



**Product:** [7921A](#) 

DataTuff® 5e, 4 Bonded-Pr #24 Sol BC, PO Ins, OS+TC Brd, PVC Jkt, CMR CMX-Outdoor

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## Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, Overall Beldfoil®+Tinned Copper Braid(70%) Shield, PVC Outer Jacket, CMR CMX-Outdoor

## Technical Specifications

### Product Overview

Suitable Applications:	noisy environment, outdoor, 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	No. of Pairs
24	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

#### Insulation

Material	Nominal Diameter	Nominal Wall Thickness
Polyolefin	0.046 in	0.012 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

Type	Layer	Material	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D
Tape	1	Alum / Poly	Beldfoil®	100 %	TC - Tinned Copper	26	Solid
Braid	2	TC - Tinned Copper		70 %			

#### Outer Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness
PVC - Polyvinyl Chloride	0.33 in	0.03 in

### Electrical Characteristics

#### Conductor DCR

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

#### Capacitance

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

Delay

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
538 ns/100m	45 ns/100m	70 %

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 dB/100m	65.3 dB	62.3 dB	63 dB	60 dB	63.8 dB	60.8 dB	20 dB	20 dB	100 ± 15 Ohm	95-110 Ohm
4 MHz	4.1 dB/100m	56.3 dB	53.3 dB	51 dB	49 dB	51.7 dB	48.7 dB	23.6 dB	23.6 dB	100 ± 15 Ohm	95-110
8 MHz	5.8 dB/100m	51.8 dB	48.8 dB	46 dB	43 dB	45.7 dB	42.7 dB	25.4 dB	25.4 dB	100 ± 15 Ohm	95-107
10 MHz	6.5 dB/100m	50.3 dB	47.3 dB	43 dB	41 dB	43.8 dB	40.8 dB	26 dB	26 dB	100 ± 15 Ohm	95-107
16 MHz	8.2 dB/100m	47.3 dB	44.3 dB	39 dB	36 dB	39.7 dB	36.7 dB	26 dB	26 dB	100 ± 15 Ohm	95-107
20 MHz	9.3 dB/100m	45.8 dB	42.8 dB	36.5 dB	33.5 dB	37.7 dB	34.7 dB	26 dB	26 dB	100 ± 15 Ohm	95-107
25 MHz	10.4 dB/100m	44.3 dB	41.3 dB	33.9 dB	30.9 dB	35.8 dB	32.8 dB	25.5 dB	25.5 dB	100 ± 15 Ohm	95-107
31.25 MHz	11.7 dB/100m	42.9 dB	39.9 dB	31 dB	28 dB	33.9 dB	30.9 dB	25 dB	25 dB	100 ± 15 Ohm	95-107
62.5 MHz	17 dB/100m	38.4 dB	35.4 dB	22 dB	19 dB	27.8 dB	24.8 dB	23.5 dB	23.5 dB	100 ± 15 Ohm	95-107
100 MHz	22 dB/100m	35.3 dB	32.3 dB	14 dB	11 dB	23.8 dB	20.8 dB	22.5 dB	22.5 dB	100 ± 15 Ohm	

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temp Range:	-25°C To +75°C
UL Temp Rating:	60°C
Storage Temp Range:	-40°C To +80°C
Operating Temp Range:	-40°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	50 lbs/1000ft
Max Recommended Pulling Tension:	75 lbs
Min Bend Radius/Minor Axis:	1.32 in

Standards

NEC/(UL) Specification:	CMR, CMX-Outdoor
CEC/C(UL) Specification:	CMR
ISO/IEC Compliance:	ISO 11801 Cat 5e
CPR Euroclass:	Eca
Data Category:	Category 5e
Telecommunications Standards:	TIA-568.C.2 Category 5e
Third Party Performance Verification:	UL verified Cat 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 II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	EU Directive 2003/11/EC (BFR)
EU CE Mark:	Yes
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-04
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes

Suitability - Sunlight Resistance:	Yes
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### Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1666 Vertical Riser
CSA Flammability:	FT4
ISO/IEC Flammability:	IEC 60332-1-2
IEEE Flammability:	1202
UL voltage rating:	300 V RMS

### Plenum/Non-Plenum

Plenum (Y/N):	No
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### Part Number

#### Variants

Item #	Color	Putup Type	Length	UPC
7921A 0101000	Black	Reel	1,000 ft	612825191261
7921A 0102000	Black	Reel	2,000 ft	612825191278
7921A 0061000	Blue	Reel	1,000 ft	612825191254
7921A 0021000	Red	Reel	1,000 ft	612825191247
7921A 1NH1000	Teal	Reel	1,000 ft	612825191285

Footnote:	C - CRATE REEL PUT-UP.
Patent:	<a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a>

### Product Notes

Notes:	US Patent #'s 5606151; 5734126. 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: 0.302 Revision Date: 04-28-2020
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