



Product: [7851A](#) 

Category 6+ Enhanced Cable, 4 Bonded-Pairs, U/UTP, CMR

Product Description

Category 6+ Enhanced Premise Horizontal Cable (600MHz), 4 Bonded-Pairs, 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: Yes

Outer Jacket Material

Separator Material	Material	Nom. Diameter	Ripcord
Center Member (Patented E-Spline®)	PVC - Polyvinyl Chloride	0.280 in	Yes

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. Capacitance Unbalance	Nom. Mutual Capacitance
82 Ohm/km	3%	90 pF/100m	15.5 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew
100 MHz	537.6 ns/100m	38 ns/100m

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]
1 MHz	1.8 dB/100m	82.3 dB	80.3 dB	80.5 dB	78.5 dB	74.8 dB	72.8 dB	20.0 dB	100 ± 12 Ohm	100 ± 15 Ohm	40.0 dB	35.0 dB
4 MHz	3.5 dB/100m	73.3 dB	71.3 dB	69.7 dB	67.7 dB	62.8 dB	60.8 dB	23.0 dB	100 ± 12 Ohm	100 ± 10.4 Ohm	40.0 dB	23.0 dB
8 MHz	5.0 dB/100m	68.8 dB	66.8 dB	63.7 dB	61.7 dB	56.7 dB	54.7 dB	24.5 dB	100 ± 12 Ohm	100 ± 8 Ohm	40.0 dB	16.9 dB
10 MHz	5.7 dB/100m	67.3 dB	65.3 dB	61.6 dB	59.6 dB	54.8 dB	52.8 dB	25.0 dB	100 ± 12 Ohm	100 ± 7.3 Ohm	40.0 dB	15.0 dB
16 MHz	7.2 dB/100m	64.2 dB	62.2 dB	57.0 dB	55.0 dB	50.7 dB	48.7 dB	25.0 dB	100 ± 12 Ohm	100 ± 5.7 Ohm	38.0 dB	10.9 dB
20 MHz	8.1 dB/100m	62.8 dB	60.8 dB	54.7 dB	52.7 dB	48.8 dB	46.8 dB	25.0 dB	100 ± 12 Ohm	100 ± 5 Ohm	37.0 dB	9.0 dB
25 MHz	9.1 dB/100m	61.3 dB	59.3 dB	52.3 dB	50.3 dB	46.8 dB	44.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	36.0 dB	7.0 dB
30 MHz	10.0 dB/100m	60.1 dB	58.1 dB	50.2 dB	48.2 dB	45.3 dB	43.3 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	35.2 dB	5.5 dB
31.25 MHz	10.2 dB/100m	59.9 dB	57.9 dB	49.7 dB	47.7 dB	44.9 dB	42.9 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	35.1 dB	

62.5 MHz	14.7 dB/100m	55.4 dB	53.4 dB	40.7 dB	38.7 dB	38.9 dB	36.9 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	32.0 dB
100 MHz	18.9 dB/100m	52.3 dB	50.3 dB	33.4 dB	31.4 dB	34.8 dB	32.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	30.0 dB
155 MHz	23.9 dB/100m	49.4 dB	47.4 dB	25.5 dB	23.5 dB	31.0 dB	29.0 dB	22.8 dB	100 ± 15 Ohm	100 ± 5 Ohm	28.1 dB
200 MHz	27.5 dB/100m	47.8 dB	45.8 dB	20.3 dB	18.3 dB	28.8 dB	26.8 dB	21.6 dB	100 ± 15 Ohm	100 ± 5 Ohm	27.0 dB
240 MHz	30.5 dB/100m	46.6 dB	44.6 dB	16.1 dB	14.1 dB	27.2 dB	25.2 dB	20.6 dB	100 ± 20 Ohm	100 ± 5 Ohm	26.2 dB
250 MHz	31.2 dB/100m	46.3 dB	44.3 dB	15.2 dB	13.2 dB	26.8 dB	24.8 dB	20.5 dB	100 ± 20 Ohm	100 ± 5 Ohm	26.0 dB
300 MHz	34.5 dB/100m	43.1 dB	43.1 dB	8.6 dB	8.6 dB	25.3 dB	23.3 dB	20.1 dB	100 ± 20 Ohm	100 ± 5 Ohm	
310 MHz	35.2 dB/100m	42.9 dB	42.9 dB	7.8 dB	7.8 dB	25.0 dB	23.0 dB	20.0 dB	100 ± 20 Ohm	100 ± 5 Ohm	
350 MHz	37.7 dB/100m	42.1 dB	42.1 dB	4.5 dB	4.5 dB	23.9 dB	21.9 dB	19.8 dB	100 ± 22 Ohm	100 ± 5 Ohm	
400 MHz	40.6 dB/100m	41.3 dB	41.3 dB	0.6 dB	0.6 dB	22.8 dB	20.8 dB	19.5 dB	100 ± 22 Ohm	100 ± 5 Ohm	
436 MHz	42.7 dB/100m	40.7 dB	40.7 dB			22.0 dB	20.0 dB	19.1 dB	100 ± 22 Ohm	100 ± 5 Ohm	
450 MHz	43.5 dB/100m	40.5 dB	40.5 dB			21.7 dB	19.7 dB	18.9 dB	100 ± 22 Ohm	100 ± 5 Ohm	
460 MHz	44.0 dB/100m	40.4 dB	40.4 dB			21.5 dB	19.5 dB	18.8 dB	100 ± 22 Ohm	100 ± 5 Ohm	
500 MHz	46.2 dB/100ft	39.8 dB	39.8 dB			20.8 dB	18.8 dB	18.4 dB	100 ± 22 Ohm	100 ± 5 Ohm	
550 MHz	48.8 dB/100ft	39.2 dB	39.2 dB			20.0 dB	18.0 dB	18.0 dB	100 ± 22 Ohm	100 ± 5 Ohm	
600 MHz	51.4 dB/100ft	38.6 dB	38.6 dB			19.2 dB	17.2 dB	17.6 dB	100 ± 22 Ohm	100 ± 5 Ohm	

Voltage

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

Mechanical Characteristics

Temperature

UL Rating	Operating	Installation	Storage
90°C	-20°C To +75°C	0°C To +50°C	-20°C To +75°C

Bend Radius

Stationary Min.	Installation Min.
0.5 in	2.25 in

Max. Pull Tension:	40 lbs
Bulk Cable Weight:	33 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:	7852A
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Variants

Item #	Color	Putup Type	Length	UPC
7851A 006Z1000				612825433378
7851A 0101000	Black	Reel	1,000 ft	612825190325
7851A 010A1000	Black	Reel-in-Box	1,000 ft	612825190318
7851A 0061000	Blue	Reel	1,000 ft	612825190288
7851A 006A1000	Blue	Reel-in-Box	1,000 ft	612825190271

7851A F6H1000	Gray	Reel	1,000 ft	612825190189
7851A F6HA1000	Gray	Reel-in-Box	1,000 ft	612825190172
7851A 0051000	Green	Reel	1,000 ft	612825190264
7851A 005A1000	Green	Reel-in-Box	1,000 ft	612825190257
7851A 0031000	Orange	Reel	1,000 ft	612825190226
7851A 003A1000	Orange	Reel-in-Box	1,000 ft	612825190219
7851A 0021000	Red	Reel	1,000 ft	612825190202
7851A 002A1000	Red	Reel-in-Box	1,000 ft	612825190196
7851A 0091000	White	Reel	1,000 ft	612825190301
7851A 009A1000	White	Reel-in-Box	1,000 ft	612825190295
7851A 0041000	Yellow	Reel	1,000 ft	612825190240
7851A 004A1000	Yellow	Reel-in-Box	1,000 ft	612825190233

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: 0.396 Revision Date: 07-28-2020
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