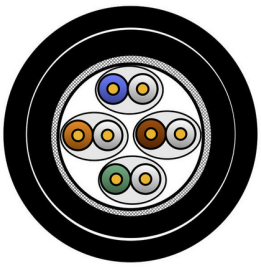

Product: 1303EPU

CATSNAKE S/FTP Cat6a PVC PUR upjacketed

Product Description

CATSNAKE S/FTP Cat6a PVC PUR upjacketed

Technical Specifications

Standards

IEC Compliance:	ISO/IEC 11801 Ed. 2.2:2002/A2:2010/C1:2011
CENELEC Compliance:	EN 50173-1 Ed. 3:2011
Data Category:	Category 6A
ANSI Compliance:	ANSI/TIA 568.2-D (2018)
IEEE Compliance:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4

Applicable Environmental and Other Programs

Environmental Space:	Indoor/Outdoor
EU RoHS Compliance Date (yyyy-mm-dd):	2014-11-27

Flammability, LS0H, Toxicity Testing

IEC Flammability:	IEC 60332-1
Burning Load:	1100 kJ/m

Part Number

Variants

Item #	Color	Putup Type	Length	UPC/EAN
1303EPU.00152	Black	Reel	152 m	8719605000989
1303EPU.00305	Black	Reel	305 m	8719605001009
1303EPU.009999	Black	Reel	499 m	8719605001023
1303EPU 010500	Black	Reel	500 ft	612825381808
1303EPU.00500	Black	Reel	500 m	8719605001016
1303EPU 0101000	Black	Reel	1,000 ft	612825381785
1303EPU.001500	Black	Reel	1,500 m	8719605000972
1303EPU 0101640	Black	Reel	1,640 ft	612825381792
1303EPU.003000	Black	Reel	3,000 m	8719605000996

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: 0.358 Revision Date: 07-09-2020

Product Overview

Suitable Applications:	Field deployable CAT6a patch horizontal and building backbone cable; AVB, Dante, CobraNEt, eSnake, Ethersound, Digital audio over Ethernet; Support current and future Category 6A and 6 applications, such as: 10GBase - T(10 Gigabit Ethernet), 1000 Base - T (Gigabit Ethernet), 100 Base - T, 10 Base - T, FDDI, ATM; Compatible connectors Belden R301601 000S1 (T568A) and R301602 000S1 (T568B)

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
24	7x32	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Type	Material	Nominal Diameter
Dielectric	Polyolefin (Foam)	1.4 mm

Bonded-Pair:	No

Color Chart

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

Inner Shield Material

Type	Material	Coverage [%]
Tape	Alum / Poly	100%

Table Notes:	Aluminum facing outside

Outer Shield Material

Type	Material	Drainwire Material	Drainwire AWG	Min. Coverage [%]
Braid	Tinned Copper (TC)	TC - Tinned Copper	26	80%

Outer Jacket Material

Layer	Material	Color	Nominal Diameter	Diameter +/- Tolerance	Diameter - Tolerance	Nominal Wall Thickness	Separator Material
1	PVC - Polyvinyl Chloride	Black (RAL 9005)	7.2 mm	0.3 mm		0.45 mm	
2	PUR - Polyurethane	Black (RAL 9005)	8.7 mm		0.3 mm	0.7 mm	non-Woven Tape

Table Notes:	Matte Finish, Rugged Sheath

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	Nominal Velocity of Propagation (VP) [%]
25 ns/100m	77%

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. PSANEXT	Min. PSAACRF	Min. TCL [dB]	Min. ELTCTL [dB]
1 MHz	2.5 dB/100m	75.3 dB	72.3 dB	72.8 dB	69.8 dB	68 dB	65 dB	20 dB	67 dB	67 dB	40 dB	35 dB
4 MHz	4.6 dB/100m	66.3 dB	63.3 dB	61.7 dB	58.7 dB	56 dB	53 dB	23 dB	67 dB	66.2 dB	34 dB	23 dB
10 MHz	7.1 dB/100m	60.3 dB	57.3 dB	53.2 dB	50.2 dB	48 dB	45 dB	25 dB	67 dB	58.2 dB	30 dB	15 dB
16 MHz	9 dB/100m	57.2 dB	54.2 dB	48.3 dB	45.3 dB	43.9 dB	40.9 dB	25 dB	67 dB	54.1 dB	28 dB	10.9 dB
31.2 MHz	12.6 dB/100m	52.9 dB	49.9 dB	50.4 dB	47.3 dB	38.1 dB	35.1 dB	23.6 dB	67 dB	48.3 dB	25.1 dB	5.1 dB
62.5 MHz	18 dB/100m	48.4 dB	45.4 dB	30.4 dB	27.4 dB	32.1 dB	9.1 dB	21.5 dB	65.6 dB	42.3 dB	22 dB	
100 MHz	23 dB/100m	45.3 dB	42.3 dB	22.3 dB	19.3 dB	28 dB	25 dB	20.1 dB	62.5 dB	38.2 dB	20 dB	
125 MHz	25.8 dB/100m	43.8 dB	40.8 dB	18 dB	15 dB	26.1 dB	23.1 dB	19.4 dB	61 dB	36.3 dB	19 dB	
200 MHz	33.1 dB/100m	40.8 dB	37.8 dB	7.7 dB	4.7 dB	22 dB	19 dB	18 dB	58 dB	32.2 dB	17 dB	
250 MHz	37.3 dB/100m	39.3 dB	36.3 dB	2 dB	-1 dB	20 dB	17 dB	17.3 dB	56.5 dB	30.2 dB	16 dB	
300 MHz	41.1 dB/100m	38.1 dB	35.1 dB	-3 dB	-6 dB	18.5 dB	15.5 dB	17.3 dB	55.3 dB	28.7 dB		
500 MHz	54.3 dB/100m	34.8 dB	31.8 dB	-19.5 dB	-22.5 dB	14 dB	11 dB	17.3 dB	52 dB	24.2 dB		

Table Notes:	Reference standard: ISO/IEC 61156-6 ed. 3.0 (2010)
General Electrical Parameters Notes:	Reference standard: ISO/IEC 61156 - 6 ed. 3.0 (2010)
Coupling Attenuation Class:	Type Ib
Segregation class according EN50174-2:	c

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

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:	83 kg/km
Max. Pull Tension:	75 N
Min Bend Radius During Installation:	70 mm
Min Bend Radius During Operation:	35 mm