



Product: [7927A](#) 

DataTuff® Cat 6, 4 Bonded-Pr #23 Sol BC, PO Ins, PVC Jkt, Oil- and Sun-Res CMR

 [Request Sample](#)

Product Description

Industrial Ethernet Cat 6, 4 Bonded-Pair 23AWG (Solid) Bare Copper, PO Insulation, PVC Outer Jacket, Oil- and Sun-Res CMR

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
23	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
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Outer Jacket

Separator Material	Material	Nom. Diameter	Ripcord
Center Member (Patented E-Spline®)	PVC - Polyvinyl Chloride	0.304 in	Yes

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. Capacitance Unbalance	Nom. Mutual Capacitance
82 Ohm/km	3%	65.6 pF/ft	15.5 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]
538 ns/100m	38 ns/100m	67%

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]	Min. SRL (Structural Return Loss)	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	1.9 dB/100m	82.3 dB	80.3 dB	80.5 dB	78.5 dB	73.8 dB	70.8 dB	20 dB	27 dB	100 ± 12 Ohm	100 ± 15 Ohm
4 MHz	3.6 dB/100m	73.3 dB	71.3 dB	69.7 dB	67.7 dB	61.8 dB	58.8 dB	23 dB	27 dB	100 ± 12 Ohm	100 ± 10.4
8 MHz	5.1 dB/100m	68.8 dB	66.8 dB	63.7 dB	61.7 dB	55.7 dB	52.7 dB	24.5 dB	27 dB	100 ± 12 Ohm	100 ± 8
10 MHz	5.7 dB/100m	67.3 dB	65.3 dB	61.6 dB	59.6 dB	53.8 dB	50.8 dB	25 dB	27 dB	100 ± 12 Ohm	100 ± 7.3
16 MHz	7.2 dB/100m	64.3 dB	62.3 dB	57 dB	55 dB	49.7 dB	46.7 dB	25 dB	27 dB	100 ± 12 Ohm	100 ± 5.7
20 MHz	8.1 dB/100m	62.8 dB	60.8 dB	54.7 dB	52.7 dB	47.8 dB	44.8 dB	25 dB	27 dB	100 ± 12 Ohm	100 ± 5
25 MHz	9.1 dB/100m	61.3 dB	59.3 dB	52.3 dB	50.3 dB	45.8 dB	42.8 dB	25 dB	27 dB	100 ± 15 Ohm	100 ± 5
31.25 MHz	10.2 dB/100m	59.9 dB	57.9 dB	49.7 dB	47.7 dB	43.9 dB	40.9 dB	25 dB	27 dB	100 ± 15 Ohm	100 ± 5
62.5 MHz	14.7 dB/100m	55.4 dB	53.4 dB	40.7 dB	38.7 dB	37.9 dB	34.9 dB	25 dB	27 dB	100 ± 15 Ohm	100 ± 5

100 MHz	18.9 dB/100m	52.3 dB	50.3 dB	33.4 dB	31.4 dB	33.8 dB	30.8 dB	25 dB	27 dB	100 ± 15 Ohm	
155 MHz	23.9 dB/100m	49.5 dB	47.5 dB	25.5 dB	23.5 dB	30 dB	27 dB	22.8 dB	24.7 dB	100 ± 15 Ohm	
200 MHz	27.5 dB/100m	47.8 dB	45.8 dB	20.3 dB	18.3 dB	27.8 dB	24.8 dB	21.7 dB	23.4 dB	100 ± 15 Ohm	
250 MHz	31.2 dB/100m	46.3 dB	44.3 dB	15.2 dB	13.2 dB	25.8 dB	22.8 dB	20.5 dB	22.2 dB	100 ± 20 Ohm	
300 MHz	34.5 dB/100m	43.2 dB	41.2 dB	10.6 dB	8.6 dB	24.3 dB	21.3 dB	20.2 dB	21.2 dB	100 ± 20 Ohm	
310 MHz	35.2 dB/100m	42.9 dB	40.9 dB	9.8 dB	7.8 dB	24 dB	21 dB	20.1 dB	21.1 dB	100 ± 20 Ohm	
350 MHz	37.7 dB/100m	42.2 dB	40.2 dB	6.5 dB	4.5 dB	22.9 dB	19.9 dB	19.8 dB	20.4 dB	100 ± 22 Ohm	
400 MHz	40.6 dB/100m	41.3 dB	39.3 dB	2.6 dB	0.6 dB	21.8 dB	18.8 dB	19.5 dB	19.7 dB	100 ± 22 Ohm	
450 MHz	43.5 dB/100m	40.5 dB	38.5 dB	2.1 dB	0.1 dB	20.7 dB	17.7 dB	18.9 dB	19.1 dB	100 ± 22 Ohm	
460 MHz	44 dB/100m	40.4 dB	38.4 dB	0 dB	0 dB	20.5 dB	17.5 dB	18.8 dB	19 dB	100 ± 22 Ohm	
500 MHz	46.2 dB/100m	39.8 dB	37.8 dB			19.8 dB	16.8 dB	18.4 dB	18.5 dB	100 ± 22 Ohm	
550 MHz	48.8 dB/100m	39.2 dB	37.2 dB			19 dB	16 dB	18 dB	18 dB	100 ± 22 Ohm	
600 MHz	51.4 dB/100m	38.6 dB	36.6 dB			18.2 dB	15.2 dB	17.6 dB	17.6 dB	100 ± 22 Ohm	

Voltage

UL Voltage Rating
300 V (CMR)

Mechanical Characteristics

Temperature

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

Max. Pull Tension:	45 lbs
Bulk Cable Weight:	33.5 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Riser, Indoor, Sunlight Resistance, Oil Resistance
Flammability / Fire Resistance:	UL1666 Riser, FT4, FT4, IEC 60332-1-2
NEC / UL Compliance:	Article 800, CMR
CEC / C(UL) Compliance:	CMR
NEMA Compliance:	NEMA WC-63.1
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
CPR Euroclass:	Eca
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
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Part Number

Variants

Item #	Color	Putup Type	Length	UPC
7927A 0101000	Black	Reel	1,000 ft	612825191445
7927A 0102000	Black	Reel	2,000 ft	612825191452
7927A 0105000	Black	Reel	5,000 ft	612825191469

Product Notes

Notes:	Third party verified to TIA/EIA-568-B.2, Category 6. Operating temperature subject to length de-rating. Cable passes -40C Cold Bend per UL 1581.
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History

Update and Revision:	Revision Number: 0.399 Revision Date: 09-17-2021
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