

## 7928A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable



For more Information  
please call

1-800-Belden1



### General Description:

24 AWG Bonded-Pair solid bare copper conductors, FEP insulation, sunlight-, oil- and gas-resistant FEP jacket. Sequential marking at two foot 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, High and Low Temperature, Oil and Gasoline Exposure, Limited Combustible FHC 25/50

### 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)
FEP - Fluorinated Ethylene Propylene	0.178	0.914

#### Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material
FEP - Fluorinated Ethylene Propylene

#### Overall Cable

Overall Nominal Diameter: 4.750 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)

Storage Temperature Range: -70°C To +150°C

Installation Temperature Range: -55°C To +150°C

Operating Temperature Range: -70°C To +150°C

Bulk Cable Weight: 37.205 Kg/Km

Max. Recommended Pulling Tension: 177.928 N

Min. Bend Radius/Minor Axis: 6.350 mm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification: CMP, FHC 25/50

CEC/C(UL) Specification: CMP

EU Directive 2011/65/EU (ROHS II): Yes

## METRIC MEASUREMENT VERSION

### 7928A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable

<b>Other Standards:</b>	ISO/IEC 11801 ed 2.1 (2008) Class D
<b>EU Directive 2000/53/EC (ELV):</b>	Yes
<b>EU Directive 2002/95/EC (RoHS):</b>	Yes
<b>EU RoHS Compliance Date (mm/dd/yyyy):</b>	04/01/2005
<b>EU Directive 2002/96/EC (WEEE):</b>	Yes
<b>EU Directive 2003/11/EC (BFR):</b>	Yes
<b>CA Prop 65 (CJ for Wire &amp; Cable):</b>	Yes
<b>MIL Order #39 (China RoHS):</b>	Yes
<b>Telecommunications Standards:</b>	Category 5e - TIA 568.C.2
<b>Other Specification:</b>	NEMA WC-63.1 Category 5e, UL verified to Category 5e, Ethernet/IP™ Compliant

#### Flame Test

<b>UL Flame Test:</b>	NFPA 262, UL723 (NFPA 255)
<b>CSA Flame Test:</b>	FT6

#### Plenum/Non-Plenum

<b>Plenum (Y/N):</b>	Yes
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### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

**Capacitance (pF/m)**  
49.215

<b>Maximum Capacitance Unbalance (pF/100 m):</b>	66
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#### Nominal Velocity of Propagation:

**VP (%)**  
72

#### 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	23.6
8	5.7	51.8	51.8	46.1	46.1	25.4
10	6.4	50.3	50.3	43.9	43.9	26.0
16	8.1	47.3	47.3	39.1	39.1	26.0
20	9.2	45.8	45.8	35.2	35.2	26.0
25	10.3	44.3	44.3	34.1	34.1	25.5
31.25	11.6	42.9	42.9	31.3	31.3	25.0
62.5	16.8	38.4	38.4	21.6	21.6	23.5
100	21.7	35.3	35.3	17.1	17.1	22.5
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:

## 7928A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 12	95-110	63.8	60.8
4	100 ± 12	95-110	51.7	48.7
8	100 ± 12	95-107	45.7	42.7
10	100 ± 12	95-107	43.8	40.8
16	100 ± 12	95-107	39.7	36.7
20	100 ± 12	95-107	37.7	34.7
25	100 ± 15	95-107	35.8	32.8
31.25	100 ± 15	95-107	33.9	30.9
62.5	100 ± 15	95-107	27.8	24.8
100	100 ± 15	95-107	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
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:** US Patent #'s 5, 606, 151; 5, 734, 126. Ethernet IP is a trademark of ControlNet International, Ltd. under license by Open DeviceNet Vendor Association, Inc. Operating temperatures are subject to length de-rating. Cable passes -70C Cold Bend per UL 1581.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7928A 0101000	1,000 FT	24.000 LB	BLACK		4 PR #24 FEP FEP
7928A 0105000	5,000 FT	120.000 LB	BLACK		4 PR #24 FEP FEP

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