



Part Number: 1583E

Category 5e Nonbonded-Pair Cable

Product Description

Cat. 5e (100MHz), 4-Pair, U/UTP Unshielded, Premise Horizontal Cable, 24 AWG solid bare copper conductors, Polyethylene insulation, PVC jacket, RJ-45 compatible

Technical Specifications

Product Overview

Environmental Space:	Indoor - Euroclass Eca
Suitable Applications:	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

Physical Characteristics (Overall)

Conductor

Element	AWG	Stranding	Material	No. of Pairs
Individual pair	24	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4
Conductor Size:	24 AWG

Insulation

Element	Type	Material	Nominal Diameter
Individual pair	Dielectric	Polyethylene	0.9 mm

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

Color Chart

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

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance
PVC - Polyvinyl Chloride	4.8 mm	0.3 mm

Construction and Dimensions

Min Elongation at Breakof Conductors:	10 %
Min Elongation at Breakof Insulation:	100 %

Cabling

Description	
4 pairs twisted together	
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. Mutual Capacitance
1,600 pF/m	56 pF/m

Impedance

Nominal Characteristic Impedance
100 Ohm

Delay

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

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. 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	

High Freq Table Note: Limits below 4MHz are for information only.

Segregation class according EN50174-2: a

Current

Max. Recommended Current [A]
1.5 A

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:	28 kg/km
Max Recommended Pulling Tension:	65 N
Min Bend Radius During Installation:	40 mm
Min Bend Radius During Operation:	20 mm

Standards

ISO/IEC Compliance:	ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011
CPR Euroclass:	Eca
CENELEC Compliance:	EN 50173-1 Ed. 3:2011
Data Category:	Category 5e
ANSI Compliance:	ANSI/TIA/EIA 568-B.2-1 (2002)

Applicable Environmental and Other Programs

EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-01
---------------------------------------	------------

Flammability, LS0H, Toxicity Testing

ISO/IEC Flammability:	IEC 60332-1
Burning Load:	290 kJ/m

Part Number

Variants

Item #	Color
1583E.03305	Black
1583E.03U305	Black
1583E.011000	Blue
1583E.01305	Blue
1583E.01500	Blue
1583E.01B100	Blue
1583E.01U305	Blue
1583E.001000	Gray
1583E.00305	Gray
1583E.00500	Gray
1583E.00B100	Gray
1583E.00U305	Gray
1583E.08U305	Gray
1583E=00305	Gray
1583E=00500	Gray
1583E=00U305	Gray
1583E.003570	Gray, RAL 7032
1583E.13U305	Gray, RAL 7032
1583E.09305	Green
1583E.09U305	Green
1583E.09500	Green
1583E.11305	Red
1583E.11U305	Red
1583E.04500	White
1583E.04U305	White
1583E.12B100	White, RAL 9003
1583E.12U305	White, RAL 9003
1583E.10305	Yellow
1583E.10U305	Yellow

Patent:	https://www.belden.com/resources/patents
---------	---

History

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

© 2019 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.