

## 7924A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable

For more Information  
please call

1-800-Belden1



### General Description:

24 AWG Bonded-Pairs stranded (7x32) tinned copper conductors, polyolefin insulation, industrial grade sunlight- and oil-resistant PVC 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, CMX - Outdoor, RJ-45 Compatible, Flexible Applications

### Physical Characteristics (Overall)

#### Conductor

**AWG:**

# Pairs	AWG	Stranding	Conductor Material	Dia. (mm)
4	24	7x32	TC - Tinned Copper	0.5588

**Total Number of Conductors:** 8

#### Insulation

**Insulation Material:**

Insulation Material	Wall Thickness (mm)	Dia. (mm)
PO - Polyolefin	0.203	1.067

#### 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	0.762

#### Overall Cable

**Overall Nominal Diameter:** 6.147 mm

#### Pair

**Pair Color Code Chart:**

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

### Mechanical Characteristics (Overall)

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

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

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

**Bulk Cable Weight:** 38.693 Kg/Km

**Max. Recommended Pulling Tension:** 177.928 N

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Min. Bend Radius/Minor Axis:	6.350 mm
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### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMR, CMX-Outdoor, UL444
CEC/C(UL) Specification:	CMR
EU Directive 2011/65/EU (ROHS II):	Yes
Other Standards:	11801 Category 5e Patch
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
Telecommunications Standards:	568-B.2 Category 5e Patch
Other Specification:	NEMA WC-63.1 Category 5, ICEA 661, Category 5e Patch, UL verified to TIA/EI-568-B.2, Category 5e

#### Flame Test

UL Flame Test:	UL1666 Riser
CSA Flame Test:	FT4

#### 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/m)

49.215

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

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**Voltage**

300 V RMS

**Maximum DCR Unbalanced:**

**DCR Unbalance @ 20°C (%)**

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### Electrical Characteristics-Premise (Overall)

**Premise Cable Electrical Table 1:**

Freq. (MHz)	Max. Attenuation (dB/100 m)	Min. NEXT (dB)	Min. PSNEXT (dB)	Min. PSACR (dB)	Min RL (dB)
1	2.4	65.3	65.3	62.9	20.0
4	4.8	56.3	56.3	51.5	23.0
8	6.8	51.8	51.8	45.0	24.5
10	7.7	50.3	50.3	42.6	25.0
16	9.7	47.3	47.3	37.5	25.0
20	11.0	45.8	45.8	34.8	25.0
25	12.4	44.3	44.3	31.9	24.3
31.25	13.9	42.9	42.9	29.0	23.6
62.5	20.2	38.4	38.4	18.3	21.5
100	26.0	35.3	35.3	9.2	20.1
155	33.2	32.5	32.5	0	19.0
200	38.4	30.8	30.8		19.0
250	43.7	29.3	29.3		18.0
300	48.6	28.2	28.2		18.0
310	49.5	27.9	27.9		18.0
350	53.2	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 ± 18	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
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 Patents 5, 606, 151; 5, 734, 126; 5, 763, 823. EtherNet/IP is a trademark of ControlNet Internation, Ltd. under license by Open DeviceNet Vendor Association, Inc. 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
7924A 0021000	305 MT	13.608 KG	RED	C	4 PR #24 PP PVC
7924A 0061000	305 MT	13.608 KG	BLUE, LIGHT	C	4 PR #24 PP PVC
7924A 0081000	305 MT	13.608 KG	GRAY	C	4 PR #24 PP PVC
7924A 0101000	305 MT	13.608 KG	BLACK	C	4 PR #24 PP PVC
7924A 0102000	610 MT	26.308 KG	BLACK	C	4 PR #24 PP PVC
7924A 1NH1000	305 MT	13.608 KG	TEAL 1NH	C	4 PR #24 PP PVC

**Notes:**

## METRIC MEASUREMENT VERSION

### 7924A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable

C = CRATE REEL PUT-UP.

Revision Number: 7    Revision Date: 03-24-2011

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