



Product: [NH50106AUFB](#)

DataTuff™ Industrial Ethernet CAT6A 4x2x23AWG/1 U/FTP SWB Fire Resistant (PH120)

Product Description

DataTuff™ Industrial Ethernet CAT6A 4x2x23AWG/1 U/FTP SWB Fire Resistant (PH120)

Technical Specifications

Product Overview

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

Conductor

Size	Stranding	Stranding Class	Material	No. of Pairs	No. of Elements
23 AWG	Solid	Class 1	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 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

Element	Shield Type	Material	Drainwire Type	Notes
Individual Pair	Tape	Bi-Laminate (Alum+Poly)	26 AWG (Solid) TC	All 4 individually shielded Pairs laid up together & made circular

Inner Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	11.8 mm (0.465 in)

Armor

Armor Type & Material
SWB - Steel Wire Braid Armor

Outer Jacket

Material
LSZH - Low Smoke Zero Halogen (Flame Retardant)

Overall Cable Diameter (Nominal):	15.0 +/- 0.50 mm
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Electrical Characteristics

Electricals

Max. Conductor DCR
73.2 Ohm/km @ 20 Deg. C

Delay

Max. Delay Skew
45 ns/100m

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation) [dB/100m]	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. RL (Return Loss) [dB]
4	3.8	66.3	63.3	23
8	5.4	61.8	58.8	24.5
10	6.0	60.3	57.3	25
16	7.6	57.2	54.2	25
20	8.5	55.8	52.8	25
25	9.6	54.3	51.3	24.3
31.25	10.7	52.9	49.9	23.6
62.5	15.5	48.4	45.4	21.5
100	19.9	45.3	42.3	20.1
200	29.1	40.8	37.8	18
250	33	39.3	36.3	17.3
300	36.6	38.1	35.1	17.3
400	43.2	36.3	33.3	17.3
500	49.2	34.8	31.8	17.3

Voltage

Voltage Rating
60 V

Mechanical Characteristics

Temperature

Operating
-40°C to + 80°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
Data Category:	Category 6A
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
European Directive Compliance:	EU Directive 2011/65/EU (RoHS 2)
APAC Compliance:	China RoHS II (GB/T 26572-2011)
Other Standard Compliance(s):	BS EN 50289-4-16

Product Notes

Notes:	TIA 568 D .2 Cat.6a and ISO/IEC 11801 class D and IEEE 802. 3an 10GBASE-T, Circuit integrity performance during a fire of the relevant requirements of IEC 60331 23
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History

Update and Revision:	Revision Number: 0.11 Revision Date: 10-09-2024
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