

## 7852A Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable



For more Information  
please call

1-800-Belden1



### Description:

23 AWG Bonded-Pairs, Solid Bare Copper Conductors, Plenum, FEP Teflon® Insulation, Patented e-Spline Center Member, Rip Cord, Flammarrest® Jacket

### Usage (Overall)

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

### Physical Characteristics (Overall)

#### Conductor

##### AWG:

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

#### Insulation

##### Insulation Material:

Insulation Material
FEP - Fluorinated Ethylene Propylene

#### Outer Shield

##### Outer Shield Material:

Outer Shield Material
Unshielded

#### Outer Jacket

##### Outer Jacket Material:

Outer Jacket Trade Name	Outer Jacket Material
Flammarrest®	LS PVC - Low Smoke Polyvinyl Chloride

##### Outer Jacket Diameter:

Nom. Dia. (in.)
0.218
0.290

**Outer Jacket Ripcord:** Yes

#### Overall Cable

**Overall Cabling Separator Material:** E-Spline Center Member

**Overall Nominal Diameter:** 0.218 x 0.290 in.

#### Pair

##### Pair Color Code Chart:

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

### Mechanical Characteristics (Overall)

**Storage Temperature Range:** -20°C To +75°C

## 7852A Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable

Installation Temperature Range:	+5°C To +50°C
Operating Temperature Range:	0°C To +75°C
Bulk Cable Weight:	37 lbs/1000 ft.
Max. Recommended Pulling Tension:	45 lbs.
Min. Bend Radius (Install)/Minor Axis:	2 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMP
NEC Articles:	800
CEC/C(UL) Specification:	CMP
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):	07/01/2006
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
Other Specification:	UL Verified to Category 6

#### Applicable Patents:

Country	Patent
US	5606151
US	5734126
US	6064503
US	6885889
US	7663061
US	7838773
US	7977575

#### Flame Test

UL Flame Test:	NFPA 262 Plenum Flame Test (UL910)(FT6)
C(UL) Flame Test:	FT6
CSA Flame Test:	FT6

#### Plenum/Non-Plenum

Plenum (Y/N):	Yes
Non-Plenum Number:	7851A

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/ft)	15.5
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Maximum Capacitance Unbalance (pF/100 m):	90
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#### Nominal Velocity of Propagation:

VP (%)	67
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#### Maximum Delay:

Delay (ns/100 m)	
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## 7852A Multi-Conductor - Enhanced Category 6 Bonded-Pair Cable

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 - 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)	Min. SRL (dB)
1	1.900	82.3	80.3	80.5	78.5	20.000	27.0
4	3.600	73.3	71.3	69.7	67.7	23.000	27.0
8	5.100	68.8	66.8	63.7	61.7	24.500	27.0
10	5.700	67.3	65.3	61.6	59.6	25.000	27.0
16	7.200	64.3	62.3	57.0	55.0	25.000	27.0
20	8.100	62.8	60.8	54.7	52.7	25.000	27.0
25	9.100	61.3	59.3	52.3	50.3	25.000	26.0
31.25	10.200	59.9	57.9	49.7	47.7	25.000	25.1
62.5	14.700	55.4	53.4	40.7	38.7	25.000	22.1
100	18.900	52.3	50.3	33.4	31.4	25.000	20.0
155	23.900	49.5	47.5	25.5	23.5	22.800	18.1
200	27.500	47.8	45.8	20.3	18.3	21.600	17.0
250	31.200	46.3	44.3	15.2	13.2	20.500	16.2
300	34.500	43.2	41.2	10.6	8.6	20.200	15.2
310	35.200	42.9	40.9	9.8	7.8	20.100	15.1
350	37.700	42.2	40.2	6.5	4.5	19.800	14.6
400	40.600	41.3	39.3	2.6	0.6	19.500	14.0
450	43.500	40.5	38.5	2.1	0.10	18.900	13.5
460	44.000	40.4	38.4	0	0	18.800	13.4
500	46.200	39.8	37.8			18.400	13.0
550	48.800	39.2	37.2			18.000	12.6
600	51.400	38.6	36.6			17.600	12.2

**Premise Cable Electrical Table 2:**

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 12	100 ± 15	73.8	70.8
4	100 ± 12	100 ± 10.4	61.8	58.8
8	100 ± 12	100 ± 8	55.7	52.7
10	100 ± 12	100 ± 7.3	53.8	50.8
16	100 ± 12	100 ± 5.7	49.7	46.7
20	100 ± 12	100 ± 5	47.8	44.8
25	100 ± 15	100 ± 5	45.8	42.8
31.25	100 ± 15	100 ± 5	43.9	40.9
62.5	100 ± 15	100 ± 5	37.9	34.9
100	100 ± 15	100 ± 5	33.8	30.8
155	100 ± 15	100 ± 5	30.0	27.0
200	100 ± 15	100 ± 5	27.8	24.8
250	100 ± 20	100 ± 5	25.8	22.8
300	100 ± 20	100 ± 5	24.3	21.3
310	100 ± 20	100 ± 5	24.0	21.0
350	100 ± 22	100 ± 5	22.9	19.9
400	100 ± 22	100 ± 5	21.8	18.8

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450	100 ± 22	100 ± 5	20.7	17.7
460	100 ± 22	100 ± 5	20.5	17.5
500	100 ± 22	100 ± 5	19.8	16.8
550	100 ± 22	100 ± 5	19.0	16.0
600	100 ± 22	100 ± 5	18.2	15.2

**Notes (Overall)**

**Notes:** Belden IBDN. Jacket sequentially marked at 2 ft./1m intervals. Third party verified to ANSI/TIA-568-C.2, Category 6.

**Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7852A D15A1000	1,000 FT	43.000 LB	BLUE		CAT6E+ 4PRB U/UTP CMP RIB
7852A D151000	1,000 FT	40.000 LB	BLUE	C	CAT6E+ 4PRB U/UTP CMP REEL
7852A 0021000	1,000 FT	40.000 LB	RED		CAT6E+ 4PRB U/UTP CMP REEL
7852A 004A1000	1,000 FT	43.000 LB	YELLOW		CAT6E+ 4PRB U/UTP CMP RIB
7852A 0041000	1,000 FT	40.000 LB	YELLOW	C	CAT6E+ 4PRB U/UTP CMP REEL
7852A 005A1000	1,000 FT	43.000 LB	GREEN, DARK		CAT6E+ 4PRB U/UTP CMP RIB
7852A 0051000	1,000 FT	40.000 LB	GREEN, DARK	C	CAT6E+ 4PRB U/UTP CMP REEL
7852A 008A1000	1,000 FT	43.000 LB	GRAY		CAT6E+ 4PRB U/UTP CMP RIB
7852A 0081000	1,000 FT	40.000 LB	GRAY		CAT6E+ 4PRB U/UTP CMP REEL
7852A 009A1000	1,000 FT	43.000 LB	WHITE		CAT6E+ 4PRB U/UTP CMP RIB
7852A 0091000	1,000 FT	40.000 LB	WHITE	C	CAT6E+ 4PRB U/UTP CMP REEL
7852A 0101000	1,000 FT	40.000 LB	BLACK		CAT6E+ 4PRB U/UTP CMP REEL

**Notes:**

C = CRATE REEL PUT-UP.

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