



Product: [IEA004](#)

DataTuff® 6A, High Flex, 4 Pr #24 Str TC, PO Ins, OS, TPE Jkt, CMR, CMX

Product Description

DataTuff® Industrial Ethernet Cat 6A, 4 Pair 24AWG (Stranded 7X32) Tinned Copper, PO Insulation, X-Spline, Beldfoil Shield, TPE Outer Jacket, UL CMR, CMX Outdoor, OIL RES II, SUN RES, AWM 600V

Technical Specifications

Product Overview

Suitable Applications:	High Flex, Automation, Robotics, exposure to oil and gasoline, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc.
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
24	7x32	TC - Tinned Copper	4

Insulation

Material
PE - Polyethylene

Bonded-Pair:	No
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Color Chart

Color
White/Blue & Blue
White/Orange & Orange
White/Green & Green
White/Brown & Brown

Outer Shield

Type	Material	Coverage [%]
Tape	Bi-Laminate (Alum+Poly)	100%
Braid		75%

Outer Jacket

Material	Nominal Diameter	Nominal Wall Thickness
TPE - Thermoplastic Elastomer	.322 in.	.033 in. mm

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
14 Ohms/100m @ 20C	0.04 %

Capacitance

Nom.Mutual Capacitance
17 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
540 ns/100m	45 ns/100m	67%

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]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.5 dB/100m	74.3 dB dB	72.3 dB dB	67.8 dB	64.8 dB	20.0 dB	100 +/- 15 Ohms	100 +/- 10 Ohms	40.0 dB	35.0 dB
4 MHz	4.6 dB/100m	65.3 dB dB	63.3 dB dB	55.8 dB	52.8 dB	23.0 dB	100 +/- 15 Ohms	100 +/- 15 Ohms	40.0 dB	23.0 dB
8 MHz	6.4 dB/100m	60.8 dB dB	58.8 dB dB	49.7 dB	46.7 dB	24.5 dB	100 +/- 15 Ohms	100 +/- 15 Ohms	40.0 dB	16.9 dB
10 MHz	7.1 dB/100m	59.3 dB dB	57.3 dB dB	47.8 dB	44.8 dB	25.0 dB	100 +/- 15 Ohms	100 +/- 15 Ohms	40.0 dB	15.0 dB
16 MHz	9.0 dB/100m	56.2 dB dB	54.2 dB dB	43.7 dB	40.7 dB	25.0 dB	100 +/- 15 Ohms	100 +/- 15 Ohms	38.0 dB	10.9 dB
20 MHz	10.1 dB/100m	54.8 dB	52.8 dB	41.8 dB	38.8 dB	25.0 dB	100 +/- 15 Ohms	100 +/- 15 Ohms	37.0 dB	9.0 dB
25 MHz	11.3 dB/100m	53.3 dB	51.3 dB	39.8 dB	36.8 dB	24.2 dB	100 +/- 15 Ohms	100 +/- 15 Ohms	36.0 dB	7.0 dB
31.25 MHz	12.6 dB/100m	51.9 dB	49.9 dB	7.9 dB	34.9 dB	23.3 dB	100 +/- 15 Ohm	100+/- 10 Ohm	35.1 dB	5.5 dB
62.5 MHz	18.0 dB/100m	47.4 dB	45.4 dB	31.9 dB	28.9 dB	20.7 dB	100 +/- 15 Ohm	100 +/- 10 Ohm	32 dB	
100 MHz	23.0 dB/100m	44.3 dB	42.3 dB	27.8 dB	24.8 dB	19.0 dB	100 +/- 15 Ohm	100 +/- 10 Ohm	30.0 dB	
200 MHz	33.1 dB/100	39.8 dB	37.8 dB	21.8 dB	18.8 dB	19.0 dB	100 +/- 22 Ohms	100 +/- 10 Ohms	27.0 dB	
250 MHz	37.3 dB/100m	38.3 dB	36.3 dB	19.8 dB	16.8 dB	15.6 dB	100 +/- 32 Ohms	100 +/- 10 Ohms	26.0 dB	
300 MHz	41.1 dB/100m	37.1 dB	35.1 dB	18.3 dB	15.3 dB	14.9 dB	100 +/- 32 Ohms	100 +/- 10 Ohms	25.2 dB	
400 MHz	48.1 dB/100m	35.3 dB	33.3 dB	15.8 dB	12.8 dB	13.8 dB	100 +/- 32 Ohm	100 +/- 10 Ohm	24.0 dB	
500 MHz	54.3 dB/100m	33.8 dB	31.8 dB	13.8 dB	10.8 dB	13.0 dB	100 +/- 32 Ohm	100 +/- 10 Ohm	23.0 dB	

Voltage

UL Description	UL Voltage Rating
UL 2463	600 V

Temperature Range

Installation Temperature Range:	-20°C To +80°C
UL Temp Rating:	80°C
Storage Temperature Range:	-40°C To +80°C
Operating Temperature Range:	-40°C To +80°C

Mechanical Characteristics

Oil Resistance:	Oil Res II
UV Resistance:	Yes
Bulk Cable Weight:	48 lbs/1000 ft
Max. Pull Tension:	32 lbs
Min. Bend Radius During Installation:	2.58"

Standards

UL AWM Style Compliance:	AWM 2463
Data Category:	Category 6A

Applicable Environmental and Other Programs

EU Directive 2011/65/EU (RoHS 2):	Yes
EU CE Mark:	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Aerial:	No
Suitability - Burial:	No
Suitability - Hazardous Locations:	No
Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

UL Flammability:	UL 1666 - Riser
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History

Update and Revision:	Revision Number: 0.25 Revision Date: 07-19-2023
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