




Product: [7901A](#) 

DataTuff® 5e, 4 Bonded-Pr #24 Sol BC, FEP Ins, OS, FEP Jkt, CMP, Extreme Temp

Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (Solid) Bare Copper, FEP Insulation, Overall Beldfoil® Shield, FEP Outer Jacket, CMP

Technical Specifications

Product Overview

Suitable Applications:	extreme temp, exposure to oil and gasoline, 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 https://www.belden.com/patents .

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
FEP - Fluorinated Ethylene Propylene

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

Type	Material Trade Name	Coverage [%]	Drainwire Material	Drainwire AWG
Tape	Beldfoil®	100%	TC - Tinned Copper	24

Outer Jacket

Material	Nominal Diameter	Ripcord
FEP - Fluorinated Ethylene Propylene	0.231 in.	No

Electrical Characteristics

Conductor DCR

Max. DCR Unbalance
3.0 %

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	72%

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)
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
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
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
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
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
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
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
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
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
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:	-55°C To +150°C
UL Temp Rating:	150°C
Storage Temperature Range:	-70°C To +150°C
Operating Temperature Range:	-70°C To +150°C

Mechanical Characteristics

Bulk Cable Weight:	34 lbs/1000ft
Max. Pull Tension:	40 lbs

Standards

NEC/(UL) Compliance:	CMP
CEC/C(UL) Compliance:	CMP
ISO/IEC Compliance:	ISO/IEC 11801 ed 2.1 (2008) Class D
TIA/EIA Compliance:	Category 5e - TIA 568.2-D
Other Specification:	NEMA WC-63.1 Category 5e, Ethernet/IP™ Compliant

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

Flammability, LS0H, Toxicity Testing

UL Flammability:	NFPA 262,UL723 (NFPA 255)
CSA Flammability:	FT6

Plenum/Non-Plenum

Plenum (Y/N):	Yes
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History

Update and Revision:	Revision Number: 0.105 Revision Date: 04-08-2022
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