



Part Number: 74011PU

DataTuff® PROFINET Cat 6A Type B PUR No Halogen

Product Description

DataTuff PROFINET Type B, Cat 6A, 10 Gb/s, AWG 23(7), Stranded, Foil+ 85% Braid, No Halogen PUR Jacket, UL AWM 21292

Technical Specifications

Product Overview

Environmental Space:	Indoor - Euroclass Fca
Suitable Applications:	Profinet CAT6A

Physical Characteristics (Overall)

Conductor

Element	AWG	Stranding	Material	No. of Pairs
Individual shielded pair	23	Stranded	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4
Conductor Size:	23 AWG

Insulation

Element	Type	Material	Nominal Diameter
Individual shielded pair	Dielectric	FPE - Foamed Polyethylene	1.58 mm

Bonded-Pair:	No
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Color Chart

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

Inner Shield Material

Element	Type	Material	Coverage [%]
Individual shielded pair	Tape	Aluminum / Polyester	100 %

InnerShield, Table Note:	Aluminum outside
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Outer Shield Material

Type	Material	Min. Coverage [%]
Braid	TC - Tinned Copper	85 %

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance
TPU	8.7 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	
Min Elongation at Breakof Jacket:	300 %

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max DCR Unbalanced Between Pairs [%]	Max. DCR Unbalanced Within Pair [%]
71.9 Ohm/km	4 %	2 %

Capacitance

Max. Capacitance Unbalance	Max. Mutual Capacitance
1.6 pF/m	56 pF/m

Impedance

Nominal Characteristic Impedance
100 Ohm

High Frequency (Nominal/Typical)

Frequency [MHz]	Nom. Insertion Loss	Nom. NEXT [dB]	Nom. PSNEXT [dB]	Nom. ACR [dB]	Nom. PSACR [dB]	Nom. ACRF (ELFEXT) [dB]	Nom. PSACRF (PSELFEXT) [dB]
1 MHz	2.1 dB/100m	103 dB	100 dB	101 dB	98 dB	95 dB	92 dB
4 MHz	3.8 dB/100m	100 dB	97 dB	97 dB	94 dB	94 dB	91 dB
10 MHz	5.9 dB/100m	98 dB	95 dB	92 dB	89 dB	93 dB	92 dB
16 MHz	7.5 dB/100m	97 dB	94 dB	90 dB	87 dB	91 dB	88 dB
31.2 MHz	10.5 dB/100m	95 dB	92 dB	85 dB	82 dB	90 dB	87 dB
62.5 MHz	15 dB/100m	94 dB	91 dB	80 dB	77 dB	87 dB	84 dB
100 MHz	19.1 dB/100m	93 dB	90 dB	75 dB	72 dB	85 dB	82 dB
125 MHz	21.5 dB/100m	92 dB	89 dB	72 dB	69 dB	83 dB	80 dB
200 MHz	27.6 dB/100m	91 dB	88 dB	65 dB	64 dB	77 dB	74 dB
250 MHz	31.1 dB/100m	90 dB	87 dB	61 dB	58 dB	74 dB	71 dB
300 MHz	34.3 dB/100m	90 dB	87 dB	58 dB	55 dB	74 dB	71 dB
600 MHz	50.3 dB/100m	86 dB	86 dB	42 dB	39 dB	60 dB	57 dB

Delay

Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
25 ns/100m	78 %

High Freq

Min. NEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. ELTCTL [dB]
75.3 dB	73.2 dB	70.2 dB	68 dB	35 dB
66.3 dB	62.5 dB	59.5 dB	56 dB	23 dB
60.3 dB	54.4 dB	51.4 dB	48 dB	15 dB
57.2 dB	49.8 dB	46.8 dB	43.9 dB	10.9 dB
52.9 dB	42.4 dB	39.4 dB	38.1 dB	5.1 dB
48.4 dB	33.4 dB	30.4 dB	32.1 dB	
45.3 dB	26.6 dB	23.2 dB	28.0 dB	
43.8 dB	22.3 dB	19.3 dB	26.1 dB	
40.8 dB	13.2 dB	10.2 dB	22.0 dB	
39.3 dB	8.3 dB	5.3 dB	20.0 dB	
38.1 dB	3.9 dB	0.9 dB	18.5 dB	
34.8 dB			14.0 dB	

High Freq Table Note:	Limits below 4MHz are for information only
Coupling Attenuation Class:	Type I

Transfer Impedance

Description
Grade 1

Current

Max. Recommended Current [A]
1.5 A

Voltage

Voltage Rating [V]
30 V AC

Temperature Range

Storage Temp Range:	-40°C To +80°C
Operating Temp Range:	-40°C To +80°C

Mechanical Characteristics

Oil Resistance:	IEC 60811-404
Min Bend Radius During Installation:	90 mm
Min Bend Radius During Operation:	45 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 6A

Applicable Environmental and Other Programs

EU RoHS Compliance Date (yyyy-mm-dd):	2017-04-12
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Flammability, LS0H, Toxicity Testing

Other Flammability:	UL Horizontal flame
Amount of Halogen acc. to IEC 60754-1 & EN50267-1:	Zero

Part Number

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