



Product: [7933A](#)

DataTuff® Cat 5e, 2 Bonded-Pr #24 Sol BC, PO Ins, OS, PVC Jkt, CMR SUN RES OIL RES

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Product Description

Industrial Ethernet Cat 5e, 2 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, Overall Beldfoil® Shield, PVC Outer Jacket, CMR SUN RES OIL RES

Technical Specifications

Product Overview

Suitable Applications:	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
24	Solid	BC - Bare Copper	2

Insulation

Material	Color Code
Polyolefin	White/Orange Stripe & Orange, White/Green Stripe & Green

Bonded-Pair: Yes

Outer Shield Material

Type	Material	Coverage	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC

Outer Jacket Material

Material	Nom. Diameter	Ripcord
PVC - Polyvinyl Chloride	0.235 in	No

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. Capacitance Unbalance	Nom. Mutual Capacitance	Nom. Velocity of Prop.
26 Ohm/1000ft	3%	90 pF/100m	15 pF/ft	70%

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]
552 ns/100m	45 ns/100m	70%

High Freq

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]	Min. SRL (Structural Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2.1 dB/100m	65.3 dB	62.3 dB	63.2 dB	60 dB	63.8 dB	60.8 dB	23 dB	23 dB	100 ± 20.2 Ohm	105 ± 10 Ohm
4 MHz	4.0 dB/100m	56.3 dB	53.3 dB	56.3 dB	49 dB	51.7 dB	48.7 dB	23 dB	23 dB	100 ± 14.2 Ohm	100 ± 10 Ohm
8 MHz	5.6 dB/100m	51.8 dB	48.8 dB	46.2 dB	43 dB	45.7 dB	42.7 dB	23 dB	24.5 dB	100 ± 11.3 Ohm	100 ± 10 Ohm
10 MHz	6.3 dB/100m	50.3 dB	47.3 dB	43.9 dB	41 dB	43.8 dB	40.8 dB	25 dB	25 dB	100 ± 11.3 Ohm	100 ± 10 Ohm
16 MHz	8.0 dB/100m	47.3 dB	44.3 dB	35.2 dB	36 dB	39.7 dB	36.7 dB	25 dB	25 dB	100 ± 11.3 Ohm	100 ± 10 Ohm

20 MHz	9.0 dB/100m	45.8 dB	42.8 dB	36.5 dB	33.5 dB	37.7 dB	34.7 dB	25 dB	25 dB	100 ± 11.3 Ohm	100 ± 10 Ohm
25 MHz	10.1 dB/100m	44.3 dB	41.3 dB	34.2 dB	30.9 dB	35.8 dB	32.8 dB	25.5 dB	24.3 dB	100 ± 11.3 Ohm	100 ± 10 Ohm
31.25 MHz	11.4 dB/100m	42.9 dB	39.9 dB	31.3 dB	28 dB	33.9 dB	30.9 dB	23.6 dB	23.6 dB	100 ± 13.2 Ohm	100 ± 10 Ohm
62.5 MHz	16.5 dB/100m	38.4 dB	35.4 dB	21.6 dB	19 dB	27.8 dB	24.8 dB	21.5 dB	21.5 dB	100 ± 16.9 Ohm	100 ± 10 Ohm
100 MHz	21.3 dB/100m	35.3 dB	32.3 dB	17.1 dB	11 dB	23.8 dB	20.8 dB	20.1 dB	20.1 dB	100 ± 20.0 Ohm	100 ± 10 Ohm
155 MHz	28.1 dB/100m	32.5 dB	29.5 dB	4.4 dB	1.4 dB	19.9 dB	16.9 dB	15.8 dB	15.8 dB	100 ± 25.0 Ohm	100 ± 15 Ohm
200 MHz	32 dB/100m	30.8 dB	27.8 dB	4 dB	1 dB	17.7 dB	14.7 dB	15 dB	15 dB	100 ± 25.0 Ohm	100 ± 15 Ohm

Voltage

UL Voltage Rating

300 V (CMR)

Mechanical Characteristics

Temperature

UL Rating	Operating	Installation	Storage
60°C	-40°C To +80°C	-25°C To +60°C	-40°C To +80°C

Bend Radius

Stationary Min.

2.560 in

Max. Pull Tension:	55 lbs
Bulk Cable Weight:	40.7 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Fire Resistance:	UL 1685 (FT4 Loading), FT4, FT4, 1202 Vertical Tray, IEC 60332-1-2
NEC / UL Compliance:	800, CMR
CEC / C(UL) Compliance:	CMR
NEMA Compliance:	NEMA WC-63.1
Data Category:	Category 5e
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 5e
CPR Euroclass:	Eca
European Directive Compliance:	EU Directive 2015/863/EU, EU Directive 2011/65/EU (ROHS II), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Other Standard Compliance(s):	Oil Res II, Oil Res 60811-2-1, Weldsplatter Resistant

Part Number

Variants

Item #	Color	Putup Type	Length	UPC
7933A 0101000	Black	Reel	1,000 ft	612825191643
7933A 1NH1000	Teal	Reel	1,000 ft	612825191667

Product Notes

Notes:	Operating Temperature subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. Limits below 4 MHz are for information only.
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History

Update and Revision:	Revision Number: 0.378 Revision Date: 07-28-2020
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