



Part Number: 7812E.001000
Category 6 Bonded-Pair Cable

Product Description

Cat. 6 (250MHz), 4-Pair, U/UTP Unshielded, Premise Horizontal Cable, 23 AWG solid bare copper conductors, Polyethylene insulation, PVC jacket

Product Specifications

AG.Filter Attributes

Total Number of Conductors:	8
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Application

Suitable Applications:	Horizontal and building backbone cable; Support current and future Category 6 and 5e applications, such as 1000Base - T (Gigabit Ethernet), 100 Base - T, 10 Base - T, FDDI, ATM
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Cabling1

Description@Cabling1:	4 pairs twisted together
Filler@Cabling1:	Cross Web of Polyolefin

Conductor

Total Number of Pairs:	4
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Technical Specifications

Applicable Patents

Patent:	http://www.belden.com/p
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Bend Radius

Min Bend Radius During Installation:	52 mm
Min Bend Radius During Operation:	26 mm

CCB-Sub-Material

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

EMEA Standard

CENELEC Compliance:	EN 50173-1 (2011)
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General Electrical Parameters

General Electrical Parameters Header:	Reference standard: ISO/IEC 61156 - 5 ed. 2.0 (2009)
Min Insulation Resistance:	5000 MOhm*km
Dielectric Strength Cond-Cond (2 sec.):	2.5 kV DC

Global Standard

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

Revision Number:	3a
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North American Standard

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

ISO/IEC Flammability:	IEC 60332-1
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Use

Burning Load:	575 kJ/m
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Max Recommended Pulling Tension:	80 N
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Impedance:

Nominal Characteristic Impedance
100 Ohm

Conductor DCR:

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

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

Delay:

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

Voltage:

Voltage Rating [V]
72 V

Current:

Max. Recommended Current [A]
1.5 A

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	75.3 dB	72.3 dB	73.2 dB	70.2 dB	70 dB	67 dB	20 dB	50 dB	35 dB	
4 MHz	3.8 dB/100m	66.3 dB	63.3 dB	62.4 dB	59.4 dB	58 dB	55 dB	23 dB	44 dB	23 dB	
10 MHz	6 dB/100m	60.3 dB	57.3 dB	54.3 dB	51.3 dB	50 dB	47 dB	25 dB	40 dB	15 dB	
16 MHz	7.6 dB/100m	57.2 dB	54.2 dB	49.6 dB	46.6 dB	45.9 dB	42.9 dB	25 dB	38 dB	10.9 dB	

20 MHz	8.5 dB/100m	55.8 dB	52.8 dB	47.3 dB	44.3 dB	44 dB	41 dB	25 dB	37 dB	9 dB
31.2 MHz	10.7 dB/100m	52.9 dB	49.9 dB	42.1 dB	39.1 dB	40.1 dB	37.1 dB	23.6 dB	35.1 dB	5.1 dB
62.5 MHz	15.5 dB/100m	48.4 dB	45.4 dB	32.9 dB	29.9 dB	34.1 dB	31.1 dB	21.5 dB	32 dB	
100 MHz	19.9 dB/100m	45.3 dB	42.3 dB	25.4 dB	22.4 dB	30 dB	27 dB	20.1 dB	30 dB	
155 MHz	25.3 dB/100m	42.4 dB	39.4 dB	17.1 dB	14.1 dB	26.2 dB	23.2 dB	18.8 dB	28.1 dB	
200 MHz	29.1 dB/100m	40.8 dB	37.8 dB	11.6 dB	8.6 dB	24 dB	21 dB	18 dB	27 dB	
250 MHz	33 dB/100m	39.3 dB	36.3 dB	6.3 dB	3.3 dB	22 dB	19 dB	17.3 dB	26 dB	

); Limits below 4MHz are for information only.

Capacitance:

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

Insulation:

Element	Type	Material	Nominal Diameter
Individual pair		Dielectric	Polyethylene 1.1 mm

Outerjacket 1:

Material	Color	Nominal Diameter	Diameter +/- Tolerance
PVC	Grey or Blue	6.1 mm	0.3 mm

Conductor:

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

Other Electrical Information:

Min Insulation Resistance	5000 MOhm*km
Dielectric Strength Cond-Cond (2 sec.)	2.5 kV DC

Product Variants

Part Number	Color	Put-Up Type	Length
7812E.001000	GRAY	Reel	1000 m
7812E.00500	GRAY	Reel	500 m
7812E.00B100	GRAY	Flat Box	100 m
7812E.00U305	GRAY	UnReel	305 m
7812E.011000	BLUE	Reel	1000 m
7812E.01500	BLUE	Reel	500 m
7812E.01U305	BLUE	UnReel	305 m
7812E.001000			

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