

**Part Number:** 74004E

DataTuff® Industrial Ethernet Cat 7 Permanent Installation Cable



**Product Description**

DataTuff Industrial ETHERNET, Cat 7 4 Pair, 10 Gb/s, AWG 23(1), Solid, Foil + 80% Braid, PVC Jacket, UL AWM 20276

**Technical Specifications**

**Product Overview**

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

**Conductor**

AWG	Stranding	Material	No. of Pairs
23	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

**Insulation**

Material	Nominal Diameter	Diameter +/- Tolerance
FPE - Foamed Polyethylene	1.45 mm	0.05 mm

Bonded-Pair:	No
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**Color Chart**

Number	Color
Pair 1	White & Blue
Pair 2	White & Orange
Pair 3	White & Green
Pair 4	White & Brown

**Inner Shield Material**

Type	Material
Tape	Aluminum / Polyester

InnerShield, Table Note:	Aluminum outside
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**Outer Shield Material**

Type	Material	Min. Coverage [%]
Braid	TC - Tinned Copper	65 %

**Outer Jacket Material**

Material	Nominal Diameter	Diameter +/- Tolerance
PVC (UV stabilised and oil resistant)	8 mm	0.3 mm

**Construction and Dimensions**

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

**Cabling**

Description
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4 pairs twisted to cable core

Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	12 MPa

## Electrical Characteristics

### Conductor DCR

Max. Conductor DCR	Max. DCR Unbalanced Within Pair [%]
75 Ohm/km	2 %

### Capacitance

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

### Impedance

Frequency [MHz]	Nominal Characteristic Impedance	Nominal Characteristic Tolerance	Nominal Input Impedance
4 - 100	100 Ohm	5 Ohm	100 +/- 15 Ohm
100 - 250	100 Ohm	22 Ohm	
250 - 600	100 Ohm	25 Ohm	

### Delay

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

Coupling Attenuation Class:	Type Ib
Segregation class according EN50174-2:	c

### Transfer Impedance

Frequency [MHz]	Transfer Impedance
1 Mhz	Max. 5 mOhm/m
10 Mhz	Max. 5 mOhm/m
30 Mhz	Max. 30 mOhm/m
100 Mhz	100 mOhm/m

### Current

Element	Max. Recommended Current [A]
Conductor	1.4 A

### Voltage

Voltage Rating [V]
30 V AC

## Temperature Range

Installation Temp Range:	-15°C To +60°C
Storage Temp Range:	-40°C To +80°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):	80 mm
Min Setting Radius:	40 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 7
ANSI Compliance:	ANSI/TIA 568.2-D (2018)
IEEE Specification:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4

## Applicable Environmental and Other Programs

EU RoHS Compliance Date (yyyy-mm-dd): 2016-01-22

## Flammability, LSOH, Toxicity Testing

ISO/IEC Flammability: IEC 60332-1-2

## Part Number

### Variants

Item #	Color	Length
74004E.01305	Black	305 m
74004E.01500	Black	500 m
74004E.01B100	Black	100 m
74004E.00305	Black	305 m
74004E.00500	Black	500 m
74004E.00B100	Black	100 m

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

## History

Update and Revision: Revision Number: 0.182 Revision Date: 09-02-2019

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