

Product: 74041E

DataTuff Ind SPE 1km10Mb 22AWG STR SF/UTP PVC

Product Description

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Technical Specifications

Product Overview

Suitable Applications:	Long distance sensors in harsh environment at Industrial edge, 1 single pair Ethernet up to 20 MHz

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
22	Stranded	TC - Tinned Copper	1

Conductor Count:	2

Insulation

Material	Nominal Diameter
PE - Polyethylene (Foam)	1.65 mm

Color Chart

Color
White & Blue

Cabling

Filler
Yes

Outer Shield Material

Type	Material	Coverage [%]
Tape	Polyester	100%
Tape	Bi-Laminate (Alum+Poly)	100%
Braid	Tinned Copper (TC)	80%

Outer Jacket Material

Material	Nominal Diameter
PVC - Polyvinyl Chloride	5.10 mm

Construction and Dimensions

Min Elongation at Breakof Conductors:	8 %
Min Elongation at Breakof Insulation:	100 %
Min Elongation at Breakof Jacket:	100 MPa
Min Tensile Strength of Jacket:	10.3 MPa

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max DCR Unbalanced Between Pairs [%]
59.4 Ohm/km at 20°C	2 %

Capacitance

Max. Capacitance Unbalance
1,600 pF/km

Dielectric Strength:	2 kVac/1 min
Insulation Resistance:	5000 MOhm*km

Impedance

Nominal Characteristic Impedance
100 Ohm

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. RL (Return Loss) [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
0.1 MHz	1.5	15 dB	50 dB	55 dB
1 MHz	2.2	20 dB	40 dB	35 dB
4 MHz	3.9	23 dB	31 dB	23 dB
10 MHz	6.1	25 dB	25 dB	15 dB
20 MHz	8.6	25 dB	20.5 dB	9 dB

Voltage

Non-UL Voltage Rating
300 V

Temperature Range

Operating Temp Range:	-30°C To +80°C

Mechanical Characteristics

Max Dielectric Shrinkage:	5 %
Dielectric Shrinkage Description:	Shrinkage of Insualtion (100+/2°CX1hr)/150mm
Cold Bend Test:	No Crack
Hygroscopicity:	Weight increasing not exceed 1% (for 3hrs)
Wicking:	The filter paper shall not wet (for 6 hrs)
IRM 902 Mineral Oil Resistance Test:	At 70C° x 4hr- Tensile Strength: ≥ 60% of Original Elongation at break:≥ 60% of Original
UV Resistance 720h per UL1581:	(300h) Tensile Strength (Mpa) - 85% of original, Elongation at break (%) - 85% of original

Standards

UL AWM Style Compliance:	AWM 2095
CSA AWM Compliance:	AWM I A/B
ISO/IEC Compliance:	IEC 61156-xx, UL 758

Flammability, LS0H, Toxicity Testing

C(UL) Flammability:	FT2

Part Number

Variants

Item #	Color	Put-Up Type	Length
74041E-A500	Black	Reel	500 m

History

Update and Revision:	Revision Number: 0.48 Revision Date: 07-12-2021

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