



**Part Number: 70006NH**

**DataTuff® PROFINET Cat 5e Type A - Permanent Installation Cable**

## Product Description

DataTuff PROFINET Type A, Cat 5e, 100Mb/s, Quad, AWG 22(1), Solid, Foil+ 85% Braid, No Halogen Jacket, UL AWG 21286

## Technical Specifications

### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Conductors
22	Solid	BC - Bare Copper	0.65 mm	4

Conductor Count:	4
Total Number of Pairs:	1 Quad (2)

#### Insulation

Material	Nominal Diameter	Diameter +/- Tolerance
Polyethylene	1.5 mm	0.05 mm

Bonded-Pair:	No
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#### Color Chart

Number	Color
Quad 1	White & Blue & Yellow & Orange

#### Inner Jacket Material

Material	Nominal Diameter
FRNC / LSZH Bedding	3.9 mm

#### Outer Shield Material

Type	Material	Thickness of Foil	Min. Coverage [%]
Tape	Aluminum/Polyester	50 µm	
Braid	TC - Tinned Copper		85 %

#### Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance
LSZH / FRNC (UV stabilised and oil resistant)	6.5 mm	0.2 mm

### Electrical Characteristics

#### Conductor DCR

Max. Conductor DCR
57.1 Ohm/km

#### Impedance

Frequency [MHz]	Nominal Characteristic Impedance	Nominal Characteristic Tolerance
1 - 100	100 Ohm	15 Ohm

#### Delay

Max. Delay	Nominal Velocity of Propagation (VP) [%]

530 ns/100m 68 %

#### High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. SRL (Structural Return Loss)
1 MHz	2.1 dB/100m	65.3 dB	64 dB	
4 MHz	4.1 dB/100m	56.3 dB	52 dB	23 dB
10 MHz	6.5 dB/100m	50.3 dB	44 dB	25 dB
16 MHz	8.3 dB/100m	47.2 dB	40 dB	25 dB
31.25 MHz	11.7 dB/100m	42.9 dB	34 dB	23.6 dB
62.5 MHz	17 dB/100m	38.4 dB	28 dB	21.5 dB
100 MHz	22 dB/100m	35.3 dB	24 dB	20.1 dB

High Freq Table Note: Reference standard: ISO/IEC 11801 ed 2.0, Cat 5e

General Electrical Parameters Notes: Reference standard: ISO/IEC 11801 ed 2.0, Cat 5e

#### Transfer Impedance

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

#### Voltage

Voltage Rating [V]
300 V

#### Temperature Range

Installation Temp Range:	-5°C To +50°C
Storage Temp Range:	-40°C to +70°C
Operating Temp Range:	-40°C To +70°C

#### Mechanical Characteristics

Oil Resistance:	IEC 60811-2-1
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#### Standards

ISO/IEC Compliance:	ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011
CPR Euroclass:	Eca
Data Category:	Category 5e

#### Applicable Environmental and Other Programs

Environmental Space:	Indoor - Euroclass Eca
EU RoHS Compliance Date (yyyy-mm-dd):	2014-10-21

#### 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
70006NH.011000	Green	1,000 m
70006NH.01305	Green	305 m
70006NH.01500	Green	500 m
70006NH.01B100	Green	100 m

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

#### History

Update and Revision:	Revision Number: 0.171 Revision Date: 09-17-2019
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