Product: 1302E

CATSNAKE S/FTP Cat6a 24AWG/7 PVC

Product Description

CATSNAKE S/FTP Cat6a 24AWG/7 PVC

Technical Specifications

Product Overview

Suitable Applications:	Field deployable CAT6a patch horizontal and building backbone cable; 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

Element	AWG	Stranding	Material	No. of Pairs
Individual shielded pair	24	7x32	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Element	Type	Material	Nominal Diameter
Individual shielded pair	Dielectric	FPE - Foamed Polyethylene	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

Element	Type	Material	Material Trade Name	Coverage [%]
Individual shielded pair	Tape	Aluminum / Polyester	Beldfoil®	100 %

InnerShield, Table Note:	Aluminum facing outside

Outer Shield Material

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

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance	Nominal Wall Thickness
Matte PVC	0.311 in	0.3 mm	0.7 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 Unbalance	Max DCR Unbalanced Between Pairs [%]	Max. DCR Unbalanced Within Pair [%]
95 Ohm/km	2 %	4 %	2 %

Capacitance

Max. Capacitance Unbalance	Max. Mutual Capacitance	Nom.Mutual Capacitance
1,600 pF/m	56 pF/m	17 pF/ft

Impedance

Nominal Characteristic Impedance
100 Ohm

Delay

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
534 ns/100m	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		

High Freq Table Note:	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 A

Voltage

UL Voltage Rating	Voltage Rating [V]
300 V RMS	72 V

Temperature Range

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

Mechanical Characteristics

Cold Bend Test:	-30°C Compliance per UL 1581
Bulk Cable Weight:	46.9 lbs
Max Recommended Pulling Tension:	16.9 lbs
Min Bend Radius During Installation:	64 mm
Min Bend Radius During Operation:	32 mm
Min Bend Radius/Minor Axis:	3.11 in

Standards

ISO/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/ICEA S-116-732-2013 Category 6A
Telecommunications Standards:	ANSI/TIA/EIA 568-B.2-10 (2008)
IEEE Specification:	PoE: IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Other Specification:	EN 50173-1 (2002), EN 50173-1 Amendment 1 (2009)

Applicable Environmental and Other Programs

Environmental Space:	Indoor (Not Riser or Plenum)
EU RoHS Compliance Date (yyyy-mm-dd):	2014-11-27
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Aerial:	No
Suitability - Burial:	No
Suitability - Hazardous Locations:	No
Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	No
Suitability - Outdoor:	Yes
Suitability - Sunlight Resistance:	No

Flammability, LS0H, Toxicity Testing

ISO/IEC Flammability:	IEC 60332-1
Burning Load:	650 kJ/m
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No

Part Number

Variants

Item #	Color	UPC	Length
1302E.00500	Black		500 m
1302E.009999	Black		499 m
1302E.003000	Black		3,000 m
1302E.00152	Black		152 m
1302E.00305	Black		305 m
1302E 0101000	Black	612825381778	1,000 ft
1302E 0101640	Black	612825381761	1,640 ft
1302E 010500	Black	612825381631	500 ft

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

History

Update and Revision:	Revision Number: 0.349 Revision Date: 12-11-2019