



Product: [2148A](#) 

Category 6A Indoor/Outdoor Cable, 4 Pair, U/UTP, CMR/CMX

Product Description

Category 6A Enhanced Premise Horizontal Cable (625MHz), Indoor/Outdoor, 4 Pair, 23 AWG Solid Bare Copper Conductors, U/UTP, Riser-CMR/CMX Outdoor, PVC Jacket

Technical Specifications

Product Overview

Suitable Applications:	Indoor/Outdoor, Premise Horizontal Cable, Ethernet up to 10GBASE-T, Wi-Fi 6, Wi-Fi 5, PoE++, PoE+, PoE, HDBaseT
Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/resources/patents .

Construction Details

Conductor

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

Insulation

Material	Color Code
PO - Polyolefin	White & Blue, White & Orange, White & Green, White & Brown

Bonded-Pair: No

Outer Jacket Material

Separator Material	Material	Nom. Diameter	Ripcord
Center Member (Patented EquiSpline®)	PVC - Polyvinyl Chloride	0.300 in	Yes

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. DCR Unbalanced Between Pairs [%]	Max. Capacitance Unbalance	Nom. Mutual Capacitance
82 Ohm/km	3%	5%	45 pF/100m	17 pF/ft

Delay

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

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. PSACR [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Min. PSANEXT	Min. PSAACRF	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.1 dB/100m	75.3 dB	75.3 dB	73.2 dB	74.8 dB	20.0 dB	100 +/-15	77.0 dB	77.0 dB	40.0 dB	35.0 dB
4 MHz	3.8 dB/100m	66.3 dB	66.3 dB	62.5 dB	62.8 dB	23.0 dB	100 +/-15	77.0 dB	76.2 dB	40.0 dB	23.0 dB
8 MHz	5.3 dB/100m	61.8 dB	61.8 dB	56.4 dB	56.7 dB	24.5 dB	100 +/-15	77.0 dB	70.1 dB	40.0 dB	16.9 dB
10 MHz	5.9 dB/100m	60.3 dB	60.3 dB	54.4 dB	54.8 dB	25.0 dB	100 +/-15	77.0 dB	68.2 dB	40.0 dB	15.0 dB
16 MHz	7.5 dB/100m	57.2 dB	57.2 dB	49.8 dB	50.7 dB	25.0 dB	100 +/-15	77.0 dB	64.1 dB	38.0 dB	10.9 dB
20 MHz	8.4 dB/100m	55.8 dB	55.8 dB	47.4 dB	48.8 dB	25.0 dB	100 +/-15	77.0 dB	62.2 dB	37.0 dB	9.0 dB
25 MHz	9.4 dB/100m	54.3 dB	54.3 dB	45.0 dB	46.8 dB	24.3 dB	100 +/-15	77.0 dB	60.2 dB	36.0 dB	7.0 dB
31.25 MHz	10.5 dB/100m	52.9 dB	52.9 dB	42.4 dB	44.9 dB	23.6 dB	100 +/-15	78.1 dB	58.3 dB	35.1 dB	5.1 dB

62.5 MHz	15.0 dB/100m	48.4 dB	48.4 dB	33.4 dB	38.9 dB	21.5 dB	100 +/-15	73.6 dB	52.3 dB	32.0 dB	
100 MHz	19.1 dB/100m	45.3 dB	45.3 dB	26.2 dB	34.8 dB	20.1 dB	100 +/-15	70.5 dB	48.2 dB	30.0 dB	
200 MHz	27.6 dB/100m	40.8 dB	40.8 dB	13.2 dB	28.8 dB	18.7 dB	100 +/-15	66.0 dB	42.2 dB	27.0 dB	
250 MHz	31.1 dB/100m	39.3 dB	39.3 dB	8.3 dB	26.8 dB	18.0 dB	100 +/-15	64.5 dB	40.2 dB	26.0 dB	
300 MHz	34.3 dB/100m	38.1 dB	38.1 dB	3.9 dB	25.3 dB	17.5 dB	100 +/-32	63.3 dB	38.7 dB	25.2 dB	
350 MHz	37.2 dB/100m	37.1 dB	37.1 dB		23.9 dB	17.0 dB	100 +/-32	62.3 dB	37.3 dB	24.6 dB	
400 MHz	40.1 dB/100m	36.3 dB	36.3 dB		22.8 dB	16.6 dB	100 +/-32	61.5 dB	36.2 dB	24.0 dB	
450 MHz	42.7 dB/100m	35.5 dB	35.5 dB		21.7 dB	16.2 dB	100 +/-32	60.7 dB	35.1 dB	23.5 dB	
500 MHz	45.3 dB/100m	34.8 dB	34.8 dB		20.8 dB	15.9 dB	100 +/-32	60.0 dB	34.2 dB	23.0 dB	
550 MHz	47.7 dB/100m	33.2 dB	31.2 dB		20.0 dB	15.6 dB	100 +/-32	59.4 dB	33.4 dB	22.6 dB	
600 MHz	50.1 dB/100m	32.6 dB	30.6 dB		19.2 dB	15.4 dB	100 +/-32	58.8 dB	32.6 dB	22.2 dB	
625 MHz	51.2 dB/100m	32.4 dB	30.4 dB		18.9 dB	15.2 dB	100 +/-32	58.6 dB	32.3 dB	22.0 dB	
750 MHz	56.7 dB/100m	31.2 dB	29.2 dB		17.3 dB	14.7 dB	100 +/-32	57.4 dB	30.7 dB	21.2 dB	
860 MHz	61.2 dB/100m	30.3 dB	28.3 dB		16.1 dB	14.3 dB	100 +/-32	56.5 dB	29.5 dB	20.7 dB	

Voltage

UL Voltage Rating
300 V (CMR), 300 V (CMX-Outdoor)

Mechanical Characteristics

Temperature

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

Bend Radius

Stationary Min.	Installation Min.
2.5 in	3.0 in

Max. Pull Tension:	25 lbs
Bulk Cable Weight:	41 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Fire Resistance:	UL 1666 Riser, FT4, FT4, 1202 Vertical Tray, IEC 60332-1-2
NEC / UL Compliance:	Article 800, CMR;CMX-Outdoor
CEC / C(UL) Compliance:	CMX-Outdoor
ICEA Compliance:	S-116-732-2013
ICEA Compliance:	S-56-434
ICEA Compliance:	S-99-689
ICEA Compliance:	S-100-685
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
NEMA Compliance:	ANSI/NEMA WC-66
Data Category:	Category 6A
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6A
CENELEC Compliance:	Segregation class according EN50174-2=a
CPR Euroclass:	Eca
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Other Standard Compliance(s):	Verified Channel/Category 6A

Part Number

Plenum Number:	10GX13 / 10GX33 / 10GXS13 / 10GXS33
Non-Plenum Number:	10GX12 / 10GX32 / 10GXS12 / 10GXS32

Variants

Item #	Color	UPC
2148A 0101000	Black	612825379430

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system. Values above 625 MHz are 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: 0.263 Revision Date: 03-16-2021
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