

2146A Multi-Conductor - Category 6 Indoor/Outdoor CMR/CMX Cable

For more Information
please call

1-800-Belden1



General Description:

CAT6 (350 MHz), 4 Pair, U/UTP-Unshielded, Indoor/Outdoor CMR-CMX Outdoor, Premise Horizontal Cable, 23 AWG Solid Bare Copper Conductors, Polyolefin Insulation, Patented Tape Separator, Ripcord, UV-Resistant PVC Jacket

Usage (Overall)

Suitable Applications: Premise Horizontal Cable, Outdoor, Riser, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
4	23	Solid	BC - Bare Copper

Total Number of Conductors: 8

Insulation

Insulation Material:

Insulation Material
PO - Polyolefin

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Diameter:

Nom. Dia. (mm)
6.477

Outer Jacket Ripcord: Yes

Overall Cable

Overall Cabling Separator Material: Patented Dielectric Tape

Pair

Pair Color Code Chart:

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

Mechanical Characteristics (Overall)

Storage Temperature Range: -40°C To +75°C

2146A Multi-Conductor - Category 6 Indoor/Outdoor CMR/CMX Cable

Installation Temperature Range:	-20°C To +75°C
Operating Temperature Range:	-40°C To +75°C
UL Temperature Rating:	90C
Bulk Cable Weight:	43.158 Kg/Km
Max. Recommended Pulling Tension:	177.928 N
Min. Bend Radius/Minor Axis:	25.400 mm
Min. Bend/Installation:	69.850 mm

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMR, CMX-Outdoor, UL444
CEC/C(UL) Specification:	CMG, CMR, CMX-Outdoor
EU Directive 2011/65/EU (ROHS II):	Yes
IEEE Specification:	POE per IEEE 802.3af & POE+ per IEEE 802.3at-2009
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2004
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Telecommunications Standards:	Category 6 - TIA 568.C.2, ISO/IEC 11801:2011 Amendment 2.2 Class E
ANSI Specification:	ANSI/NEMA WC-66 Category 6, ANSI/TIA 568-C.2 and ANSI/ICEA S-116-732-2013 Category 6A
Other Specification:	ANSI/ICEA S-56-434 Outdoor Use, ANSI/ICEA S-100-685 Indoor/Outdoor Use, ANSI/ICEA S-99-689 Broadband Outdoor

Applicable Patents:

Country
www.belden.com/p

Flame Test

UL Flame Test:	UL1666 Vertical Riser
C(UL) Flame Test:	FT4
CSA Flame Test:	FT4
IEC Flame Test:	60332-1

Suitability

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

Plenum/Non-Plenum

2146A Multi-Conductor - Category 6 Indoor/Outdoor CMR/CMX Cable

Plenum (Y/N):	No
Plenum Number:	2413
Non-Plenum Number:	2412

Electrical Characteristics (Overall)

Nom. Mutual Capacitance:

Capacitance (pF/m)
55.777

Maximum Capacitance Unbalance (pF/100 m): 330

Nominal Velocity of Propagation:

VP (%)
68.000

Maximum Delay:

Delay (ns/100 m)
537 @ 100MHz

Max. Delay Skew:

Delay Skew (ns/100 m)
35.000

Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
7.800

Max. Operating Voltage - UL:

Voltage
300 V RMS

Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
3.000

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)
1	2.000	75.3	75.3	73.3	73.3	20.000
4	3.700	66.3	66.3	62.5	62.5	23.000
8	5.300	61.8	61.8	56.5	56.5	24.500
10	5.900	60.3	60.3	54.4	54.4	25.000
16	7.400	57.2	57.2	49.8	49.8	25.000
20	8.300	55.8	55.8	47.4	47.4	25.000
25	9.400	54.3	54.3	45.0	45.0	24.300
31.25	10.500	52.9	52.9	42.4	42.4	23.600
62.5	15.100	48.4	48.4	33.3	33.3	21.500
100	19.300	45.3	45.3	26.0	26.0	20.800
155	24.500	42.4	42.4	17.9	17.9	19.500
200	28.200	40.8	40.8	12.6	12.6	18.700
250	31.800	39.3	39.3	7.5	7.5	18.000
300	35.200	38.1	36.1	2.9	0.9	17.500
350	38.400	37.1	35.1			17.000
400	41.500	36.3	34.3			16.600
450	44.300	35.5	33.5			16.200
500	47.100	34.8	32.8			15.900
550	49.700	34.2	32.2			15.600

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ACRF (dB)	Min. PSACRF (dB)
1	100 ± 15	102 ± 15	70.8	67.8
4	100 ± 15	100 ± 15	58.8	55.8
8	100 ± 15	100 ± 15	52.7	49.7

2146A Multi-Conductor - Category 6 Indoor/Outdoor CMR/CMX Cable

10	100 ± 15	100 ± 15	50.8	47.8
16	100 ± 15	100 ± 15	46.7	43.7
20	100 ± 15	100 ± 15	44.8	41.8
25	100 ± 15	100 ± 15	42.8	39.8
31.25	100 ± 15	100 ± 15	40.9	37.9
62.5	100 ± 15	100 ± 15	34.9	31.9
100	100 ± 15	100 ± 15	30.8	27.8
155	100 ± 22	100 ± 15	27.0	24.0
200	100 ± 22	100 ± 15	24.8	21.8
250	100 ± 32	100 ± 15	22.8	19.8
300	100 ± 32	100 ± 15	21.3	18.3
350	100 ± 32	100 ± 15	19.9	16.9
400	100 ± 32	100 ± 15	18.8	15.8
450	100 ± 32	100 ± 15	17.7	14.7
500	100 ± 32	100 ± 15	16.8	13.8
550	100 ± 32	100 ± 15	16	13.0

Notes (Overall)

Notes: Data Above 350 MHz for Information Only, Third party verified to ANSI/TIA-568-C.2, Category 6, -40C Cold Bend Compliance Per UL1581, Print Includes Descending Footage/Meter Marking. Reference T/8-36 For Sag and Span Aerial.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
2146A 0101000	1,000 FT	32.000 LB	BLACK		CAT6 4PR U/UTP CMR/CMX REEL

Revision Number: 4 Revision Date: 08-08-2017

© 2019 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 herein 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 "AS IS" 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 EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure 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. This 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.

Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 2014/35/EU).