

1702A Multi-Conductor - Enhanced Category 5e Bonded-Pair Cable



Description:

24 AWG bonded-pairs solid bare copper conductors, non-plenum, Polyolefin insulation, rip cord, see color code chart (below), PVC jacket (red, orange, white, black, yellow, green, blue, purple, light gray or gray)

Usage (Overall)

Suitable Applications:

Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, Noisy Environments | US Patent #'s 5, 606, 151; 5, 734, 126

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
8	24	Solid	BC - Bare Copper

Insulation

Insulation Material:

Insulation Material
PO - Polyolefin

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Ripcord:

Yes

Overall Cabling

Overall Nominal Diameter:

0.200 x 0.415 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)

Operating Temperature Range:

-20°C To +80°C

Bulk Cable Weight:

45 lbs/1000 ft.

Max. Recommended Pulling Tension:

50 lbs.

Min. Bend Radius (Install)/Minor Axis:

0.800 in.

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Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CM, UL444
CEC/C(UL) Specification:	CM
Other Standards:	11801 Category 5
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:	568-B.2 Category 5e
Other Specification:	NEMA WC-63.1 Category 5e, UL verified to Category 5e

Flame Test

UL Flame Test:	UL1685 UL Loading
CSA Flame Test:	FT1

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	1703A

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

Capacitance (pF/ft)
15

Nominal Velocity of Propagation:

VP (%)
70

Maximum Capacitance Unbalance (pF/100 m): 66

Maximum Delay:

Delay (ns/100 m)
510

Max. Delay Skew:

Delay Skew (ns/100 m)
25

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
9

Max. Operating Voltage - UL:

Voltage
300 V RMS

Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
3

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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	2.0	65.3	65.3	63.3	63.3	20.0
4	4.0	56.3	56.3	52.3	52.3	23.0
8	5.7	51.8	51.8	46.1	46.1	24.5
10	6.4	50.3	50.3	43.9	43.9	25.0
16	8.1	47.3	47.3	39.1	39.1	25.0
20	9.2	45.8	45.8	35.2	35.2	25.0
25	10.3	44.3	44.3	34.1	34.1	24.3
31.25	11.6	42.9	42.9	31.3	31.3	23.6
62.5	16.8	38.4	38.4	21.6	21.6	21.5
100	21.7	35.3	35.3	17.1	17.1	20.1
155	27.7	32.5	32.5	4.7	4.7	19.0
200	32.0	30.8	30.8	3.0	3.0	19.0
250	36.4	29.3	29.3	>0	>0	18.0
300	40.5	28.2	28.2			18.0
310	41.3	27.9	27.9			18.0
350	44.3	27.2	27.2			17.0

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 12	105 ± 10	63.8	60.8
4	100 ± 12	100 ± 10	51.7	48.8
8	100 ± 12	100 ± 10	45.7	42.7
10	100 ± 12	100 ± 10	43.8	40.8
16	100 ± 12	100 ± 10	39.7	36.7
20	100 ± 12	100 ± 10	37.7	34.7
25	100 ± 15	100 ± 10	35.8	32.8
31.25	100 ± 15	100 ± 10	33.9	30.9
62.5	100 ± 15	100 ± 10	27.8	24.9
100	100 ± 15	100 ± 10	23.8	20.8
155	100 ± 18	100 ± 10	19.9	16.9
200	100 ± 18	100 ± 10	17.7	14.7
250	100 ± 20	100 ± 10	15.8	12.8
300	100 ± 20	100 ± 10	14.2	11.2
310	100 ± 20	100 ± 10	13.9	10.9
350	100 ± 22	100 ± 10	12.9	9.9

Notes (Overall)

Notes: Belden IBDN. Jacket sequentially marked at 2 ft. intervals. U.S. Patents 5, 606, 151 and 5, 734, 126. Third party verified to TIA/EIA-568-B.2, Category 5e.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1702A F2V1000	1,000 FT	45.000 LB	GRAY, DEC	C	2 X 4 PR #24 DUAL DATATWIST
1702A F2V1640	1,640 FT	73.800 LB	GRAY, DEC	C	2 X 4 PR #24 DUAL DATATWIST
1702A 0061000	1,000 FT	45.000 LB	BLUE, LIGHT	C	2 X 4 PR #24 DUAL DATATWIST
1702A 0061640	1,640 FT	73.800 LB	BLUE, LIGHT	C	2 X 4 PR #24 DUAL DATATWIST

Notes:

C = CRATE REEL PUT-UP.

DataTwist® 350 UTP Cable

TIA/EIA-568-B.2, Category 5e

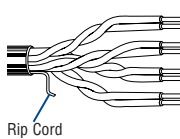
Enhanced Category 5e Bonded-Pair Cables

Certified System Cable

Description	Part No.	UL NEC/ C(UL) CEC Type	No. of Pairs	Standard Lengths		Standard Unit Wt.		Nominal OD		Max. DCR (Ω/100m)	Max. DCR Unbal. (%)	Max. Cap. Unbal. (pF/100m)	Freq. (MHz)	Max. Atten. (dB/100m)	Min. PSUM NEXT (dB)	Min. PSUM ACR (dB/100m)	Min. PSUM ELFEXT (dB/100m)	Input Imped. (Ω)	Min. RL (dB)
				Ft.	m	Lbs.	kg	Inch	mm										

24 AWG Bonded-Pairs Solid Bare Copper Conductors • Rip Cord • See Color Code Chart (below)

Non-Plenum • Polyolefin Insulation • PVC Jacket (Red, Orange, White, Black, Yellow, Green, Blue, Purple, Light Gray or Gray)

	1700A	NEC:	4	U-1000	U-304.8	22.0	10.0	.200	5.08	9.0	3.0	66.0	1	2.0	65.3	63.3	60.8	100±12	20.0	
		CM		1000 †	304.8	22.0	10.0							4	4.0	56.3	52.3	48.8	100±12	23.0
		CEC:			1640 †	500.0	36.1	16.4						8	5.7	51.8	46.1	42.7	100±12	24.5
		CM			3000 †	914.4	63.0	28.6						10	6.4	50.3	43.9	40.8	100±12	25.0
		CM			3280 †	1000.0	72.2	32.8						16	8.1	47.3	39.1	36.7	100±12	25.0
														25	10.3	44.3	34.1	32.8	100±15	24.3
														31.25	11.6	42.9	31.3	30.9	100±15	23.6
														62.5	16.8	38.4	21.6	24.9	100±15	21.5
														100	21.7	35.3	17.1	20.8	100±15	20.1
														155	27.7	32.5	4.7	16.9	100±18	19.0
													200	32.0	30.8	3.0	14.7	100±18	19.0	
													250	36.4	29.3	—	12.8	100±20	18.0	
													350	44.3	27.2	—	9.9	100±22	17.0	
	1702A*	NEC:	2x4	1000 *	304.8	45.0	20.4	.200	5.08											
		CM		1640 *	500.0	73.8	33.5		x	x										
		CEC:						.415	10.54											
		CM																		
		CM																		
	1700R	NEC:	4	U-1000 ††	U-304.8	22.0	10.0	.204	5.18											
		CMR		1000 ††	304.8	22.0	10.0													
		CEC:		3000 ††	914.4	63.0	28.6													
		CMR																		
		CMR																		

*1702A is Siamese version of 1700A and is available in Blue or Light Gray only.

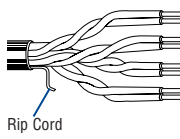
†1000 ft. put-up not available in Gray. 3000 ft. put-up available in Red, Blue, White or Lt. Gray only. 1640 ft. available in Lt. Gray or Blue only. 3280 ft. available in Lt. Gray only.

††1700R is not available in Black nor Medium Gray. 3000 ft. put-up available in Red, Blue, Purple, White or Light Gray only.

Third party verified to TIA/EIA-568-B.2, Category 5e

Jacket sequentially marked at 2 ft. intervals. Features Descending Length Marking. • U.S. Patents 5,606,151 and 5,734,126

Plenum • FEP Teflon® Insulation • Flamarrest® Jacket (Available in Red, Orange, Gray, Yellow, Green, Blue, Purple, Natural or Black)

	1701A	NEC:	4	U-1000	U-304.8	23.0	10.5	.195	4.95	9.0	3.0	66.0	1	2.0	65.3	63.3	60.8	100±12	20.0	
		CMP		1000	304.8	24.0	10.9							4	4.0	56.3	52.3	48.8	100±12	23.0
		CEC:			3000 †	914.4	69.0	31.3						8	5.7	51.8	46.1	42.7	100±12	24.5
		CMP												10	6.4	50.3	43.9	40.8	100±12	25.0
		CMP												16	8.1	47.3	39.1	36.7	100±12	25.0
														25	10.3	44.3	34.1	32.8	100±15	24.3
														31.25	11.6	42.9	31.3	30.9	100±15	23.6
														62.5	16.8	38.4	21.6	24.9	100±15	21.5
														100	21.7	35.3	17.1	20.8	100±15	20.1
														155	27.7	32.5	4.7	16.9	100±18	19.0
													200	32.0	30.8	3.0	14.7	100±20	19.0	
													250	36.4	29.3	—	12.8	100±20	18.0	
													350	44.3	27.2	—	9.9	100±22	17.0	
	1703A**	NEC:	2x4	1000 ††	304.8	46.0	20.9	.195	4.95											
		CMP						x	x											
		CEC:						.405	10.29											
		CMP																		
		CMP																		

**1703A is Siamese version of 1701A.

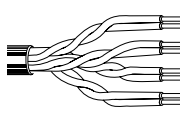
†3000 ft. put-up available in Blue or Natural only.

††1000 ft. put-up available in Blue or Natural only.

Third party verified to TIA/EIA-568-B.2, Category 5e

Jacket sequentially marked at 2 ft. intervals. Features Descending Length Marking. • U.S. Patents 5,606,151 and 5,734,126

Plenum • FEP Teflon Insulation • FEP Jacket (Available in Blue or White)

	1701LC	NEC:	4	U-1000	U-304.8	23.0	10.5	.187	4.75	9.0	3.0	66.0	1	2.0	65.3	63.3	60.8	100±12	20.0	
		Limited Combustible		1000	304.8	24.0	10.9							4	4.0	56.3	52.3	48.8	100±12	23.0
		FHC 25/50												8	5.7	51.8	46.1	42.7	100±12	24.5
		CMP												10	6.4	50.3	43.9	40.8	100±12	25.0
		CMP												16	8.1	47.3	39.1	36.7	100±12	25.0
														25	10.3	44.3	34.1	32.8	100±15	24.3
														31.25	11.6	42.9	31.3	30.9	100±15	23.6
														62.5	16.8	38.4	21.6	24.9	100±15	21.5
														100	21.7	35.3	17.1	20.8	100±15	20.1
														155	27.7	32.5	4.7	16.9	100±18	19.0
													200	32.0	30.8	3.0	14.7	100±20	19.0	
													250	36.4	29.3	—	12.8	100±20	18.0	
													350	44.3	27.2	—	9.9	100±22	17.0	

1701LC does not have a rip cord.

Third party verified to TIA/EIA-568-B.2, Category 5e

Jacket sequentially marked at 2 ft. intervals. Features Descending Length Marking. • U.S. Patents 5,606,151 and 5,734,126

ACR = Attenuation Crosstalk Ratio • DCR = DC Resistance • ELFEXT = Equal Level Far-end Crosstalk • NEXT = Near-end Crosstalk • PSUM = Power Sum • RL = Return Loss • UTP = Unshielded Twisted Pair(s)

Color Codes: DataTwist 350

Pair No.	Color Combination
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

Teflon is a DuPont trademark.