



Product: [121872A](#)

DataTuff® Cat 6, 4 Bonded-Pr #23 Sol BC, PO Ins, PVC Jkt, AIA Armor, PVC Jkt, CMG CM

[Request Sample](#)

Product Description

Industrial Ethernet Cat 6, 4 Bonded-Pair 23AWG (Solid) Bare Copper, PO Insulation, PVC Inner Jacket, Aluminum Interlock Armor, PVC Outer Jacket, CMG CM

Technical Specifications

Product Overview

Suitable Applications:	harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc. exposure to rodent, crush, or cut through force,
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

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

Insulation

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

Bonded-Pair:	Yes
--------------	-----

Inner Jacket

Material	Nom. Diameter	Ripcord
PVC - Polyvinyl Chloride	0.365 x 0.165 in	Yes

Armor

Armor Type & Material	Armor Thickness	Diameter Over Armor
AIA - Aluminum Interlock Armor	0.025 in (0.64 mm)	0.625 in (15.9 mm)

Outer Jacket

Material	Nom. Diameter
PVC - Polyvinyl Chloride	0.725 in (18.4 mm)

Overall Cable Diameter (Nominal):	0.725 in (18.4 mm)
-----------------------------------	--------------------

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
93.8 Ohm/km	49.2 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
510 ns/100m	25 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	1.9 dB/100m	74.3	72.3	72.4	70.4	67.8	64.8	20	100 ± 12 Ohm	100 ± 15 Ohm
4	3.7 dB/100m	65.3	63.3	61.6	59.6	55.7	52.7	23	100 ± 12 Ohm	100 ± 15 Ohm
8	5.3 dB/100m	60.3	58.8	55.5	53.5	49.7	46.7	24.5	100 ± 12 Ohm	100 ± 15 Ohm
10	5.9 dB/100m	59.3	57.3	53.4	51.4	47.8	44.8	25	100 ± 12 Ohm	100 ± 15 Ohm
16	7.5 dB/100m	56.3	54.3	48.7	46.7	43.7	40.7	25	100 ± 12 Ohm	100 ± 8 Ohm
20	8.4 dB/100m	54.8	52.8	46.4	44.4	41.7	38.7	25	100 ± 12 Ohm	100 ± 8 Ohm
25	9.5 dB/100m	53.4	51.4	43.9	41.9	39.8	36.8	24.3	100 ± 15 Ohm	100 ± 8 Ohm
31.25	10.6 dB/100m	51.9	49.9	41.2	39.2	37.9	34.9	23.6	100 ± 15 Ohm	100 ± 8 Ohm
62.5	15.4 dB/100m	47.4	45.4	32	30	31.8	28.8	21.5	100 ± 15 Ohm	100 ± 8 Ohm
100	19.8 dB/100m	44.3	42.3	24.5	22.5	27.8	24.8	21	100 ± 15 Ohm	
155	25.1 dB/100m	41.5	39.5	16.3	14.3	23.9	20.9	21	100 ± 15 Ohm	
200	29.0 dB/100m	39.9	37.9	10.8	10	21.7	18.7	21	100 ± 15 Ohm	
250	32.8 dB/100m	38.3	36.3	5.5	3.5	19.8	16.8	18	100 ± 20 Ohm	
300	35.2 dB/100m	37.2	34.2	0.7	0	18.2	15.2	18	100 ± 20 Ohm	
310	37.1 dB/100m	36.9	34.9	0		17.9	14.9	18	100 ± 20 Ohm	
350	39.8 dB/100m	36.2	34.2			16.9	13.9	17	100 ± 22 Ohm	
400	43.0 dB/100m	35.3	33.3			15.7	12.7	14	100 ± 32 Ohm	
500	49.0 dB/100m	33.8	31.8			13.8	10.8	14	100 ± 32 Ohm	

Voltage

UL Voltage Rating	Voltage Rating
300 V (CM)	300 V (CMG-HL)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
60°C	-40°C To +75°C	-25°C To +75°C	-40°C To +85°C

Bend Radius

Stationary Min.
8.25 in (210 mm)

Max. Pull Tension:	200 lbs (91 kg)
Bulk Cable Weight:	172 lbs/1000ft (256 kg/km)

Standards and Compliance

Environmental Suitability:	Indoor (Not Riser or Plenum), Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	UL 1685 (UL Loading), FT4, FT4, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca; CPR UKCA Class: Eca
NEC / UL Compliance:	Article 800, CM
CEC / C(UL) Compliance:	CMG, HL, CMG-HL
IEEE Compliance:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
European Directive Compliance:	EU Directive 2015/863/EU (RoHS 2 amendment), REACH, EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
UK Regulation Compliance:	UKCA Mark
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Product Notes

Notes:	US Patent #'s 5606151; 5734126; 5821467 **Values above 350 MHz are information only. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581.
--------	---

History

Update and Revision:	Revision Number: 0.491 Revision Date: 02-16-2022
----------------------	--

Variants

Item #	Color	Putup Type	Length	UPC
121872A 0101000	Black	Reel	1,000 ft	612825109037
121872A J221000	Blue, Strong	Reel	1,000 ft	612825109013
121872A 0081000	Gray	Reel	1,000 ft	612825109020

© 2022 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.