

## 7921A 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® (100%coverage) plus tinned copper braid shield (70% coverage), drain wire, industrial grade sunlight- and oil-resistant PVC jacket. Seq. marking at 2 ft. intervals

### Usage (Overall)

**Suitable Applications:** Industrial Ethernet, Harsh Environments, Category 5e, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, CMX - Outdoor, EtherNet/IP™

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
4	24	Solid	BC - Bare Copper

**Total Number of Conductors:** 8

#### Insulation

Insulation Material:

Insulation Material	Wall Thickness (in.)	Dia. (in.)
PO - Polyolefin	0.012	0.046

#### Outer Shield

Outer Shield Material:

Layer #	Outer Shield Trade Name	Type	Outer Shield Material	Coverage (%)
1	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100.000
2		Braid	TC - Tinned Copper	70.000

Outer Shield Drain Wire AWG:

AWG	Stranding	Drain Wire Conductor Material
26	Solid	TC - Tinned Copper

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material	Nom. Wall Thickness (in.)
Industrial Grade PVC - Polyvinyl Chloride	0.030

#### Overall Cable

**Overall Nominal Diameter:** 0.330 in.

#### 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)

<b>Storage Temperature Range:</b>	-40°C To +80°C
<b>Installation Temperature Range:</b>	-25°C To +75°C
<b>Operating Temperature Range:</b>	-40°C To +75°C
<b>Bulk Cable Weight:</b>	50 lbs/1000 ft.
<b>Max. Recommended Pulling Tension:</b>	75 lbs.
<b>Min. Bend Radius/Minor Axis:</b>	1.320 in.

## 7921A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC(UL) Specification:	CMR, CMX-Outdoor
CEC/C(UL) Specification:	CMR
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
Telecommunications Standards:	Category 5e - TIA 568.C.2
Other Specification:	NEMA WC-63.1 Category 5e, EtherNet/IP™ Compliant

#### Applicable Patents:

Country
www.belden.com/p

#### Flame Test

UL Flame Test:	UL1666 Vertical 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
---------------	----

### Electrical Characteristics (Overall)

#### Nom. Mutual Capacitance:

Capacitance (pF/ft)
15

Maximum Capacitance Unbalance (pF/100 m):	150
---	-----

#### Nominal Velocity of Propagation:

VP (%)
70

#### Maximum Delay:

Delay (ns/100 m)
538 @ 100MHz

#### Max. Delay Skew:

Delay Skew (ns/100 m)
45

#### Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)
9.38

#### 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)	Min. SRL (dB)
1	2.0	65.3	62.3	63.0	60.0	20.0	20.0

## 7921A Multi-Conductor - Category 5e DataTuff® Twisted Pair Cable

4	4.1	56.3	53.3	51.0	49.0	23.6	23.6
8	5.8	51.8	48.8	46.0	43.0	25.4	25.4
10	6.5	50.3	47.3	43.0	41.0	26.0	26.0
16	8.2	47.3	44.3	39.0	36.0	26.0	26.0
20	9.3	45.8	42.8	36.5	33.5	26.0	26.0
25	10.4	44.3	41.3	33.9	30.9	25.5	25.5
31.25	11.7	42.9	39.9	31.0	28.0	25.0	25.0
62.5	17.0	38.4	35.4	22.0	19.0	23.5	23.5
100	22.0	35.3	32.3	14.0	11.0	22.5	22.5

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ELFEXT (dB)	Min. PSELFEXT (dB)
1	100 ± 15	95-110	63.8	60.8
4	100 ± 15	95-110	51.7	48.7
8	100 ± 15	95-107	45.7	42.7
10	100 ± 15	95-107	43.8	40.8
16	100 ± 15	95-107	39.7	36.7
20	100 ± 15	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

### Notes (Overall)

**Notes:** US Patent #'s 5606151; 5734126. 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 -40C Cold Bend per UL 1581.

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

T568A Plug Compatible Part Number: R301601 T568B Plug Compatible Part Number: R301602

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7921A 0021000	1,000 FT	54.000 LB	RED	C	4 PR #24 PP SH PVC
7921A 0061000	1,000 FT	21.000 LB	BLUE, LIGHT	C	4 PR #24 PP SH PVC
7921A 0101000	1,000 FT	54.000 LB	BLACK	C	4 PR #24 PP SH PVC
7921A 0102000	2,000 FT	106.000 LB	BLACK	C	4 PR #24 PP SH PVC
7921A 1NH1000	1,000 FT	54.000 LB	TEAL 1NH	C	4 PR #24 PP SH PVC

**Notes:**

C = CRATE REEL PUT-UP.

Revision Number: 7 Revision Date: 07-19-2016

© 2016 Belden, Inc  
All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability. Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein. All sales of Belden products are subject to Belden's standard terms and conditions of sale. Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.