

## 1213F Multi-Conductor - Enhanced Category 5e Nonbonded-Pair Cable



For more Information  
please call

1-800-Belden1

**General Description:**

CAT5e+ (350MHz), 4-Pair, F/UTP-Foil shielded, Plenum-CMP, Premise Horizontal Cable, 24 AWG solid bare copper conductors, FEP insulation, overall Beldfoil® shield, Flammarrest® jacket, RJ-45 compatible

**Usage (Overall)****Suitable Applications:**

Premise Horizontal Cable, Gigabit Ethernet, HDBaseT, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, Noisy Environments, 100 MHz Category 5e

**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
FEP - Fluorinated Ethylene Propylene

**Outer Shield****Outer Shield Material:**

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100

**Outer Shield Drain Wire AWG:**

AWG	Stranding	Drain Wire Conductor Material
24	7x32	TC - Tinned Copper

**Outer Jacket****Outer Jacket Material:**

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

**Overall Cable**

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)**

Operating Temperature Range:

0°C To +75°C

Bulk Cable Weight:

34 lbs/1000 ft.

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Max. Recommended Pulling Tension:	25 lbs.
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Min. Bend Radius/Minor Axis:	1 in.
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**Applicable Specifications and Agency Compliance (Overall)****Applicable Standards & Environmental Programs**

CEC/C(UL) Specification:	CMP
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EU Directive 2011/65/EU (ROHS II):	Yes
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EU CE Mark:	Yes
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EU Directive 2000/53/EC (ELV):	Yes
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EU Directive 2002/95/EC (RoHS):	Yes
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EU RoHS Compliance Date (mm/dd/yyyy):	12/09/2011
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EU Directive 2002/96/EC (WEEE):	Yes
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EU Directive 2003/11/EC (BFR):	Yes
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CA Prop 65 (CJ for Wire & Cable):	Yes
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MII Order #39 (China RoHS):	Yes
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Telecommunications Standards:	Category 5e - TIA 568.C.2
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ANSI Specification:	ANSI/TIA 568-C.2 Category 5e
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Other Specification:	NEMA WC-63.1 Category 5e
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**Flame Test**

UL Flame Test:	NFPA 262
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CSA Flame Test:	FT6
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**Plenum/Non-Plenum**

Plenum (Y/N):	Yes
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Non-Plenum Number:	1212F
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**Electrical Characteristics (Overall)****Nom. Mutual Capacitance:**

Capacitance (pF/ft)
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15
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Maximum Capacitance Unbalance (pF/100 m):	330
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**Nominal Velocity of Propagation:**

VP (%)
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70
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**Maximum Delay:**

Delay (ns/100 m)
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538 @ 100MHz
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**Max. Delay Skew:**

Delay Skew (ns/100 m)
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45
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**Maximum Conductor DC Resistance:**

DCR @ 20°C (Ohm/100 m)
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9.38
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**Max. Operating Voltage - UL:**

Voltage
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300 V RMS
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**Maximum DCR Unbalanced:**

DCR Unbalance @ 20°C (%)
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## 1213F Multi-Conductor - Enhanced Category 5e Nonbonded-Pair Cable

## 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	2.000	70.3	68.3	70.3	66.3	20.000	23.0
4	4.000	61.3	59.3	59.3	55.3	23.000	23.0
8	5.700	56.8	54.8	53.1	49.1	24.500	24.5
10	6.400	55.3	53.3	50.9	46.9	25.000	25.0
16	8.100	52.2	50.2	46.1	42.1	25.000	25.0
20	9.100	50.8	48.8	43.7	39.7	25.000	25.0
25	10.200	49.3	47.3	41.1	37.1	24.300	24.3
31.25	11.400	47.9	45.9	38.5	34.5	23.600	23.6
62.5	16.400	43.4	41.4	29.0	25.0	21.500	21.5
100	21.000	40.3	38.3	21.3	17.3	20.100	20.1
155	26.600	37.4	35.4	12.8	8.9	18.800	
200	30.500	35.8	33.8	7.3	3.3	18.000	
250	34.400	34.3	32.3	1.9		17.300	
300	38.000	33.1	28.2			16.800	
350	41.400	32.1	27.2			16.300	
400	44.500	31.3	26.3			15.900	
450	47.600	30.5	25.6			15.500	

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 15	100 ± 15	67.8	64.8
4	100 ± 15	100 ± 15	55.8	52.8
8	100 ± 15	100 ± 15	49.7	46.7
10	100 ± 15	100 ± 15	47.8	44.8
16	100 ± 15	100 ± 15	43.7	40.7
20	100 ± 15	100 ± 15	41.8	38.8
25	100 ± 15	100 ± 15	39.8	36.8
31.25	100 ± 15	100 ± 15	37.9	34.9
62.5	100 ± 15	100 ± 15	31.9	28.9
100	100 ± 15	100 ± 15	27.8	24.8
155	100 ± 22	100 ± 15	24.0	21.0
200	100 ± 22	100 ± 15	21.8	18.8
250	100 ± 32	100 ± 15	19.8	16.8
300	100 ± 32	100 ± 15	18.2	15.2
350	100 ± 32	100 ± 15	16.9	13.9

## Notes (Overall)

**Notes:** Shield is bonded to jacket inner wall for electrical stability. RJ-45 Compatible. Jacket sequentially marked at 2 ft. intervals.  
 Third party verified to TIA/EIA-568-B.2, Category 5e.

## Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1213F D15A1000	1,000 FT	36.000 LB	BLUE		CAT5E+ 4PR F/UTP CMP RIB
1213F D15A500	500 FT	19.500 LB	BLUE		CAT5E+ 4PR F/UTP CMP RIB
1213F D15Z1000	1,000 FT	36.000 LB	BLUE		CAT5E+ 4PR F/UTP CMP
1213F D15Z500	500 FT	19.500 LB	BLUE		CAT5E+ 4PR F/UTP CMP
1213F D151000	1,000 FT	32.000 LB	BLUE	C	CAT5E+ 4PR F/UTP CMP REEL
1213F D15500	500 FT	16.000 LB	BLUE		CAT5E+ 4PR F/UTP CMP REEL
1213F 002A1000	1,000 FT	36.000 LB	RED		CAT5E+ 4PR F/UTP CMP RIB
1213F 0021000	1,000 FT	32.000 LB	RED	C	CAT5E+ 4PR F/UTP CMP REEL
1213F 003A1000	1,000 FT	36.000 LB	ORANGE		CAT5E+ 4PR F/UTP CMP RIB
1213F 003Z1000	1,000 FT	36.000 LB	ORANGE		CAT5E+ 4PR F/UTP CMP
1213F 0031000	1,000 FT	32.000 LB	ORANGE	C	CAT5E+ 4PR F/UTP CMP REEL
1213F 004A1000	1,000 FT	36.000 LB	YELLOW		CAT5E+ 4PR F/UTP CMP RIB
1213F 004Z1000	1,000 FT	36.000 LB	YELLOW		CAT5E+ 4PR F/UTP CMP
1213F 0041000	1,000 FT	32.000 LB	YELLOW	C	CAT5E+ 4PR F/UTP CMP REEL

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1213F 005A1000	1,000 FT	36.000 LB	GREEN, DARK		CAT5E+ 4PR F/UTP CMP RIB
1213F 005Z1000	1,000 FT	36.000 LB	GREEN, DARK		CAT5E+ 4PR F/UTP CMP
1213F 0051000	1,000 FT	32.000 LB	GREEN, DARK	C	CAT5E+ 4PR F/UTP CMP REEL
1213F 008A1000	1,000 FT	36.000 LB	GRAY		CAT5E+ 4PR F/UTP CMP RIB
1213F 008Z1000	1,000 FT	36.000 LB	GRAY		CAT5E+ 4PR F/UTP CMP
1213F 0081000	1,000 FT	32.000 LB	GRAY	C	CAT5E+ 4PR F/UTP CMP REEL
1213F 009A1000	1,000 FT	36.000 LB	WHITE		CAT5E+ 4PR F/UTP CMP RIB
1213F 009A500	500 FT	19.500 LB	WHITE		CAT5E+ 4PR F/UTP CMP RIB
1213F 009Z1000	1,000 FT	36.000 LB	WHITE		CAT5E+ 4PR F/UTP CMP
1213F 009Z500	500 FT	19.500 LB	WHITE		CAT5E+ 4PR F/UTP CMP
1213F 0091000	1,000 FT	32.000 LB	WHITE	C	CAT5E+ 4PR F/UTP CMP REEL
1213F 010A1000	1,000 FT	36.000 LB	BLACK		CAT5E+ 4PR F/UTP CMP RIB
1213F 010Z1000	1,000 FT	36.000 LB	BLACK		CAT5E+ 4PR F/UTP CMP
1213F 010Z250	250 FT	9.250 LB	BLACK		CAT5E+ 4PR F/UTP CMP
1213F 010Z500	500 FT	19.500 LB	BLACK		CAT5E+ 4PR F/UTP CMP
1213F 0101000	1,000 FT	32.000 LB	BLACK	C	CAT5E+ 4PR F/UTP CMP REEL
1213F 010501	500 FT	17.500 LB	BLACK		CAT5E+ 4PR F/UTP CMP REEL

**Notes:**

C = CRATE REEL PUT-UP.

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