	60.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	23.0 dB
8 MHz	4.9 dB/100m	67.8 dB	66.8 dB	62.8 dB	61.8 dB	56.7 dB	54.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	16.9 dB
10 MHz	5.5 dB/100m	66.3 dB	65.3 dB	60.8 dB	59.8 dB	54.8 dB	52.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	40.0 dB	15.0 dB
16 MHz	7.0 dB/100m	63.2 dB	62.2 dB	56.3 dB	55.3 dB	50.7 dB	48.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	38.0 dB	10.9 dB
20 MHz	7.8 dB/100m	61.8 dB	60.8 dB	54.0 dB	53.0 dB	48.8 dB	46.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	37.0 dB	9.0 dB
25 MHz	8.7 dB/100m	60.3 dB	59.3 dB	51.6 dB	50.6 dB	46.8 dB	44.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	36.0 dB	7.0 dB
31.25 MHz	9.8 dB/100m	58.9 dB	57.9 dB	49.1 dB	48.1 dB	44.9 dB	42.9 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm	35.1 dB	

62.5 MHz	14.1 dB/100m	54.4 dB	53.4 dB	40.3 dB	39.3 dB	38.9 dB	36.9 dB	22.2 dB	100 ± 15 Ohm	100 ± 15 Ohm	32.0 dB
100 MHz	18.0 dB/100m	51.3 dB	50.3 dB	33.3 dB	32.3 dB	34.8 dB	32.8 dB	20.8 dB	100 ± 15 Ohm	100 ± 15 Ohm	30.0 dB
155 MHz	22.8 dB/100m	48.4 dB	47.4 dB	25.7 dB	24.7 dB	31.0 dB	29.0 dB	19.5 dB	100 ± 22 Ohm	100 ± 15 Ohm	28.1 dB
200 MHz	26.2 dB/100m	46.8 dB	45.8 dB	20.6 dB	19.6 dB	28.8 dB	26.8 dB	18.7 dB	100 ± 22 Ohm	100 ± 15 Ohm	27.0 dB
250 MHz	29.6 dB/100m	45.3 dB	44.3 dB	15.8 dB	14.8 dB	26.8 dB	24.8 dB	18.0 dB	100 ± 32 Ohm	100 ± 15 Ohm	26.0 dB
300 MHz	32.7 dB/100m	44.1 dB	43.1 dB	11.4 dB	10.4 dB	25.3 dB	23.3 dB	17.5 dB	100 ± 32 Ohm	100 ± 15 Ohm	
350 MHz	35.6 dB/100m	43.1 dB	42.1 dB	7.5 dB	6.5 dB	23.9 dB	21.9 dB	17.0 dB	100 ± 32 Ohm	100 ± 15 Ohm	
400 MHz	38.4 dB/100m	42.3 dB	41.3 dB	3.9 dB	2.9 dB	22.8 dB	20.8 dB	16.6 dB	100 ± 32 Ohm	100 ± 15 Ohm	
450 MHz	41.0 dB/100m	41.5 dB	40.5 dB	0.5 dB		21.7 dB	19.7 dB	16.2 dB	100 ± 32 Ohm	100 ± 15 Ohm	
500 MHz	43.6 dB/100m	40.8 dB	39.8 dB			20.8 dB	18.8 dB	15.9 dB	100 ± 32 Ohm	100 ± 15 Ohm	
550 MHz	46.0 dB/100m	40.2 dB	39.2 dB			20.0 dB	18.0 dB	15.6 dB	100 ± 32 Ohm	100 ± 15 Ohm	
600 MHz	48.4 dB/100m	39.6 dB	38.6 dB			19.2 dB	17.2 dB	15.4 dB	100 ± 32 Ohm	100 ± 15 Ohm	
650 MHz	50.6 dB/100m	39.1 dB	36.1 dB			18.5 dB	15.5 dB	15.1 dB			
750 MHz	55.0 dB/100ft	38.2 dB	35.2 dB			17.3 dB	14.3 dB	14.7 dB			
860 MHz	59.6 dB/100ft	37.3 dB	34.3 dB			16.1 dB	13.1 dB	14.3 dB			

Voltage

UL Voltage Rating
300 V (CMR), 300 V (CL3R)

Mechanical Characteristics

Temperature

UL Rating	Operating	Installation	Storage
75°C	-20°C To +75°C	0°C To +50°C	-20°C To +75°C

Bend Radius

Stationary Min.	Installation Min.
1.0 in	2.75 in

Max. Pull Tension:	25 lbs
Bulk Cable Weight:	31 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Riser, Indoor
Sustainability:	Product Lens™, Environmental Product Declaration (EPD) Available
Flammability / Fire Resistance:	UL 1666 Riser, FT4, FT4, IEC 60332-1-2
NEC / UL Compliance:	800, CMR;CMR-LP (0.5A);CL3R-LP (0.5A)
CEC / C(UL) Compliance:	CMR
ICEA Compliance:	S-116-732-2013
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
Cenelec Compliance:	Segregation class according EN50174-2=a
CPR Euroclass:	Eca
European Directive 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

Plenum Number:	4813
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Variants

Item #	Color	Putup Type	Length	UPC
4812 0103000	Black	Reel	3,000 ft	612825153573
4812 0103000	Black	Reel	3,000 ft	612825153573
4812 0061000	Blue	Reel	1,000 ft	612825153528
4812 0061000	Blue	Reel	1,000 ft	612825153528
4812 006A1000	Blue	Reel-in-Box	1,000 ft	612825153511
4812 006A1000	Blue	Reel-in-Box	1,000 ft	612825153511

4812 0062500	Blue	Reel	2,500 ft	612825153535
4812 0062500	Blue	Reel	2,500 ft	612825153535
4812 0081000	Gray	Reel	1,000 ft	612825153542
4812 0081000	Gray	Reel	1,000 ft	612825153542
4812 0051000	Green	Reel	1,000 ft	612825153504
4812 0051000	Green	Reel	1,000 ft	612825153504
4812 0021000	Red	Reel	1,000 ft	612825153481
4812 0021000	Red	Reel	1,000 ft	612825153481
4812 0091000	White	Reel	1,000 ft	612825153566
4812 0091000	White	Reel	1,000 ft	612825153566
4812 009A1000	White	Reel-in-Box	1,000 ft	612825153559
4812 009A1000	White	Reel-in-Box	1,000 ft	612825153559
4812 0041000	Yellow	Reel	1,000 ft	612825153498
4812 0041000	Yellow	Reel	1,000 ft	612825153498

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 600 MHz are for Engineering Information Only. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.
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History

Update and Revision:	Revision Number: 0.412 Revision Date: 09-30-2020
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