Part Number: 74005NH

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, No Halogen Jacket, UL AWM 20851

Technical Specifications

Product Overview

Environmental Space:	Indoor
Environmental Space:	Euroclass Eca

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
Conductor Size:	26 AWG

Insulation

Material	Nominal Diameter	Diameter +/- Tolerance
FPE - Foamed Polyethylene	1.05 mm	0.05 mm

Bonded-Pair:	No

Color Chart

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

Inner Shield Material

Type	Material
Tape	Aluminum / Polyester

InnerShield, Table Note:	Aluminum outside

Outer Shield Material

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

Outer Jacket Material

Material	Color	Nominal Diameter	Diameter +/- Tolerance	Nominal Wall Thickness
LSZH / FRNC (UV stabilised and oil resistant)	Black	6.8 mm	0.3 mm	0.5 mm

Construction and Dimensions

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

Cabling

Description
4 pairs twisted to cable core

Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	9 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	80 dB	77 dB	23 dB
10 MHz	8.5 dB/100m	80 dB	77 dB	74 dB	71 dB	25 dB
16 MHz	10.8 dB/100m	80 dB	77 dB	69.9 dB	66.9 dB	25 dB
20 MHz	12.1 dB/100m	80 dB	77 dB	68 dB	65 dB	25 dB
31.25 MHz	15.2 dB/100m	80 dB	77 dB	64.1 dB	61.1 dB	23.6 dB
62.5 MHz	27.8 dB/100m	75.1 dB	72.1 dB	58.1 dB	55.1 dB	21.5 dB
100 MHz	27.8 dB/100m	72.4 dB	69.4 dB	54 dB	51 dB	20.1 dB
200 MHz	40.1 dB/100m	67.9 dB	64.9 dB	48 dB	45 dB	18 dB
300 MHz	50 dB/100m	65.3 dB	62.3 dB	44.5 dB	41.5 dB	17.3 dB
600 MHz	73.3 dB/100m	60.8 dB	57.8 dB	38.4 dB	35.4 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

CPR Euroclass:	Eca
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

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

Flammability, LS0H, Toxicity Testing

ISO/IEC Flammability:	IEC 60332-1-2
Amount of Halogen acc. to IEC 60754-1 & EN50267-1:	Zero

Part Number

Variants

Item #	Color	Length
74005NH.07500	Black	500 m
74005NH.00500	Black	500 m
74005NH.11500	Blue	500 m
74005NH.01500	Blue	500 m
74005NH.10500	Gray	500 m
74005NH.03500	Gray	500 m
74005NH.08500	Green	500 m
74005NH.04500	Green	500 m
74005NH.09500	Orange	500 m
74005NH.05500	Orange	500 m
74005NH.13500	Red	500 m
74005NH.06500	Red	500 m
74005NH.12500	Yellow	500 m
74005NH.02500	Yellow	500 m

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

History

Update and Revision:	Revision Number: 0.179 Revision Date: 05-23-2019