



Product: [1212F](#)

Category 5E+ Cable, 4 Pair, F/UTP, CMR

Product Description

Category 5E+ Premise Horizontal Cable (350MHz), 4 Pair, 24 AWG Solid Bare Copper Conductors, F/UTP - Foil Shielded, Riser-CMR, PVC Jacket

Technical Specifications

Product Overview

Suitable Applications:

Premise Horizontal Cable, Ethernet 1000BASE-T, Ethernet 100BASE-TX, Ethernet 10BASE-T, PoE++, PoE+, PoE , Noisy Environments

Construction Details

Conductor

AWG	Stranding	Material	Number of Pairs
24	Solid	BC - Bare Copper	4

Insulation

Material	Color Code
Polyolefin	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair: No

Outer Shield Material

Type	Material	Coverage	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC

Outer Jacket Material

Material	Nom. Diameter	Ripcord
PVC - Polyvinyl Chloride	0.260 in	No

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. Capacitance Unbalance	Nom. Mutual Capacitance	Nom. Velocity of Prop.
93.8 Ohm/km	3%	330 pF/100m	15 pF/ft	70%

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	70%

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2.0 dB/100m	70.3 dB	68.3 dB	70.3 dB	66.3 dB	67.8 dB	64.8 dB	20.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
4 MHz	4.0 dB/100m	61.3 dB	59.3 dB	59.3 dB	55.3 dB	55.8 dB	52.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
8 MHz	5.7 dB/100m	56.8 dB	54.8 dB	53.1 dB	49.1 dB	49.7 dB	46.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
10 MHz	6.4 dB/100m	55.3 dB	53.3 dB	50.9 dB	46.9 dB	47.8 dB	44.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
16 MHz	8.1 dB/100m	52.2 dB	50.2 dB	46.1 dB	42.1 dB	43.7 dB	40.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
20 MHz	9.1 dB/100m	50.8 dB	48.8 dB	43.7 dB	39.7 dB	41.8 dB	38.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
25 MHz	10.2 dB/100m	49.3 dB	47.3 dB	41.1 dB	37.1 dB	39.8 dB	36.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm

31.25 MHz	11.4 dB/100m	47.9 dB	45.9 dB	38.5 dB	34.5 dB	37.9 dB	34.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 15 Ohm
62.5 MHz	16.4 dB/100m	43.4 dB	41.4 dB	29.0 dB	25.0 dB	31.9 dB	28.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
100 MHz	21.0 dB/100m	40.3 dB	38.3 dB	21.3 dB	17.3 dB	27.8 dB	24.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 15 Ohm
155 MHz	26.6 dB/100m	37.4 dB	35.4 dB	12.8 dB	8.9 dB	24.0 dB	21.0 dB	18.8 dB	100 ± 22 Ohm	100 ± 15 Ohm
200 MHz	30.5 dB/100m	35.8 dB	33.8 dB	7.3 dB	3.3 dB	21.8 dB	18.8 dB	18.0 dB	100 ± 22 Ohm	100 ± 15 Ohm
250 MHz	34.4 dB/100m	34.3 dB	32.3 dB	1.9 dB		19.8 dB	16.8 dB	17.3 dB	100 ± 32 Ohm	100 ± 15 Ohm
300 MHz	38.0 dB/100m	33.1 dB	28.2 dB			18.2 dB	15.2 dB	16.8 dB	100 ± 32 Ohm	100 ± 15 Ohm
350 MHz	41.4 dB/100m	32.1 dB	27.2 dB			16.9 dB	13.9 dB	16.3 dB	100 ± 32 Ohm	100 ± 15 Ohm
400 MHz	44.6 dB/100m	31.3 dB	26.3 dB					15.9 dB		
450 MHz	47.6 dB/100m	30.5 dB	25.6 dB					15.5 dB		

Voltage

UL Voltage Rating
300 V (CMR)

Mechanical Characteristics

Temperature

UL Rating	Operating	Installation	Storage
75°C	-20°C To +75°C	0°C To +50°C	-20°C To +75°C

Bend Radius

Stationary Min.	Installation Min.
2.25 in	2.75 in

Max. Pull Tension:	25 lbs
Bulk Cable Weight:	30 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Riser, Indoor
Sustainability:	Product Lens™, Environmental Product Declaration (EPD) Available
Flammability / Fire Resistance:	UL 1666 Riser, FT4, FT4, IEC 60332-1-2
NEC / UL Compliance:	800, CMR
CEC / C(UL) Compliance:	CMR
ICEA Compliance:	S-90-661-2012
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3
NEMA Compliance:	NEMA WC-63.1
Data Category:	Category 5e
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 5e
CPR Euroclass:	Eca
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU, EU Directive 2011/65/EU (ROHS II), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Part Number

Plenum Number:	1213F
----------------	-------

Variants

Item #	Color	Putup Type	Length	UPC
1212F 0101000	Black	Reel	1,000 ft	612825108658
1212F 010A1000	Black	Reel-in-Box	1,000 ft	612825108641
1212F 006A500	Blue	Reel-in-Box	500 ft	612825108573
1212F 0061000	Blue	Reel	1,000 ft	612825108580
1212F 006A1000	Blue	Reel-in-Box	1,000 ft	612825108566
1212F 0081000	Gray	Reel	1,000 ft	612825108603
1212F 008A1000	Gray	Reel-in-Box	1,000 ft	612825108597
1212F 0051000	Green	Reel	1,000 ft	612825108559
1212F 005A1000	Green	Reel-in-Box	1,000 ft	612825108542
1212F 0031000	Orange	Reel	1,000 ft	612825108511
1212F 003A1000	Orange	Reel-in-Box	1,000 ft	612825108504
1212F 0021000	Red	Reel	1,000 ft	612825108498

1212F 002A1000	Red	Reel-in-Box	1,000 ft	612825108481
1212F 009A500	White	Reel-in-Box	500 ft	612825108627
1212F 0091000	White	Reel	1,000 ft	612825108634
1212F 009A1000	White	Reel-in-Box	1,000 ft	612825108610
1212F 0041000	Yellow	Reel	1,000 ft	612825108535
1212F 004A1000	Yellow	Reel-in-Box	1,000 ft	612825108528

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 350 MHz are for Engineering Information Only. Shield is Bonded to Jacket Inner Wall for Electrical Stability. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.
--------	--

History

Update and Revision:	Revision Number: 0.396 Revision Date: 07-28-2020
----------------------	--

© 2020 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.