



Product: [2142A](#) 

Category 6A Indoor/Outdoor CMR/CMX F/UTP Cable

Product Description

CAT6A (625 MHz), 4 Pair, F/UTP-Foil Shielded, Indoor/Outdoor CMR-CMX Outdoor, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented EquiSpline™, Overall Beldfoil® Shield with Drain Wire, Ripcord, UV-Resistant PVC Jacket

Technical Specifications

Product Overview

Suitable Applications:	OSP-Outdoor, Premise Horizontal Cable, 10 Gigabit Ethernet, Wireless, Wi-Fi, 100Base TX, 100Base VG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio AES51, RS-422, Noisy Environments, PoE, PoE+
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Physical Characteristics (Overall)

Conductor

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

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Material	
Polyolefin	
Bonded-Pair:	N/A

Color Chart

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

Outer Shield Material

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
Tape	Alum / Poly	Beldfoil®	100 %	TC - Tinned Copper	26

Outer Jacket Material

Material	Nominal Diameter	Ripcord
PVC - Polyvinyl Chloride	0.300 in	Yes

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance	Max DCR Unbalanced Between Pairs [%]
82 Ohm/km	3 %	5 %

Capacitance

Max. Capacitance Unbalance	Nom.Mutual Capacitance
45 pF/100m	17 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
100 MHz	537.6 ns/100m	45 ns/100m	65 %

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. PSNEXT [dB]	Min. PSACR [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. PSANEXT	Min. PSAACRF	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.1 dB/100m	75.3 dB	73.2 dB	79.8 dB	20.0 dB	100 ± 15 Ohm	105 ± 10 Ohm	75.0 dB	77.0 dB	40.0 dB	43.0 dB
4 MHz	3.8 dB/100m	66.3 dB	62.5 dB	67.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	76.2 dB	40.0 dB	41.0 dB
8 MHz	5.3 dB/100m	61.8 dB	56.5 dB	61.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	70.1 dB	40.0 dB	24.9 dB
10 MHz	5.9 dB/100m	60.3 dB	54.4 dB	59.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	68.2 dB	40.0 dB	23.0 dB
16 MHz	7.4 dB/100m	57.2 dB	49.8 dB	55.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	64.1 dB	38.0 dB	18.9 dB
20 MHz	8.3 dB/100m	55.8 dB	47.4 dB	53.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	62.2 dB	37.0 dB	17.0 dB
25 MHz	9.3 dB/100m	54.3 dB	45.0 dB	51.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm	75.0 dB	60.2 dB	36.0 dB	15.0 dB
31.25 MHz	10.4 dB/100m	52.9 dB	42.5 dB	49.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 10 Ohm	75.0 dB	58.3 dB	35.1 dB	13.1 dB
62.5 MHz	14.8 dB/100m	48.4 dB	33.6 dB	43.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 10 Ohm	73.6 dB	52.3 dB	32.0 dB	
100 MHz	18.9 dB/100m	45.3 dB	26.4 dB	39.8 dB	20.1 dB	100 ± 15 Ohm	100 ± 10 Ohm	70.5 dB	48.2 dB	30.0 dB	
200 MHz	27.0 dB/100m	40.8 dB	13.8 dB	33.8 dB	18.9 dB	100 ± 22 Ohm	100 ± 10 Ohm	66.0 dB	42.2 dB	27.0 dB	
250 MHz	30.4 dB/100m	39.3 dB	9.0 dB	31.8 dB	17.3 dB	100 ± 32 Ohm	100 ± 10 Ohm	64.5 dB	40.2 dB	26.0 dB	
300 MHz	33.5 dB/100m	38.1 dB	4.6 dB	30.3 dB	16.8 dB	100 ± 32 Ohm	100 ± 10 Ohm	63.3 dB	38.7 dB	25.2 dB	
350 MHz	36.3 dB/100m	37.1 dB	0.8 dB	28.9 dB	16.3 dB	100 ± 32 Ohm	100 ± 10 Ohm	62.3 dB	37.3 dB	24.6 dB	
400 MHz	39.0 dB/100m	36.3 dB		27.8 dB	15.9 dB	100 ± 32 Ohm	100 ± 10 Ohm	61.5 dB	36.2 dB	24.0 dB	
450 MHz	41.5 dB/100m	35.5 dB		26.7 dB	15.5 dB	100 ± 32 Ohm	100 ± 10 Ohm	60.7 dB	35.1 dB	23.5 dB	
500 MHz	43.9 dB/100m	34.8 dB		25.8 dB	15.2 dB	100 ± 32 Ohm	100 ± 10 Ohm	60.0 dB	34.2 dB	23.0 dB	
550 MHz	46.2 dB/100m	33.2 dB		25.0 dB	14.9 dB	100 ± 32 Ohm	100 ± 10 Ohm	59.4 dB	33.4 dB		
600 MHz	48.4 dB/100m	32.6 dB		24.2 dB	14.7 dB	100 ± 32 Ohm	100 ± 10 Ohm	58.8 dB	32.6 dB		
625 MHz	49.5 dB/100m	32.4 dB		23.9 dB	14.5 dB	100 ± 32 Ohm	100 ± 10 Ohm	58.6 dB	32.3 dB		
750 MHz	54.7 dB/100m	32.2 dB		22.3 dB	14.0 dB	100 ± 32 Ohm	100 ± 10 Ohm	57.4 dB	30.7 dB		
860 MHz	58.9 dB/100m	31.3 dB		21.1 dB	13.6 dB	100 ± 32 Ohm	100 ± 10 Ohm	56.5 dB	29.5 dB		

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

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

Mechanical Characteristics

Cold Bend Test:	-40°C Compliance Per UL 1581
Bulk Cable Weight:	41 lbs/1000ft
Max Recommended Pulling Tension:	25 lbs
Min Bend Radius During Installation:	3.0 in
Min Bend Radius/Minor Axis:	2.5 in

Standards

NEC/(UL) Specification:	CMR, CMX-Outdoor
CEC/C(UL) Specification:	CMR
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class EA
Data Category:	Category 6A
ANSI Compliance:	S-116-732-2013 Category 6A, ANSI/NEMA WC-66 Category 6A
Telecommunications Standards:	ANSI/TIA-568-C.2 Category 6A
IEEE Specification:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Other Specification:	Outdoor Use ANSI/ICEA S56434, Broadband Outdoor Use ANSI/ICEA S99689, Indoor/Outdoor Use ANSI/ICEA S100685, Verified Channel/Category 6A

Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes
EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
EU RoHS Compliance Date (yyyy-mm-dd):	2013-11-14
MII Order #39 (China RoHS):	Yes

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:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LSOH, Toxicity Testing

UL Flammability:	UL 1666 Riser
CSA Flammability:	FT4
ISO/IEC Flammability:	60332-1
IEEE Flammability:	1202 Vertical Tray
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	10GX53F / 10GX63F

Part Number

Non-Plenum Number:	10GX52F / 10GX62F
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Variants

Item #	Color	UPC
2142A 0101000	Black	612825401056

Patent:	https://www.belden.com/resources/patents
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Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 625MHz for Engineering Information Only. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.
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History

Update and Revision:	Revision Number: 0.120 Revision Date: 04-28-2020
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