


**Product:** [72001PU](#) 

DataTuff® 5E, 2PR #24 Sol BC, PO ins, SF/UTP, PUR HF jkt, AWM 20549



## Product Description

DataTuff® 5E, 2 Pair AWG 24 Bare Copper - Solid, Polyolefin (PO, PE, PP) insulation, SF/UTP - Overall Braid + Foil shielding, PUR Halogen Free jacket, AWM 20549

## Technical Specifications

### Product Overview

Suitable Applications:	harsh environment, IIoT, factory or process automation, video, audio, data communication, etc. Not rodent protected.
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### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	No. of Pairs
24	Solid	BC - Bare Copper	2

Conductor Count:	4
Total Number of Pairs:	4

#### Insulation

Material	Nominal Diameter	Diameter +/- Tolerance
PO - Polyolefin	1.1 mm	0.05 mm

Bonded-Pair:	No
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#### Color Chart

Number	Color
Pair 1	White/Blue & Blue
Pair 2	White/Orange & Orange

#### Outer Shield Material

Type	Material	Min. Coverage [%]
Tape	Bi-Laminate (Alum+Poly)	
Braid	Tinned Copper (TC)	80%

Table Notes:	Aluminum outside
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#### Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance	Min. Wall Thickness
PUR - Polyurethane (Halogen Free)	6 mm	0.3 mm	0.8 mm

Table Notes:	Flame Retardant Sheath
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### Construction and Dimensions

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %
Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	10.3 MPa

### Electrical Characteristics

## Conductor DCR

Max. Conductor DCR	Max. Conductor Loop	Max. DCR Unbalanced Within Pair [%]
93.8 Ohm/km	19 Ohm/1000ft	2 %

## Capacitance

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

## Impedance

Nominal Characteristic Impedance	Nominal Characteristic Tolerance	Nominal Input Impedance
100 Ohm	5 Ohm	100 +/- 15 Ohm

## Delay

Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
40 ns/100m	60%

## High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. RL (Return Loss) [dB]
0.772 MHz		67 dB		19.4 dB
1 MHz	3.2 dB/100m	65.3 dB	63.8 dB	20 dB
4 MHz	6 dB/100m	56.3 dB	51.8 dB	23 dB
10 MHz	9.5 dB/100m	50.3 dB	43.8 dB	25 dB
16 MHz	12.1 dB/100m	47.2 dB	39.7 dB	25 dB
20 MHz	13.6 dB/100m	45.8 dB	37.8 dB	25 dB
25 MHz	15.3 dB/100m	44.3 dB	35.8 dB	24.3 dB
31.25 MHz	17.1 dB/100m	42.9 dB	33.9 dB	23.6 dB
62.5 MHz	24.8 dB/100m	38.3 dB	27.9 dB	21.5 dB
100 MHz	32 dB/100m	35.3 dB	23.8 dB	20.1 dB

## Current

Element	Max. Recommended Current [A]
Conductor	1.4 Amps per Conductor

## Voltage

Voltage Rating [V]
450 V DC and 300 V AC

## Temperature Range

Installation Temp Range:	-5°C To +50°C
Operating Temp Range:	-40°C To +80°C

## Mechanical Characteristics

Oil Resistance:	IEC 60811-2-1
Max. Pull Tension:	40 N
Min Bend Radius (W/o Pulling Strength):	60 mm
Min Setting Radius:	30 mm

## Standards

UL AWM Style Compliance:	UL AWM 20549
IEC Compliance:	ISO/IEC 11801-1
CENELEC Compliance:	EN 50173-1
Data Category:	Category 5e
ANSI Compliance:	ANSI/TIA 568.2-D (2018)

## Applicable Environmental and Other Programs

Environmental Space:	Indoor
EU RoHS Compliance Date (yyyy-mm-dd):	2016-01-06

## Suitability

Suitability - Burial:	No
Suitability - Indoor:	Yes

Suitability - Oil Resistance:	Yes
Suitability - Outdoor:	Yes - Black only
Suitability - Sunlight Resistance:	Yes

## Flammability, LSOH, Toxicity Testing

CSA Flammability:	FT2
IEC 60754-1 (EN50267-1)- Halogen Amount:	Zero

## Part Number

### Variants

Item #	Color	Putup Type	Length	EAN
72001PU.01305	Black	Reel	305 m	8719605012784
72001PU.01500	Black	Reel	500 m	8719605012791

## History

Update and Revision:	Revision Number: 0.204 Revision Date: 12-18-2020
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