

Part Number: 7953A

DataTuff® Cat 6, (4 pr) 23 AWG Solid BC, PP/PVC/PVC, EtherNet/IP, Foil Shld, CMR, CMX, 600 V AWM



Product Description

Four Cat 6 23 AWG Bonded-Pairs solid bare copper conductors, polypropylene insulation, FRPE spline center member, inner PVC jacket, overall Beldfoil® Shield (100% coverage), industrial grade oil- and UV-resistant PVC outer jacket.

Technical Specifications

Product Overview

Suitable Applications:	Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155 ATM, 622 ATM, 250MHz Category 6
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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
PP - Polypropylene	0.043 in	0.01 in

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 Shield Material

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
Tape	Aluminum Foil-Polyester Tape	Beldfoil®	100 %	TC - Tinned Copper	24

Inner Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness	Ripcord
Industrial Grade PVC - Polyvinyl Chloride	0.335 in	0.02 in	Yes

Outer Shield Material

Type	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Tape	Aluminum Foil-Polyester Tape	Beldfoil®	100 %	TC - Tinned Copper	24	7x32 mm

Outer Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness	Ripcord
Industrial Grade PVC - Polyvinyl Chloride	0.695 in	0.03 in	No

Construction and Dimensions

Stranding

Lay Length

N mm

Cabling

Filler

X-Spline Center Member

Armor

Type of Armor Material

Interlocked

Aluminum

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)
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
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
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
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
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
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
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
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
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 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

300V 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
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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
CA Prop 65 (CJ for Wire & Cable):	Yes
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
IEEE Flammability:	1202

Part Number

Plenum (Y/N):	No
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Variants

Item #	Color
7953A 0101000	BLACK
7953A 0105000	BLACK
7953A 0061000	BLUE
7953A 0081000	GRAY
7953A 0021000	RED
7953A 1NH1000	TEAL

Patent:	http://www.belden.com/p
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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 electrical power delivery.

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