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/patents.

Construction Details

Conductor

Element	Size	Stranding	Material	No. of Elements
Pair(s)	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

Outer Jacket

Separator	Material	Nom. Diameter	Ripcord
Center Member (Patented E-Spline®)	PVC - Polyvinyl Chloride	0.304 in (7.72 mm)	Yes

Overall Cable Diameter (Nominal):	0.304 in (7.72 mm)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
82 Ohm/km (25 Ohm/1000ft)	65.6 pF/ft

Delay

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

62.5	14.7 dB/100m	55.4	53.4	40.7	38.7	37.9	34.9	25	27	100 ± 15	100 ± 5
100	18.9 dB/100m	52.3	50.3	33.4	31.4	33.8	30.8	25	27	100 ± 15	
155	23.9 dB/100m	49.5	47.5	25.5	23.5	30	27	22.8	24.7	100 ± 15	
200	27.5 dB/100m	47.8	45.8	20.3	18.3	27.8	24.8	21.7	23.4	100 ± 15	
250	31.2 dB/100m	46.3	44.3	15.2	13.2	25.8	22.8	20.5	22.2	100 ± 20	
300	34.5 dB/100m	43.2	41.2	10.6	8.6	24.3	21.3	20.2	21.2	100 ± 20	
310	35.2 dB/100m	42.9	40.9	9.8	7.8	24	21	20.1	21.1	100 ± 20	
350	37.7 dB/100m	42.2	40.2	6.5	4.5	22.9	19.9	19.8	20.4	100 ± 22	
400	40.6 dB/100m	41.3	39.3	2.6	0.6	21.8	18.8	19.5	19.7	100 ± 22	
450	43.5 dB/100m	40.5	38.5	2.1	0.1	20.7	17.7	18.9	19.1	100 ± 22	
460	44.0 dB/100m	40.4	38.4	0	0	20.5	17.5	18.8	19	100 ± 22	
500	46.2 dB/100m	39.8	37.8			19.8	16.8	18.4	18.5	100 ± 22	
550	48.8 dB/100m	39.2	37.2			19	16	18	18	100 ± 22	
600	51.4 dB/100m	38.6	36.6			18.2	15.2	17.6	17.6	100 ± 22	

Voltage

UL Voltage Rating
300 V (CMR)

Mechanical Characteristics

Temperature

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

Bend Radius

Stationary Min.
0.25 in (6.4 mm)

Max. Pull Tension:	45 lbs (20 kg)
Bulk Cable Weight:	38 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Riser, Indoor, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	UL1666 Riser, FT4, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca
NEC / UL Compliance:	Article 800, CMR
CEC / C(UL) Compliance:	CMR
NEMA Compliance:	ANSI/NEMA WC-66
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61156-5
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:	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.

History

Update and Revision:	Revision Number: 0.427 Revision Date: 04-29-2024

Part Numbers

Variants

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

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