



Part Number: 70009PU

DataTuff® PROFINET Cat 5e Type C - Continuous Flexing Cable, Torsion

Product Description

PROFINET Category 5e, 2 Pair (Quad), AWG 22 (19), Torsion, Overall Foil+ 85% Braid, PUR No Halogen Outer Jacket

Technical Specifications

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Construction n x D	No. of Conductors
22	Stranded	TC - Tinned Copper	19x0.15 mm	4

Conductor Count:	4
Total Number of Pairs:	2

Insulation

Material	Nominal Diameter	Diameter +/- Tolerance
PP - Polypropylene	1.55 mm	0.1 mm

Bonded-Pair:	No
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Color Chart

Number	Color
Quad 1	White & Blue & Yellow & Orange

Inner Jacket Material

Material	Nominal Diameter
TPE Bedding	4.3 mm

Outer Shield Material

Type	Material	Coverage [%]	Min. Coverage [%]
Tape	Aluminum/Polyester	100 %	
Braid	TC - Tinned Copper		85 %

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance	Separator Material
PUR (Halogenfree, weld-splatter resistant and non-crosslinked)	6.5 mm	0.2 mm	Non-woven foil

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) [%]
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530 ns/100m	68 %
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High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. SRL (Structural Return Loss)
1 MHz	2.1 dB/100m	65 dB	62 dB	64 dB	61 dB	
4 MHz	4 dB/100m	56 dB	53 dB	52 dB	49 dB	23 dB
10 MHz	6.3 dB/100m	50 dB	47 dB	44 dB	41 dB	25 dB
16 MHz	8 dB/100m	47 dB	44 dB	40 dB	37 dB	25 dB
31.25 MHz	11.4 dB/100m	43 dB	40 dB	34 dB	31 dB	23.6 dB
62.5 MHz	16.5 dB/100m	38 dB	35 dB	28 dB	25 dB	21.5 dB
100 MHz	21.3 dB/100m	35 dB	32 dB	24 dB	21 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 +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
Torsion Test: Min Number of Torsions:	2000000
Torsion Test: Description:	+/- 180° ,12x/min over 1mtr
Min Bend Radius (W/o Pulling Strength):	30 mm
Min No. of Drag Chain Cycles:	2000000
Drag Chain Parameters:	a= 3m/s2 v= 3 m/s and r= 60 mm

Standards

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

Applicable Environmental and Other Programs

Environmental Space:	Indoor
EU RoHS Compliance Date (yyyy-mm-dd):	2012-03-06

Flammability, LS0H, Toxicity Testing

CSA Flammability:	FT2
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Part Number

Variants

Item #	Color	Length
70009PU.01500	Green	500 m

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

Update and Revision:	Revision Number: 0.169 Revision Date: 09-17-2019
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