

**Part Number: 74005PU**

DataTuff® Industrial Ethernet Cat 7 Moderate Flexing Cable



### Product Description

DataTuff Industrial Ethernet Cat 7 4 Pair, 10 Gb/s, AWG 26(7), Foil + 65% Braid, PUR No Halogen Jacket, UL AWM 21292

### Technical Specifications

#### Physical Characteristics (Overall)

##### Conductor

AWG	Stranding	Material	Construction n x D	No. of Pairs
26	Stranded	BC - Bare Copper	7x0.16 mm	4

Conductor Count:	8
Total Number of Pairs:	4

##### Insulation

Material	Nominal Diameter	Diameter +/- Tolerance
FPE - Foamed Polyethylene	1.05 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
Pair 3	White/Green & Green
Pair 4	White/Brown & 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	Nominal Wall Thickness
PUR (Halogenfree and flame-retardant)	6.8 mm	0.3 mm	0.5 mm

#### Construction and Dimensions

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %
Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	15 MPa

#### Electrical Characteristics

##### Conductor DCR

Max. Conductor DCR	Max. DCR Unbalanced Within Pair [%]
145 Ohm/km	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	70 %

#### High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]
1 MHz	2.7 dB/100m	80 dB	77 dB			
4 MHz	5.5 dB/100m	80 dB	77 dB	58 dB	55 dB	23 dB
10 MHz	8.5 dB/100m	80 dB	77 dB	50 dB	47 dB	25 dB
16 MHz	10.8 dB/100m	80 dB	77 dB	46 dB	43 dB	25 dB
20 MHz	12.1 dB/100m	80 dB	77 dB	44 dB	41 dB	25 dB
31.25 MHz	15.2 dB/100m	80 dB	77 dB	40 dB	37 dB	23.6 dB
62.5 MHz	27.8 dB/100m	75.1 dB	72.1 dB	34 dB	31 dB	21.5 dB
100 MHz	27.8 dB/100m	72.4 dB	69.4 dB	30 dB	27 dB	20.1 dB
200 MHz	40.1 dB/100m	67.9 dB	64.9 dB	24 dB	21 dB	18 dB
300 MHz	50 dB/100m	65.3 dB	62.3 dB	20 dB	17 dB	17.3 dB
600 MHz	73.3 dB/100m	60.8 dB	57.8 dB	14 dB	11 dB	17.3 dB

#### Transfer Impedance

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

#### Current

Element	Max. Recommended Current [A]
Conductor	1 A

#### Voltage

Voltage Rating [V]
450 V DC and 300 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):	65 mm
Min Setting Radius:	30 mm

#### Standards

ISO/IEC Compliance:	ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011
CENELEC Compliance:	EN 50173-1 Ed. 3:2011
Data Category:	Category 7
ANSI Compliance:	ANSI/TIA 568.2-D (2018)

#### Applicable Environmental and Other Programs

Environmental Space:	Indoor
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-01

## Flammability, LS0H, Toxicity Testing

CSA Flammability:	FT2
Amount of Halogen acc. to IEC 60754-1 & EN50267-1:	Zero

## Part Number

### Variants

Item #	Color	Length
74005PU.K0500	Black	500 m
74005PU.02305	Black	305 m
74005PU.02500	Black	500 m
74005PU.02B100	Black	100 m
74005PU.01500	Blue, Water	500 m

Patent:	<a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a>
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## History

Update and Revision:	Revision Number: 0.169 Revision Date: 09-02-2019
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