



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/patents .

Construction Details

Conductor

Size	Stranding	Material	No. of Pairs
23 AWG	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
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Outer Jacket

Separator	Material	Nom. Diameter	Ripcord
Center Member (Patented E-Spline®)	PVC - Polyvinyl Chloride	0.280 in (7.11 mm)	Yes

Overall Cable Diameter (Nominal):	0.280 in (7.11 mm)
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Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
82 Ohm/km (25 Ohm/1000ft)	90 pF/100m

Delay

Frequency	Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
100 MHz	537.6 ns/100m	38 ns/100m	67%

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) [Ohm]	Max./Min. Fitted Impedance [Ohm]	Min. TCL [dB]	Min. ELTCTL [dB]
1	1.8 dB/100m	82.3	80.3	80.5	78.5	74.8	72.8	20.0	100 ± 12	100 ± 15	40.0	35.0
4	3.5 dB/100m	73.3	71.3	69.7	67.7	62.8	60.8	23.0	100 ± 12	100 ± 10.4	40.0	23.0
8	5.0 dB/100m	68.8	66.8	63.7	61.7	56.7	54.7	24.5	100 ± 12	100 ± 8	40.0	16.9
10	5.7 dB/100m	67.3	65.3	61.6	59.6	54.8	52.8	25.0	100 ± 12	100 ± 7.3	40.0	15.0
16	7.2 dB/100m	64.2	62.2	57.0	55.0	50.7	48.7	25.0	100 ± 12	100 ± 5.7	38.0	10.9
20	8.1 dB/100m	62.8	60.8	54.7	52.7	48.8	46.8	25.0	100 ± 12	100 ± 5	37.0	9.0
25	9.1 dB/100m	61.3	59.3	52.3	50.3	46.8	44.8	25.0	100 ± 15	100 ± 5	36.0	7.0

30	10.0 dB/100m	60.1	58.1	50.2	48.2	45.3	43.3	25.0	100 ± 15	100 ± 5	35.2	5.5
31.25	10.2 dB/100m	59.9	57.9	49.7	47.7	44.9	42.9	25.0	100 ± 15	100 ± 5	35.1	
62.5	14.7 dB/100m	55.4	53.4	40.7	38.7	38.9	36.9	25.0	100 ± 15	100 ± 5	32.0	
100	18.9 dB/100m	52.3	50.3	33.4	31.4	34.8	32.8	25.0	100 ± 15	100 ± 5	30.0	
155	23.9 dB/100m	49.4	47.4	25.5	23.5	31.0	29.0	22.8	100 ± 15	100 ± 5	28.1	
200	27.5 dB/100m	47.8	45.8	20.3	18.3	28.8	26.8	21.6	100 ± 15	100 ± 5	27.0	
240	30.5 dB/100m	46.6	44.6	16.1	14.1	27.2	25.2	20.6	100 ± 20	100 ± 5	26.2	
250	31.2 dB/100m	46.3	44.3	15.2	13.2	26.8	24.8	20.5	100 ± 20	100 ± 5	26.0	
300	34.5 dB/100m	43.1	43.1	8.6	8.6	25.3	23.3	20.1	100 ± 20	100 ± 5		
310	35.2 dB/100m	42.9	42.9	7.8	7.8	25.0	23.0	20.0	100 ± 20	100 ± 5		
350	37.7 dB/100m	42.1	42.1	4.5	4.5	23.9	21.9	19.8	100 ± 22	100 ± 5		
400	40.6 dB/100m	41.3	41.3	0.6	0.6	22.8	20.8	19.5	100 ± 22	100 ± 5		
436	42.7 dB/100m	40.7	40.7			22.0	20.0	19.1	100 ± 22	100 ± 5		
450	43.5 dB/100m	40.5	40.5			21.7	19.7	18.9	100 ± 22	100 ± 5		
460	44.0 dB/100m	40.4	40.4			21.5	19.5	18.8	100 ± 22	100 ± 5		
500	46.2 dB/100ft	39.8	39.8			20.8	18.8	18.4	100 ± 22	100 ± 5		
550	48.8 dB/100ft	39.2	39.2			20.0	18.0	18.0	100 ± 22	100 ± 5		
600	51.4 dB/100ft	38.6	38.6			19.2	17.2	17.6	100 ± 22	100 ± 5		

Voltage

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

Mechanical Characteristics

Temperature

UL Temperature	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 (13 mm)	2.25 in (57.2 mm)

Max. Pull Tension:	40 lbs (18 kg)
Bulk Cable Weight:	33 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Riser, Indoor
Sustainability:	Product Lens™, Environmental Product Declaration (EPD) Available
Flammability / Reaction to Fire:	UL 1666 Riser, FT4, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca
NEC / UL Compliance:	Article 800, CMR, CMR-LP (0.5A), CL3R-LP (0.5A)
CEC / C(UL) Compliance:	CMR
ICEA Compliance:	S-116-732
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
Third Party Performance Verification:	Category 6
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
CENELEC Compliance:	Segregation class according EN50174-2 = a
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
UK Regulation Compliance:	UKCA Mark
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Plenum Number:	7852A

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: 0.575 Revision Date: 12-12-2023

Part Numbers

Variants

Item #	Color	Putup Type	Length	UPC	Footnote
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	C
7851A 006A1000	Blue	Reel-in-Box	1,000 ft	612825190271	
7851A F6H1000	Gray	Reel	1,000 ft	612825190189	C
7851A F6HA1000	Gray	Reel-in-Box	1,000 ft	612825190172	
7851A 0051000	Green	Reel	1,000 ft	612825190264	C
7851A 005A1000	Green	Reel-in-Box	1,000 ft	612825190257	
7851A 0031000	Orange	Reel	1,000 ft	612825190226	C
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	C
7851A 009A1000	White	Reel-in-Box	1,000 ft	612825190295	
7851A 0041000	Yellow	Reel	1,000 ft	612825190240	C
7851A 004A1000	Yellow	Reel-in-Box	1,000 ft	612825190233	

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