BELDEN

Product: [NH50116ASFA](#) ⧉

DataTuff™ Industrial Ethernet CAT6A 4x2x23AWG/1 S/FTP SWA Fire Resistant Anti-termite & Water proof

Product Description

DataTuff™ Industrial Ethernet CAT6A 4x2x23AWG/1 S/FTP SWA Fire Resistant (EN 50200-PH120 & BS 6387 CWZ) Anti-termite & Water proof

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	1.17 mm (0.0461 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	Coverage	Drainwire Type	Notes
Individual Pair	Tape	Bi-Laminate (Alum+Poly)		26 AWG (Solid) TC	All four pairs laid up together, bound by a fire-protection barrier of mica-glass tape (MGT)
Overall	Braid	Tinned Copper (TC)	60%		Water-blocking tape is wrapped over the braid shielding

Inner Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	12.7 mm (0.500 in)

Armor

Armor Type & Material
SWA - Steel Wire Armor

Outer Jacket

Material
LSZH - Low Smoke Zero Halogen (Flame Retardant)

Overall Cable Diameter (Nominal):	16.1 mm (0.634 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/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	3.8dB/70m	66.3	63.3	56.0	53.0	23.0
10	5.9 B/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	45.3 dB/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, BS 6387 CWZ
Resistance to Fire:	EN 50200-PH120
Data Category:	Category 6A
TIA/EIA Compliance:	EIA/TIA 568.2-D
ISO/IEC Compliance:	IEC 61156-5, 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

History

Update and Revision:	Revision Number: 0.27 Revision Date: 07-29-2025