Product: 72001E

DataTuff® 5E, 2PR #24 Sol BC, PO ins, SF/UTP, PVC jkt, AWM 2464

Product Description

DataTuff® 5E, 2 Pair AWG 24 Bare Copper - Solid, Polyolefin (PO, PE, PP) insulation, SF/UTP - Overall Braid + Foil shielding, PVC jacket , AWM 2464

Technical Specifications

Product Overview

Suitable Applications:	harsh environment, IIoT, factory or process automation, video, audio, data communication, etc. Not rodent protected.

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

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

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance	Min. Wall Thickness	Nominal Wall Thickness
PVC - Polyvinyl Chloride	6 mm	0.3 mm	0.8 mm	0.8 mm

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:	12.5 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:	80 N
Min Bend Radius (W/o Pulling Strength):	60 mm
Min Setting Radius:	30 mm

Standards

UL AWM Style Compliance:	UL AWM 2464
IEC Compliance:	ISO/IEC 11801-1
CPR Euroclass:	Eca
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 - Euroclass Eca
EU RoHS Compliance Date (yyyy-mm-dd):	2015-12-18

Suitability

Suitability - Burial:	No
Suitability - Indoor:	Yes
Suitability - Oil Resistance:	Yes

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

Flammability, LS0H, Toxicity Testing

IEC Flammability:	IEC 60332-1-2

Part Number

Variants

Item #	Color	Putup Type	Length	EAN
72001E.01B100	Black	Flat Box	100 m	8719605012746
72001E.01305	Black	Reel	305 m	8719605012722
72001E.01500	Black	Reel	500 m	8719605012739
72001E.013000	Black	Reel	3,000 m	8719605012715

History

Update and Revision:	Revision Number: 0.205 Revision Date: 12-18-2020