

## 7933A 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, overall Beldfoil® shield (100% coverage) with drain wire, .030" industrial grade sunlight- and oil-resistant PVC jacket, drain wire. Sequential marking at two foot intervals.

### Usage (Overall)

**Suitable Applications:** Industrial Ethernet, Harsh Environments, 200MHz Category 5e, M-12 Compatible, 100Base TX, 100BaseVG ANYLAN, 155A TM, 622A TM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, RJ-45 Compatible, EtherNet/IP

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
2	24	Solid	BC - Bare Copper

**Total Number of Conductors:** 4

#### Insulation

Insulation Material:

Insulation Material
PO - Polyolefin

#### Outer Shield

Outer Shield Material:

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100

Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire	Conductor Material
24	7x32	TC - Tinned Copper	

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material
Industrial Grade PVC - Polyvinyl Chloride

#### Overall Cable

**Overall Nominal Diameter:** 0.235 in.

#### Pair

Pair Color Code Chart:

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

### Mechanical Characteristics (Overall)

**Storage Temperature Range:** -40°C To +85°C

**Installation Temperature Range:** -25°C To +75°C

**Operating Temperature Range:** -40°C To +75°C

**Bulk Cable Weight:** 30 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 20 lbs.

**Min. Bend Radius/Minor Axis:** 0.500 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

**NEC/(UL) Specification:** CMR

**CEC/(UL) Specification:** CMR

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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):	01/01/2004
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
Other Specification:	NEMA WC-63.1 Category 5e, UL verified to Category 5e, EtherNet/IP Compliant

**Applicable Patents:**

<b>Country</b>
www.belden.com/p

**Flame Test**

UL Flame Test:	UL1666 Riser
CSA Flame Test:	FT4
IEEE Flame Test:	1202

**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:**

<b>Capacitance (pF/ft)</b>
15

Maximum Capacitance Unbalance (pF/100 m):	150
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**Nominal Velocity of Propagation:**

<b>VP (%)</b>
70

**Maximum Delay:**

<b>Delay (ns/100 m)</b>
538 @ 100MHz

**Max. Delay Skew:**

<b>Delay Skew (ns/100 m)</b>
45

**Maximum Conductor DC Resistance:**

<b>DCR @ 20°C (Ohm/100 m)</b>
9.38

**Max. Operating Voltage - UL:**

<b>Voltage</b>
300 V RMS

**Maximum DCR Unbalanced:**

<b>DCR Unbalance @ 20°C (%)</b>
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)	Min. SRL (dB)
1	2.0	65.3	62.3	63.0	60.0	20.0	23
4	4.1	56.3	53.3	51.0	49.0	23.6	23.0
8	5.8	51.8	48.8	46.0	43.0	25.4	24.5
10	6.5	50.3	47.3	43.0	41.0	26.0	25.0
16	8.2	47.3	44.3	39.0	36.0	26.0	25.0
20	9.3	45.8	42.8	36.5	33.5	26.0	25.0
25	10.4	44.3	41.3	33.9	30.9	25.5	24.3
31.25	11.7	42.9	39.9	31.0	28.0	25.0	23.6

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62.5	17.0	38.4	35.4	22.0	19.0	23.5	21.5
100	22.0	35.3	32.3	14.0	11.0	22.5	20.1
155	28.1	32.5	29.5	4.4	1.4	15.8	
200	32.0	30.8	27.8	4.0	1.0	15.0	

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 15	102.5 ± 7.5	63.8	60.8
4	100 ± 15	102.5 ± 7.5	51.7	48.7
8	100 ± 15	101 ± 6	45.7	42.7
10	100 ± 15	101 ± 6	43.8	40.8
16	100 ± 15	101 ± 6	39.7	36.7
20	100 ± 15	101 ± 6	37.7	34.7
25	100 ± 15	101 ± 6	35.8	32.8
31.25	100 ± 15	101 ± 6	33.9	30.9
62.5	100 ± 15	101 ± 6	27.8	24.8
100	100 ± 15	101 ± 6	23.8	20.8
155	100 ± 25	100 ± 15	19.9	16.9
200	100 ± 25	100 ± 15	17.7	14.7

### Notes (Overall)

**Notes:** EtherNet IP is a trademark of ControlNet International Ltd. under license by DeviceNet Vendor Association, Inc. Operating Temperature subject to length de-rating.

**Notes (Cont'd.):**

Cable passes -40C Cold Bend per UL 1581. T568A Plug Compatible Part Number: R301603 T568B Plug Compatible Part Number: R301604

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7933A 0101000	1,000 FT	33.000 LB	BLACK	C	2 PR #24 PP FS FRPVC
7933A 0102000	2,000 FT	66.000 LB	BLACK	C	2 PR #24 PP FS FRPVC
7933A 1NH1000	1,000 FT	33.000 LB	TEAL 1NH	C	2 PR #24 PP FS FRPVC

**Notes:**

C = CRATE REEL PUT-UP.

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