



Product: [NH50106AUFB](#)

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

Product Description

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

Technical Specifications

Product Overview

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

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
-----------------------------------	------------------

Electrical Characteristics

Electricals

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

Delay

Max. Delay Skew
45 ns/70m

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	3.8 dB/70m	66.3	63.3	56.0	53.0	23.0
10	5.9dB/70m	60.3	57.3	48.0	45.0	25.0
20	8.4 dB/70m	55.8	52.8	42.0	39.0	25.0
25	9.4 dB/70m	54.3	51.3	40.0	37.0	24.3
31.25	10.5 dB/70m	52.9	49.9	38.1	35.1	23.6
62.5	15.0 dB/70m	48.4	45.4	32.1	29.1	21.5
100	19.1 dB/70m	45.3	42.3	28.0	25.0	20.1
250	31.1 dB/70m	39.3	36.3	20.0	17.0	17.3
300	34.3 dB/70m	38.1	35.1	18.5	15.5	17.3
500	45.3dB/70m	34.8	31.8	14.0	11.0	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
Data Category:	Category 6A
TIA/EIA Compliance:	ANSI/TIA 568.2-D
ISO/IEC Compliance:	IEC 61156-5
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)

History

Update and Revision:	Revision Number: 0.23 Revision Date: 07-25-2025
----------------------	---

© 2025 Belden, Inc

All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described here in are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "ASIS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with all applicable environmental programs as listed in the data sheet. The information provided is correct to the best of Belden's knowledge, information and belief at the date of its publication. This information is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. The Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.