Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

7851NH Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable



For more Information please call

1-800-Belden1

General Description:

CAT6+ (600MHz), 4-Bonded-Pairs, U/UTP-Unshielded, Zero Halogen, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented E-Spline, Ripcord, Haloarrest® II Jacket.

Usage (Overall)

Suitable Applications:	Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155 ATM, 622 ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, 600MHz Enhanced Category 6

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
4	23	Solid	BC - Bare Copper

Total Number of Conductors:	8

Insulation

Insulation Material:

Insulation Material
PO - Polyolefin

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Trade Name	Outer Jacket Material
Haloarrest®	LSNH - Low Smoke Non-Halogen

Outer Jacket Diameter:

Nom. Dia. (in.)
0.265

Outer Jacket Ripcord:	Yes

Overall Cable

Overall Cabling Separator Material:	Patented E-Spline Center Member
Overall Nominal Diameter:	0.227 x 0.315 in.

Pair

Pair Color Code Chart:

Number	Color
1	White/Green & Green
2	White/Orange & Orange
3	White/Blue & Blue
4	White/Brown & Brown

Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +75°C
Bulk Cable Weight:	35 lbs/1000 ft.
Max. Recommended Pulling Tension:	45 lbs.
Min. Bend Radius/Minor Axis:	0.500 in.
Min. Bend/Installation:	2.250 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

EU Directive 2011/65/EU (ROHS II):	Yes

7851NH Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable

Other Standards:	ISO/IEC 11801 ed 2.1 (2008) Class E
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2004
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Telecommunications Standards:	Category 6 - TIA 568.C.2

Applicable Patents:

Country
www.belden.com/p

Flame Test

IEC Flame Test:	60332-1

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	7852A

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

Capacitance (pF/ft)
15.5

Maximum Capacitance Unbalance (pF/100 m):	90

Nominal Velocity of Propagation:

VP (%)
67

Maximum Delay:

Delay (ns/100 m)
538 @ 100MHz

Max. Delay Skew:

Delay Skew (ns/100 m)
38

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
8.2

Max. Operating Voltage - Non-UL:

Voltage
300 V RMS

Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
3

Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

Freq. (MHz)	Max. Attenuation (dB/100 m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. ACR (dB)	Min. PSACR (dB)	Min RL (dB)
1	1.900	82.3	80.3	80.5	78.5	20.000
4	3.600	73.3	71.3	69.7	67.7	23.000
8	5.100	68.8	66.8	63.7	61.7	24.500
10	5.700	67.3	65.3	61.6	59.6	25.000
16	7.200	64.3	62.3	57.0	55.0	25.000
20	8.100	62.8	60.8	54.7	52.7	25.000
25	9.100	61.3	59.3	52.3	50.3	25.000
31.25	10.200	59.9	57.9	49.7	47.7	25.000
62.5	14.700	55.4	53.4	40.7	38.7	25.000
100	18.900	52.3	50.3	33.4	31.4	25.000
155	23.900	49.5	47.5	25.5	23.5	22.800
200	27.500	47.8	45.8	20.3	18.3	21.700
250	31.200	46.3	44.3	15.2	13.2	20.500

7851NH Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable

300	34.500	43.1	43.1	8.6	8.6	20.200
350	37.700	42.1	42.1	4.4	4.4	19.800
400	40.600	41.3	41.3	0.7	0.7	19.500
450	43.500	40.5	40.5	0	0	18.900
460	44.000	40.4	40.4	0	0	18.800
500	46.200	39.8	39.8			18.400
550	48.800	39.2	39.2			18.000
600	51.400	38.6	38.6			17.600

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ACRF (dB)	Min. PSACRF (dB)
1	100 ± 12	100 ± 15	74.8	72.8
4	100 ± 12	100 ± 10.4	62.8	60.8
8	100 ± 12	100 ± 8	56.7	54.7
10	100 ± 12	100 ± 7.3	54.8	52.8
16	100 ± 12	100 ± 5.7	50.7	48.7
20	100 ± 12	100 ± 5	48.8	46.8
25	100 ± 15	100 ± 5	46.8	44.8
31.25	100 ± 15	100 ± 5	44.9	42.9
62.5	100 ± 15	100 ± 5	38.9	36.9
100	100 ± 15	100 ± 5	34.8	32.8
155	100 ± 15	100 ± 5	31.0	29.0
200	100 ± 15	100 ± 5	28.8	26.8
250	100 ± 20	100 ± 5	26.8	24.8
300	100 ± 20	100 ± 5	25.3	23.3
350	100 ± 22	100 ± 5	23.9	21.9
400	100 ± 22	100 ± 5	22.8	20.8
450	100 ± 22	100 ± 5	21.7	19.7
460	100 ± 22	100 ± 5	21.5	19.5
500	100 ± 22	100 ± 5	20.8	18.8
550	100 ± 22	100 ± 5	20.0	18.0
600	100 ± 22	100 ± 5	19.2	17.2

Notes (Overall)

Notes: Jacket Sequentially marked at 1 meter intervals. Third party verified to ANSI/TIA-568-C.2, Category 6.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7851NH E4XA1000	1,000 FT	41.000 LB	GRAY, LIGHT DEC		CAT6E+ 4PRB U/UTP LSZH RIB

Revision Number: 7 Revision Date: 03-10-2014

© 2017 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 herein 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 "AS IS" 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 EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure 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. This 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.
Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 2014/35/EU).