



Product: [121700R](#)

DataTuff® 5e, 4 Bonded-Pr #24 Sol BC, PO Ins, PVC Jkt, AIA Armor, PVC Jkt, CMG CM -40C

[Request Sample](#)

Product Description

Industrial Ethernet Cat 5e, 4 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, PVC Inner Jacket, Aluminum Interlock Armor, PVC Outer Jacket, CMG CM -40C

Technical Specifications

Product Overview

Suitable Applications:	harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc. exposure to rodent, crush, or cut through force, lower temperature
Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/patents .

Construction Details

Conductor

Element	Size	Stranding	Material	Number of Element
Pair(s)	24 AWG	Solid	BC - Bare Copper	4

Insulation

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

Bonded-Pair:	Yes
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Inner Jacket

Material	Nom. Diameter	Ripcord
PVC - Polyvinyl Chloride	0.2 in (5.1 mm)	Yes

Armor

Armor Type & Material	Armor Thickness	Diameter Over Armor
AIA - Aluminum Interlock Armor	0.025 in (0.64 mm)	0.463 in (11.8 mm)

Outer Jacket

Separator	Material	Nom. Diameter
Polyester Tape	PVC - Polyvinyl Chloride	0.553 in (14.0 mm)

Overall Cable Diameter (Nominal):	0.553 in (14.0 mm)
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Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance
9 Ohm/1000ft	160 pF/100m

Delay

Max. Delay	Max. Delay Skew	Nom. Velocity of Prop.
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) [Ohm]	Max./Min. Fitted Impedance [Ohm]
1	2 dB/100m	65.3	65.3	63.3	63.3	63.8	60.8	20	100 ± 12	105 ± 10
4	4 dB/100m	56.3	56.3	52.3	52.3	51.7	48.7	23	100 ± 12	100 ± 10
8	5.7 dB/100m	51.8	51.8	46.1	46.1	45.7	42.7	24.5	100 ± 12	100 ± 10
10	6.4 dB/100m	50.3	50.3	43.9	43.9	43.8	40.8	25	100 ± 12	100 ± 10
16	8.1 dB/100m	47.3	47.3	39.1	39.1	39.7	36.7	25	100 ± 12	100 ± 10
20	9.2 dB/100m	45.8	45.8	35.2	35.2	37.7	34.7	25	100 ± 12	100 ± 10
25	10.3 dB/100m	44.3	44.3	34.1	34.1	35.8	32.8	24.3	100 ± 15	100 ± 10
31.25	11.6 dB/100m	42.9	42.9	31.3	31.3	33.9	30.9	23.6	100 ± 15	100 ± 10
62.5	16.8 dB/100m	38.4	38.4	21.6	21.6	27.8	24.8	21.5	100 ± 15	100 ± 10
100	21.7 dB/100m	35.3	35.3	17.1	17.1	23.8	20.8	20.1	100 ± 15	
155	27.7 dB/100m	32.5	32.5	4.7	4.7	19.9	16.9	19	100 ± 18	
200	32 dB/100m	30.8	30.8	3	3	17.7	14.7	19	100 ± 20	
250	36.4 dB/100m	29.3	29.3	0	0	15.8	12.8	18	100 ± 20	
300	40.5 dB/100m	28.2	28.2	0	0	14.2	11.2	18	100 ± 20	
310	41.3 dB/100m	27.9	27.9			13.9	10.9	18	100 ± 20	
350	44.3 dB/100m	27.2	27.2			12.9	9.9	17	100 ± 22	

Voltage

UL Voltage Rating
300 V (CM), 300 V (CMG)

Mechanical Characteristics

Temperature

UL Temperature	Operating	Installation	Storage
60°C	-40°C To +60°C	-40°C To +75°C	-40°C To +60°C

Bend Radius

Stationary Min.
6.5 in (170 mm)

Max. Pull Tension:	40 lbs (18 kg)
Bulk Cable Weight:	123 lbs/1000ft

Standards and Compliance

Environmental Suitability:	Indoor, Indoor, Outdoor, Sunlight Resistance, Oil Resistance
Flammability / Reaction to Fire:	UL1685 UL Loading, FT4, IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Eca; CPR UKCA Class: Eca
NEC / UL Compliance:	CM
CEC / C(UL) Compliance:	CMG, HL
Data Category:	Category 5e
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 5e
European Directive Compliance:	EU Directive 2015/863/EU (RoHS 2 amendment), EU Directive 2011/65/EU (RoHS 2), EU Directive 2012/19/EU (WEEE)
UK Regulation Compliance:	UKCA Mark

Product Notes

Notes:	US Patent #'s 5, 606, 151; 5, 734, 126 Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. Cable passes -40C cold impact.
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History

Update and Revision:	Revision Number: 0.237 Revision Date: 01-04-2023
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