



**Part Number:** 1633ENS.001000

Category 5e Nonbonded-Pair ScTP Cable

## Product Description

Cat. 5e (100MHz), 4-Pair, SF/UTP shielded, Premise Horizontal Cable, 24 AWG solid bare copper conductors, Polyethylene insulation, Beldfoil® shield, AWG 26 solid tinned copper drainwire, tinned copper braid shield (30% coverage), LSZH jacket, RJ-45 compatible

## Technical Specifications

<b>Suitable Applications:</b>	Horizontal and building backbone cable; Support current and future Category 5e applications, such as: 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM
-------------------------------	---

## Construction and Dimensions

### Conductor:

Element	AWG	Stranding	Material	No. of Pairs
Individual pair	24	Solid	Bare copper	4
Total Number of Conductors:			8	
Total Number of Pairs:			4	
Min Elongation at Break of Conductors:			10 %	

### Insulation:

Element	Type	Material	Nominal Diameter
Individual pair	Dielectric	Polyethylene	1.05 mm
Min Elongation at Break of Insulation:			100 %

### Color Chart 1:

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

#### Outershield 1:

Type	Layer	Material	Coverage [%]	Drainwire Material	Drainwire AWG	Drainwire Position	Min. Coverage [%]
Tape	1	Aluminum / Polyester	100 %	Solid tinned copper	26	Over foil	
Braid	2	Tinned copper					30 %
Aluminum facing outside in contact with drain wire in in							

#### Outerjacket 1:

Material	Nominal Diameter	Diameter +/- Tolerance
FRNC / LSZH	6.0 mm	0.3 mm
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 Ohm

#### Capacitance:

Max. Capacitance Unbalance	Max. Mutal Capacitance
1,600 pF/m	56 pF/m
Min Insulation Resistance:	
	5000 MOhm*km

#### Impedance:

Nominal Characteristic Impedance
100 Ohm

#### Delay:

Max. Delay Skew	Min. Velocity of Propagation
40 ns/100m	60 %

#### High Freq:

Element	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 MHz	2.1 dB/100m	65.3 dB	62.3 dB	63.2 dB	60.2 dB	64 dB	61 dB	20 dB	40 dB	35 dB
	4 MHz	4 dB/100m	56.3 dB	53.3 dB	52.32 dB	49.3 dB	52 dB	49 dB	23 dB	34 dB	23 dB
	10 MHz	6.3 dB/100m	50.3 dB	47.3 dB	44 dB	41 dB	44 dB	41 dB	25 dB	30 dB	15 dB
	16 MHz	8 dB/100m	47.2 dB	44.2 dB	39.2 dB	36.2 dB	39.9 dB	36.9 dB	25 dB	28 dB	10.9 dB
	20 MHz	9 dB/100m	45.8 dB	42.8 dB	36.8 dB	33.8 dB	38 dB	35 dB	25 dB	27 dB	9 dB
	31.25 MHz	11.4 dB/100m	42.9 dB	39.9 dB	31.5 dB	28.5 dB	34.1 dB	31.5 dB	23.6 dB	25.1 dB	5.5 dB
	62.5 MHz	16.5 dB/100m	38.4 dB	35.4 dB	21.9 dB	18.9 dB	28.1 dB	25.1 dB	21.5 dB	22 dB	
	100 MHz	21.3 dB/100m	35.3 dB	32.3 dB	14 dB	11 dB	24 dB	21 dB	20.1 dB	20 dB	

); Limits below 4MHz are for information only.

Current:

Max. Recommended Current [A]
1.5 A

Voltage:

Voltage Rating [V]
72 V

Coupling Attenuation:

Element	Coupling Attenuation [dB]
	Type II V dB
Type II	
Coupling Attenuation Class:	Type II

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

Use

Burning Load:	440 kJ/m
Max Recommended Pulling Tension:	72 N

Safety

ISO/IEC Flammability:	IEC 60332-1
-----------------------	-------------

## Temperature Range

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

## Mechanical Characteristics

Min Bend Radius During Installation:	48 mm
Min Bend Radius During Operation:	24 mm

## Standards

ISO/IEC Compliance:	ISO/IEC 11801 2nd edition (2002) and ISO/IEC 11801 Amendment 2 (2010)
ANSI Compliance:	ANSI/TIA/EIA 568-B.2-1 (2002)
CENELEC Compliance:	EN 50173-1 (2011)

## History

Revision Number:	3
------------------	---

## Product Variants

Part Number	Color	Put-Up Type	Length
1633ENS.001000	GRAY	Reel	1000 m
1633ENS.00305	GRAY	Reel	305 m
1633ENS.00500	GRAY	Reel	500 m
1633ENS.00B100	GRAY	Flat Box	100 m
1633ENS.01305	BLUE, RAL 5015	Reel	305 m
1633ENS.02305	ORANGE	Reel	305 m
1633ENS.03500	PURPLE	Reel	500 m
1633ENS.001000	GRAY	Reel	500 m
1633ENS.001000			

© 2017 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.