BELDEN

Product: NH50106UFL ⧉

DataTuff™ Industrial Ethernet CAT6 4x2x23AWG/1 U/FTP Fire Resistant (PH120)

Product Description

DataTuff™ Industrial Ethernet CAT6 4x2x23AWG/1 U/FTP Fire Resistant (PH120)

Technical Specifications

Product Overview

Suitable Applications:	This Category 6 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
23	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), Twist Direction = S, 25% AL-mylar tape(Overlapping)

Inner Shield

Shield Type	Material	Drainwire Type	Notes
Tape	Bi-Laminate (Alum+Poly)	26 AWG (Solid) TC	All 4 Pairs laid up together & binded by Fire Protection Barrier: Mica Glass Tape(MGT)

Outer Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	10.80 mm (0.4252 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Nom. Characteristic Impedance
73.2 Ohm/km (22.3 Ohm/1000ft)	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. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]
1	2.03 dB/100m	74.3	72.3	67.8	64.8	20
4	3.78 dB/100m	65.3	63.3	55.8	52.8	23
8	5.32 dB/100m	60.8	58.8	49.7	46.7	24.5
10	5.95 dB/100m	59.3	57.3	47.8	44.8	25
16	7.55 dB/100m	56.2	54.2	43.7	40.7	25
20	8.47 dB/100m	54.8	52.8	41.8	38.8	25

25	9.51 dB/100m	53.3	51.3	39.8	36.8	24.32
31.25	10.67 dB/100m	51.9	49.9	37.9	34.9	23.64
62.5	15.38 dB/100m	47.4	45.4	31.9	28.9	21.54
100	19.8 dB/100m	44.3	42.3	27.8	24.8	20.11
200	28.98 dB/100m	39.8	37.8	21.8	18.8	18
250	32.85 dB/100m	38.3	36.3	19.8	16.8	17.32

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
AWM Compliance:	AWM 21130
TIA/EIA Compliance:	EIA/TIA 568
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:	EN50200 Annex E

History

Update and Revision:	Revision Number: 0.40 Revision Date: 04-29-2024

Part Numbers

Variants

Item #	Color	Putup Type	Length	EAN
NH50106UFL-C305	Blue, Light	Reel	305 m	8719605204660