




**Product:** [7953A](#) 

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

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## 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

Print Legend:	7953A BELDEN VERIFIED (UL) CAT 6 4PR23 E108998-M CMR-CMX OUTDOOR OR C(UL) CMG-----ISO/IEC11801 CAT 6 --- 300V PATENTED OIL/SUN RES FT4 IEEE 1202 123456 FT
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.

### Physical Characteristics (Overall)

#### Conductor

Element	AWG	Stranding	Material	No. of Pairs
	23	Solid	BC - Bare Copper	4
No Ground				

Conductor Count:	8
Total Number of Pairs:	4

#### Insulation

Material	Nominal Diameter	Nominal Wall Thickness
Polyolefin	0.043 in	0.01 in

Bonded-Pair:	Yes
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#### Color Chart

Number	Color
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

#### Inner Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness	Ripcord
PVC - Polyvinyl Chloride	0.258 in	0.02 in	Yes

#### Outer Shield Material

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Tape	Alum / Poly	Beldfoil®	100 %	TC - Tinned Copper	24	7x32

#### Outer Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness	Ripcord
PVC - Polyvinyl Chloride	0.335 in	0.03 in	No

### Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
8.2 Ohm/1000ft	3 %

Capacitance

Max. Capacitance Unbalance	Nom.Mutual Capacitance
330 pF/ft	15 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
537 ns/100m	45 ns/100m	72 %

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]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2 dB/100m	74.3 dB	72.3 dB	72.3 dB	70.3 dB	67.8 dB	64.8 dB	21 dB	100 ± 15 Ohm	100 ± 15 Ohm
4 MHz	3.8 dB/100m	65.3 dB	63.3 dB	61.5 dB	59.5 dB	55.8 dB	52.7 dB	24 dB	100 ± 15 Ohm	100 ± 15
8 MHz	5.3 dB/100m	60.8 dB	58.8 dB	55.4 dB	53.4 dB	49.7 dB	46.7 dB	25.5 dB	100 ± 15 Ohm	100 ± 15
10 MHz	6 dB/100m	59.3 dB	57.3 dB	53.3 dB	51.3 dB	47.8 dB	44.8 dB	26 dB	100 ± 15 Ohm	100 ± 15
16 MHz	7.6 dB/100m	56.2 dB	54.3 dB	48.7 dB	46.7 dB	43.7 dB	40.7 dB	26 dB	100 ± 15 Ohm	100 ± 15
20 MHz	8.5 dB/100m	54.8 dB	52.8 dB	46.3 dB	44.3 dB	41.8 dB	38.8 dB	26 dB	100 ± 15 Ohm	100 ± 15
25 MHz	9.5 dB/100m	53.3 dB	51.3 dB	43.8 dB	41.8 dB	39.8 dB	36.8 dB	25.3 dB	100 ± 15 Ohm	100 ± 15
31.25 MHz	10.7 dB/100m	51.9 dB	49.9 dB	41.2 dB	39.2 dB	37.9 dB	34.9 dB	24.6 dB	100 ± 15 Ohm	100 ± 15
62.5 MHz	15.4 dB/100m	47.4 dB	45.4 dB	32 dB	30 dB	31.9 dB	28.9 dB	22.5 dB	100 ± 15 Ohm	100 ± 15
100 MHz	19.8 dB/100m	44.3 dB	42.3 dB	24.5 dB	22.5 dB	27.8 dB	24.8 dB	21.1 dB	100 ± 15 Ohm	
155 MHz	25.2 dB/100m	41.5 dB	39.5 dB	16.3 dB	14.3 dB	23.9 dB	20.9 dB	19.8 dB	100 ± 22 Ohm	
200 MHz	29 dB/100m	39.8 dB	37.8 dB	10.8 dB	8.8 dB	21.8 dB	18.8 dB	19 dB	100 ± 22 Ohm	
250 MHz	32.8 dB/100m	38.3 dB	36.3 dB	5.5 dB	3.5 dB	19.8 dB	16.8 dB	18.3 dB	100 ± 32 Ohm	

Voltage

UL Description	UL Voltage Rating
	300 V RMS
Appliance Wiring Material	600 V RMS

Temperature Range

Installation Temp Range:	-25°C To +75°C
UL Temp Rating:	75°C
Storage Temp Range:	-40°C To +80°C
Operating Temp Range:	-40°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	44 lbs/1000ft
Max Recommended Pulling Tension:	40 lbs
Min Bend Radius/Minor Axis:	4 in

Standards

NEC/(UL) Specification:	CMR, CMX-Outdoor
CEC/C(UL) Specification:	CMG
UL AWM Style:	UL Style 21047
ISO/IEC Compliance:	ISO/IEC 11801 ed 2.1 (2008) Class E
CPR Euroclass:	Eca
Data Category:	Category 6
Telecommunications Standards:	Category 6 - TIA 568.C.2
Other Specification:	NEMA WC-63.1 Category 6,

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes

EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-04
MII Order #39 (China RoHS):	Yes

#### Suitability

Suitability - Aerial:	Yes
Suitability - Burial:	No
Suitability - Indoor:	Yes
Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

#### Flammability, LSOH, Toxicity Testing

C(UL) Flammability:	FT4
UL Flammability:	UL1666 Riser
CSA Flammability:	FT4
ISO/IEC Flammability:	IEC 60332-1-2
IEEE Flammability:	1202
UL voltage rating:	300 V RMS

#### Plenum/Non-Plenum

Plenum (Y/N):	No
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#### Part Number

##### 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

Footnote:	C - CRATE REEL PUT-UP.
Patent:	<a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a>

#### Product Notes

Notes:	US Patent #'s 5, 606, 151; 5, 734, 126. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. Not intended for 600 V eletrical power delivery. T568A Plug Compatible Part Number: R301603 T568B Plug Compatible Part Number: R301604 T568A Plug Compatible Part Number: R301603 T568B Plug Compatible Part Number: R301604
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#### History

Update and Revision:	Revision Number: 0.346 Revision Date: 04-28-2020
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