



Product: [7905A](#)

DataTuff® 5e, 4 Pr #24 Str TC, PO Ins, TPE Jkt, Flexible CMR

Product Description

Industrial Ethernet Cat 5e, 4 Bonded Pair 24AWG (7x32) Tinned Copper, PO Insulation, TPE Outer Jacket, Flexible CMR

Technical Specifications

Product Overview

Suitable Applications:	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/patents">https://www.belden.com/patents</a> .

Physical Characteristics (Overall)

Conductor			
AWG	Stranding	Material	No. of Pairs
24	7x32	TC - Tinned Copper	4
Conductor Count:			8
Total Number of Pairs:			4

Insulation	
Material	
PO - Polyolefin	
Bonded-Pair:	Yes

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	
No Shield	

Outer Jacket	
Material	Nominal Diameter
TPE - Thermoplastic Elastomer	0.242 in.

Electrical Characteristics

Conductor DCR	
Max. Conductor DCR	Max. DCR Unbalance
9 Ohm/1000ft	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	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)	Max./Min. Fitted Impedance
1 MHz	2.4 dB/100m	65.3 dB	65.3 dB	62.9 dB	62.9 dB	63.8 dB	60.8 dB	20 dB	100 ± 12 Ohm	105 ± 10
4 MHz	4.8 dB/100m	56.3 dB	56.3 dB	51.5 dB	51.5 dB	51.7 dB	48.7 dB	23.6 dB	100 ± 12 Ohm	100 ± 10
8 MHz	6.8 dB/100m	51.8 dB	51.8 dB	45.0 dB	45.0 dB	45.7 dB	42.7 dB	25.4 dB	100 ± 12 Ohm	100 ± 10
10 MHz	7.7 dB/100m	50.3 dB	50.3 dB	42.6 dB	42.6 dB	43.8 dB	40.8 dB	26 dB	100 ± 12 Ohm	100 ± 10
16 MHz	9.7 dB/100m	47.3 dB	47.3 dB	37.5 dB	37.5 dB	39.7 dB	36.7 dB	26 dB	100 ± 12 Ohm	100 ± 10
20 MHz	11.0 dB/100m	45.8 dB	45.8 dB	34.8 dB	34.8 dB	37.7 dB	34.7 dB	26 dB	100 ± 12 Ohm	100 ± 10
25 MHz	12.4 dB/100m	44.3 dB	44.3 dB	31.9 dB	31.9 dB	35.8 dB	32.8 dB	25.5 dB	100 ± 15 Ohm	100 ± 10
31.25 MHz	13.9 dB/100m	42.9 dB	42.9 dB	29.0 dB	29.0 dB	33.9 dB	30.9 dB	25 dB	100 ± 15 Ohm	100 ± 10
62.5 MHz	20.2 dB/100m	38.4 dB	38.4 dB	18.3 dB	18.3 dB	27.8 dB	24.8 dB	23.5 dB	100 ± 15 Ohm	100 ± 10
100 MHz	26 dB/100m	35.3 dB	35.3 dB	9.2 dB	9.2 dB	23.8 dB	20.8 dB	22.5 dB	100 ± 15 Ohm	100 ± 10
155 MHz	33.2 dB/100m	32.5 dB	32.5 dB			19.9 dB	16.9 dB	19 dB	100 ± 18 Ohm	100 ± 10
200 MHz	38.4 dB/100m	30.8 dB	30.8 dB			17.7 dB	14.7 dB	19 dB	100 ± 20 Ohm	100 ± 10
250 MHz	43.7 dB/100m	29.3 dB	29.3 dB			15.8 dB	12.8 dB	18 dB	100 ± 20 Ohm	100 ± 10
300 MHz	48.6 dB/100m	28.2 dB	28.2 dB			14.2 dB	11.2 dB	18 dB	100 ± 20 Ohm	100 ± 10
310 MHz	49.5 dB/100m	27.9 dB	27.9 dB			13.9 dB	10.9 dB	18 dB	100 ± 20 Ohm	100 ± 10
350 MHz	53.2 dB/100m	27.2 dB	27.2 dB			12.9 dB	9.9 dB	17 dB	100 ± 22 Ohm	100 ± 10

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

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

Mechanical Characteristics

UV Resistance:	Yes
Bulk Cable Weight:	27 lbs/1000ft
Max. Pull Tension:	40 lbs
Min. Bend Radius/Minor Axis:	0.25 in

Standards

NEC/(UL) Compliance:	CMR
CEC/C(UL) Compliance:	CMG
ISO/IEC Compliance:	ISO/IEC 11801 Cat 5e Patch
TIA/EIA Compliance:	TIA 568-C.2 Category 5e Patch

Applicable Environmental and Other Programs

EU Directive 2011/65/EU (RoHS 2):	Yes
-----------------------------------	-----

Suitability

Suitability - Indoor:	Yes
Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LSOH, Toxicity Testing

UL Flammability:	UL1666 Riser
------------------	--------------

Related Part Numbers

Variants

Item #	UPC
7905A 0021000	612825424215
7905A 0061000	612825422754
7905A 1NH1000	612825422747
7905A B591000	612825422730

Product Notes

Notes:	US Patent # 6, 273, 977. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581.
--------	---

History

Update and Revision:	Revision Number: 0.127 Revision Date: 05-05-2023
----------------------	--

© 2023 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.