



**Product:** [10GXV91](#)

DNV GL, Shipboard, 10GX Cat 6A+ Cable, F/FTP, LSZH, 4 Pair, AWG 23, Indoor

## Product Description

DNV GL, Shipboard, Category 6A (625MHz), 4-Pair, F/FTP shielded, Premise Horizontal Cable, 23 AWG Solid Bare Copper conductors, Foam Polyolefin insulation, each pair with Beldfoil® shield, AWG 26 solid tinned copper drainwire, overall Beldfoil® shield, LSZH jacket (passes bundle flame test IEC60332-3-24)

## Technical Specifications

### Product Overview

Suitable Applications:	Horizontal and building backbone cable; Support current and future Category 6A and 6 applications, such as: 10GBase-T (10 Gigabit Ethernet), 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 <a href="https://www.belden.com/resources/patents">https://www.belden.com/resources/patents</a> .

### Physical Characteristics (Overall)

#### Conductor

AWG	Stranding	Material	No. of Pairs
23	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

#### Insulation

Type	Material	Nominal Diameter
Dielectric	PO - Polyolefin (Foam)	1.32 mm

Bonded-Pair:	No
--------------	----

#### Color Chart

Number	Color
Pair 1	White & Blue
Pair 2	White & Orange
Pair 3	White & Green
Pair 4	White & Brown

#### Inner Shield Material

Type	Material	Coverage [%]
Tape	Bi-Laminate (Alum+Poly)	100%

Table Notes:	Aluminum facing outside
--------------	-------------------------

#### Outer Shield Material

Type	Material	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Construction n x D	Drainwire Position
Tape	Bi-Laminate (Alum+Poly)	100%	TC - Tinned Copper	26	Solid	Between inner and outer foil

Table Notes:	Aluminum facing inside
--------------	------------------------

#### Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance	Ripcord
LSZH - Low Smoke Zero Halogen (Flame Retardant)	7.9 mm	0.3 mm	Yes

## Construction and Dimensions

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %
Min Elongation at Breakof Jacket:	100 %
Min Tensile Strength of Jacket:	9 MPa

## Electrical Characteristics

### Conductor DCR

Max. Conductor DCR	Max DCR Unbalanced Between Pairs [%]	Max. DCR Unbalanced Within Pair [%]
95 Ohm/km	4 %	2 %

### Capacitance

Max. Capacitance Unbalance	Max. Mutual Capacitance
1,600 pF/m	56 pF/m

### Impedance

Nominal Characteristic Impedance
100 Ohm

### Delay

Max. Delay Skew
45 ns/100m

### High Freq

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. PSANEXT	Min. PSAACRF	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.1 dB/100m	75.3 dB	72.3 dB	73.2 dB	70.2 dB	68 dB	65 dB	20 dB	67 dB	67 dB	40 dB	35 dB
4 MHz	3.8 dB/100m	66.3 dB	63.3 dB	62.5 dB	59.5 dB	56 dB	53 dB	23 dB	67 dB	66.2 dB	34 dB	23 dB
10 MHz	5.9 dB/100m	60.3 dB	57.3 dB	54.4 dB	51.4 dB	48 dB	45 dB	25 dB	67 dB	58.2 dB	30 dB	15 dB
16 MHz	7.5 dB/100m	57.2 dB	54.2 dB	49.8 dB	46.8 dB	43.9 dB	40.9 dB	25 dB	67 dB	54.1 dB	28 dB	10.9 dB
31.2 MHz	10.5 dB/100m	52.9 dB	49.9 dB	42.4 dB	39.4 dB	38.1 dB	35.1 dB	23.6 dB	67 dB	48.3 dB	25.1 dB	5.1 dB
62.5 MHz	15 dB/100m	48.4 dB	45.4 dB	33.4 dB	30.4 dB	32.1 dB	29.1 dB	21.5 dB	65.6 dB	42.3 dB	22 dB	
100 MHz	19.1 dB/100m	45.3 dB	42.3 dB	26.2 dB	23.2 dB	28 dB	25 dB	20.1 dB	62.5 dB	38.2 dB	20 dB	
125 MHz	21.5 dB/100m	43.8 dB	40.8 dB	22.3 dB	19.3 dB	26.1 dB	23.1 dB	19.4 dB	61 dB	36.3 dB	19 dB	
200 MHz	27.6 dB/100m	40.8 dB	37.8 dB	13.2 dB	10.2 dB	22 dB	19 dB	18 dB	58 dB	32.2 dB	17 dB	
250 MHz	31.1 dB/100m	39.3 dB	36.3 dB	8.3 dB	5.3 dB	20 dB	17 dB	17.3 dB	56.5 dB	30.2 dB	16 dB	
300 MHz	34.3 dB/100m	38.1 dB	35.1 dB	3.9 dB	0.9 dB	18.5 dB	15.5 dB	17.3 dB	55.3 dB	28.7 dB		
500 MHz	45.3 dB/100m	34.8 dB	31.8 dB	-10.4 dB	-13.4 dB	14 dB	11 dB	17.3 dB	52 dB	24.2 dB		
625 MHz	51.2 dB/100m	33.4 dB	30.4 dB	-17.8 dB	-20.8 dB	12.1 dB	9.1 dB	17.3 dB	50.6 dB	22.3 dB		

Table Notes:	Limits below 4 MHz and at 625 MHz are for information only. Reference standard: IEC 61156-5
General Electrical Parameters Notes:	Reference standard: ISO/IEC 61156-5
Coupling Attenuation Class:	Type Ib
Segregation class according EN50174-2:	d

### Transfer Impedance

Frequency [MHz]	Description	Transfer Impedance
1 Mhz	Grade 2	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
---------------------------	---------

### Current

Max. Recommended Current [A]
1.5 Amps per Conductor

### Voltage

Voltage Rating [V]
72 V

## Temperature Range

Installation Temp Range:	0°C To +50°C
Operating Temp Range:	-30°C To +60°C

## Mechanical Characteristics

Bulk Cable Weight:	64 kg/km
Max. Pull Tension:	79 N
Min Bend Radius During Installation:	64 mm
Min Bend Radius During Operation:	32 mm

## Standards

IEC Compliance:	ISO/IEC 11801-1
CENELEC Compliance:	EN 50173-1
Data Category:	Category 6A
ANSI Compliance:	ANSI/TIA 568.2-D (2018)
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Third Party Performance Verification:	DNV GL certification

## Applicable Environmental and Other Programs

Environmental Space:	Indoor
EU RoHS Compliance Date (yyyy-mm-dd):	2015-10-07

## Flammability, LSOH, Toxicity Testing

IEC Flammability:	IEC 60332-1-2 and IEC 60332-3-24
Burning Load:	750 kJ/m
IEC 60754-1 (EN50267-1)- Halogen Amount:	Zero
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Max. Conductivity:	2.5 µS/mm
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Min. pH:	4,3
IEC 61034-2 (EN 61034-2) (VDE 0482-1034) - Smoke Density Min. Transmittance:	60%

## Part Number

### Variants

Item #	Color	Putup Type	Length	EAN
10GXV91.06500	Blue	Reel	500 m	8719605180377

## 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: 0.46 Revision Date: 09-30-2020
----------------------	---

© 2020 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.