



**Product:** [70007NH](#) 

DataTuff® 5E, 1Q #22 Str TC, PO ins, F/B, LSNH Jkt, PROFINET Type B

## Product Description

DataTuff® 5E, 1 Quad AWG 22 Tinned Copper - Stranded, Polyolefin (PO, PE, PP) insulation, Foil + Braid(s) shielding, LSZH / FRNC jacket , PROFINET Type B

## Technical Specifications

### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	Construction n x D	No. of Conductors
22	Stranded	TC - Tinned Copper	7x0.25 mm	4

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

#### Insulation

Material	Nominal Diameter	Diameter +/- Tolerance
PO - Polyolefin	1.55 mm	0.05 mm

Bonded-Pair:	No
--------------	----

#### Color Chart

Number	Color
Quad 1	White & Blue & Yellow & Orange

#### Inner Jacket Material

Material	Nominal Diameter
FRNC / LSZH Bedding	4.1 mm

#### Outer Shield Material

Type	Material	Thickness of Foil	Min. Coverage [%]
Tape	Aluminum/Polyester	50 / 23 µm	
Braid	TC - Tinned Copper		85 %

#### Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance
LSZH / FRNC	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	43 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:	-25°C To +70°C

Mechanical Characteristics

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

Standards

ISO/IEC Compliance:	ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011
CPR Euroclass:	Eca
CENELEC Compliance:	EN 50173-1 Ed. 3:2012
Data Category:	Category 5e

Applicable Environmental and Other Programs

Environmental Space:	Indoor - Euroclass Eca
EU RoHS Compliance Date (yyyy-mm-dd):	2014-09-26

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	Length
70007NH.K0305	Green	305 m
70007NH.K0500	Green	500 m
70007NH.011000	Green	1,000 m
70007NH.01305	Green	305 m
70007NH.01500	Green	500 m
70007NH.01B100	Green	100 m

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

History

Update and Revision:	Revision Number: 0.194 Revision Date: 01-31-2020
----------------------	--

© 2020 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.