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1-800-Belden1



General Description:

Miniature, 23 AWG solid .023" bare copper conductors, solid copper, gas-injected foam HDPE insulation, Duofoil® + tinned copper braid shield (95% coverage), overall PVC jacket.

Usage (Overall)

Suitable Applications: SMPTE 2081-1 6 Gb/s UHDTV, 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. (mm)
16	23	Solid	BC - Bare Copper	0.584

Total Number of Conductors: 16

Insulation

Insulation Material:

Insulation Material	Dia. (mm)
Gas-injected FHDPE - Foam High Density Polyethylene	2.5908

Inner Shield

Inner Shield Material:

Layer #	Inner Shield Trade Name	Type	Inner Shield Material	Coverage (%)
1	Duofoil®	Tape	Aluminum Foil-Polyester Tape-Aluminum Foil	100
2		Braid	TC - Tinned Copper	95

Inner Jacket

Inner Jacket Material:

Inner Jacket Material	Nom. Dia. (mm)
PVC - Polyvinyl Chloride	4.0386

Inner Jacket Color Code Chart:

Number	Color
1	Brown #1
2	Red #2
3	Orange #3
4	Green #4
5	Yellow #5
6	Blue #6
7	Violet #7
8	Gray #8
9	White #9
10	Black #10
11	Tan #11
12	Pink #12
13	Gray #13
14	Gray #14
15	Gray #15
16	Gray #16

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cable

Overall Nominal Diameter: 23.292 mm

Mechanical Characteristics (Overall)

Operating Temperature Range:	-35°C To +75°C
Bulk Cable Weight:	577.422 Kg/Km
Max. Recommended Pulling Tension:	2562.163 N
Min. Bend Radius/Minor Axis:	234.950 mm

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
RG Type:	Mini

Flame Test

UL Flame Test: UL1666 Vertical Shaft

Suitability

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

Plenum/Non-Plenum

Plenum (Y/N): No

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)
75

Nom. Inductance:

Inductance (µH/m)
0.347786

Nom. Capacitance Conductor to Shield:

Capacitance (pF/m)
54.1365

Nominal Velocity of Propagation:

VP (%)
83

Nominal Delay:

Delay (ns/m)
4.06844

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)
65.9481

Nom. Inner Shield DC Resistance:

DCR @ 20°C (Ohm/km)
24.9356

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)
1.000	1.312
3.600	2.625
10.000	3.937
71.500	10.171
135.000	12.468
270.000	17.717
360.000	20.342
540.000	25.264
720.000	29.857
750.000	31.170
1000.000	34.451
1500.000	42.653
2500.000	55.449
3000.000	60.699
4500.000	80.713
6000.000	95.051

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
2178A B59N1000	1,000 FT	428.000 LB	BLACK, MATTE	C	16 #23 PE/GIFHDPE SH FRPVC PVC

Notes:
C = CRATE REEL PUT-UP.

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2178A Coax - Bundled Miniature

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