



Product: [2138A](#)

Category 5e Indoor/Outdoor CMR/CMX F/UTP Cable

Product Description

CAT5e (100MHz), 4-Pair, F/UTP-Foil shielded, Riser-CMR-CMX Outdoor, Premise Horizontal Cable, 24 AWG solid bare copper conductors, polyolefin insulation, overall Beldfoil® shield, PVC jacket, RJ-45 compatible

Technical Specifications

Product Overview

Suitable Applications:	OSP-Outdoor, Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, Noisy Environments, 100MHz Category 5e
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
24	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Material	
PO - Polyolefin	
Bonded-Pair:	N/A

Color Chart

Number	Color
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

Outer Shield

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
Tape	Bi-Laminate (Alum+Poly)	Beldfoil®	100%	TC - Tinned Copper	24

Outer Jacket

Material	Nominal Diameter	Ripcord
PVC - Polyvinyl Chloride	0.265 in	No

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
93.8 Ohm/km	5 %

Capacitance

Max. Capacitance Unbalance	Nom. Mutual Capacitance
330 pF/100m	15 pF/ft

Delay

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

High Frequency

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	65.3 dB	62.3 dB	63.3 dB	60.3 dB	63.8 dB	60.8 dB	20.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
4 MHz	4.1 dB/100m	56.3 dB	53.3 dB	52.2 dB	49.2 dB	51.8 dB	48.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
8 MHz	5.8 dB/100m	51.8 dB	48.8 dB	46.0 dB	43.0 dB	45.7 dB	42.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
10 MHz	6.5 dB/100m	50.3 dB	47.3 dB	43.8 dB	40.8 dB	43.8 dB	40.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
16 MHz	8.2 dB/100m	47.2 dB	44.2 dB	39.0 dB	36.0 dB	39.7 dB	36.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
20 MHz	9.3 dB/100m	45.8 dB	42.8 dB	36.5 dB	33.5 dB	37.8 dB	34.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
25 MHz	10.4 dB/100m	44.3 dB	41.3 dB	33.9 dB	30.9 dB	35.8 dB	32.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm
31.25 MHz	11.7 dB/100m	42.9 dB	39.9 dB	31.2 dB	28.2 dB	33.9 dB	30.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 15 Ohm
62.5 MHz	17.0 dB/100m	38.4 dB	35.4 dB	21.4 dB	18.4 dB	27.9 dB	24.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
100 MHz	22.0 dB/100m	35.3 dB	32.3 dB	13.3 dB	10.3 dB	23.8 dB	20.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 15 Ohm
155 MHz	28.1 dB/100m	32.4 dB	29.4 dB	4.4 dB	1.4 dB	20.0 dB	17.0 dB	18.8 dB		
200 MHz	32.4 dB/100m	30.8 dB	27.8 dB	-1.6 dB	-4.6 dB	17.8 dB	14.8 dB	18.0 dB		

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temperature Range:	-20°C To +75°C
UL Temp Rating:	90°C
Storage Temperature Range:	-40°C To +75°C
Operating Temperature Range:	-40°C To +75°C

Mechanical Characteristics

Cold Bend Test:	-40°C Compliance Per UL 1581
Bulk Cable Weight:	31 lbs/1000ft
Max. Pull Tension:	25 lbs
Min. Bend Radius During Installation:	2.75 in
Min. Bend Radius/Minor Axis:	2.25 in

Standards

NEC/(UL) Compliance:	CMG, CMR, CMX-Outdoor
CEC/C(UL) Compliance:	CMR-CMX OUTDOOR OR CMG
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class D
Data Category:	Category 5e
ANSI Compliance:	S-90-661-2012 Category 5e, ANSI/NEMA WC-63.1 Category 5e
TIA/EIA Compliance:	ANSI/TIA-568-C.2 Category 5e
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3
Third Party Performance Verification:	Category 5e

Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (RoHS 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU (RoHS 2 amendment):	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes

EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
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Suitability

Suitability - Aerial:	Yes - When supported by messenger wire
Suitability - Burial:	No
Suitability - Hazardous Locations:	No
Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	No
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

UL Flammability:	UL 1666 Riser
IEC Flammability:	IEC 60332-1-2
IEEE Flammability:	IEEE 1202 Vertical Tray Flame Test
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	1533P

Related Part Numbers

Non-Plenum Number:	1533R
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Variants

Item #	Color	UPC
2138A 0101000	Black	612825377320

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 100 MHz are for Engineering Information Only. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0. Shield is Bonded to Jacket Inner Wall for Electrical Stability.
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History

Update and Revision:	Revision Number: 0.379 Revision Date: 12-12-2023
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