



Product: [7953A](#)

DataTuff® Cat 6, 4 Bonded-Pair #23 Sol BC, PO Ins, OS, PVC Jkt, PVC Jkt, MSHA, CMX-Outdoor 600V AWM 21047

[Request Sample](#)

Product Description

Industrial Ethernet Cat 6, 4 Bonded-Pair 23AWG (Solid) Bare Copper, PO Insulation, Overall Beldfoil® Shield, PVC Inner Jacket, PVC Outer Jacket, MSHA, CMX-Outdoor 600V AWM 21047

Technical Specifications

Product Overview

Suitable Applications:	outdoor, in cabinet with high volt devices, such as motor control center, mining, noisy environment, 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

Size	Stranding	Material	Number of Pairs
23 AWG	Solid	BC - Bare Copper	4

Insulation

Material	Nom. Insulation Diameter	Color Code
PO - Polyolefin	0.043 in (1.1 mm)	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair:	Yes
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Inner Jacket

Material	Nom. Diameter	Ripcord
PVC - Polyvinyl Chloride	0.254 in (6.45 mm)	Yes

Outer Shield

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

Outer Jacket

Separator	Material	Nom. Diameter	Ripcord
Center Member (Patented X-Spline®)	PVC - Polyvinyl Chloride	0.335 in (8.51 mm)	No

Overall Cable Diameter (Nominal):	0.335 in (8.51 mm)
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Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
82 Ohm/km	330 pF/ft

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)	Max./Min. Fitted Impedance
1	2.0 dB/100m	74.3	72.3	72.3	70.3	67.8	64.8	21	100 ± 15 Ohm	100 ± 15 Ohm
4	3.8 dB/100m	65.3	63.3	61.5	59.5	55.8	52.7	24	100 ± 15 Ohm	100 ± 15 Ohm
8	5.3 dB/100m	60.8	58.8	55.4	53.4	49.7	46.7	25.5	100 ± 15 Ohm	100 ± 15 Ohm
10	6 dB/100m	59.3	57.3	53.3	51.3	47.8	44.8	26	100 ± 15 Ohm	100 ± 15 Ohm
16	7.6 dB/100m	56.2	54.3	48.7	46.7	43.7	40.7	26	100 ± 15 Ohm	100 ± 15 Ohm
20	8.5 dB/100m	54.8	52.8	46.3	44.3	41.8	38.8	26	100 ± 15 Ohm	100 ± 15 Ohm
25	9.5 dB/100m	53.3	51.3	43.8	41.8	39.8	36.8	25.3	100 ± 15 Ohm	100 ± 15 Ohm
31.25	10.7 dB/100m	51.9	49.9	41.2	39.2	37.9	34.9	24.6	100 ± 15 Ohm	100 ± 15 Ohm
62.5	15.4 dB/100m	47.4	45.4	32	30	31.9	28.9	22.5	100 ± 15 Ohm	100 ± 15 Ohm
100	19.8 dB/100m	44.3	42.3	24.5	22.5	27.8	24.8	21.1	100 ± 15 Ohm	
155	25.2 dB/100m	41.5	39.5	16.3	14.3	23.9	20.9	19.8	100 ± 22 Ohm	
200	29.0 dB/100m	39.8	37.8	10.8	8.8	21.8	18.8	19	100 ± 22 Ohm	
250	32.8 dB/100m	38.3	36.3	5.5	3.5	19.8	16.8	18.3	100 ± 32 Ohm	

Voltage

UL Voltage Rating
300 V (CMR, CMX-Outdoor), 600 V (AWM 21047)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
75°C	-40°C To +75°C	-25°C To +75°C	-40°C To +80°C

Bend Radius

Stationary Min.
4 in (100 mm)
Max. Pull Tension: 40 lbs (18 kg)
Bulk Cable Weight: 44 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	UL1666 Riser, FT4, FT4, IEEE 1202 Vertical Tray Flame Test, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca
NEC / UL Compliance:	Article 800, CMR;CMX-Outdoor
AWM Compliance:	21047
CEC / C(UL) Compliance:	CMX-Outdoor;CMG
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
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)

Product Notes

Notes:	Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. Not intended for 600 V electrical power delivery. T568A Plug Compatible Part Number: R301601. T568B Plug Compatible Part Number: R301602 T568B Plug Compatible.
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History

Update and Revision:	Revision Number: 0.449 Revision Date: 12-15-2021
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Variants

Item #	Color	Putup Type	Length	UPC
7953A 0101000	Black	Reel	1,000 ft	612825191964
7953A 0105000	Black	Reel	5,000 ft	612825191971
7953A 0061000	Blue	Reel	1,000 ft	612825191940
7953A 0081000	Gray	Reel	1,000 ft	612825191957
7953A 0021000	Red	Reel	1,000 ft	612825191933
7953A 1NH1000	Teal	Reel	1,000 ft	612825191988

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