

**Part Number:** 72001E

DataTuff® Industrial Ethernet Cat 5e Permanent Installation Cable



## Product Description

DataTuff Industrial ETHERNET Cat 5e 2 Pair, 24 AWG, Overall Foil + 80% Braid, PVC Outer Jacket, UL AWG 2464

## Technical Specifications

### Product Overview

Environmental Space:	Indoor - Euroclass Eca
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### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	No. of Pairs
24	Solid	BC - Bare Copper	2

Conductor Count:	8
Total Number of Pairs:	4
Conductor Size:	24 AWG

#### Insulation

Material	Nominal Diameter	Diameter +/- Tolerance
PP - Polypropylene	1.1 mm	0.05 mm

Bonded-Pair:	No
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#### Color Chart

Number	Color
Pair 1	White/Blue & Blue
Pair 2	White/Orange & Orange

#### Outer Shield Material

Type	Material	Min. Coverage [%]
Tape	Aluminum/Polyester	
Braid	TC - Tinned Copper	80 %

Outer Shield Table Note:	Aluminum outside
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#### Outer Jacket Material

Material	Color	Nominal Diameter	Diameter +/- Tolerance	Min. Wall Thickness	Nominal Wall Thickness
PVC - Polyvinyl Chloride	Black	6 mm	0.3 mm	0.8 mm	0.8 mm

### Construction and Dimensions

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %

#### Cabling

Description	Filler
2 pairs and 2 fillers twisted to cable core covered with a polyester foil	Polypropylene (2x)

Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	12.5 MPa

## Electrical Characteristics

### Conductor DCR

Max. Conductor DCR	Max. Conductor Loop	Max. DCR Unbalanced Within Pair [%]
93.8 Ohm/km	19 Ohm/1000ft	2 %

### Capacitance

Max. Capacitance Unbalance	Max. Mutual Capacitance
1.6 pF/m	56 pF/m

### Impedance

Nominal Characteristic Impedance	Nominal Characteristic Tolerance	Nominal Input Impedance
100 Ohm	5 Ohm	100 +/- 15 Ohm

### Delay

Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
40 ns/100m	60 %

### High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. RL (Return Loss) [dB]
0.772 MHz		67 dB		19.4 dB
1 MHz	3.2 dB/100m	65.3 dB	63.8 dB	20 dB
4 MHz	6 dB/100m	56.3 dB	51.8 dB	23 dB
10 MHz	9.5 dB/100m	50.3 dB	43.8 dB	25 dB
16 MHz	12.1 dB/100m	47.2 dB	39.7 dB	25 dB
20 MHz	13.6 dB/100m	45.8 dB	37.8 dB	25 dB
25 MHz	15.3 dB/100m	44.3 dB	35.8 dB	24.3 dB
31.25 MHz	17.1 dB/100m	42.9 dB	33.9 dB	23.6 dB
62.5 MHz	24.8 dB/100m	38.3 dB	27.9 dB	21.5 dB
100 MHz	32 dB/100m	35.3 dB	23.8 dB	20.1 dB

### Current

Element	Max. Recommended Current [A]
Conductor	1.4 A

### Voltage

Voltage Rating [V]
450 V DC and 300 V AC

## Temperature Range

Installation Temp Range:	-5°C To +50°C
Operating Temp Range:	-40°C To +80°C

## Mechanical Characteristics

Oil Resistance:	IEC 60811-2-1
Max Recommended Pulling Tension:	80 N
Min Bend Radius (W/o Pulling Strength):	60 mm
Min Setting Radius:	30 mm

## Standards

ISO/IEC Compliance:	ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011 and ISO/IEC 24702
CPR Euroclass:	Eca
CENELEC Compliance:	EN 50173-1 Ed. 3:2011
Data Category:	Category 5e
ANSI Compliance:	ANSI/TIA 568.2-D (2018)

## Applicable Environmental and Other Programs

EU RoHS Compliance Date (yyyy-mm-dd):	2015-12-18
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## Flammability, LS0H, Toxicity Testing

ISO/IEC Flammability:	IEC 60332-1-2
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### Variants

Item #	Color	Length
72001E.013000	Black	3,000 m
72001E.01305	Black	305 m
72001E.01500	Black	500 m
72001E.01B100	Black	100 m
72001E.00500	Black	500 m
72001E.00B100	Black	100 m

Patent: <https://www.belden.com/resources/patents>

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