



Product: [2424D](#) 

DataTwist 2400 Cat 6+ Cable, U/UTP, LSZH, 4 Pair, AWG 24, Indoor CPR Eca

Product Description

CAT6+ (300MHz), 4-Pair, U/UTP Unshielded, Premise Horizontal Cable, 24 AWG Solid Bare Copper Conductors, Polyolefin Insulation, LSZH Jacket

Technical Specifications

Product Overview

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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Physical Characteristics (Overall)

Conductor

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

Conductor Count:	8
Total Number of Pairs:	4

Insulation

Type	Material	Nominal Diameter
Dielectric	Polyolefin	1 mm

Bonded-Pair:	No
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Color Chart

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

Outer Jacket Material

Material	Nominal Diameter	Diameter +/- Tolerance	Ripcord
LSZH - Low Smoke Zero Halogen flame retardant	5.5 mm	0.3 mm	Yes

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 [%]
93.8 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	70%

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 dB/100m	75.3 dB	73.3 dB	73.3 dB	71.3 dB	70.8 dB	67.8 dB	20 dB	40 dB	35 dB
4 MHz	3.7 dB/100m	66.3 dB	64.3 dB	62.6 dB	60.6 dB	58.8 dB	55.8 dB	23 dB	40 dB	23 dB
10 MHz	5.8 dB/100m	61.8 dB	59.8 dB	56 dB	54 dB	50.8 dB	47.8 dB	25 dB	40 dB	15 dB
16 MHz	7.4 dB/100m	58.6 dB	56.6 dB	51.2 dB	49.2 dB	46.7 dB	43.7 dB	25 dB	38 dB	10.9 dB
20 MHz	8.3 dB/100m	57.1 dB	55.1 dB	48.8 dB	46.8 dB	44.8 dB	41.8 dB	25 dB	37 dB	9 dB
31.2 MHz	10.4 dB/100m	54 dB	52 dB	43.6 dB	41.6 dB	40.9 dB	37.9 dB	23.6 dB	35.1 dB	5.1 dB
62.5 MHz	15 dB/100m	49.1 dB	47.1 dB	34.1 dB	32.1 dB	34.9 dB	31.9 dB	21.5 dB	32.6 dB	
100 MHz	19.3 dB/100m	45.8 dB	43.8 dB	26.5 dB	24.5 dB	30.8 dB	27.8 dB	20.8 dB	30 dB	
200 MHz	28.3 dB/100m	40.9 dB	38.9 dB	12.6 dB	10.6 dB	22.8 dB	21.8 dB	19.5 dB	27 dB	
250 MHz	32.1 dB/100m	39.3 dB	37.3 dB	7.2 dB	5.2 dB	22.8 dB	19.8 dB	18 dB	26.0 dB	
300 MHz	35.6 dB/100m	38.1 dB	36.1 dB	2.5 dB	0.5 dB	21.3 dB	18.3 dB	17.5 dB	25.2 dB	
350 MHz	38.8 dB/100m	37.1 dB	35.1 dB			19.9 dB	16.9 dB	17.0 dB	24.6 dB	

Table Notes:	Limits below 4 MHz are for information only. Reference standard: ISO/IEC 61156-5 ed. 2.0 (2009)
General Electrical Parameters Notes:	Reference standard: ISO/IEC 61156 - 5 ed. 2.0 (2009)
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:	-20°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	33 kg/km
Max. Pull Tension:	80 N
Min Bend Radius During Installation:	44 mm
Min Bend Radius During Operation:	22 mm

Standards

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 6
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 - Euroclass Eca
EU RoHS Compliance Date (yyyy-mm-dd):	2005-09-30

Flammability, LSOH, Toxicity Testing

IEC Flammability:	IEC 60332-1-2
Burning Load:	350 kJ/m
IEC 60754-1 (EN50267-1)- Halogen Amount:	Zero
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Max. Conductivity:	2.5 µS/mm
IEC 60754-2 (EN50267-2)- Halogen Acid Gas Amount - Min. pH:	4.3
IEC 61034-2 (EN 61034-2) (VDE 0482-1034) - Smoke Density Min. Transmittance:	IEC 61034-2

Part Number

Variants

Item #	Color	Putup Type	Length	EAN
2424D.10305	Black	Reel	305 m	8719605005281
2424D.06305	Blue	Reel	305 m	8719605005144
2424D.06A305	Blue	Reel-in-Box	305 m	8719605005168
2424D.08A305	Gray	Reel-in-Box	305 m	8719605005236
2424D.08500	Gray	Reel	500 m	8719605005229
2424D.05305	Green	Reel	305 m	8719605005137
2424D.03305	Orange	Reel	305 m	8719605005113
2424D.07305	Purple	Reel	305 m	8719605005199
2424D.07A305	Purple	Reel-in-Box	305 m	8719605005212
2424D.071000	Purple	Reel	1,000 m	8719605005175
2424D.02A305	Red	Reel-in-Box	305 m	8719605005106
2424D.09A305	White	Reel	305 m	8719605005274
2424D.09500	White	Reel	500 m	8719605005267
2424D.091000	White	Reel	1,000 m	8719605005243
2424D.04305	Yellow	Reel	305 m	8719605005120

Product Notes

Notes:	Electrical values are expected performance based on cable testing and representative performance within a typical Belden system.
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History

Update and Revision:	Revision Number: 0.221 Revision Date: 06-08-2020
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