



Product: [IEA004](#)

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

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Product Description

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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Construction Details

Element	Size	Stranding	Material	No. of Pairs
Pair(s)	24 AWG	7x32	TC - Tinned Copper	4

Element	Material	Nom. Insulation Diameter	Color Code
Pair(s)	PE - Polyethylene	0.045 in (1.1 mm)	Blue & White/Blue, Orange & White/Orange, Green & White/Green, Brown & White/Brown

Shield Type	Material	Coverage
Tape	Bi-Laminate (Alum+Poly)	100%
Braid	Tinned Copper (TC)	75%

Material	Nom. Diameter
TPE - Thermoplastic Elastomer	0.322 in (8.18 mm)

Overall Cable Diameter (Nominal):	0.322 in (8.18 mm)
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Electrical Characteristics

Max. Conductor DCR
28.8 Ohm/1000ft

Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
540 ns/100m	45 ns/100m	67%

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) [Ohm]	Max./Min. Fitted Impedance [Ohm]	Min. TCL [dB]	Min. ELTCTL [dB]	Max. Surface Transfer Impedance [mOhm/m]	Min. Coupling Attenuation [dB]
1	2.5 dB/100m	74.3 dB	72.3 dB	67.8	64.8	20.0	100 ± 15	100 +/- 10	40.0	35.0	50.0	
4	4.6 dB/100m	65.3	63.3	55.8	52.8	23.0	100 ± 15	100 ± 15	40.0	23.0	75.9	
8	6.4 dB/100m	60.8	58.8	49.7	46.7	24.5	100 ± 15	100 ± 15	40.0	16.9	93.5	
10	7.1 dB/100m	59.3	57.3	47.8	44.8	25.0	100 ± 15	100 ± 15	40.0	15.0	100.0	

16	9.0 dB/100m	56.2	54.2	43.7	40.7	25.0	100 ± 15	100 ± 15	38.0	10.9	135.3	
20	10.1 dB/100m	54.8	52.8	41.8	38.8	25.0	100 ± 15	100 ± 15	37.0	9.0	155.8	
25	11.3 dB/100m	53.3	51.3	39.8	36.8	24.2	100 ± 15	100 ± 15	36.0	7.0	179.5	
31.25	12.6 dB/100m	51.9	49.9	7.9	34.9	23.3	100 ± 15	100 ± 10	35.1	5.5		85
62.5	18.0 dB/100m	47.4	45.4	31.9	28.9	20.7	100 ± 15	100 ± 10	32			85
100	23.0 dB/100m	44.3	42.3	27.8	24.8	19.0	100 ± 15	100 ± 10	30.0			85
200	33.1 dB/100	39.8	37.8	21.8	18.8	19.0	100 ± 15	100 ± 10	27.0			78.9
250	37.3 dB/100m	38.3	36.3	19.8	16.8	15.6	100 ± 32	100 ± 10	26.0			77
300	41.1 dB/100m	37.1	35.1	18.3	15.3	14.9	100 ± 32	100 ± 10	25.2			75.5
400	48.1 dB/100m	35.3	33.3	15.8	12.8	13.8	100 ± 32	100 ± 10	24.0			72.9
500	54.3 dB/100m	33.8	31.8	13.8	10.8	13.0	100 ± 32	100 ± 10	23.0			71.0

Voltage

UL Voltage Rating
600 V (UL 2463)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
75°C	-40°C To +75°C	-20°C To +80°C	-40°C To +80°C

Bend Radius

Stationary Min.	Installation Min.	Flexing Min.
2.58 in (65.5 mm)	2.58 in (65.5 mm)	2.58 in (65.5 mm)

Max. Pull Tension:	44 lbs (20 kg)
Bulk Cable Weight:	48 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, UV Resistance, Oil Resistance
Flammability / Reaction to Fire:	UL 1666 - Riser, VW-1
NEC / UL Compliance:	Article 800, CMX-Outdoor, CMR
AWM Compliance:	AWM 2463
CEC / C(UL) Compliance:	CMR-CMX OUTDOOR
Data Category:	Category 6A
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6A
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2)
APAC Compliance:	China RoHS II (GB/T 26572-2011)

History

Update and Revision:	Revision Number: 0.189 Revision Date: 05-15-2024
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