



REPRESENTATIVE IMAGE

Product: [7931A](#)

DataTuff® Cat 6, 4 Bonded-Pr #23 Sol BC, FEP Ins, FEP Jkt, CMP CMP-LC

[Request Sample](#)

Product Description

Industrial Ethernet Cat 6, 4 Bonded-Pair 23AWG (Solid) Bare Copper, FEP Insulation, FEP Outer Jacket, CMP CMP-LC

Technical Specifications

Product Overview

Suitable Applications:	extreme temp, exposure to oil and gasoline, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc.
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
FEP - Fluorinated Ethylene Propylene	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair:	Yes
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Outer Jacket

Material	Nom. Diameter	Ripcord
FEP - Fluorinated Ethylene Propylene	0.214 in	No

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. Capacitance Unbalance	Nom. Mutual Capacitance
93.8 Ohm/km	5%	330 pF/ft	15 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]
537 ns/100m	45 ns/100m	72%

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 dB/100m	74.3 dB	72.3 dB	72.3 dB	70.3 dB	67.8 dB	64.8 dB	20 dB	100 ± 15 Ohm	100 ± 15 Ohm
4 MHz	3.8 dB/100m	65.3 dB	63.3 dB	61.5 dB	59.5 dB	55.8 dB	52.7 dB	23 dB	100 ± 15 Ohm	100 ± 15
8 MHz	5.3 dB/100m	60.8 dB	58.8 dB	55.4 dB	53.4 dB	49.7 dB	46.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15
10 MHz	6 dB/100m	59.3 dB	57.3 dB	53.3 dB	51.3 dB	47.8 dB	44.8 dB	25 dB	100 ± 15 Ohm	100 ± 15
16 MHz	7.6 dB/100m	56.2 dB	54.3 dB	48.7 dB	46.7 dB	43.7 dB	40.7 dB	25 dB	100 ± 15 Ohm	100 ± 15
20 MHz	8.5 dB/100m	54.8 dB	52.8 dB	46.3 dB	44.3 dB	41.8 dB	38.7 dB	25 dB	100 ± 15 Ohm	100 ± 15
25 MHz	9.5 dB/100m	53.3 dB	51.3 dB	43.8 dB	41.8 dB	39.8 dB	36.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15
31.25 MHz	10.7 dB/100m	51.9 dB	49.9 dB	41.2 dB	39.2 dB	37.9 dB	34.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 15
62.5 MHz	15.4 dB/100m	47.4 dB	45.4 dB	32 dB	30 dB	31.9 dB	28.8 dB	21.5 dB	100 ± 15 Ohm	100 ± 15

100 MHz	19.8 dB/100m	44.3 dB	42.3 dB	24.5 dB	22.5 dB	27.8 dB	24.8 dB	20.1 dB	100 ± 15 Ohm	
155 MHz	25.2 dB/100m	41.5 dB	39.5 dB	16.3 dB	14.3 dB	23.9 dB	20.9 dB	18.8 dB	100 ± 22 Ohm	
200 MHz	29 dB/100m	39.8 dB	37.8 dB	10.8 dB	8.8 dB	21.8 dB	18.7 dB	18 dB	100 ± 22 Ohm	
250 MHz	32.8 dB/100m	38.3 dB	36.3 dB	5.5 dB	3.5 dB	19.8 dB	16.8 dB	17.3 dB	100 ± 32 Ohm	

Voltage

UL Voltage Rating
300 V (CMP)

Mechanical Characteristics

Temperature

UL Rating	Operating	Installation
150°C	-70°C To +150°C	-55°C To +150°C

Max. Pull Tension:	40 lbs
Bulk Cable Weight:	28 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor (Not Riser or Plenum), Indoor, Sunlight Resistance, Oil Resistance
Flammability / Fire Resistance:	NFPA 262 Plenum Flame Test (UL910),UL723 (NFPA 255), FT6, FT6, IEC 60332-1-2
NEC / UL Compliance:	Article 800, CMP;FHC 25/50
CEC / C(UL) Compliance:	CMP
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
CPR Euroclass:	Eca
European Directive Compliance:	EU CE Mark, 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
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Part Number

Variants

Item #	Color	Putup Type	Length	UPC
7931A 0101000	Black	Reel	1,000 ft	612825191599

Product Notes

Notes:	Operating temperatures subject to length de-rating.
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History

Update and Revision:	Revision Number: 0.396 Revision Date: 09-17-2021
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