



Product: [7935A](#)

DataTuff® 5e, 4 Bonded-Pr #24 Sol BC, PO Ins, LSZH Jkt, CM SUN RES

Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, LSZH Outer Jacket, CM SUN RES

Technical Specifications

Product Overview

Suitable Applications:	shipboard, transportation, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc.
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Physical Characteristics (Overall)

Conductor					
Element	AWG	Stranding	Material	Nominal Diameter	No. of Pairs
Pair(s)	24	Solid	BC - Bare Copper	0.02 in	4
Conductor Count:				8	
Total Number of Pairs:				4	

Insulation			
Element	Material	Nominal Diameter	Nominal Wall Thickness
Pair(s)	PP - Polypropylene	0.038 in	0.009 in
Bonded-Pair:		Yes	

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

Outer Jacket		
Material	Nominal Diameter	Ripcord
LSZH - Low Smoke Zero Halogen (Flame Retardant)	0.23 in	Yes

Electrical Characteristics

Conductor DCR	
Max. Conductor DCR	Max. DCR Unbalance
29.7 Ohm/1000ft	3 %

Capacitance	
Max. Capacitance Unbalance	Nom.Mutual Capacitance
66 pF/ft	15 pF/ft

Delay		
Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
510 ns/100m	25 ns/100m	70%

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)	Max./Min. Fitted Impedance
1 MHz	2 dB/100m	65.3 dB	65.3 dB	63.3 dB	63.3 dB	63.8 dB	60.8 dB	20 dB	100 ± 12 Ohm	95-110 Ohm
4 MHz	4 dB/100m	56.3 dB	56.3 dB	52.3 dB	52.3 dB	51.7 dB	48.7 dB	23.6 dB	100 ± 12 Ohm	95-110
8 MHz	5.7 dB/100m	51.8 dB	51.8 dB	46.1 dB	46.1 dB	45.7 dB	42.7 dB	25.4 dB	100 ± 12 Ohm	95-107
10 MHz	6.4 dB/100m	50.3 dB	50.3 dB	43.9 dB	43.9 dB	43.8 dB	40.8 dB	26 dB	100 ± 12 Ohm	95-107
16 MHz	8.1 dB/100m	47.3 dB	47.3 dB	39.1 dB	39.1 dB	39.7 dB	36.7 dB	26 dB	100 ± 12 Ohm	95-107
20 MHz	9.2 dB/100m	45.8 dB	45.8 dB	35.2 dB	35.2 dB	37.7 dB	34.7 dB	26 dB	100 ± 12 Ohm	95-107
25 MHz	10.3 dB/100m	44.3 dB	44.3 dB	34.1 dB	34.1 dB	35.8 dB	32.8 dB	25.5 dB	100 ± 15 Ohm	95-107
31.25 MHz	11.6 dB/100m	42.9 dB	42.9 dB	31.3 dB	31.3 dB	33.9 dB	30.9 dB	25 dB	100 ± 15 Ohm	95-107
62.5 MHz	16.8 dB/100m	38.4 dB	38.4 dB	21.6 dB	21.6 dB	27.8 dB	24.8 dB	23.5 dB	100 ± 15 Ohm	95-107
100 MHz	21.7 dB/100m	35.3 dB	35.3 dB	17.1 dB	17.1 dB	23.8 dB	20.8 dB	22.5 dB	100 ± 15 Ohm	
155 MHz	27.7 dB/100m	32.5 dB	32.5 dB	4.7 dB	4.7 dB	19.9 dB	16.9 dB	19 dB	100 ± 18 Ohm	
200 MHz	32 dB/100m	30.8 dB	30.8 dB	3 dB	3 dB	17.7 dB	14.7 dB	19 dB	100 ± 20 Ohm	
250 MHz	36.4 dB/100m	29.3 dB	29.3 dB	0 dB	0 dB	15.8 dB	12.8 dB	18 dB	100 ± 20 Ohm	
300 MHz	40.5 dB/100m	28.2 dB	28.2 dB	0 dB	0 dB	14.2 dB	11.2 dB	18 dB	100 ± 20 Ohm	
310 MHz	41.3 dB/100m	27.9 dB	27.9 dB			13.9 dB	10.9 dB	18 dB	100 ± 20 Ohm	
350 MHz	44.3 dB/100m	27.2 dB	27.2 dB			12.9 dB	9.9 dB	17 dB	100 ± 22 Ohm	

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temperature Range:	+5°C To +75°C
UL Temp Rating:	60°C
Storage Temperature Range:	-10°C To +75°C
Operating Temperature Range:	-10°C To +75°C

Mechanical Characteristics

UV Resistance:	Yes
Bulk Cable Weight:	26 lbs/1000ft
Max. Pull Tension:	41 lbs
Min. Bend Radius During Installation:	2.3 in
Min. Bend Radius/Minor Axis:	0.25 in

Standards

NEC Articles:	Article 800
NEC/(UL) Compliance:	CM
CEC/C(UL) Compliance:	CM
ISO/IEC Compliance:	ISO/IEC 11801 Cat 5e
CPR Euroclass:	Eca
Data Category:	Category 5e
TIA/EIA Compliance:	TIA-568.C.2 Category 5e, NEMA WC-63.1
Third Party Performance Verification:	UL Verifield Category 5e

Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2011/65/EU (RoHS 2):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU (RoHS 2 amendment):	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Indoor:	Yes
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Suitability - Non-Halogenated:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LSOH, Toxicity Testing

CSA/C(UL) Flammability:	FT1
UL Flammability:	UL1685 Vertical Tray Flame Test
IEC Flammability:	IEC 60332-1-2
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
7935A 0101000	Black	Reel	1,000 ft	612825191681
7935A 0102000	Black	Reel	2,000 ft	612825191698

Footnote:	C - CRATE REEL PUT-UP.
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Product Notes

Notes:	US Patent #'s 5, 606, 151; 5, 734, 126. EtherNet IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vendor Association, Inc. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581.
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History

Update and Revision:	Revision Number: 0.535 Revision Date: 04-29-2024
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