

2177A Coax - Low Loss Serial Digital Coax

For more Information
please call

1-800-Belden1



General Description:

RG-7 Type 16 AWG solid 0.051" bare copper conductor, gas-injected foamed high-density polyethylene insulation, Duofoil® + tinned copper braid shield (95% coverage) plus Beldfoil® with shorting fold, PVC jacket.

Usage (Overall)

Suitable Applications: SMPTE 2081-1 6 Gb/s UHD TV, SMPTE 424M 3 Gb/s HD-SDI 1080p, SDI/HDTV Digital Video, High Definition (HD), Standard Definition (SDI)

Physical Characteristics (Overall)

Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
5	16	Solid	BC - Bare Copper	0.051

Total Number of Conductors: 1

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
Gas-injected FHDPE - Foam High Density Polyethylene	0.225

Inner Shield

Inner Shield Material:

Layer #	Inner Shield Trade Name	Type	Inner Shield Material	Coverage (%)
1	Duofoil(R)	Tape	Aluminum Foil-Polyester Tape-Aluminum Foil	100.000
2		Braid	TC - Tinned Copper	95.000
3	Beldfoil(R)	Tape	Polyester Tape-Aluminum Foil	100.000

Inner Jacket

Inner Jacket Material:

Inner Jacket Material	Nom. Dia. (in.)
PVC - Polyvinyl Chloride	0.320

Inner Jacket Color Code Chart:

Color
Green
Brown
Red
Orange
Yellow

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cable

Overall Nominal Diameter: 0.968 in.

Mechanical Characteristics (Overall)

Operating Temperature Range: -20°C To +60°C

Bulk Cable Weight: 372 lbs/1000 ft.

Max. Recommended Pulling Tension: 555 lbs.

Min. Bend Radius/Minor Axis: 9.750 in.

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
EU CE Mark:	Yes
EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
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
Series Type:	Series 7

Flame Test

UL Flame Test:	UL1666 Vertical Shaft
CSA Flame Test:	FT4

Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes - Black only.
Suitability - Burial:	No

Plenum/Non-Plenum

Plenum (Y/N):	No
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Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)
75

Nom. Inductance:

Inductance (µH/ft)
0.091

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
16.100

Nominal Velocity of Propagation:

VP (%)
84.000

Nominal Delay:

Delay (ns/ft)
1.210

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
4.000

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
1.900

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
1.000	0.170
3.580	0.300
5.000	0.350
6.000	0.380
7.000	0.400
10.000	0.480
12.000	0.520
25.000	0.740
55.000	1.080
67.500	1.200
71.500	1.240
88.500	1.370
100.000	1.460
135.000	1.700

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143.000	1.750
180.000	1.970
270.000	2.430
360.000	2.830
540.000	3.500
720.000	4.090
750.000	4.180
1000.000	4.890
1500.000	6.100
2000.000	7.200
2250.000	7.690
3000.000	9.080
4500.000	11.530
6000.000	13.770

Max. Operating Voltage - UL:

Voltage
300 V RMS

Other Electrical Characteristic 1:

Return Loss: Fixed bridge and termination.

Minimum Return Loss:

Start Freq. (MHz)	Stop Freq. (MHz)	Min. RL (dB)
5.000	1600.000	23.000
1600.000	4500.000	21.000
4500.000	6000.000	15.000

Sweep Test

Sweep Testing:

Sweep tested 5 MHz to 6 GHz.

Notes (Overall)

Notes: Print legend includes sequential footage marks.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1883D 010N1000	1,000 FT	24.000 LB	BLACK		2 BONDED #24 FSPR PO FRPVC
2177A B59N1000	1,000 FT	543.000 LB	BLACK, MATTE		5#16LDPE/GIFHDLPE SH FRPVC/PVC

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