

## 7938A Multi-Conductor - Category 5e DataTuff® 10 Million Flex Twisted Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

24 AWG stranded (7x32) bare copper alloy conductors, bonded pairs, polyolefin insulation, polyester separator, TPE inner jacket, Beldfoil® shield (100% coverage), 85% TC Braid, industrial grade sunlight-, oil and Weld splatter-resistant TPE jacket. Ripcord.

### Usage (Overall)

**Suitable Applications:** Industrial Ethernet, Harsh Environments, Robotic Applications, Flexible Applications, 100MHz Category 5e, Industrial Patch Cable, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU, Digital Video, RS-422, Outdoor, RJ-45 Compatible\*

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
4	24	7x32	CA - Copper Alloy

**Total Number of Conductors:** 8

#### Insulation

Insulation Material:

Insulation Material
PO - Polyolefin

#### Inner Jacket

Inner Jacket Material:

Inner Jacket Material	Nom Wall (in.)	Nom. Dia. (in.)
TPE	0.020	0.254

#### Outer Shield

Outer Shield Material:

Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)	Dia. (in.)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000	
	Braid	TC - Tinned Copper	85.000	0.282

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (in.)
Industrial Grade TPE - Theroplastic Elastomer	0.030

Outer Jacket Diameter:

Nom. Dia. (in.)
0.342

**Outer Jacket Ripcord:** Yes

### Overall Cable

**Overall Cabling Separator Material:** Polyester

**Overall Nominal Diameter:** 0.342 in.

### Pair

Pair Color Code Chart:

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

### Mechanical Characteristics (Overall)

**Storage Temperature Range:** -40°C To +80°C

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

**Operating Temperature Range:** -40°C To +80°C

## 7938A Multi-Conductor - Category 5e DataTuff® 10 Million Flex Twisted Pair Cable

Bulk Cable Weight:	60 lbs/1000 ft.
Max. Recommended Pulling Tension:	40 lbs.
Min. Bend Radius/Minor Axis:	3.500 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

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):	07/17/2008
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 Patch, ICEA 661 Category 5 Patch,

#### Flame Test

UL Flame Test:	UL1581 Vertical Tray (VW-1)
C(UL) Flame Test:	FT1

#### Suitability

Suitability - Indoor:	Yes
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:

Capacitance (pF/ft)  
15.000

#### Maximum Capacitance Unbalance:

Capacitance (pF/ft)  
330.000

#### Nominal Velocity of Propagation:

VP (%)  
69.000

#### Maximum Delay:

Delay (ns/100 m)  
510.000

#### Typical Delay Skew:

Delay Skew (ns/ft)  
12.000

#### Max. Delay Skew:

Delay Skew (ns/100 m)  
45.000

#### Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)  
11.000

#### Max. Operating Voltage - UL:

Voltage  
300 V RMS

#### Maximum DCR Unbalanced:

DCR Unbalance @ 20°C (%)  
3.000

### Electrical Characteristics-Premise (Overall)

Premise Cable Electrical Table 1:

## 7938A Multi-Conductor - Category 5e DataTuff® 10 Million Flex Twisted Pair Cable

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	2.500	65.3	62.3	62.8	59.8	20.000	23.0
4	4.900	56.3	53.3	51.4	48.4	23.000	23.0
8	6.900	51.8	48.8	44.9	41.9	24.500	24.5
10	7.800	50.3	47.3	42.5	39.5	25.000	25.0
16	9.900	47.3	44.3	37.4	34.4	25.000	25.0
20	11.100	45.8	42.8	34.7	31.7	25.000	25.0
25	12.500	44.3	41.3	21.8	28.8	24.300	24.3
31.25	14.100	42.9	39.9	28.8	25.8	23.600	23.6
62.5	20.400	38.4	35.4	18.0	15.0	21.500	21.5
100	26.400	35.3	32.3	8.9	5.9	20.100	20.1

Premise Cable Electrical Table 2:

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

### Notes (Overall)

**Notes:** Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. \*Special RJ45 plugs required. See WWW. BELDEN.COM - Tools - Connector Cross Reference.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7938A B591000	1,000 FT	69.000 LB	BLACK, MATTE	C	4 PR #24 PP TPE SH TPE
7938A B59500	500 FT	35.000 LB	BLACK, MATTE	C	4 PR #24 PP TPE SH TPE

**Notes:**  
C = CRATE REEL PUT-UP.

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