



Part Number: 2412

DataTwist 2400 Cat 6+ Cable, U/UTP, PVC, 4 Pair, AWG 23, Riser

Product Description

CAT6+ (350MHz), 4-Pair, U/UTP-unshielded, Riser-CMR, Premise Horizontal cable, 23 AWG solid bare copper conductors, polyolefin insulation, tape separator, ripcord, PVC jacket

Technical Specifications

Product Overview

Environmental Space:	Riser
Suitable Applications:	Premise Horizontal Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM

Physical Characteristics (Overall)

Conductor

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

Conductor Count:	8
Total Number of Pairs:	4
Conductor Size:	23 AWG

Insulation

Material	
PO - Polyolefin	
Bonded-Pair:	N/A

Color Chart

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

Outer Jacket Material

Material	Nominal Diameter	Ripcord	Separator Material
PVC - Polyvinyl Chloride	0.224 in	Yes	Patented Dielectric Tape

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
78 Ohm/km	3 %

Capacitance

Max. Capacitance Unbalance	Nom. Mutual Capacitance
330 pF/100m	17 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
-----------------	------------	-----------------	--

100 MHz	537.6 ns/100m	35 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]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	2.0 dB/100m	75.3 dB	75.3 dB	73.3 dB	73.3 dB	70.8 dB	67.8 dB	20.0 dB	100 ± 15 Ohm	102 ± 15 Ohm
4 MHz	3.7 dB/100m	66.3 dB	66.3 dB	62.6 dB	62.6 dB	58.8 dB	55.8 dB	23.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
8 MHz	5.2 dB/100m	61.8 dB	61.8 dB	56.6 dB	56.6 dB	52.7 dB	49.7 dB	24.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
10 MHz	5.8 dB/100m	60.3 dB	60.3 dB	54.5 dB	54.5 dB	50.8 dB	47.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
16 MHz	7.4 dB/100m	57.2 dB	57.2 dB	49.9 dB	49.9 dB	46.7 dB	43.7 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
20 MHz	8.3 dB/100m	55.8 dB	55.8 dB	47.5 dB	47.5 dB	44.8 dB	41.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 15 Ohm
25 MHz	9.3 dB/100m	54.3 dB	54.3 dB	45.1 dB	45.1 dB	42.8 dB	39.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 15 Ohm
31.25 MHz	10.4 dB/100m	52.9 dB	52.9 dB	42.5 dB	42.5 dB	40.9 dB	37.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 15 Ohm
62.5 MHz	15.0 dB/100m	48.4 dB	48.4 dB	33.4 dB	33.4 dB	34.9 dB	31.9 dB	21.5 dB	100 ± 15 Ohm	100 ± 15 Ohm
100 MHz	19.3 dB/100m	45.3 dB	45.3 dB	26.0 dB	26.0 dB	30.8 dB	27.8 dB	20.8 dB	100 ± 15 Ohm	100 ± 15 Ohm
155 MHz	24.6 dB/100m	42.4 dB	42.4 dB	17.9 dB	17.9 dB	27.0 dB	24.0 dB	19.5 dB	100 ± 22 Ohm	100 ± 15 Ohm
200 MHz	28.3 dB/100m	40.8 dB	40.8 dB	12.5 dB	12.5 dB	24.8 dB	21.8 dB	18.7 dB	100 ± 22 Ohm	100 ± 15 Ohm
250 MHz	32.1 dB/100m	39.3 dB	39.3 dB	7.2 dB	7.2 dB	22.8 dB	19.8 dB	18.0 dB	100 ± 32 Ohm	100 ± 15 Ohm
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	100 ± 32 Ohm	100 ± 15 Ohm
350 MHz	38.9 dB/100m	37.1 dB	35.1 dB	-1.8 dB	-3.8 dB	19.9 dB	16.9 dB	17.0 dB	100 ± 32 Ohm	100 ± 15 Ohm
400 MHz	42.0 dB/100m	36.3 dB	34.3 dB	-5.7 dB	-7.7 dB	18.8 dB	15.8 dB	16.6 dB	100 ± 32 Ohm	100 ± 15 Ohm
450 MHz	45.0 dB/100m	35.5 dB	33.5 dB	-9.5 dB	-11.5 dB	17.7 dB	14.7 dB	16.2 dB	100 ± 32 Ohm	100 ± 15 Ohm
500 MHz	47.9 dB/100m	34.8 dB	32.8 dB	-13.1 dB	-15.1 dB	16.8 dB	13.8 dB	15.9 dB	100 ± 32 Ohm	100 ± 15 Ohm
550 MHz	50.6 dB/100m	34.2 dB	32.2 dB	-16.4 dB	-18.4 dB	16.0 dB	13.0 dB	15.6 dB	100 ± 32 Ohm	100 ± 15 Ohm

Voltage

UL Voltage Rating

300 V RMS

Temperature Range

Installation Temp Range:	0°C To +50°C
UL Temp Rating:	75°C
Storage Temp Range:	-20°C To +75°C
Operating Temp Range:	-20°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	22 lbs/1000ft
Max Recommended Pulling Tension:	25 lbs
Min Bend Radius/Minor Axis:	1.0 in
Min Bend Radius/Installation:	2.25 in

Standards

NEC Articles:	800
NEC/(UL) Specification:	CMR
CEC/C(UL) Specification:	CMR
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class E
CPR Euroclass:	Eca
Data Category:	Category 6
ANSI Compliance:	S-116-732-2013 Category 6, ANSI/NEMA WC-66 Category 6
Telecommunications Standards:	ANSI/TIA-568-C.2 Category 6
IEEE Specification:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Third Party Performance Verification:	Category 6

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes

EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes
EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-01
CA Prop 65 (CJ for Wire & Cable):	Yes
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:	No
Suitability - Sunlight Resistance:	No

Flammability, LS0H, Toxicity Testing

C(UL) Flammability:	FT4
UL Flammability:	UL 1666 Riser
CSA Flammability:	CMR FT 4
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	2413

Part Number

Variants

Item #	Color	Footnote
2412 0101000	Black	
2412 010A1000	Black	
2412 010U1000	Black	
2412 0061000	Blue	
2412 0061400	Blue	
2412 0062500	Blue	
2412 0065000	Blue	C
2412 006A1000	Blue	
2412 006U1000	Blue	
2412 0081000	Gray	
2412 008A1000	Gray	
2412 008U1000	Gray	
2412 0051000	Green	
2412 005A1000	Green	
2412 005U1000	Green	
2412 003A1000	Orange	
2412 003U1000	Orange	
2412 007A1000	Purple	
2412 007U1000	Purple	
2412 002A1000	Red	C
2412 0091000	White	
2412 0092500	White	
2412 0095000	White	C
2412 009A1000	White	
2412 009U1000	White	
2412 0041000	Yellow	
2412 0042500	Yellow	

2412 004A1000	Yellow	
2412 004U1000	Yellow	

Footnote:	C - CRATE REEL PUT-UP.
Patent:	https://www.belden.com/resources/patents

Product Notes

Notes:	Values above 350 MHz are for Engineering Information Only. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.
--------	---

© 2019 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.