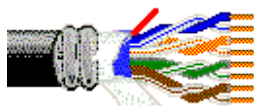


## 121700R Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

24 AWG Bonded-Pairs solid bare copper conductors, polyolefin insulation, PVC inner jacket, rip cord, polyester wrap, aluminum interlocked armor, industrial grade outer PVC jacket. Sequential marking at one meter intervals.

### Usage (Overall)

**Suitable Applications:** Industrial Ethernet Cable, Harsh Environments, 350MHz Enhanced Category 5e, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, RJ-45 Compatible, Flexible Applications, Armored for Extra Protection

### Physical Characteristics (Overall)

#### Conductor

**AWG:**

# Pairs	AWG	Stranding	Conductor Material	Dia. (mm)
4	24	Solid	BC - Bare Copper	0.508

**Total Number of Conductors:** 8

#### Insulation

**Insulation Material:**

Insulation Material	Wall Thickness (mm)	Dia. (mm)
PO - Polyolefin	0.2286	0.889

#### Inner Jacket

**Inner Jacket Material:**

Inner Jacket Material	Nom. Dia. (mm)
PVC - Polyvinyl Chloride	5.08

**Inner Jacket Ripcord:** Yes

#### Outer Shield

**Outer Shield Material:**

Outer Shield Material
Unshielded

#### Outer Jacket

**Outer Jacket Material:**

Outer Jacket Material	Nom. Wall Thickness (mm)
Industrial Grade PVC - Polyvinyl Chloride	1.143

#### Outer Jacket over Armor

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

**Outer Jacket Material Over Armor:**

OJ Over Armor Material
PVC - Polyvinyl Chloride

#### Armor

**Armor Type:** Interlocked

**Armor Material:** Aluminum

**Diameter over Armor:** .440

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## Overall Cable

Overall Cabling Separator Material:	Polyester
Overall Nominal Diameter:	14.046 mm

## Pair

## Pair Color Code Chart:

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

## Mechanical Characteristics (Overall)

Installation Temperature Range:	-40°C To +75°C
Operating Temperature Range:	-40°C To +75°C
Bulk Cable Weight:	151.796 Kg/Km
Max. Recommended Pulling Tension:	177.928 N
Min. Bend Radius/Minor Axis:	165.100 mm

## Applicable Specifications and Agency Compliance (Overall)

## Applicable Standards &amp; Environmental Programs

NEC/(UL) Specification:	CM, UL444
CEC/C(UL) Specification:	CMG, HL
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	10/01/2005
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 5e - TIA 568.C.2
Other Specification:	NEMA WC-63.1 Category 5e

## Applicable Patents:

Country
<a href="http://www.belden.com/p">www.belden.com/p</a>

## Flame Test

UL Flame Test:	UL1685 UL Loading
CSA Flame Test:	FT4

## Suitability

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

## Plenum/Non-Plenum

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

Nom. Mutual Capacitance:

METRIC MEASUREMENT VERSION

## 121700R Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable

**Capacitance (pF/m)**

49.215

**Maximum Capacitance Unbalance (pF/100 m):** 66

**Nominal Velocity of Propagation:**

**VP (%)**

70

**Maximum Delay:**

**Delay (ns/100 m)**

510

**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

**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	2.0	65.3	65.3	63.3	63.3	20.0
4	4.0	56.3	56.3	52.3	52.3	23.0
8	5.7	51.8	51.8	46.1	46.1	24.5
10	6.4	50.3	50.3	43.9	43.9	25.0
16	8.1	47.3	47.3	39.1	39.1	25.0
20	9.2	45.8	45.8	35.2	35.2	25.0
25	10.3	44.3	44.3	34.1	34.1	24.3
31.25	11.6	42.9	42.9	31.3	31.3	23.6
62.5	16.8	38.4	38.4	21.6	21.6	21.5
100	21.7	35.3	35.3	17.1	17.1	20.1
155	27.7	32.5	32.5	4.7	4.7	19.0
200	32.0	30.8	30.8	3.0	3.0	19.0
250	36.4	29.3	29.3	>0	>0	18.0
300	40.5	28.2	28.2	>0	>0	18.0
310	41.3	27.9	27.9			18.0
350	44.3	27.2	27.2			17.0

**Premise Cable Electrical Table 2:**

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 12	105 ± 10	63.8	60.8
4	100 ± 12	100 ± 10	51.7	48.7
8	100 ± 12	100 ± 10	45.7	42.7
10	100 ± 12	100 ± 10	43.8	40.8
16	100 ± 12	100 ± 10	39.7	36.7
20	100 ± 12	100 ± 10	37.7	34.7
25	100 ± 15	100 ± 10	35.8	32.8
31.25	100 ± 15	100 ± 10	33.9	30.9
62.5	100 ± 15	100 ± 10	27.8	24.8
100	100 ± 15	100 ± 10	23.8	20.8
155	100 ± 18	100 ± 10	19.9	16.9
200	100 ± 20	100 ± 10	17.7	14.7
250	100 ± 20	100 ± 10	15.8	12.8

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300	100 ± 20	100 ± 10	14.2	11.2
310	100 ± 20	100 ± 10	13.9	10.9
350	100 ± 22	100 ± 10	12.9	9.9

### Notes (Overall)

**Notes:** Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. Cable passes -40C cold impact.

**Notes (Cont'd.):** T568A Plug Compatible Part Number: R301603 T568B Plug Compatible Part Number: R301604

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
121700R J222000	2,000 FT	340.000 LB	BLUE, STRONG		1700R/300V/AIA/PVCOJ/STRBLUOJ

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