



Product: [74040NH](#)

DataTuff Ind SPE 1km10Mb 18AWG SO SF/UTP LSZH

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
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
18	Solid	BC - Bare Copper	1

Conductor Count:	2
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Insulation

Material	Nominal Diameter
PE - Polyethylene (Foam)	2.45 mm

Color Chart

Color
White & Blue

Cabling

Filler
1.58 mm

Outer Shield

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

Outer Jacket

Material	Nominal Diameter	Min. Wall Thickness	Nominal Wall Thickness
LSZH - Low Smoke Zero Halogen (Flame Retardant)	6.60 mm	0.38 mm	0.55 mm

Construction and Dimensions

Min Elongation at Breakof Conductors:	8 %
Min Elongation at Breakof Jacket:	100 MPa
Min Tensile Strength of Jacket:	9 MPa

Electrical Characteristics

Conductor DCR

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

Max. Capacitance Unbalance

160 pF/100m

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

Impedance

Nominal Characteristic Impedance

100 Ohm

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. RL (Return Loss) [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
0.1 MHz	1	15 dB	50 dB	55 dB
1 MHz	1.4	20 dB	40 dB	35 dB
4 MHz	2.6	23 dB	31 dB	23 dB
10 MHz	4.1	25 dB	25 dB	15 dB
20 MHz	5.7	25 dB	20.5 dB	9 dB

Voltage

Non-UL Voltage Rating

300 V

Temperature Range

Operating Temperature Range:	-30°C To +80°C
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Mechanical Characteristics

Cold Bend Test:	No Crack
Hygroscopicity:	Weight increasing not exceed 1% (for 3hrs)
Wicking:	The filter paper shall not wet (for 6 hrs)

Standards

UL AWM Style Compliance:	AWM 21307
ISO/IEC Compliance:	IEC 61156-13, UL 758

Flammability, LS0H, Toxicity Testing

CSA/C(UL) Flammability:	FT2
IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity:	10
IEC 60754-2 - Halogen Acid Gas Amount - Min. pH:	4.3
IEC 61034-2 - Smoke Density Min. Transmittance:	60

Related Part Numbers

Variants

Item #	Color	Put-Up Type	Length
74040NH-A500	Black	Reel	500 m
74040NH-A1500	Black	Reel	1,500 m

History

Update and Revision:	Revision Number: 0.56 Revision Date: 12-20-2022
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