



**Product:** [7939A](#)

DataTuff® Cat 5e, 4 Bonded-Pr #24 Str BC, PO Ins, OS, PVC Jkt, CMX-Outdoor CMR

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## Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (7x32) Bare Copper, PO Insulation, Overall Beldfoil® Shield, PVC Outer Jacket, CMX-Outdoor CMR

## Technical Specifications

### Product Overview

Suitable Applications:	outdoor, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc.
Patent:	This product has one or more applicable patents. More information on patents can be found at <a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a> .

### Construction Details

#### Conductor

AWG	Stranding	Material	Number of Pairs
24	7x32	BC - Bare Copper	4

#### Insulation

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

Bonded-Pair: Yes

#### Outer Shield Material

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

#### Outer Jacket Material

Material	Nom. Diameter	Ripcord
PVC - Polyvinyl Chloride	0.295 in	No

### Electrical Characteristics

#### Electricals

Max. Conductor DCR	Max. DCR Unbalance	Max. Capacitance Unbalance	Nom. Mutual Capacitance	Nom. Velocity of Prop.
9.38 Ohm/1000ft	3%	330 pF/ft	15 pF/ft	69%

#### Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Propagation (VP) [%]	Typical Delay Skew
510 ns/100m	45 ns/100m	69%	12 ns/ft

#### High Freq

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]	Min. SRL (Structural Return Loss)	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2.5 dB/100m	65.3 dB	62.3 dB	62.8 dB	59.8 dB	63.8 dB	60.8 dB	20 dB	23 dB	100 ± 15 Ohm	100 ± 15 Ohm
4 MHz	4.9 dB/100m	56.3 dB	53.3 dB	51.4 dB	48.4 dB	51.7 dB	48.7 dB	23 dB	23 dB	100 ± 15 Ohm	100 ± 15
8 MHz	6.9 dB/100m	51.8 dB	48.8 dB	44.9 dB	41.9 dB	45.7 dB	42.7 dB	24.5 dB	24.5 dB	100 ± 15 Ohm	100 ± 15
10 MHz	7.8 dB/100m	50.3 dB	47.3 dB	42.5 dB	39.5 dB	43.8 dB	40.8 dB	25 dB	25 dB	100 ± 15 Ohm	100 ± 15
16 MHz	9.9 dB/100m	47.3 dB	44.3 dB	37.4 dB	34.4 dB	39.7 dB	36.7 dB	25 dB	25 dB	100 ± 15 Ohm	100 ± 15

20 MHz	11.1 dB/100m	45.8 dB	42.8 dB	34.7 dB	31.7 dB	37.7 dB	34.7 dB	25 dB	25 dB	100 ± 15 Ohm	100 ± 15
25 MHz	12.5 dB/100m	44.3 dB	41.3 dB	21.8 dB	28.8 dB	35.8 dB	32.8 dB	24.3 dB	24.3 dB	100 ± 15 Ohm	100 ± 15
31.25 MHz	14.1 dB/100m	42.9 dB	39.9 dB	28.8 dB	25.8 dB	33.9 dB	30.9 dB	23.6 dB	23.6 dB	100 ± 15 Ohm	100 ± 15
62.5 MHz	20.4 dB/100m	38.4 dB	35.4 dB	18 dB	15 dB	27.8 dB	24.8 dB	21.5 dB	21.5 dB	100 ± 15 Ohm	100 ± 15
100 MHz	26.4 dB/100m	35.3 dB	32.3 dB	8.9 dB	5.9 dB	23.8 dB	20.8 dB	20.1 dB	20.1 dB	100 ± 15 Ohm	

Voltage

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

Mechanical Characteristics

Temperature

UL Rating	Operating	Installation
60°C	-40°C To +75°C	-25°C To +75°C

Bend Radius

Stationary Min.
0.6 in

Max. Pull Tension:	40 lbs
Bulk Cable Weight:	35 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor/Outdoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Fire Resistance:	UL1666 Riser, FT4, FT4, 1202 Vertical Tray, IEC 60332-1-2
NEC / UL Compliance:	800, CMR;CMX-Outdoor
CEC / C(UL) Compliance:	CMX-Outdoor;CMG
ICEA Compliance:	S-90-661-2012
NEMA Compliance:	NEMA WC-63.1
Data Category:	Category 5e
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 5e
CPR Euroclass:	Eca
European Directive Compliance:	EU CE Mark, EU Directive 2015/863/EU, EU Directive 2011/65/EU (ROHS II), EU Directive 2012/19/EU (WEEE), REACH: 2020-01-16
APAC Compliance:	China RoHS II (GB/T 26572-2011)

Part Number

Variants

Item #	Color	Putup Type	Length	UPC
7939A 0101000	Black	Reel	1,000 ft	612825191773
7939A 0102000	Black	Reel	2,000 ft	612825191780
7939A 0061000	Blue	Reel	1,000 ft	612825191759
7939A 0081000	Gray	Reel	1,000 ft	612825191766
7939A 0021000	Red	Reel	1,000 ft	612825191742
7939A 1NH1000	Teal	Reel	1,000 ft	612825191797

Product Notes

Notes:	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: 0.328 Revision Date: 06-22-2020
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