Product: 7860VNH

DNV GL, Shipboard, Category 6 Cable, 4 Pair bonded, F/UTP, LSZH Indoor CPR Dca

Product Description

DNV GL, Shipboard, Category 6 Premise Horizontal Cable (250MHz), 4-Pair, 23 AWG solid bare copper conductors, F/UTP, Polyethylene insulation, Beldfoil® shield, AWG 26 solid tinned copper drainwire, LSZH jacket

Technical Specifications

Product Overview

Suitable Applications:	Horizontal and building backbone cable; Support current and future Category 6 and 5e applications, such as: 1000Base - T (Gigabit Ethernet), 100 Base - T, 10 Base - T, FDDI, ATM
Patent:	This product has one or more applicable patents. More information on patents can be found at https://www.belden.com/patents.

Construction Details

Conductor

Element	Size	Stranding	Material	No. of Pairs	No. of Elements
Individual Pair	23 AWG	Solid	BC - Bare Copper	4	8

Insulation

Element	Material	Nom. Insulation Diameter	Color Code
Individual Pair	PE - Polyethylene	1.35 mm (0.0531 in)	White/Blue & Blue, White/Green & Green, White/Orange & Orange, White/Brown & Brown

Bonded-Pair:	Yes

Cable Core

Description	Separator
4 pairs twisted together covered with a polyester foil	Center Member (Patented X-Spline®)

Outer Shield

Shield Type	Material	Coverage	Drainwire Type
Tape	Bi-Laminate (Alum+Poly)	100%	26 AWG (Solid) TC

Table Notes:	Aluminum facing outside in contact with drain wire

Outer Jacket

Material	Nom. Diameter
LSZH - Low Smoke Zero Halogen (Flame Retardant)	8.0 mm (0.31 in)

Overall Cable Diameter (Nominal):	8.0 mm (0.31 in)

Electrical Characteristics

Electricals

Max. Conductor DCR	Max. Mutual Capacitance	Max. Capacitance Unbalance	Nom. Characteristic Impedance
95 Ohm/km	56 pF/m (17 pF/ft)	160 pF/100m	100 Ohm

Delay

Max. Delay Skew	Nom. Velocity of Prop.
40 ns/100m	68%

High Frequency

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Min. TCL [dB]	Min. ELTCTL [dB]
1	2.1 dB/100m	75.3	72.3	73.2	70.2	70	67	20	40	35
4	3.8 dB/100m	66.3	63.3	62.4	59.4	58	55	23	34	23
10	6 dB/100m	60.3	57.3	54.3	51.3	50	47	25	30	15
16	7.6 dB/100m	57.2	54.2	49.6	46.6	45.9	42.9	25	28	10.9
20	8.5 dB/100m	55.8	52.8	47.3	44.3	44	41	25	27	9
31.2	10.7 dB/100m	52.9	49.9	42.1	39.1	40.1	37.1	23.6	25.1	5.1
62.5	15.5 dB/100m	48.4	45.4	32.9	29.9	34.1	31.1	21.5	22	
100	19.9 dB/100m	45.3	42.3	25.4	22.4	30	27	20.1	20	
155	25.3 dB/100m	42.4	39.4	17.1	14.1	26.2	23.2	18.8	18.1	
200	29.1 dB/100m	40.8	37.8	11.6	8.6	24	21	18	17	
250	33 dB/100m	39.3	36.3	6.3	3.3	22	19	17.3	16	

Table Notes:	Limits below 4 MHz are for information only. Reference standard: IEC 61156-5

Transfer Impedance

Frequency	Max. Transfer Impedance
1 Mhz	Max. 50 mOhm/m
10 Mhz	Max. 100 mOhm/m
30 Mhz	Max. 200 mOhm/m
100 Mhz	Max. 1000 mOhm/m

Transfer Impedance Class:	Grade 2
Screening Class:	Type II
Table Notes:	Coupling Attenuation

Voltage

Voltage Rating
72 V DC

Mechanical Characteristics

Temperature

Operating	Installation
-30°C to +60°C	0°C To +50°C

Bend Radius

Stationary Min.	Installation Min.
29 mm (1.1 in)	58 mm

Max. Pull Tension:	80 N (18 lbf)
Bulk Cable Weight:	50 kg/km

Standards and Compliance

Environmental Suitability:	Indoor - Euroclass Dca
Flammability / Reaction to Fire:	IEC 60332-1-2
CPR Compliance:	CPR Euroclass: Dca-s2,d1,a1
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Data Category:	Category 6
TIA/EIA Compliance:	ANSI/TIA 568.2-D
Third Party Performance Verification:	DNV GL certification
ISO/IEC Compliance:	ISO/IEC 11801-1, IEC 61034-2 - Smoke Density Min Transmittance = 60%
CENELEC Compliance:	EN 50173-1, Segregation class according EN50174-2 = c
European Halogen Free Standards:	IEC 62821-1 Halogen Free Compliance = Yes, IEC 60754-1 - Halogen Amount = Zero, IEC 60754-2 - Halogen Acid Gas Amount - Max. Conductivity = 2.5 µS/mm, IEC 60754-2 - Halogen Acid Gas Amount - Min. pH = 4.3
European Directive Compliance:	EU CE Mark
UK Regulation Compliance:	UKCA Mark

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system.

History

Update and Revision:	Revision Number: 0.105 Revision Date: 04-29-2024

Part Numbers

Variants

Item #	Color	Putup Type	Length	EAN
7860VNH.06500	Blue	Reel	500 m	8719605180445
7860VNH.08500	Gray, RAL 7032	Reel	500 m	8719605197733