

## 3613 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 Insulation, 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.)
0.237

**Outer Jacket Ripcord:** Yes

#### Overall Cable

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

**Overall Nominal Diameter:** 0.237 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

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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:	1 in.
Min. Bend/Installation:	2.400 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMP
CEC/C(UL) Specification:	CMP
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:	UL Verified to Category 6

#### Applicable Patents:

Country	Patent
US	5563377
US	6074503
US	7663061
US	7977575

#### 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

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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 (%)  
5.000

### 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)	Min. SRL (dB)
0.772	1.800	81.00	79.00	79.2	77.2		
1	2.000	79.31	77.31	77.3	75.3	20.000	27.0
4	3.700	70.28	68.28	66.6	64.6	23.000	27.0
8	5.200	65.77	63.77	60.6	58.6	24.500	27.0
10	5.800	64.31	62.31	58.5	56.5	25.000	27.0
16	7.400	61.25	59.25	53.9	51.9	25.000	27.0
20	8.300	59.80	57.80	51.5	49.5	25.000	27.0
25	9.300	58.35	56.35	49.1	47.1	24.300	26.0
31.25	10.400	56.89	54.89	46.5	44.5	23.600	25.1
62.5	15.000	52.38	50.38	37.4	35.4	21.500	22.1
100	19.300	49.31	47.31	30.0	28.0	20.800	20.0
155	24.600	46.46	44.46	21.9	19.9	19.500	18.1
200	28.300	44.80	42.80	16.5	14.5	18.700	17.0
250	32.100	43.35	41.35	11.2	9.2	18.000	16.0
300	35.600	42.16	40.16	6.5	4.5	17.500	15.2
350	38.900	41.15	39.15	2.3	0.3	17.000	14.6
400	42.000	40.28	38.28			16.600	14.0
450	45.000	39.52	37.52			16.200	13.5
500	47.900	38.83	36.83			15.900	13.0
550	50.600	38.21	36.21			15.600	12.6
600	53.300	37.64	35.64			15.400	12.2
650	55.900	37.12	35.12			15.100	11.9

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Min. ACRF (dB)	Min. PSACRF (dB)
.772		75.0	72.0
1	100 ± 15	72.8	69.8
4	100 ± 15	60.8	57.8
8	100 ± 15	54.7	51.7
10	100 ± 15	52.8	49.8
16	100 ± 15	48.7	45.7
20	100 ± 15	46.8	43.8
25	100 ± 15	44.8	41.8
31.25	100 ± 15	42.9	39.9

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62.5	100 ± 15	36.9	33.9
100	100 ± 15	32.8	29.8
155	100 ± 22	28.9	25.9
200	100 ± 22	26.8	23.8
250	100 ± 32	24.8	21.8
300	100 ± 32	23.3	20.3
350	100 ± 32	21.9	18.9
400	100 ± 32	20.8	17.8
450	100 ± 32	19.7	16.7
500	100 ± 32	18.8	15.8
550	100 ± 32	18.0	15.0
600	100 ± 32	17.2	14.2
650	100 ± 32	16.5	13.5

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:** Jacket sequentially marked at 2 ft./1m intervals. Third party verified to ANSI/TIA-568-C.2 Category 6. Values above 350MHz 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	31.000 LB	BLUE		CAT6E 4PR U/UTP CMP REEL
3613 D152500	2,500 FT	72.500 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 0031000	1,000 FT	31.000 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	31.000 LB	YELLOW		CAT6E 4PR U/UTP CMP REEL
3613 0042500	2,500 FT	72.500 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 0051000	1,000 FT	31.000 LB	GREEN, DARK		CAT6E 4PR U/UTP CMP REEL
3613 0052500	2,500 FT	72.500 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 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	31.000 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	31.000 LB	WHITE		CAT6E 4PR U/UTP CMP REEL
3613 0092500	2,500 FT	72.500 LB	WHITE		CAT6E 4PR U/UTP CMP REEL
3613 010A1000	1,000 FT	33.000 LB	BLACK		CAT6E 4PR U/UTP CMP RIB

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3613 0101000	1,000 FT	31.000 LB	BLACK		CAT6E 4PR U/UTP CMP REEL
3613 0102500	2,500 FT	72.500 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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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

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