



Product: [127921A](#)

DataTuff® Cat 5e, 4 Bonded-Pr #24 Sol BC, PO Ins, OS+TC Brd, PVC Jkt, AIA Armor, PVC Jkt

[Request Sample](#)

Product Description

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

Technical Specifications

Product Overview

Suitable Applications:	mining, harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc. exposure to rodent, crush, or cut through force,
------------------------	---

Physical Characteristics (Overall)

Conductor

Element	AWG	Stranding	Material
Pair(s)	24	Solid	BC - Bare Copper

Insulation

Material
PO - Polyolefin

Bonded-Pair:	Yes
--------------	-----

Color Chart

Color
White/Blue Stripe & Blue
White/Orange Stripe & Orange
White/Green Stripe & Green
White/Brown Stripe & Brown

Inner Jacket

Material	Nominal Diameter	Ripcord
PVC - Polyvinyl Chloride	0.330 in	Yes

Outer Shield

Type	Material	Material Trade Name	Coverage [%]
Tape	Bi-Laminate (Alum+Poly)	Beldfoil®	100%
Braid	Tinned Copper (TC)		70%

Outer Jacket

Material	Nominal Diameter	Ripcord	Separator Material
PVC - Polyvinyl Chloride	0.638 in	No	Polyester Tape

Construction and Dimensions

Armor

Diameter over Armoring
0.548 in

Electrical Characteristics

Conductor DCR

Max. Conductor DCR
93.8 Ohm/km

Capacitance

Max. Capacitance Unbalance
330 pF/100m

Delay

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
538 ns/100m	45 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]	Min. SRL (Structural Return Loss)	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2.0 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 Ohm
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 Ohm
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 Ohm
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 Ohm
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 Ohm
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 Ohm
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 Ohm
62.5 MHz	17.0 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 Ohm
100 MHz	22.0 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	

Current

Max. Recommended Current [A]
15 pF/ft

Voltage

UL Description	UL Voltage Rating
CM	300 V

Temperature Range

UL Temp Rating:	75°C
Storage Temperature Range:	-40°C To +85°C
Operating Temperature Range:	-40°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	140 lbs/1000ft
Max. Pull Tension:	100 lbs

Standards

NEC Articles:	Article 800
NEC/(UL) Compliance:	CM
CEC/C(UL) Compliance:	CMG, HL
CPR Euroclass:	Eca
Data Category:	Category 5e
TIA/EIA Compliance:	ANSI/TIA-568.2-D Category 5e

Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor
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 CE Mark:	Yes
EU REACH SVHC Compliance (yyyy-mm-dd):	2020-01-16

MII Order #39 (China RoHS):	Yes
-----------------------------	-----

Suitability

Suitability - Aerial:	No
Suitability - Burial:	No
Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

CSA/C(UL) Flammability:	FT4
UL Flammability:	UL 1685 (UL Loading)

Product Notes

Notes:	Operating temperatures are subject to length de-rating
--------	--

History

Update and Revision:	Revision Number: 0.48 Revision Date: 04-29-2024
----------------------	---

© 2025 Belden, Inc
All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.