



Product: [1583E](#)

Cat 5e Cable, U/UTP, PVC, 4 Pair, AWG 24, Indoor CPR Eca

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

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

Insulation

Element	Type	Material	Nominal Diameter
Individual pair	Dielectric	PO - Polyolefin	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	4.5 mm	0.3 mm

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	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	

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

General Electrical Parameters Notes: Reference standard: ISO/IEC 61156-5

Segregation class according EN50174-2: a

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

Standards

IEC Compliance:	ISO/IEC 11801-1
CPR Euroclass:	Eca
CENELEC Compliance:	EN 50173-1
Data Category:	Category 5e
ANSI Compliance:	ANSI/TIA 568.2-D (2018)
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3

Applicable Environmental and Other Programs

Environmental Space:	Indoor - Euroclass Eca
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-01

Flammability, LS0H, Toxicity Testing

IEC Flammability:	IEC 60332-1-2
Burning Load:	290 kJ/m

Part Number

Variants

Item #	Color	Putup Type	Length	EAN
1583E.03305	Black	Reel	305 m	8719605002143
1583E.03U305	Black	UnReel	305 m	8719605002150
1583E.01B100	Blue	Flat Box	100 m	8719605002129
1583E.01305	Blue	Reel	305 m	8719605002105
1583E.01U305	Blue	UnReel	305 m	8719605002136
1583E.01500	Blue	Reel	500 m	8719605002112
1583E.011000	Blue	Reel	1,000 m	8719605002099
1583E.00B100	Gray	Flat Box	100 m	8719605002075
1583E.00305	Gray	Reel	305 m	8719605002044
1583E.00U305	Gray	UnReel	305 m	8719605002082
1583E.00500	Gray	Reel	500 m	8719605002068
1583E.001000	Gray	Reel	1,000 m	8719605002037
1583E.003500	Gray	Reel	3,500 m	8719605176783
1583E.003570	Gray	Reel	3,570 m	8719605002051
1583E.09305	Green	Reel	305 m	8719605002204
1583E.09U305	Green	UnReel	305 m	8719605002228
1583E.09500	Green	Reel	500 m	8719605002211
1583E.11305	Red	Reel	305 m	8719605002259
1583E.11U305	Red	UnReel	305 m	8719605002266
1583E.12B100	White	Flat Box	100 m	8719605002273
1583E.04U305	White	UnReel	305 m	8719605002174
1583E.12U305	White	UnReel	305 m	8719605002280
1583E.04500	White	Reel	500 m	8719605002167
1583E.10305	Yellow	Reel	305 m	8719605002235
1583E.10U305	Yellow	UnReel	305 m	8719605002242

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: 0.238 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.