



Part Number: 121872A

DataTuff® Cat 6, (4 pr) 23 AWG Solid BC, PO/PVC/PVC, CM, Alum Armor

[Request Sample](#)

Product Description

Four Cat 6 23 AWG Bonded-Pairs solid bare copper conductors, polyolefin insulation, PVC inner jacket, industrial gradePVC outer jacket, aluminum interlocked armor.

Technical Specifications

Product Overview

Suitable Applications:	Industrial Ethernet Cable, Harsh Environments, 350 MHz Enhanced Category 6, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, RJ-45 Compatible, Armored
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Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	Nominal Diameter	No. of Pairs
23	Solid	BC - Bare Copper	0.022 in	4

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

Insulation

Material	Nominal Diameter	Nominal Wall Thickness
PO - Polyolefin	0.038 in	0.009 in

Bonded-Pair:	Yes
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Color Chart

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

Inner Jacket Material

Material	Nominal Diameter
PVC - Polyvinyl Chloride	.365 x .165 in

Outer Shield Material

Material
Unshielded

Outer Jacket Material

Material	Nominal Diameter	Nominal Wall Thickness
Industrial Grade PVC - Polyvinyl Chloride	0.725 in	0.05 in

Construction and Dimensions

Armor

Type of Armor	Material	Diameter over Armoring
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Interlocked Armor	Aluminum	0.625 mm
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Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
9 Ohm/1000ft	3 %

Capacitance

Max. Capacitance Unbalance	Nom. Mutual Capacitance
49.2 pF/ft	15 pF/ft

Delay

Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]
510 ns/100m	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]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance
1 MHz	1.9 dB/100m	74.3 dB	72.3 dB	72.4 dB	70.4 dB	67.8 dB	64.8 dB	20 dB	100 ± 12 Ohm	100 ± 15 Ohm
4 MHz	3.7 dB/100m	65.3 dB	63.3 dB	61.6 dB	59.6 dB	55.7 dB	52.7 dB	23 dB	100 ± 12 Ohm	100 ± 15
8 MHz	5.3 dB/100m	60.3 dB	58.8 dB	55.5 dB	53.5 dB	49.7 dB	46.7 dB	24.5 dB	100 ± 12 Ohm	100 ± 15
10 MHz	5.9 dB/100m	59.3 dB	57.3 dB	53.4 dB	51.4 dB	47.8 dB	44.8 dB	25 dB	100 ± 12 Ohm	100 ± 15
16 MHz	7.5 dB/100m	56.3 dB	54.3 dB	48.7 dB	46.7 dB	43.7 dB	40.7 dB	25 dB	100 ± 12 Ohm	100 ± 8
20 MHz	8.4 dB/100m	54.8 dB	52.8 dB	46.4 dB	44.4 dB	41.7 dB	38.7 dB	25 dB	100 ± 12 Ohm	100 ± 8
25 MHz	9.5 dB/100m	53.4 dB	51.4 dB	43.9 dB	41.9 dB	39.8 dB	36.8 dB	24.3 dB	100 ± 15 Ohm	100 ± 8
31.25 MHz	10.6 dB/100m	51.9 dB	49.9 dB	41.2 dB	39.2 dB	37.9 dB	34.9 dB	23.6 dB	100 ± 15 Ohm	100 ± 8
62.5 MHz	15.4 dB/100m	47.4 dB	45.4 dB	32 dB	30 dB	31.8 dB	28.8 dB	21.5 dB	100 ± 15 Ohm	100 ± 8
100 MHz	19.8 dB/100m	44.3 dB	42.3 dB	24.5 dB	22.5 dB	27.8 dB	24.8 dB	21 dB	100 ± 15 Ohm	
155 MHz	25.1 dB/100m	41.5 dB	39.5 dB	16.3 dB	14.3 dB	23.9 dB	20.9 dB	21 dB	100 ± 15 Ohm	
200 MHz	29 dB/100m	39.9 dB	37.9 dB	10.8 dB	10 dB	21.7 dB	18.7 dB	21 dB	100 ± 15 Ohm	
250 MHz	32.8 dB/100m	38.3 dB	36.3 dB	5.5 dB	3.5 dB	19.8 dB	16.8 dB	18 dB	100 ± 20 Ohm	
300 MHz	35.2 dB/100m	37.2 dB	34.2 dB	0.7 dB	0 dB	18.2 dB	15.2 dB	18 dB	100 ± 20 Ohm	
310 MHz	37.1 dB/100m	36.9 dB	34.9 dB	0 dB		17.9 dB	14.9 dB	18 dB	100 ± 20 Ohm	
350 MHz	39.8 dB/100m	36.2 dB	34.2 dB			16.9 dB	13.9 dB	17 dB	100 ± 22 Ohm	
400 MHz	43 dB/100m	35.3 dB	33.3 dB			15.7 dB	12.7 dB	14 dB	100 ± 32 Ohm	
500 MHz	49 dB/100m	33.8 dB	31.8 dB			13.8 dB	10.8 dB	14 dB	100 ± 32 Ohm	

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temp Range:	-25°C To +75°C
UL Temp Rating:	60°C
Storage Temp Range:	-40°C To +85°C
Operating Temp Range:	-40°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	154 lbs/1000ft
Max Recommended Pulling Tension:	200 lbs
Min Bend Radius/Minor Axis:	8.25 in

Standards

NEC/(UL) Specification:	CM, UL 444
CEC/C(UL) Specification:	CMG, HL
CPR Euroclass:	Eca
Data Category:	Category 6
Telecommunications Standards:	Category 6 - TIA 568.C.2, ISO/IEC 11801 Class E

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2003/11/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:	EU Directive 2003/11/EC (BFR)
EU RoHS Compliance Date (yyyy-mm-dd):	2004-01-04
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Oil Resistance:	Yes
Suitability - Sunlight Resistance:	Yes

Flammability, LS0H, Toxicity Testing

UL Flammability:	UL1685 UL Loading
CSA Flammability:	FT4
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	No
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Part Number

Variants

Item #	Color	Footnote
121872A 0101000	Black	C Z
121872A J221000	Blue, Strong	
121872A 0081000	Gray	C Z

Footnote:	C - CRATE REEL PUT-UP.
Footnote:	Z - FINAL PUT-UP MAY VARY (= OR -) 10% FOR SPOOLS OR REELS AND (+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.
Patent:	https://www.belden.com/resources/patents

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