



**Product:** [7935A](#)

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

[Request Sample](#)

### 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

AWG	Stranding	Material	Nominal Diameter	No. of Pairs
24	Solid	BC - Bare Copper	0.02 in	4

Conductor Count:	8
Total Number of Pairs:	4

##### Insulation

Material	Nominal Diameter	Nominal Wall Thickness
PO - Polyolefin	0.035 in	0.009 in

Bonded-Pair:	Yes
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##### Color Chart

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

##### Outer Shield

Material
No Shield

##### 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
9 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

Bulk Cable Weight:	19 lbs/1000ft
Max. Pull Tension:	40 lbs
Min. Bend Radius/Minor Axis:	0.25 in

## Standards

NEC/(UL) Compliance:	CM, UL 444
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
Other Specification:	EtherNet/IP™
Third Party Performance Verification:	UL Verified Category 5e

## Applicable Environmental and Other Programs

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 - Oil Resistance:	No
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

## Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1581 Vertical Tray,UL1685 Vertical Tray Flame Test
CSA Flammability:	FT1
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: 0.481 Revision Date: 12-20-2022
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