



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, SF/UTP - Overall Braid + Foil shielding, LSZH / FRNC jacket , PROFINET Type B

Technical Specifications

Product Overview

Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/resources/patents .
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Construction n x D	No. of Quads
22	Stranded	TC - Tinned Copper	7x0.25 mm	1

Conductor Count:	4
Total Number of Pairs:	2

Insulation

Material	Nominal Diameter	Diameter +/- Tolerance
PO - Polyolefin	1.55 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
LSZH - Low Smoke Zero Halogen (Flame Retardant)	4.1 mm

Table Notes:	Bedding
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Outer Shield Material

Type	Material	Thickness of Foil	Min. Coverage [%]
Tape	Bi-Laminate (Alum+Poly)	50 / 23 µm	
Braid	Tinned Copper (TC)		85%

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance
LSZH - Low Smoke Zero Halogen (Flame Retardant)	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

Table Notes:	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
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Standards

IEC Compliance:	ISO/IEC 11801-1
CPR Euroclass:	Eca
CENELEC Compliance:	EN 50173-1
Data Category:	Category 5e

Applicable Environmental and Other Programs

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

Suitability

Suitability - Oil Resistance:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

IEC Flammability:	IEC 60332-1-2
IEC 60754-1 (EN50267-1)- Halogen Amount:	Zero
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Max. Conductivity:	2.5 µS/mm
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Min. pH:	4.3

Part Number

Variants

Item #	Color	Putup Type	Length	EAN
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70007NH.01B100	Green	Flat Box	100 m	8719605009388
70007NH.01305	Green	Reel	305 m	8719605009364
70007NH.01500	Green	Reel	500 m	8719605009371
70007NH.011000	Green	Reel	1,000 m	8719605009357

History

Update and Revision:

Revision Number: 0.228 Revision Date: 12-18-2020

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