



Product: [127953A](#)

DataTuff® Cat 6, (4 pr) 24 AWG Solid BC, PP/PVC/Alum Armor/PVC, EtherNet/IP, Foil Shld, CMR, CMX Outdoor, 600V AWM

Request Sample

Product Description

Four Cat 6 24 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:	Armored Ethernet applications, In Cable tray, in cabinet with high volt devices, such as motor control center, mining, outdoor, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc. exposure to rodent, crush, or cut through force,
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Construction Details

Conductor

Element	Size	Stranding	Material	Number of Element
Pair(s)	24 AWG	Solid	BC - Bare Copper	4

Insulation

Material	Color Code
PO - Polyolefin	White/Blue Stripe & Blue, White/Orange Stripe & Orange, White/Green Stripe & Green, White/Brown Stripe & Brown

Bonded-Pair:

Yes

Inner Jacket

Material	Nom. Diameter	Ripcord
PVC - Polyvinyl Chloride	0.254 in (6.45 mm)	Yes

Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	100%	24 AWG (7x32) TC

Armor

Armor Type & Material	Armor Thickness	Diameter Over Armor
AIA - Aluminum Interlock Armor	0.025 in (0.64 mm)	0.595 in (15.1 mm)

Outer Jacket

Separator	Material	Nom. Diameter
Polyester Tape	PVC - Polyvinyl Chloride	0.695 in (17.7 mm)

Overall Cable Diameter (Nominal):

0.695 in (17.7 mm)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
82 Ohm/km (25 Ohm/1000ft)	330 pF/ft

High Frequency

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) [Ohm]	Max./Min. Fitted Impedance [Ohm]
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1	2.0 dB/100m	74.3	72.3	72.3	70.3	67.8	64.8	21	100 ± 15	100 ± 15
4	3.8 dB/100m	65.3	63.3	61.5	59.5	55.8	52.7	24	100 ± 15	100 ± 15
8	5.3 dB/100m	60.8	58.8	55.4	53.4	49.7	46.7	25.5	100 ± 15	100 ± 15
10	6 dB/100m	59.3	57.3	53.3	51.3	47.8	44.8	26	100 ± 15	100 ± 15
16	7.6 dB/100m	56.2	54.3	48.7	46.7	43.7	40.7	26	100 ± 15	100 ± 15
20	8.5 dB/100m	54.8	52.8	46.3	44.3	41.8	38.8	26	100 ± 15	100 ± 15
25	9.5 dB/100m	53.3	51.3	43.8	41.8	39.8	36.8	25.3	100 ± 15	100 ± 15
31.25	10.7 dB/100m	51.9	49.9	41.2	39.2	37.9	34.9	24.6	100 ± 15	100 ± 15
62.5	15.4 dB/100m	47.4	45.4	32	30	31.9	28.9	22.5	100 ± 15	100 ± 15
100	19.8 dB/100m	44.3	42.3	24.5	22.5	27.8	24.8	21.1	100 ± 15	
155	25.2 dB/100m	41.5	39.5	16.3	14.3	23.9	20.9	19.8	100 ± 22	
200	29.0 dB/100m	39.8	37.8	10.8	8.8	21.8	18.8	19	100 ± 22	
250	32.8 dB/100m	38.3	36.3	5.5	3.5	19.8	16.8	18.3	100 ± 32	

Voltage

UL Voltage Rating
300 V (CMR), 300 V (CMX)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Storage
60°C	-20°C to +60°C	-20°C to +60°C

Max. Pull Tension:	200 lbs (91 kg)
Bulk Cable Weight:	164 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Sunlight Resistance
Flammability / Reaction to Fire:	UL 1666 Riser, FT4
NEC / UL Compliance:	CMR-CMX
CEC / C(UL) Compliance:	CMG, HL
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 6
ISO/IEC Compliance:	ISO/IEC 11801 Cat 6

History

Update and Revision:	Revision Number: 0.116 Revision Date: 01-04-2023
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