



Product: [BE43887](#)

DataTuff® 7, 4PR #23 Sol BC, PO ins, S/FTP, LSNH Jkt, ECE R118

Product Description

DataTuff® 7, 4 Pair AWG 23 Bare Copper - Solid, Polyolefin (PO, PE, PP) insulation, S/FTP - Overall Braid / Individual Foil shielding, LSZH / FRNC jacket , ECE R118

Technical Specifications

Product Overview

Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/resources/patents .
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Physical Characteristics (Overall)

Conductor

Element	AWG	Stranding	Material	No. of Pairs
Individual shielded pair	23	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Element	Type	Material	Nominal Diameter
Individual shielded pair	Dielectric	PO - Polyolefin (Foam)	1.45 mm

Bonded-Pair:	No
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Color Chart

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

Inner Shield Material

Element	Type	Material	Coverage [%]
Individual shielded pair	Tape	Bi-Laminate (Alum+Poly)	100%

Table Notes:	Aluminum facing outside
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Outer Shield Material

Type	Material	Min. Coverage [%]
Braid	Tinned Copper (TC)	30%

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance	Ripcord
LSZH - Low Smoke Zero Halogen (Flame Retardant)	7.0 mm	0.3 mm	Yes

Construction and Dimensions

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %

Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	9 MPa

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max DCR Unbalanced Between Pairs [%]	Max. DCR Unbalanced Within Pair [%]
95 Ohm/km	4 %	2 %

Capacitance

Max. Capacitance Unbalance	Max. Mutual Capacitance
1,600 pF/m	56 pF/m

Impedance

Nominal Characteristic Impedance
100 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss	Nom. NEXT [dB]	Nom. PSNEXT [dB]	Nom. ACR [dB]	Nom. PSACR [dB]	Nom. ACRF (ELFEXT) [dB]	Nom. PSACRF (PSELFEXT) [dB]
1 MHz	1.8 dB/100m	103 dB	100 dB	101 dB	98 dB	95 dB	92 dB
4 MHz	3.4 dB/100m	100 dB	97 dB	97 dB	94 dB	94 dB	91 dB
10 MHz	5.5 dB/100m	98 dB	95 dB	92 dB	89 dB	93 dB	92 dB
16 MHz	6.9 dB/100m	97 dB	94 dB	90 dB	87 dB	91 dB	88 dB
31.2 MHz	9.7 dB/100m	95 dB	92 dB	85 dB	82 dB	90 dB	87 dB
62.5 MHz	13.9 dB/100m	94 dB	91 dB	80 dB	77 dB	87 dB	84 dB
100 MHz	17.7 dB/100m	93 dB	90 dB	75 dB	72 dB	85 dB	82 dB
125 MHz	19.9 dB/100m	92 dB	89 dB	72 dB	69 dB	83 dB	80 dB
200 MHz	25.6 dB/100m	91 dB	88 dB	65 dB	64 dB	77 dB	74 dB
250 MHz	28.8 dB/100m	90 dB	87 dB	61 dB	58 dB	74 dB	71 dB
300 MHz	31.8 dB/100m	90 dB	87 dB	58 dB	55 dB	74 dB	71 dB
600 MHz	46.6 dB/100m	89 dB	86 dB	42 dB	39 dB	60 dB	57 dB
1000 MHz	62.2 dB/100m	88 dB	85 dB	26 dB	23 dB	50 dB	47 dB

Delay

Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
25 ns/100m	78%

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]	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2 dB/100m	78 dB	75 dB	76 dB	73 dB	78 dB	75 dB	20 dB	40 dB	35 dB
4 MHz	3.7 dB/100m	78 dB	75 dB	74.3 dB	71.3 dB	78 dB	75 dB	23 dB	34 dB	23 dB
10 MHz	5.9 dB/100m	78 dB	75 dB	72.1 dB	69.1 dB	75.3 dB	72.3 dB	25 dB	30 dB	15 dB
16 MHz	7.4 dB/100m	78 dB	75 dB	70.6 dB	67.6 dB	71.2 dB	68.2 dB	25 dB	28 dB	10.9 dB
31.2 MHz	10.4 dB/100m	78 dB	75 dB	67.6 dB	64.6 dB	65.4 dB	62.4 dB	23.6 dB	25.1 dB	5.1 dB
62.5 MHz	14.9 dB/100m	75.5 dB	72.5 dB	60.6 dB	57.6 dB	59.4 dB	56.4 dB	21.5 dB	22 dB	
100 MHz	19 dB/100m	72.4 dB	69.4 dB	53.4 dB	50.4 dB	55.3 dB	52.3 dB	20.1 dB	20 dB	
125 MHz	21.4 dB/100m	70.9 dB	67.9 dB	49.6 dB	46.6 dB	53.4 dB	50.4 dB	19.4 dB	19 dB	
200 MHz	27.5 dB/100m	67.9 dB	64.9 dB	40.4 dB	37.4 dB	49.3 dB	46.3 dB	18 dB	17 dB	
250 MHz	31 dB/100m	66.4 dB	63.4 dB	35.5 dB	32.5 dB	47.3 dB	44.3 dB	17.3 dB	16 dB	
300 MHz	34.2 dB/100m	65.2 dB	62.2 dB	31.1 dB	28.1 dB	45.8 dB	42.8 dB	17.3 dB		
600 MHz	50.1 dB/100m	60.7 dB	57.7 dB	10.6 dB	7.6 dB	39.7 dB	36.7 dB	17.3 dB		
1000 MHz	66.9 dB/100m	57.4 dB	54.4 dB			35.3 dB	32.3 dB	15.1 dB		

Table Notes: Limits below 4 MHz are for information only.; Values at 1000 MHz are for information only. Reference standard: IEC 61156-5

General Electrical Parameters Notes: Reference standard: ISO/IEC 61156-5

Coupling Attenuation Class: Type Ib

Segregation class according EN50174-2: c

Transfer Impedance

Frequency [MHz]	Description	Transfer Impedance
1 Mhz	Grade 2	Max. 50 mOhm/m
10 Mhz		Max. 100 mOhm/m
30 Mhz		Max. 200 mOhm/m

100 Mhz	Max. 1000 mOhm/m
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Current

Max. Recommended Current [A]
1.5 Amps per Conductor

Voltage

Voltage Rating [V]
72 V

Temperature Range

Installation Temp Range:	0°C To +50°C
Operating Temp Range:	-30°C To +60°C

Mechanical Characteristics

Bulk Cable Weight:	52 kg/km
Max. Pull Tension:	85 N
Min Bend Radius During Installation:	58 mm
Min Bend Radius During Operation:	29 mm

Standards

IEC Compliance:	ISO/IEC 11801-1
CPR Euroclass:	Eca
CENELEC Compliance:	EN 50173-1
Data Category:	Category 7

Applicable Environmental and Other Programs

Environmental Space:	Indoor
EU RoHS Compliance Date (yyyy-mm-dd):	2017-03-31

Flammability, LSOH, Toxicity Testing

IEC Flammability:	IEC 60332-1-2
Other Flammability:	ECE R118
Burning Load:	500 kJ/m
IEC 60754-1 (EN50267-1)- Halogen Amount:	Zero
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Max. Conductivity:	2.5 µS/mm
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Min. pH:	4.3
IEC 61034-2 (EN 61034-2) (VDE 0482-1034) - Smoke Density Min. Transmittance:	60%

Part Number

Variants

Item #	Color	Putup Type	Length	EAN
BE43887.00500	Gray	Reel	500 m	8719605162069

History

Update and Revision:	Revision Number: 0.101 Revision Date: 12-18-2020
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