



10GXE91

Part Number: 10GXE91

Enhanced Category 6A Nonbonded-Pair ScTP Cable

Product Description

CAT6A (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)

Product Specifications

Application

Application 1:	Horizontal and building backbone cable
Application 2:	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

Cabling1

Cabling1, Description:	4 pairs twisted together
------------------------	--------------------------

Technical Specifications

Bend Radius

Min Bend Radius During Installation:	64 mm
Min Bend Radius During Operation:	32 mm

CCB-Sub-Material

Min Elongation at Breakof Conductors:	10 %
---------------------------------------	------

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

EMEA Standard

CENELEC Compliance:	EN 50173-1 (2011)
---------------------	-------------------

Environmental Characteristics

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

General Electrical Parameters

General Electrical Parameters Header:	Reference standard: ISO/IEC 61156-5 ed. 2.0 (2009)
Min Insulation Resistance:	5000 mOhm/1000ft
Dielectric Strength Cond-Cond (2 sec):	2.5 kV DC
Dielectric Strength Cond-Screen (2 sec):	2.5 kJ/ft

Global Standard

ISO/IEC Compliance:	ISO/IEC 11801 2nd edition (2002) and ISO/IEC 11801 Amendment 2 (2010)
---------------------	-----------------------------------------------------------------------

History

Revision Date:	40961
Revision Number:	2

North American Standard

ANSI Compliance:	ANSI/TIA/EIA 568-B.2-1 (2002)
------------------	-------------------------------

Safety

ISO/IEC Flammability:	IEC 60332-3-24
Amt of Halogen Acid Gas; MaxConductivity:	10 µS/mm
Amt of Halogen Acid Gas; Min pH:	4.3
Smoke Density; Min Transmittance:	60 %
Amt of Halogen IEC 60754-1 /EN50267-1:	Zero

Use

Burning Load:	750 kJ/m
Max Recommended Pulling Tension:	79 lbs

Impedance:

Nominal Characteristic Impedance
100 mOhm/ft

Conductor DCR:

Max. Conductor DCR	Max DCR Unbalanced Between Pairs	Max. DCR Unbalanced Within Pair
95 Ohm/100m	4 %	2 Ohm

Color Chart 1:

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

Delay:

Max. Delay Skew	Nominal Velocity of Propagation (VP)
45 ns/100m	77 ns/100m

Voltage:

Voltage Rating
72 dB

Current:

Max. Recommended Current
1.5 A

High Freq:

Element Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT	Min. PSNEXT	Min. ACR	Min. PSACR	Min. ACRF (ELFEXT)	Min. PSACRF (PSELFEXT)	Min. RL (Return Loss)	Min. PSANEXT	Min. PSAACR	Min. RFTCL	Min. ELTCTL
-------------------------	-----------------------------------	-----------	-------------	----------	------------	--------------------	------------------------	-----------------------	--------------	-------------	------------	-------------

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		

): Limits below 4MHz and at 625MHz are for information only.

Innershield:

Element	Type	Material	Coverage
Individual shielded pair	Tape	Aluminium / Polyester	100 %
Aluminum facing outside			

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

Capacitance:

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

Insulation:

Element	Type	Material	Nominal Diameter
Individual pair	Dielectric	Polyethylene	1.32 mm

Outerjacket 1:

Material	Nominal Diameter	Diameter +/- Tolerance	Ripcord
FRNC / LSNH	7.1 mm	0.3 mm	Yes

Conductor:

Element	AWG	Stranding	Material	No. of Pairs
Individual pair	23	Solid	Bare copper	4

Outersheild 1:

Type	Material	Coverage	Drainwire Material	Drainwire AWG	Drainwire Position
Tape	Aluminum / Polyester	100 %	Solid tinned copper	26	Between inner and outer foil

Aluminum facing inside in

Coupling Attenuation:

Coupling Attenuation
Type II V

Product Variants

Part Number	Color	Put-Up Type	Length
10GXE91.06500	BLUE, RAL 5015	Reel	500 m
10GXE91.07500	PURPLE, RAL 4005	Reel	500 m

© 2015 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 herein 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 "AS IS" 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 EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure 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. This 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.

Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.