



**Product:** [50106ASFLB](#)

DataTuff® Cat 6A, 4P23AWG, S/FTP, Solid Bare Cu, FMPE Ins, SWB, LSZH Jkt, UV resistant

Product Description

DataTuff® CAT 6A 4PR x 23AWG S/FTP, Solid Bare Copper Conductor, FMPE Insulation, AL-Mylar Individual Shield, Overall Tinned Copper Braid Shield, LSZH Inner Jacket, Steel Wire Braid Armoring, LSZH Outer Jacket, Indoor/Outdoor

Technical Specifications

Product Overview

Suitable Applications:	Industrial Ethernet cables are used for interconnecting Industrial Ethernet Switches, programmable logic controller and transmitting industrial protocol data signals. These cables are suitable for transmitting 10GBase-T (10 Gigabit Ethernet), 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, 500MHz Category 6A. These are highly durable & ruggedized cables for both indoor and outdoor use meeting IEC 60332-3-22 and IEC 60754-1 & 2
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Construction Details

Conductor

Element	Size	Stranding	Material	No. of Pairs
Conductor(s)	23 AWG	Solid	BC - Bare Copper	4

Insulation

Element	Material	Nom. Insulation Diameter	Color Code
Conductor(s)	PO - Polyolefin (Foam)	1.4 mm (0.055 in)	Blue & White, Orange & White, Green & White, Brown & White

Inner Shield

Shield Type	Material	Coverage
Tape	Bi-Laminate (Alum+Poly)	100%

Inner Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (SHF1)	8 mm (0.31 in)

Outer Shield

Shield Type	Material	Coverage
Braid	Tinned Copper (TC)	65%

Armor

Armor Type & Material	Armor Material Diameter
SWB - Steel Wire Braid Armor	0.2 mm (0.0079 in)

Outer Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (SHF1)	10.6 mm (0.417 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
95 Ohm/km (29 Ohm/1000ft)	160 pF/100m

Table Notes:	Mutual capacitance : 56 nF/km
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Delay

Max. Delay Skew	Nom. Velocity of Prop.
45 ns/100m	78%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Min. PSANEXT [dB]	Min. PSAACRF [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
1	2.1 dB/100m	75.3	72.3	68	65	20	67	67	40	35
4	3.8 dB/100m	66.3	63.3	56	53	23	67	66.2	34	23
10	5.9 dB/100m	60.3	57.3	48	45	25	67	58.2	30	15
16	7.5 dB/100m	57.2	54.2	43.9	40.9	25	67	54.1	28	10.9
31.2	10.5 dB/100m	52.9	49.9	38.1	35.1	23.6	67	48.3	25.1	5.1
62.5	15 dB/100m	48.4	45.4	32.1	29.1	21.5	65.6	42.3	22	
100	19.1 dB/100m	45.3	42.3	28	25	20.1	62.5	38.2	20	
125	21.5 dB/100m	43.8	40.8	26.1	23.1	19.4	61	36.3	19	
200	27.6 dB/100m	40.8	37.8	22	19	18	58	32.2	17	
250	31.1 dB/100m	39.3	36.3	20	17	17.3	56.5	30.2	16	
300	34.3 dB/100m	38.1	35.1	18.5	15.5	17.3	55.3	28.7		
500	45.3 dB/100m	34.8	31.8	14	11	17.3	52	24.2		

Table Notes:	Limits below 4 MHz are for information only. Reference standard: ISO/IEC 61156-5 ed. 2.0 (2012)
Transfer Impedance Class:	Grade 2

Voltage

Voltage Rating
72 V DC

Mechanical Characteristics

Temperature

Operating	Installation
-20°C to +70°C	-5°C to +70°C

Bend Radius

Installation Min.
106 mm (4.17 in)

Bulk Cable Weight:	160 kg/km (110 lbs/1000ft)
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Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, UV Resistance
Flammability / Reaction to Fire:	IEC 60332-3-22, IEC 60332-1-2
Data Category:	Category 6A
ISO/IEC Compliance:	ISO/IEC 11801IEC 61156-5
CENELEC Compliance:	EN 50173-1

History

Update and Revision:	Revision Number: 0.22 Revision Date: 08-12-2024
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