

## 121872A Multi-Conductor - Category 6 DataTuff® Twisted Pair Cable



For more Information  
please call

1-800-Belden1



### Description:

23 AWG Bonded-Pairs solid bare copper conductors, polyolefin insulation, PVC inner jacket, aluminum interlocked armor, industrial grade PVC jacket. Sequential marking at one meter intervals.

### Usage (Overall)

**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

### Physical Characteristics (Overall)

#### Conductor

**AWG:**

# Pairs	AWG	Stranding	Conductor Material	Dia. (mm)
4	23	Solid	BC - Bare Copper	0.5588

**Total Number of Conductors:** 8

#### Insulation

**Insulation Material:**

Insulation Material	Wall Thickness (mm)	Dia. (mm)
PO - Polyolefin	0.2286	0.9652

#### Inner Jacket

**Inner Jacket Material:**

Inner Jacket Material	Nom. Dia. (mm)
PVC - Polyvinyl Chloride	.365 x .165

#### Outer Shield

**Outer Shield Material:**

Outer Shield Material
Unshielded

#### Outer Jacket

**Outer Jacket Material:**

Outer Jacket Material
PVC - Polyvinyl Chloride

**Outer Jacket over Armor (y/n):** Yes

#### Armor

**Armor Type:** Interlocked

**Armor Material:** Aluminum

#### Overall Cable

**Overall Nominal Diameter:** 17.475 mm

#### Pair

**Pair Color Code Chart:**

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

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4	White/Brown Stripe & Brown
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### Mechanical Characteristics (Overall)

Installation Temperature Range:	-25°C To +75°C
Operating Temperature Range:	-40°C To +75°C
Bulk Cable Weight:	229.183 Kg/Km
Max. Recommended Pulling Tension:	889.640 N
Min. Bend Radius/Minor Axis:	209.550 mm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CM
CEC/C(UL) Specification:	CMG, HL
Other Standards:	11801 Category 6
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2006
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Telecommunications Standards:	Category 6 - TIA 568.B.2-1

#### Flame Test

UL Flame Test:	UL1666 Vertical Tray
CSA Flame Test:	FT4

#### Plenum/Non-Plenum

Plenum (Y/N):	No
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### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/m)
49.215

Maximum Capacitance Unbalance (pF/100 m):	49.2
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#### Nominal Velocity of Propagation:

VP (%)
70

#### Maximum Delay:

Delay (ns/100 m)
510 @ 100MHz

#### Max. Delay Skew:

Delay Skew (ns/100 m)
25

#### Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
9

#### Max. Operating Voltage - UL:

Voltage
300 V RMS

METRIC MEASUREMENT VERSION

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Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)
3

### Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

Freq. (MHz)	Max. Attenuation (dB/100 m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. ACR (dB)	Min. PSACR (dB)	Min RL (dB)
1	1.900	74.3	72.3	72.4	70.4	20.000
4	3.700	65.3	63.3	61.6	59.6	23.000
8	5.300	60.3	58.8	55.5	53.5	24.500
10	5.900	59.3	57.3	53.4	51.4	25.000
16	7.500	56.3	54.3	48.7	46.7	25.000
20	8.400	54.8	52.8	46.4	44.4	25.000
25	9.500	53.4	51.4	43.9	41.9	24.300
31.25	10.600	51.9	49.9	41.2	39.2	23.600
62.5	15.400	47.4	45.4	32.0	30	21.500
100	19.800	44.3	42.3	24.5	22.5	21.000
155	25.100	41.5	39.5	16.3	14.3	21.000
200	29.000	39.9	37.9	10.8	10	21.000
250	32.800	38.3	36.3	5.5	3.5	18.000
300	35.200	37.2	34.2	0.7	0	18.000
310	37.100	36.9	34.9	0		18.000
350	39.800	36.2	34.2			17.000
400	43.000	35.3	33.3			14.000
500	49.000	33.8	31.8			14.000

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 12	100 ± 15	67.8	64.8
4	100 ± 12	100 ± 15	55.7	52.7
8	100 ± 12	100 ± 15	49.7	46.7
10	100 ± 12	100 ± 15	47.8	44.8
16	100 ± 12	100 ± 8	43.7	40.7
20	100 ± 12	100 ± 8	41.7	38.7
25	100 ± 15	100 ± 8	39.8	36.8
31.25	100 ± 15	100 ± 8	37.9	34.9
62.5	100 ± 15	100 ± 8	31.8	28.8
100	100 ± 15	100 ± 8	27.8	24.8
155	100 ± 15	100 ± 8	23.9	20.9
200	100 ± 15	100 ± 8	21.7	18.7
250	100 ± 20	100 ± 8	19.8	16.8
300	100 ± 20	100 ± 8	18.2	15.2
310	100 ± 20	100 ± 8	17.9	14.9
350	100 ± 22	100 ± 8	16.9	13.9
400	100 ± 32	100 ± 8	15.7	12.7
500	100 ± 32	100 ± 8	13.8	10.8

### Notes (Overall)

**Notes:** US Patent #'s 5606151; 5734126; 5821467 \*\*Values above 350 MHz are information only. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
121872A J221000	305 MT	105.234 KG	BLUE, STRONG		1872A ALUM ARMOR PVC
121872A 0081000	305 MT	105.234 KG	GRAY	C Z	4 PR 24 ARM PVC CABLE
121872A 0101000	305 MT	105.234 KG	BLACK	C Z	4 PR 24 ARM PVC CABLE

**Notes:**

C = CRATE REEL PUT-UP.

Z = FINAL PUT-UP LENGTH MAY VARY (+ OR -) 10% FOR SPOOLS OR REELS AND(+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.

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