

Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

Belden 1583A Plenum Cat5e Cable



General Description:

CAT5e (100MHz), 4-Pair, U/UTP-Unshielded, Plenum-CMP, Premise Horizontal Cable, 24 AWG Solid Bare Copper Conductors, Dual FRPO/FEP Insulation, Rip Cord,

Usage (Overall)

Suitable Applications: Horizontal, 1000BaseT, Gigabit Ethernet, POE, POE+, 100BaseTX, Fast Ethernet, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Video, RS-422

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
4	24	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
	LS PVC - Low Smoke Polyvinyl Chloride

Outer Jacket Diameter:

Nom. Dia. (in.)
0.190

Outer Jacket Ripcord: Yes

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:	0°C To +60°C
Operating Temperature Range:	-20°C To +60°C
Bulk Cable Weight:	20 lbs/1000 ft.
Max. Recommended Pulling Tension:	35 lbs.
Min. Bend Radius/Minor Axis:	0.800 in.
Min. Bend/Installation:	1.900 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMP
NEC Articles:	800

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CEC/C(UL) Specification:	CMP
EU Directive 2011/65/EU (ROHS II):	Yes
Other Standards:	ISO/IEC 11801 ed 2.1 (2008) Class D
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:	Category 5e - TIA 568.C.2
Other Specification:	NEMA WC-63.1 Category 5e, UL Verified to Category 5e
Applicable Patents:	

Flame Test

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

Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	No
Suitability - Aerial:	No
Suitability - Burial:	No
Sunlight Resistance:	No
Oil Resistance:	No
Non-halogenated:	No

Plenum/Non-Plenum

Plenum (Y/N):	Yes
Non-Plenum Number:	1583A

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

Capacitance (pF/ft)
15

Maximum Capacitance Unbalance (pF/100 m): 330

Nominal Velocity of Propagation:

VP (%)
72

Maximum Delay:

Delay (ns/100 m)
538 @ 100MHz

Max. Delay Skew:

Delay Skew (ns/100 m)
45

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
9.38

Max. Operating Voltage - UL:

Voltage
300 V RMS

Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)

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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)	Min. SRL (dB)
1	2.0	65.3	62.3	63.0	60.3	20.0	23.0
4	4.1	56.3	53.3	51.0	49.2	23.0	23.0
8	5.8	51.8	48.8	46.0	43.0	24.5	24.5
10	6.5	50.3	47.3	43.0	40.8	25.0	25.0
16	8.2	47.3	44.3	39.0	36.0	25.0	25.0
20	9.3	45.8	42.8	36.5	33.5	25.0	25.0
25	10.4	44.3	41.3	33.9	30.9	24.3	24.3
31.25	11.7	42.9	39.9	31.0	28.2	23.6	23.6
62.5	17.0	38.4	35.4	22.0	19.0	21.5	21.5
100	22.0	35.3	32.3	14.0	10.3	20.1	20.1
155	28.1	32.5	29.5	4.4	1.4	15.8	
200	32.0	30.8	27.8	4.0	1.0	15.0	

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 15	100 ± 15	63.8	60.8
4	100 ± 15	100 ± 15	51.7	48.7
8	100 ± 15	100 ± 15	45.7	42.7
10	100 ± 15	100 ± 15	43.8	40.8
16	100 ± 15	100 ± 15	39.7	36.7
20	100 ± 15	100 ± 15	37.7	34.7
25	100 ± 15	100 ± 15	35.8	32.8
31.25	100 ± 15	100 ± 15	33.9	30.9
62.5	100 ± 15	100 ± 15	27.8	24.9
100	100 ± 15	100 ± 15	23.8	20.8
155	100 ± 25	100 ± 15	19.9	16.9
200	100 ± 25	100 ± 15	17.7	14.7

Notes (Overall)

Notes: Jacket sequentially marked at 2 ft. intervals. Third party verified to ANSI/TIA-568-C.2, Category 5e. Values above 100 MHz are for engineering purposes only.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1585A D15U1000	1,000 FT	23.000 LB	BLUE		CAT5E 4PR U/UTP CMP BOX
1585A D151000	1,000 FT	23.000 LB	BLUE	C	CAT5E 4PR U/UTP CMP REEL
1585A D153000	3,000 FT	66.000 LB	BLUE	C	CAT5E 4PR U/UTP CMP REEL
1585A 002U1000	1,000 FT	23.000 LB	RED		CAT5E 4PR U/UTP CMP BOX
1585A 0021000	1,000 FT	23.000 LB	RED	C	CAT5E 4PR U/UTP CMP REEL
1585A 003U1000	1,000 FT	0.000 LB	ORANGE		CAT5E 4PR U/UTP CMP BOX
1585A 0031000	1,000 FT	23.000 LB	ORANGE	C	CAT5E 4PR U/UTP CMP REEL
1585A 004U1000	1,000 FT	23.000 LB	YELLOW		CAT5E 4PR U/UTP CMP BOX
1585A 0041000	1,000 FT	23.000 LB	YELLOW	C	CAT5E 4PR U/UTP CMP REEL
1585A 005U1000	1,000 FT	23.000 LB	GREEN, DARK		CAT5E 4PR U/UTP CMP BOX
1585A 0051000	1,000 FT	23.000 LB	GREEN, DARK	C	CAT5E 4PR U/UTP CMP REEL
1585A 008U1000	1,000 FT	23.000 LB	GRAY		CAT5E 4PR U/UTP CMP BOX
1585A 0081000	1,000 FT	23.000 LB	GRAY	C	CAT5E 4PR U/UTP CMP REEL
1585A 009U1000	1,000 FT	23.000 LB	WHITE		CAT5E 4PR U/UTP CMP BOX
1585A 0091000	1,000 FT	23.000 LB	WHITE	C	CAT5E 4PR U/UTP CMP REEL
1585A 010U1000	1,000 FT	23.000 LB	BLACK		CAT5E 4PR U/UTP CMP BOX
1585A 0101000	1,000 FT	23.000 LB	BLACK	C	CAT5E 4PR U/UTP CMP REEL
1585A 010500	500 FT	10.500 LB	BLACK		CAT5E 4PR U/UTP CMP REEL
1585A 012U1000	1,000 FT	23.000 LB	PINK		CAT5E 4PR U/UTP CMP BOX
1585A 0121000	1,000 FT	23.000 LB	PINK	C	CAT5E 4PR U/UTP CMP REEL
1585A 877U1000	1,000 FT	23.000 LB	NATURAL		CAT5E 4PR U/UTP CMP BOX
1585A 8771000	1,000 FT	23.000 LB	NATURAL	C	CAT5E 4PR U/UTP CMP REEL

Notes:

C = CRATE REEL PUT-UP.