

**7958A Multi-Conductor - Category 5e DataTuff® 600V AWM Rated 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), industrial grade sunlight- and oil-resistant PVC jacket, drain wire, rip cord. Sequential marking at two foot intervals

**Usage (Overall)****Suitable Applications:**

Industrial Ethernet Cable, Harsh Environments, 200MHz Category 5e, Industrial Ethernet, Gigabit Ethernet, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments, CMX - Outdoor, RJ-45 Compatible\*

**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 (mm)
PO - Polyolefin	0.254

**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
PVC - Polyvinyl Chloride

**Outer Jacket Ripcord:**

No

**Overall Cable****Overall Nominal Diameter:**

6.731 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

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**Mechanical Characteristics (Overall)**

Installation Temperature Range:	-25°C To +75°C
Operating Temperature Range:	-40°C To +75°C
Bulk Cable Weight:	47.622 Kg/Km
Max. Recommended Pulling Tension:	155.687 N
Min. Bend Radius/Minor Axis:	12.700 mm

**Applicable Specifications and Agency Compliance (Overall)****Applicable Standards & Environmental Programs**

CEC/C(UL) Specification:	CMR
AWM Specification:	UL Style 21047
Other Standards:	TIA 1005
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

**Flame Test**

UL Flame Test:	UL1666 Riser
CSA Flame Test:	FT4

**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:**

Capacitance (pF/m)
49.215

Maximum Capacitance Unbalance (pF/100 m):	150
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**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)
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9.38

## Max. Operating Voltage - UL:

Voltage	Description
300 V RMS	
600 V RMS	Appliance Wiring Material

## 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	2.000	65.3	62.3	63.0	60.0	20.000	20.0
4	4.100	56.3	53.3	51.0	49.0	23.600	23.6
8	5.800	51.8	48.8	46.0	43.0	25.400	25.4
10	6.500	50.3	47.3	43.0	41.0	26.000	26.0
16	8.200	47.3	44.3	39.0	36.0	26.000	26.0
20	9.300	45.8	42.8	36.5	33.5	26.000	26.0
25	10.400	44.3	41.3	33.9	30.9	25.500	25.5
31.25	11.700	42.9	39.9	31.0	28.0	25.000	25.0
62.5	17.000	38.4	35.4	22.0	19.0	23.500	23.5
100	22.000	35.3	32.3	14.0	11.0	22.500	22.5
200	32.400		27.8		1.0		

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
200	100 ± 25			14.7

## 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 Vender Association, Inc. Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. \*Special RJ45 plug required. See WWW. BELDEN.COM - Tools - Connector Cross Reference. Not intended for 600 V electrical power delivery.

## Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7958A 0061000	305 MT	16.783 KG	BLUE, LIGHT	C	4 PR #24 PP FS FRPVC
7958A 0101000	305 MT	16.783 KG	BLACK	C	4 PR #24 PP FS FRPVC
7958A 0102000	610 MT	30.844 KG	BLACK		4 PR #24 PP FS FRPVC
7958A 1NH1000	305 MT	16.783 KG	TEAL 1NH	C	4 PR #24 PP FS FRPVC

## Notes:

C = CRATE REEL PUT-UP.

## Test Reports

## a) UL

- i) UL Test Reports are available on-line through the UL Client Document Access web portal.
- ii) UL Inspection Reports are also available through the UL Client Document Access web portal.

## b) CSA

- i) CSA "Descriptive Report and Test Results" documents are available on the CSA Gateway Portal.
- ii) CSA Inspection Reports are maintained on the CSA issued 'flash drive' at each manufacturing location.

## METRIC MEASUREMENT VERSION

### 7958A Multi-Conductor - Category 5e DataTuff® 600V AWM Rated Twisted Pair Cable

\* other test data may be available if requested at time of order.

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