Belden



Product: 7931A

DataTuff® Cat 6, 4 Bonded-Pr #23 Sol BC, FEP Ins, FEP Jkt, CMP FHC 25/50

Request Sample

Product Description

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

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/patents.

Construction Details

Conductor

Element	Size	Stranding	Material	No. of Pairs
Pair(s)	23 AWG	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

Outer Jacket

Material	Nom. Diameter	Ripcord
FEP - Fluorinated Ethylene Propylene	0.210 in (5.33 mm)	No

Overall Cable Diameter (Nominal):	0.210 in (5.33 mm)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
93.8 Ohm/km (28.6 Ohm/1000ft)	330 pF/100m

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
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) [Ohm]	Max./Min. Fitted Impedance [Ohm]
1	2.0 dB/100m	74.3	72.3	72.3	70.3	67.8	64.8	20	100 ± 15	100 ± 15
4	3.8 dB/100m	65.3	63.3	61.5	59.5	55.8	52.7	23	100 ± 15	100 ± 15
8	5.3 dB/100m	60.8	58.8	55.4	53.4	49.7	46.7	24.5	100 ± 15	100 ± 15
10	6 dB/100m	59.3	57.3	53.3	51.3	47.8	44.8	25	100 ± 15	100 ± 15
16	7.6 dB/100m	56.2	54.3	48.7	46.7	43.7	40.7	25	100 ± 15	100 ± 15
20	8.5 dB/100m	54.8	52.8	46.3	44.3	41.8	38.7	25	100 ± 15	100 ± 15
25	9.5 dB/100m	53.3	51.3	43.8	41.8	39.8	36.8	24.3	100 ± 15	100 ± 15
31.25	10.7 dB/100m	51.9	49.9	41.2	39.2	37.9	34.9	23.6	100 ± 15	100 ± 15

62.5	15.4 dB/100m	47.4	45.4	32	30	31.9	28.8	21.5	100 ± 15	100 ± 15
100	19.8 dB/100m	44.3	42.3	24.5	22.5	27.8	24.8	20.1	100 ± 15	
155	25.2 dB/100m	41.5	39.5	16.3	14.3	23.9	20.9	18.8	100 ± 22	
200	29.0 dB/100m	39.8	37.8	10.8	8.8	21.8	18.7	18	100 ± 22	
250	32.8 dB/100m	38.3	36.3	5.5	3.5	19.8	16.8	17.3	100 ± 32	

Voltage

UL Voltage Rating
300 V (CMP)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation
200°C	-70°C To +200°C	-55°C To +150°C

Bend Radius

Stationary Min.
0.5 in (13 mm)

Max. Pull Tension:	40 lbs (18 kg)
Bulk Cable Weight:	32 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance, Aerial
Flammability / Reaction to Fire:	NFPA 262 Plenum Flame Test (UL910),UL723 (NFPA 255), FT6, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca
NEC / UL Compliance:	Article 800, CMP
CEC / C(UL) Compliance:	CMP
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
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
UK Regulation Compliance:	UKCA Mark
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Product Notes

Notes:	Operating temperatures subject to length de-rating.

History

Update and Revision:	Revision Number: 0.683 Revision Date: 09-07-2025

Part Numbers

Variants

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

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