

## 7961A Multi-Conductor - Category 5e DataTuff® Quad Cables



For more Information  
please call

1-800-Belden1



### General Description:

22 AWG Symmetric quad stranded tinned copper conductors, polyolefin insulation, FRPE bedding, industrial grade sunlight- and oil-resistant PVC jacket, rip cord. Sequential marking at two foot intervals. PROFINET Type B cable

### Usage (Overall)

**Suitable Applications:** Industrial Ethernet Cable, Harsh Environments, Category 5e, ProfiNet, 100BaseTX, CMX - Outdoor, PLTC Listed, Approved for Cable Tray Use in Class 1, Division 2, Hazardous Areas and Non-hazardous Areas, Cable Trays, Raceways, Conduit and Supported by Messenger Wires, Approved for Outdoor Usage

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Conductors	AWG	Stranding	Conductor Material	Dia. (in.)
4	22	7x 0.25 mm	TC - Tinned Copper	0.029

**Total Number of Conductors:** 4

#### Insulation

Insulation Material:

Insulation Material	Dia. (in.)
PO - Polyolefin	0.061

#### Inner Jacket

Inner Jacket Material:

Inner Jacket Material	Nom. Dia. (in.)
FRPE	0.164

#### 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		85.000

#### Outer Jacket

Outer Jacket Material:

Outer Jacket Material
Industrial Grade PVC

#### Overall Cable

**Overall Nominal Diameter:** 0.272 in.

#### Pair

Pair Color Code Chart:

Number	Color
1	White
2	Blue
3	Yellow
4	Orange

### Mechanical Characteristics (Overall)

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

**Installation Temperature Range:** -20°C To +60°C

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

**Bulk Cable Weight:** 42.600 lbs/1000 ft.

**Max. Recommended Pulling Tension:** 55 lbs.

**Min. Bend Radius/Minor Axis:** 2.560 in.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMG, CMX-Outdoor, ITC, PLTC
CEC/C(UL) Specification:	CMG
AWM Specification:	UL Style 21047
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

#### Flame Test

UL Flame Test:	UL1685 FT4/IEEE 1202 Vertical Tray Flame Test
C(UL) Flame Test:	FT4
IEEE Flame Test:	1202

#### 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. Capacitance Conductor to Shield:

Capacitance (pF/ft)  
15

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

VP (%)  
70

#### Maximum Delay:

Delay (ns/100 m)  
552.000

#### Maximum Conductor DC Resistance:

DCR @ 20°C (Ohm/100 m)  
5.700

#### 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. ACR (dB)	Min RL (dB)
1	2.100	65.3	63.2	23.000
4	4.000	56.3	52.3	23.000
10	6.300	50.3	43.9	25.000
16	8.000	47.2	39.1	25.000
20	9.000	45.8	35.2	25.000
31.25	11.400	42.9	31.3	23.600

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62.5	16.500	38.4	21.6	21.500
100	21.300	35.3	17.1	20.100

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Fitted Impedance	Min. ACRF (dB)
1	100 ± 20.2	105 ± 10	64.0
4	100 ± 14.2	100 ± 10	52.0
10	100 ± 11.3	100 ± 10	44.0
16	100 ± 11.3	100 ± 10	39.9
20	100 ± 11.3	100 ± 10	38.0
31.25	100 ± 13.2	100 ± 10	34.1
62.5	100 ± 16.9	100 ± 10	28.1
100	100 ± 20.0	100 ± 10	24.0

### Notes (Overall)

**Notes:** Operating temperatures are subject to length de-rating. Cable passes -40C Cold Bend per UL 1581. Limits below 4 MHz are for information only.

**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
7961A 1SW1000	1,000 FT	46.000 LB	GREEN, RAL 6018		PROFINET TYPE B CAT 5/5E
7961A 1SW2000	2,000 FT	92.000 LB	GREEN, RAL 6018		PROFINET TYPE B CAT 5/5E

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