

## 3613 Multi-Conductor - Enhanced Category 6 Nonbonded-Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

CAT6+ (400MHz), 4-Pair, U/UTP-Unshielded, Plenum-CMP, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Dual FRPO/FEP Insulation, Patented X-Spline Center Member, Rip Cord, Flamarrest® PVC 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	Nom. Wall Thickness (in.)
Flamarrest(R)	LS PVC - Low Smoke Polyvinyl Chloride	0.017

Outer Jacket Diameter:

Nom. Dia. (in.)
0.235

**Outer Jacket Ripcord:** Yes

#### Overall Cable

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

**Overall Nominal Diameter:** 0.235 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

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

**Operating Temperature Range:** 0°C To +75°C

**UL Temperature Rating:** 75°C

**Bulk Cable Weight:** 32 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 45 lbs.

**Min. Bend Radius/Minor Axis:** 0.750 in.

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Min. Bend/Installation: 2.250 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMP
CEC/C(UL) Specification:	CMP
EU Directive 2011/65/EU (ROHS II):	Yes
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):	04/03/2009
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:	6

#### Applicable Patents:

Country
www.belden.com/p

#### Flame Test

UL Flame Test:	NFPA 262
C(UL) Flame Test:	FT6

#### Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	No
Suitability - Aerial:	No
Suitability - Burial:	No
Sunlight Resistance:	No

#### Plenum/Non-Plenum

Plenum (Y/N):	Yes
Non-Plenum Number:	3612

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/ft)
15.5

Maximum Capacitance Unbalance (pF/100 m): 330

#### Nominal Velocity of Propagation:

VP (%)
70.000

#### Maximum Delay:

Freq. (MHz)	Delay (ns/100 m)
100.000	537.600

#### Typical Delay Skew:

Delay Skew (ns/ft)
35.000

#### Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
7.700

#### Max. Operating Voltage - UL:

Voltage
300 V RMS

#### Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
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3.000

### 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	1.800	81.0	81.0	79.2	79.2	
1	2.000	79.3	79.3	77.3	77.3	20.000
4	3.700	70.3	70.3	66.6	66.6	23.000
8	5.200	65.8	65.8	60.6	60.6	24.500
10	5.800	64.3	64.3	58.5	58.5	25.000
16	7.400	61.2	61.2	53.9	53.9	25.000
20	8.300	59.8	59.8	51.5	51.5	25.000
25	9.300	58.3	58.3	49.1	49.1	24.300
31.25	10.400	56.9	56.9	46.5	46.5	23.600
62.5	15.000	52.4	52.4	37.4	37.4	21.500
100	19.300	49.3	49.3	30.0	30.0	20.800
155	24.600	46.4	46.4	21.8	21.8	19.500
200	28.300	44.8	44.8	16.5	16.5	18.700
250	32.100	43.3	43.3	11.2	11.2	18.000
300	35.600	42.1	42.1	6.5	6.5	17.500
350	38.900	41.1	41.1	2.3	2.3	17.000
400	42.000	38.3	38.3	-3.7	-3.7	16.600
450	45.000	37.5	37.5			16.200
500	47.900	36.8	36.8			15.900
550	50.600	36.2	36.2			15.600
600	53.300	35.6	35.6			15.400
650	55.900	35.1	35.1			15.100

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Min. ACRF (dB)	Min. PSACRF (dB)
.772		75.0	73.0
1	100 ± 15	72.8	70.8
4	100 ± 15	60.8	58.8
8	100 ± 15	54.7	52.7
10	100 ± 15	52.8	50.8
16	100 ± 15	48.7	46.7
20	100 ± 15	46.8	44.8
25	100 ± 15	44.8	42.8
31.25	100 ± 15	42.9	40.9
62.5	100 ± 15	36.9	34.9
100	100 ± 15	32.8	30.8
155	100 ± 22	28.9	26.9
200	100 ± 22	26.8	24.8
250	100 ± 32	24.8	22.8
300	100 ± 32	23.3	21.3
350	100 ± 32	21.9	19.9
400	100 ± 32	20.8	18.8
450	100 ± 32	19.7	17.7
500	100 ± 32	18.8	16.8
550	100 ± 32	18.0	16.0
600	100 ± 32	17.2	15.2
650	100 ± 32	16.5	14.5

Premise Cable Electrical Table 4:

Frequency (MHz)	Min. TCL (dB)	Min. ELTCL (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	

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250.000	26.000	
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### Notes (Overall)

**Notes:** Jacket sequentially marked at 2 ft./1m intervals. Third party verified to ANSI/TIA-568-C.2 Category 6. Values above 400 MHz are for engineering information only.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
3613 D15A1000	1,000 FT	33.000 LB	BLUE		CAT6E 4PR U/UTP CMP RIB
3613 D15U1000	1,000 FT	30.000 LB	BLUE		CAT6E 4PR U/UTP CMP BOX
3613 D151000	1,000 FT	30.000 LB	BLUE		CAT6E 4PR U/UTP CMP REEL
3613 D152500	2,500 FT	70.000 LB	BLUE		CAT6E 4PR U/UTP CMP REEL
3613 002A1000	1,000 FT	33.000 LB	RED		CAT6E 4PR U/UTP CMP RIB
3613 003A1000	1,000 FT	33.000 LB	ORANGE		CAT6E 4PR U/UTP CMP RIB
3613 003U1000	1,000 FT	30.000 LB	ORANGE		CAT6E 4PR U/UTP CMP BOX
3613 0031000	1,000 FT	30.000 LB	ORANGE		CAT6E 4PR U/UTP CMP REEL
3613 004A1000	1,000 FT	33.000 LB	YELLOW		CAT6E 4PR U/UTP CMP RIB
3613 004U1000	1,000 FT	30.000 LB	YELLOW		CAT6E 4PR U/UTP CMP BOX
3613 0041000	1,000 FT	30.000 LB	YELLOW		CAT6E 4PR U/UTP CMP REEL
3613 0042500	2,500 FT	70.000 LB	YELLOW		CAT6E 4PR U/UTP CMP REEL
3613 005A1000	1,000 FT	33.000 LB	GREEN, DARK		CAT6E 4PR U/UTP CMP RIB
3613 005U1000	1,000 FT	30.000 LB	GREEN, DARK		CAT6E 4PR U/UTP CMP BOX
3613 0051000	1,000 FT	30.000 LB	GREEN, DARK		CAT6E 4PR U/UTP CMP REEL
3613 0052500	2,500 FT	70.000 LB	GREEN, DARK		CAT6E 4PR U/UTP CMP REEL
3613 007A1000	1,000 FT	33.000 LB	VIOLET		CAT6E 4PR U/UTP CMP RIB
3613 007U1000	1,000 FT	30.000 LB	VIOLET		CAT6E 4PR U/UTP CMP BOX
3613 008A1000	1,000 FT	33.000 LB	GRAY		CAT6E 4PR U/UTP CMP RIB
3613 008U1000	1,000 FT	30.000 LB	GRAY		CAT6E 4PR U/UTP CMP BOX
3613 0081000	1,000 FT	30.000 LB	GRAY		CAT6E 4PR U/UTP CMP REEL
3613 009A1000	1,000 FT	33.000 LB	WHITE		CAT6E 4PR U/UTP CMP RIB
3613 009U1000	1,000 FT	30.000 LB	WHITE		CAT6E 4PR U/UTP CMP BOX
3613 0091000	1,000 FT	30.000 LB	WHITE		CAT6E 4PR U/UTP CMP REEL
3613 0092500	2,500 FT	70.000 LB	WHITE		CAT6E 4PR U/UTP CMP REEL
3613 010A1000	1,000 FT	33.000 LB	BLACK		CAT6E 4PR U/UTP CMP RIB
3613 010U1000	1,000 FT	30.000 LB	BLACK		CAT6E 4PR U/UTP CMP BOX
3613 0101000	1,000 FT	30.000 LB	BLACK		CAT6E 4PR U/UTP CMP REEL
3613 0102500	2,500 FT	70.000 LB	BLACK		CAT6E 4PR U/UTP CMP REEL
3613 012A1000	1,000 FT	33.000 LB	PINK		CAT6E 4PR U/UTP CMP RIB

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