



Product: [NH50106ASF](#)

DataTuff™ Industrial Ethernet CAT6A 4x2x23AWG Fire Resistance Small Diameter Cable

Product Description

DataTuff™ Industrial Ethernet CAT6A 4x2x23AWG Fire Resistance Cable

Technical Specifications

Product Overview

Suitable Applications:	For Ethernet Networking, Fire resistance
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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 (Foam)	1.30 mm (0.0512 in)	Blue & White, Orange & White, Green & White, Brown & White	Fire Protection Barrier: Mica glass Tape(MGT)

Inner Shield

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

Outer Shield

Shield Type	Material	Coverage
Braid	Tinned Copper (TC)	70%

Outer Jacket

Material
LSZH - Low Smoke Zero Halogen (Flame Retardant)

Overall Cable Diameter (Nominal): 8.5 mm (0.33 in)

Electrical Characteristics

Electricals

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

Delay

Max. Delay Skew
45 ns/100m

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]
4	5.1 dB/70m	66.3	63.3	56	53	23
10	7.9 dB/100m	60.3	57.3	48	45	25
20	11.1 dB/100m	55.8	52.8	42	39	25
25	12.5 dB/100m	54.3	51.3	40	37	25

31.25	14 dB/100m	52.9	49.9	38.1	35.1	23.3
62.5	19.9 dB/100m	48.4	45.4	32.1	29.1	20.7
100	25.4 dB/100m	45.3	42.3	28	25	19
250	41.3 dB/100m	39.3	36.3	20	17	17.3
300	45.6 dB/100m	38.1	35.1	18.5	15.5	17.3
500	60.2 dB/100m	34.8	31.8	14	11	17.3

Voltage

Voltage Rating
60 V

Mechanical Characteristics

Temperature

Operating
-20°C to + 60°C

Standards and Compliance

Flammability / Reaction to Fire:	IEC 60332-1-2, IEC 60332-3-24, IEC 60332-3-25, 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
Other Standard Compliance(s):	BS EN 50289-4-16

History

Update and Revision:	Revision Number: 0.9 Revision Date: 11-27-2024
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