Product: NH50105UU

DataTuff™ Industrial Ethernet CAT5e 4x2x22AWG/1 U/UTP Fire Resistant (PH120)

Product Description

DataTuff™ Industrial Ethernet CAT5e 4x2x22AWG/1 U/UTP Fire Resistant (PH120)

Technical Specifications

Product Overview

Suitable Applications:	This Category 5e Cable is a cable standard for Gigabit Ethernet, capable to continue transmitting data even when being directly attacked by fire.

Construction Details

Conductor

Size	Stranding	Stranding Class	Material	No. of Pairs	No. of Elements
22 AWG	Solid	Class 1	BC - Bare Copper	4	8

Insulation

Material	Nom. Insulation Diameter	Color Code	Notes
PE - Polyethylene	1.03 mm (0.0406 in)	Blue & White with Blue Strips, Orange & White with Orange Strips, Green & White with Green Strips, Brown & White with Brown Strips	Fire Protection Barrier: Mica glass Tape(MGT)

Inner Shield

Notes
All 4 Pairs laid up together over a cross filler & binded by Fire Protection Barrier: Mica Glass Tape(MGT)

Outer Jacket

Material
LSZH - Low Smoke Zero Halogen (Flame Retardant)

Overall Cable Diameter (Nominal):	9.60 mm (0.378 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Nom. Characteristic Impedance
54.3 Ohm/km @ 20 Deg. C	100 Ohm

Delay

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

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. RL (Return Loss) [dB]
1	2.04 dB/70m	65.3	62.3	20
4	4.05 dB/70m	56.3	53.3	23
8	5.77 dB/70m	51.8	48.8	24.5
10	6.47 dB/70m	50.3	47.3	25
16	8.25 dB/70m	47.2	44.2	25

20	9.27 dB/70m	45.8	42.8	25
25	10.42 dB/70m	44.3	41.3	24.3
31.25	11.72 dB/70m	42.9	39.9	23.6
62.5	16.99 dB/70m	38.4	35.4	21.5
100	21.98 dB/70m	35.3	32.3	20.1

Voltage

Voltage Rating
60 V

Mechanical Characteristics

Temperature

Operating
-40°C to + 60°C

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
AWM Compliance:	AWM 21130
Data Category:	Category 5e
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 = 0.5 %, 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

Product Notes

Notes:	• TIA 568 D .2 Cat.5E and ISO/IEC 11801 class D and IEEE 802.3 100Base TX,1000Base T, Circuit integrity performance during a fire of the relevant requirements of IEC 60331 23. • Cable will meet CAT 5e channel requirements up to 80m length or up to 70m permanent length.

History

Update and Revision:	Revision Number: 0.19 Revision Date: 04-29-2024