



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	Number 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
--------------	-----

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)
-----------------------------------	--------------------

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
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.
--------	--

History

Update and Revision:	Revision Number: 0.572 Revision Date: 01-20-2023
----------------------	--

Part Numbers

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

© 2023 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.