



**Product:** [11872A](#)

DataTuff® 6, 4 Bonded-Pr #24 Sol BC, PO Ins, PVC Jkt, PVC Jkt, CMR

[Request Sample](#)

**Product Description**

Industrial Ethernet Cat 6, 4 Bonded-Pair 24AWG (Solid) Bare Copper, PO Insulation, PVC Inner Jacket, PVC Outer Jacket, CMR

**Technical Specifications**

**Product Overview**

Suitable Applications:	harsh environment, IIoT, factory or process automation, IP cameras and devices, data communication, etc.
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**Physical Characteristics (Overall)**

<b>Conductor</b>					
Element	AWG	Stranding	Material	Nominal Diameter	No. of Pairs
Pair(s)	23	Solid	BC - Bare Copper	0.022 in	4
Conductor Count:				8	
Total Number of Pairs:				4	

<b>Insulation</b>			
Element	Material	Nominal Diameter	Nominal Wall Thickness
Pair(s)	PO - Polyolefin	0.043 in	0.01 in
Bonded-Pair:		Yes	

<b>Color Chart</b>	
Number	Color
1	Blue & White/Blue
2	Orange & White/Orange
3	Green & White/Green
4	Brown & White/Brown

<b>Inner Jacket</b>		
Material	Nominal Diameter	Ripcord
PVC - Polyvinyl Chloride	0.365 x 0.165 in	Yes

<b>Outer Jacket</b>			
Material	Nominal Diameter	Nominal Wall Thickness	Ripcord
PVC - Polyvinyl Chloride	0.475 x 0.265 in	0.035 in	Yes

**Electrical Characteristics**

<b>Conductor DCR</b>	
Max. Conductor DCR	Max. DCR Unbalance
23.2 Ohm/1000ft	3 %

<b>Capacitance</b>	
Max. Capacitance Unbalance	Nom.Mutual Capacitance
49.2 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	1.9 dB/100m	74.3 dB	72.3 dB	72.4 dB	70.4 dB	67.8 dB	64.8 dB	20 dB	100 ± 12 Ohm	100 ± 15 Ohm
4 MHz	3.7 dB/100m	65.3 dB	63.3 dB	61.6 dB	59.6 dB	55.7 dB	52.7 dB	23 dB	100 ± 12 Ohm	100 ± 15
8 MHz	5.3 dB/100m	60.3 dB	58.8 dB	55.5 dB	53.5 dB	49.7 dB	46.7 dB	24.5 dB	100 ± 12 Ohm	100 ± 15
10 MHz	5.9 dB/100m	59.3 dB	57.3 dB	53.4 dB	51.4 dB	47.8 dB	44.8 dB	25 dB	100 ± 12 Ohm	100 ± 15
16 MHz	7.5 dB/100m	56.3 dB	54.3 dB	48.7 dB	46.7 dB	43.7 dB	40.7 dB	25 dB	100 ± 12 Ohm	100 ± 8
20 MHz	8.4 dB/100m	54.8 dB	52.8 dB	46.4 dB	44.4 dB	41.7 dB	38.7 dB	25 dB	100 ± 12 Ohm	100 ± 8
25 MHz	9.5 dB/100m	53.4 dB	51.4 dB	43.9 dB	41.9 dB	39.8 dB	36.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 8
31.25 MHz	10.6 dB/100m	51.9 dB	49.9 dB	41.2 dB	39.2 dB	37.9 dB	34.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 8
62.5 MHz	15.4 dB/100m	47.4 dB	45.4 dB	32 dB	30 dB	31.8 dB	28.8 dB	21.5 dB	100 ± 15 Ohm	100 ± 8
100 MHz	19.8 dB/100m	44.3 dB	42.3 dB	24.5 dB	22.5 dB	27.8 dB	24.8 dB	21 dB	100 ± 15 Ohm	
155 MHz	25.1 dB/100m	41.5 dB	39.5 dB	16.3 dB	14.3 dB	23.9 dB	20.9 dB	21 dB	100 ± 15 Ohm	
200 MHz	29 dB/100m	39.9 dB	37.9 dB	10.8 dB	10 dB	21.7 dB	18.7 dB	21 dB	100 ± 15 Ohm	
250 MHz	32.8 dB/100m	38.3 dB	36.3 dB	5.5 dB	3.5 dB	19.8 dB	16.8 dB	18 dB	100 ± 20 Ohm	
300 MHz	35.2 dB/100m	37.2 dB	34.2 dB	0.7 dB	0 dB	18.2 dB	15.2 dB	18 dB	100 ± 20 Ohm	
310 MHz	37.1 dB/100m	36.9 dB	34.9 dB	0 dB		17.9 dB	14.9 dB	18 dB	100 ± 20 Ohm	
350 MHz	39.8 dB/100m	36.2 dB	34.2 dB			16.9 dB	13.9 dB	17 dB	100 ± 22 Ohm	
400 MHz	43 dB/100m	35.3 dB	33.3 dB			15.7 dB	12.7 dB	14 dB	100 ± 32 Ohm	
500 MHz	49 dB/100m	33.8 dB	31.8 dB			13.8 dB	10.8 dB	14 dB	100 ± 32 Ohm	

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temperature Range:	-10°C To +75°C
UL Temp Rating:	75°C
Operating Temperature Range:	-25°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	59 lbs/1000ft
Max. Pull Tension:	50 lbs
Min. Bend Radius During Installation:	4.75 in
Min. Bend Radius/Minor Axis:	0.1 in

Standards

NEC Articles:	Article 800
NEC/(UL) Compliance:	CMR
CEC/C(UL) Compliance:	CMR
ISO/IEC Compliance:	ISO/IEC 11801 Cat 6
CPR Euroclass:	Eca
Data Category:	Category 6
TIA/EIA Compliance:	TIA/EIA-568B.2 Cat 6

Applicable Environmental and Other Programs

Environmental Space:	Indoor - Riser
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/EC (BFR):	Yes
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 Directive Compliance:	EU Directive 2003/11/EC (BFR)
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Indoor:	Yes
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Flammability, LS0H, Toxicity Testing

CSA/C(UL) Flammability:	FT4
UL Flammability:	UL1666 Riser
IEC Flammability:	IEC 60332-1-2
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length	UPC
11872A 0101000	Black	Reel	1,000 ft	612825107989
11872A 0081000	Gray	Reel	1,000 ft	612825107972

Footnote:	C - CRATE REEL PUT-UP.
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Product Notes

Notes:	US Patent #'s 5, 606, 151; 5, 734, 126; 5, 821, 467 **Values above 350 MHz are information only
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History

Update and Revision:	Revision Number: 0.559 Revision Date: 04-29-2024
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