Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

7910A Composite - Composite Data, Audio, Video, Security and Control Cable

For more Information
please call

1-800-Belden1

General Description:

Composite - (1) Cat 5e 4-bonded-pair 24 AWG unshielded plus (1) Series 6 Coax with Duobond Plus® Bonded Tri-shield, polyolefin insulation on the pairs; Gas-injected FPE insulation on the coax, F-R PVC jackets, overall F-R PVC jacket.

Usage (Overall)

Suitable Applications: HDTV, DBS, CATV, CCTV, Multimedia, Voice, Video, Data, High Speed Internet, Networked Computing, Distributed Video, Distributed Audio, Security Monitoring, Energy Monitoring

Coax

Physical Characteristics

Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	18	Solid	BC - Bare Copper	0.040

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
Gas-injected FPE - Foam Polyethylene	0.180

Inner Shield

Inner Shield Material:

Layer #	Inner Shield Trade Name	Type	Inner Shield Material	% Coverage (%)
1	Bonded Duofoil®	Tape	Bonded Aluminum Foil-Polyester Tape-Aluminum Foil	100
2		Braid	AL - Aluminum	77
3		Tape	Bonded Aluminum Foil-Polyester Tape w/Shorting Fold	100

Inner Jacket

Inner Jacket Material:

Inner Jacket Material	Nom. Dia. (in.)
PVC - Polyvinyl Chloride	0.275

Outer Jacket

Outer Jacket Color Code Chart:

Color
Black

Overall Diameter

Overall Nominal Diameter: 0.275 in.

Electrical Characteristics

Nom. Characteristic Impedance:

Impedance (Ohm)
75

Nom. Inductance:

Inductance (µH/ft)
0.097

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
16.200

Nominal Velocity of Propagation:

VP (%)
83.000

Nominal Delay:

Delay (ns/ft)
1.200

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)

6.400

Nom. Inner Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
4.600

Minimum Structural Return Loss:

Start Freq. (MHz)	Stop Freq. (MHz)	Min. SRL (dB)
5.000	1000.000	20.000
1000.000	2250.000	15.000
2250.000	3000.000	10.000

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
5.000	0.500
55.000	1.400
211.000	2.600
500.000	4.100
750.000	5.100
862.000	5.500
1000.000	6.000
1450.000	7.800
1800.000	8.600
2250.000	9.800
3000.000	11.300

Max. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
5.000	0.670
55.000	1.600
211.000	2.870
500.000	4.480
750.000	5.590
862.000	5.980
1000.000	6.540
1450.000	8.000
1800.000	8.800
2250.000	10.000
3000.000	11.900

Max. Operating Voltage - UL: 350 V RMS

Shield Effectiveness:

Start Frequency (MHz)	Stop Frequency (MHz)	Shield Effectiveness (dB)
5.000	50.000	105.000
50.000	1000.000	125.000

Twisted Pair

Physical Characteristics

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material	Dia. (in.)
4	24	Solid	BC - Bare Copper	0.020

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
PO - Polyolefin	0.035

Twisted Pair Color Code Chart:

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

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Color Code Chart:

Color
Blue

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Overall Diameter

Overall Nominal Diameter: 0.200 in.

Electrical Characteristics

Nom. Mutual Capacitance:

Capacitance (pF/ft)
15.000

Nominal Velocity of Propagation:

VP (%)
70.000

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
9.380

Max. Operating Voltage - UL:

Voltage
300 V RMS

Other Electrical Characteristic 1: Third party verified to TIA/EIA-568-B.2, Category 5e.

Premise Cable Electrical Table 1:

Freq. (MHz)	Max. Attenuation (dB/100 m)	Min. PSNEXT (dB)	Min. PSACR (dB)	Min RL (dB)
1.0	2.000	62.3	60	20.000
4.0	4.100	53.3	49	23.000
8.0	5.800	48.8	43	24.500
10.0	6.500	47.3	41	25.000
16.0	8.200	44.3	36	25.000
20.0	9.300	42.8	34	25.000
25.0	10.400	41.3	31	24.300
31.25	11.700	39.9	28	23.600
62.5	17.000	35.4	19	21.500
100	22.000	32.3	11	20.100

Premise Cable Electrical Table 2:

Freq. (MHz)	Input (Unfitted) Imp. (Ohms)	Min. PSELFEXT (dB)
1.0	100 +/- 15%	60.8
4.0	100 +/- 15%	48.7
8.0	100 +/- 15%	42.7
10.0	100 +/- 15%	40.8
16.0	100 +/- 15%	36.7
20.0	100 +/- 15%	34.7
25.0	100 +/- 15%	32.8
31.25	100 +/- 15%	30.9
62.5	100 +/- 15%	24.8
100	100 +/- 15%	20.8

Physical Characteristics (Overall)

Outer Shield

Outer Shield Material:

Outer Shield Material
Unshielded

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
F-R PVC - flame Retardant Polyvinyl Chloride

Outer Jacket Ripcord: Yes

Overall Cable

Overall Nominal Diameter: 0.335 in.

Mechanical Characteristics (Overall)

Operating Temperature Range: -20°C To +75°C

Bulk Cable Weight: 78.000 lbs/1000 ft.

Max. Recommended Pulling Tension: 131.000 lbs.

Min. Bend Radius/Minor Axis: 3.500 in.

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Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMR
CEC/C(UL) Specification:	CMG
EU Directive 2011/65/EU (ROHS II):	Yes
Other Standards:	ISO/IE 11801, Category 5
EU CE Mark:	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:	ANSI/TIA/EIA-568-B.2, Category 5e
Other Specification:	NEMA WC-63.1, Category 5e

Flame Test

UL Flame Test:	UL1666 Riser
C(UL) Flame Test:	FT4

Plenum/Non-Plenum

Plenum (Y/N):	No

Notes (Overall)

Notes: Overall jacket sequentially marked.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
7910A N3U1000	1,000 FT	91.000 LB	GREEN, MIL	C	PARA COMPOSITE CABLE FRPVC
7910A N3U500	500 FT	48.500 LB	GREEN, MIL	C	PARA COMPOSITE CABLE FRPVC

Notes:
C = CRATE REEL PUT-UP.

Revision Number: 0 Revision Date: 04-24-2008

Mouser Electronics

Authorized Distributor

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Belden Wire & Cable:

7910A N3U1000 7910A N3U500