



Product: [NH50106UFR](#)

DataTuff™ Industrial Ethernet CAT6 4x2x23AWG/1 U/FTP Fire Resistant Anti-Rodent and Water- block

Product Description

23 AWG solid bare twisted copper conductors, Mica Glass Tape Fire Protection barrier on each conductor, Polyethylene insulation, U/FTP, Fire Reistant, AL-mylar tape Shield with Central Drain Wire, Mica Glass Tape and Water Blocking tape,LSZH Jacket, Anti-Rodent and Water-block

Technical Specifications

Product Overview

Suitable Applications:	Industrial Ethernet Cat 6 connection with Fire Resistant capability
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Construction Details

Conductor

Element	Size	Stranding	Material	No. of Pairs	No. of Elements
Conductor(s)	23	Solid	BC - Bare Copper	4	8

Insulation

Material	Nom. Insulation Diameter	Color Code	Notes
PE - Polyethylene	1.58 mm (0.0622 in)	Blue & White with Blue Strip, Orange & White with Orange Strip, Green & White with Green Strip, Brown & White with Brown Strip	Fire Protection Barrier: Mica glass Tape(MGT), Twist Direction = S, 25% AL-mylar tape(Overlapping)

Inner Shield

Shield Type	Drainwire Type	Notes
Tape	26 AWG (Solid) TC	Fire Protection Barrier: Mica Glass Tape(MGT), Water blocking structure: Water block tape

Inner Jacket

Material
LSZH - Low Smoke Zero Halogen (Flame Retardant)

Outer Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	11.40 mm (0.4488 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Capacitance Unbalance	Nom. Characteristic Impedance
73.2 Ohm/km (22.3 Ohm/1000ft)	330 pF/100m	100 Ohm

Delay

Max. Delay	Max. Delay Skew
536 ns/100m	45 ns/100m

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation) [dB/100m]	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]
1	2.03	74.3	72.3	67.8	64.8	20.0
4	3.78	65.3	63.3	55.8	52.8	23.0
8	5.32	60.8	58.8	49.7	46.7	24.5

10	5.95	59.3	57.3	47.8	44.8	25.0
16	7.55	56.2	54.2	43.7	40.7	25.0
20	8.47	54.8	52.8	41.8	38.8	25.0
25	9.51	53.3	52.8	39.8	36.8	24.32
31.25	10.67	51.9	49.9	37.9	34.9	23.64
62.5	15.38	47.4	45.4	31.9	28.9	21.54
100	19.8	44.3	42.3	27.8	24.8	20.11
200	28.98	39.8	37.8	21.8	18.8	18.0
250	32.85	38.3	36.3	19.8	16.8	17.32

Voltage

UL Voltage Rating
60 V

Mechanical Characteristics

Table Notes:	Temperature range : -40°C To +80°C
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Standards and Compliance

Environmental Suitability:	UV Resistance, Oil Resistance
Flammability / Reaction to Fire:	IEC 60332-1-2, IEC 60332-3-22, IEC 60331-23, BS EN 50200 PH120
TIA/EIA Compliance:	EIA/TIA 568
ISO/IEC Compliance:	IEC 61034-2 - Smoke Density Min Transmittance = 60%
European Halogen Free Standards:	IEC 60754-1 - Halogen Amount = 0.50%, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 10 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3
Other Standard Compliance(s):	BS EN 50289-4-16

History

Update and Revision:	Revision Number: 0.34 Revision Date: 04-29-2024
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