

## 4813 Multi-Conductor - Enhanced Category 6 Nonbonded-Pair Cable



For more Information  
please call

1-800-Belden1



### Description:

23 AWG Solid Bare Copper Conductors, Dual FRPO/FEP Teflon® insulation, X-Spline Center Member, Rip Cord, Flam arrest® 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

**Total Number of Conductors:** 8

#### Insulation

Insulation Material:

Insulation Material
FRPO/FEP - Flame Retardant Polyolefin/Fluorinated Ethylene Propylene

#### Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

#### Outer Jacket

Outer Jacket Material:

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

Outer Jacket Diameter:

Nom. Dia. (in.)
0.255

**Outer Jacket Ripcord:** Yes

#### Overall Cable

**Overall Cabling Separator Material:** Patented X-Spline Center Member

#### 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)

**Installation Temperature Range:** +5°C To +50°C

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

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<b>Bulk Cable Weight:</b>	34 lbs/1000 ft.
<b>Max. Recommended Pulling Tension:</b>	45 lbs.
<b>Min. Bend Radius/Minor Axis:</b>	1.500 in.
<b>Min. Bend/Installation:</b>	2.500 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

<b>NEC/(UL) Specification:</b>	CMP
<b>NEC Articles:</b>	800
<b>CEC/C(UL) Specification:</b>	CMP
<b>Other Standards:</b>	ISO/IEC 11801 ed 2.1 (2008) Class E
<b>EU CE Mark:</b>	Yes
<b>EU Directive 2000/53/EC (ELV):</b>	Yes
<b>EU Directive 2002/95/EC (RoHS):</b>	Yes
<b>EU RoHS Compliance Date (mm/dd/yyyy):</b>	07/01/2006
<b>EU Directive 2002/96/EC (WEEE):</b>	Yes
<b>EU Directive 2003/11/EC (BFR):</b>	Yes
<b>CA Prop 65 (CJ for Wire &amp; Cable):</b>	Yes
<b>MII Order #39 (China RoHS):</b>	Yes
<b>Telecommunications Standards:</b>	Category 6 - TIA 568.C.2
<b>Other Specification:</b>	UL Verified to Category 6

#### Applicable Patents:

Country	Patent
US	5563377
US	6074503
US	7663061
CANADA	2144694
US	7977575

#### Flame Test

<b>UL Flame Test:</b>	NFPA 262
<b>CSA Flame Test:</b>	FT6

#### Plenum/Non-Plenum

<b>Plenum (Y/N):</b>	Yes
<b>Non-Plenum Number:</b>	4812

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

<b>Capacitance (pF/ft)</b>	15.5
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**Maximum Capacitance Unbalance (pF/100 m):** 330

#### Nominal Velocity of Propagation:

<b>VP (%)</b>	70.000
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#### Maximum Delay:

<b>Delay (ns/100 m)</b>	510.000
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#### Max. Delay Skew:

<b>Delay Skew (ns/100 m)</b>	
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25.000

**Maximum Conductor DC Resistance:**

**DCR @ 20°C (Ohm/100 m)**  
6.600

**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)
0.772	1.700	82	80	80.3	78.3	
1	1.800	80.3	78.3	78.5	76.5	20.000
4	3.400	71.3	69.3	67.9	65.9	23.000
8	4.800	66.8	64.8	62	60	24.500
10	5.300	65.3	63.3	60	58	25.000
16	6.800	62.2	60.2	55.5	53.5	25.000
20	7.600	60.8	58.8	53.2	51.2	25.000
25	8.500	59.3	57.3	50.8	48.8	25.000
31.25	9.600	57.9	55.9	48.3	46.3	24.200
62.5	13.800	53.4	51.4	39.6	37.6	22.900
100	17.800	50.3	48.3	32.5	30.5	22.100
155	22.700	47.4	45.4	24.8	22.8	21.300
200	26.200	45.8	43.8	19.6	17.6	20.900
250	29.700	44.3	42.3	14.6	12.6	20.400
300	33.000	43.1	41.1	10.2	8.2	20.100
350	36.000	42.1	40.1	6.1	4.1	19.800
400	39.000	41.3	39.3	2.3	0.3	19.600
450	41.800	40.5	38.5	-1.3	-3.3	19.400
500	44.500	39.8	37.8	-4.6	-6.6	19.200
550	47.100	39.2	37.2	-7.9	-9.9	19.000
600	49.600	38.6	36.6	-11.0	-13.0	18.900

**Premise Cable Electrical Table 2:**

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ACRF (dB)	Min. PSACRF (dB)
0.772		102 ± 15	77.0	74.0
1	100 ± 15	100 ± 15	74.8	71.8
4	100 ± 15	100 ± 15	62.8	59.8
8	100 ± 15	100 ± 15	56.7	53.7
10	100 ± 15	100 ± 15	54.8	51.8
16	100 ± 15	100 ± 15	50.7	47.7
20	100 ± 15	100 ± 15	48.8	45.8
25	100 ± 15	100 ± 15	46.8	43.8
31.25	100 ± 15	100 ± 15	44.9	41.9
62.5	100 ± 15	100 ± 15	38.9	35.9
100	100 ± 15	100 ± 15	34.8	31.8
155	100 ± 15	100 ± 15	31.0	28.0
200	100 ± 15	100 ± 15	28.8	25.8
250	100 ± 22	100 ± 15	26.8	23.8
300	100 ± 22	100 ± 15	25.3	22.3
350	100 ± 22	100 ± 15	23.9	20.9
400	100 ± 22	100 ± 15	22.8	19.8
450			21.7	18.7
500			20.8	17.8
550			20.0	17.0
600			19.2	16.2

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Premise Cable Electrical Table 4:

Frequency (MHz)	Min. TCL (dB)	Min. ELTCTL (dB)
0.772	40.000	37.200
1.000	40.000	35.000
4.000	40.000	23.000
8.000	40.000	16.900
10.000	40.000	15.000
16.000	38.000	10.900
20.000	37.000	9.000
25.000	36.000	7.000
31.250	35.100	
62.500	32.000	
100.000	30.000	
155.000	28.100	
200.000	27.000	
250.000	26.000	

### Notes (Overall)

**Notes:** Belden IBDN. Jacket sequentially marked at 2 ft./1m intervals. Values above 400 MHz are for Engineering Informaton Only. Third party verified to ANSI/TIA-568-C.2, Category 6.

### Reference (Overall)

**Previous Part Number:** 24587785, 24587785+US, 25087885, 25087885+US, 24587185, 24587185+US, 24587385, 24587385+US, 24587336, 24587336+US, 24587315, 24587485, 24587485+US, 24587451+US, 24587985, 24587985+US, 24587915, 24587915+US

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
4813 D15A1000	1,000 FT	30.000 LB	BLUE		CAT6E+ 4PR U/UTP CMP RIB
4813 D151000	1,000 FT	30.000 LB	BLUE		CAT6E+ 4PR U/UTP CMP REEL
4813 0041000	1,000 FT	30.000 LB	YELLOW		CAT6E+ 4PR U/UTP CMP REEL
4813 0051000	1,000 FT	30.000 LB	GREEN, DARK		CAT6E+ 4PR U/UTP CMP REEL
4813 0081000	1,000 FT	30.000 LB	GRAY		CAT6E+ 4PR U/UTP CMP REEL
4813 009A1000	1,000 FT	30.000 LB	WHITE		CAT6E+ 4PR U/UTP CMP RIB
4813 0091000	1,000 FT	30.000 LB	WHITE		CAT6E+ 4PR U/UTP CMP REEL
4813 0092500	2,500 FT	80.000 LB	WHITE		CAT6E+ 4PR U/UTP CMP REEL
4813 0101000	1,000 FT	30.000 LB	BLACK		CAT6E+ 4PR U/UTP CMP REEL
4813 0103000	3,000 FT	99.000 LB	BLACK		CAT6E+ 4PR U/UTP CMP REEL

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