BELDEN
SENDING ALL THE RIGHT SIGNALS

Part Number: 74002NH

DataTuff® Industrial Ethernet Cat 5e Moderate Flexing Cable

Product Description

DataTuff Industrial ETHERNET, CAT 5E 4P, 1 Gb/s, AWG 26(7), Stranded, Foil + 80% Braid, No Halogen Jacket, UL AWM 21286

Technical Specifications

Product Overview

Environmental Space:	Indoor - 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
PP - Polypropylene	0.98 mm	0.05 mm

Bonded-Pair:	No

Color Chart

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

Outer Shield Material

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

Outer Shield Table Note:	Aluminum outside

Outer Jacket Material

Material	Color	Nominal Diameter	Diameter +/- Tolerance
LSZH / FRNC (UV stabilised and oil resistant)	Black	6.5 mm	0.3 mm

Construction and Dimensions

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

Cabling

Description
4 pairs twisted to cable core covered with a polyester foil

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 Ohm

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. PSNEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]
0.772 MHz		67 dB	64 dB			19.4 dB
1 MHz	3.2 dB/100m	65.3 dB	62.3 dB	63.8 dB	60.8 dB	20 dB
4 MHz	6 dB/100m	56.3 dB	53.3 dB	51.8 dB	48.8 dB	23 dB
10 MHz	9.5 dB/100m	50.3 dB	47.3 dB	43.8 dB	40.8 dB	25 dB
16 MHz	12.1 dB/100m	47.2 dB	44.2 dB	39.7 dB	36.7 dB	25 dB
20 MHz	13.6 dB/100m	45.8 dB	42.8 dB	37.8 dB	34.8 dB	25 dB
25 MHz	15.3 dB/100m	44.3 dB	41.3 dB	35.8 dB	32.8 dB	24.3 dB
31.25 MHz	17.1 dB/100m	42.9 dB	39.9 dB	33.9 dB	40.9 dB	23.6 dB
62.5 MHz	24.8 dB/100m	38.3 dB	35.4 dB	27.9 dB	24.9 dB	21.5 dB
100 MHz	32 dB/100m	35.3 dB	32.3 dB	23.8 dB	20.8 dB	20.1 dB

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
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):	70 mm
Min Setting Radius:	35 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/EIA 568-C.2 (2009)

Applicable Environmental and Other Programs

EU RoHS Compliance Date (yyyy-mm-dd):	2015-06-26

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
74002NH.02305	Black
74002NH.02500	Black
74002NH.02B100	Black
74002NH.01500	Gray

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

History

Revision Number:	2