

8281B Coax - Double Braided RG-59/U Type

For more Information
please call

1-800-Belden1

**General Description:**

20 AWG solid .031" bare copper conductor, flame-retardant semi-foam polyethylene insulation, tinned copper/bare copper double braid shield (95% coverage), PVC jacket.

Physical Characteristics (Overall)**Conductor**

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (in.)
1	20	Solid	BC - Bare Copper	.031

Total Number of Conductors: 1

Insulation

Insulation Material:

Insulation Material	Dia. (in.)
FR Semi-Foam PE - Flame Retardant Semi-Foam Polyethylene	.198

Outer Shield

Outer Shield Material:

Layer #	Type	Outer Shield Material	Coverage (%)
1	Braid	TC - Tinned Copper	95.000
2	Braid	TC - Tinned Copper	95.000

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Overall Cable

Overall Nominal Diameter: 0.305 in.

Mechanical Characteristics (Overall)

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

UL Temperature Rating: 75°C, 80°C

Bulk Cable Weight: 79 lbs/1000 ft.

Max. Recommended Pulling Tension: 168 lbs.

Min. Bend Radius/Minor Axis: 3 in.

Min. Flexing Radius: 6 in.

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

NEC/(UL) Specification: CMR

CEC/C(UL) Specification: CMG

AWM Specification: UL Style 1354

EU Directive 2011/65/EU (ROHS II): Yes

EU CE Mark: Yes

8281B Coax - Double Braided RG-59/U Type

EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	10/13/2005
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:	59/U

Flame Test

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

Suitability

Suitability - Indoor:	Yes
Suitability - Outdoor:	Yes - Black Only
Suitability - Aerial:	Yes - Black only, when supported by a messenger wire

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	88281

Electrical Characteristics (Overall)**Nom. Characteristic Impedance:**

Impedance (Ohm)
75

Nom. Inductance:

Inductance (μH/ft)
0.118

Nom. Capacitance Conductor to Shield:

Capacitance (pF/ft)
21

Nominal Velocity of Propagation:

VP (%)
66

Nominal Delay:

Delay (ns/ft)
1.54

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
9.9

Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
1.1

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
1	.3
3.6	.5
10.0	.8
71.5	2.1
135	3.0
270	4.4
360	5.1

8281B Coax - Double Braided RG-59/U Type

540	6.6
720	7.8
750	8.0
1000	10.2

Max. Operating Voltage - UL:

Voltage
30 V RMS
300 V RMS

Max. Operating Voltage - Non-UL:

Voltage
300 V RMS

Other Electrical Characteristic 1:

Impedance tested in accordance with ASTM D-4566 paragraph 43.2, option 2 using a 75 Ohm fixed bridge and termination. 75 +/- 1.5 Ohms

Other Electrical Characteristic 2:

Return Loss tested in accordance with ASTM D-4566 paragraph 45.3, Using a 75 Ohm fixed bridge and termination.

Minimum Structural Return Loss:

Start Freq. (MHz)	Stop Freq. (MHz)	Min. SRL (dB)
5	216	27
217	850	23

Sweep Test**Sweep Testing:**

100% sweep tested. 5 MHz to 850 MHz.

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8281B 0021000	1,000 FT	83.000 LB	RED	C	#20 FRSFPE DBLB FRPVC
8281B 0041000	1,000 FT	83.000 LB	YELLOW	C	#20 FRSFPE DBLB FRPVC
8281B 0051000	1,000 FT	83.000 LB	GREEN, DARK	C	#20 FRSFPE DBLB FRPVC
8281B 0061000	1,000 FT	83.000 LB	BLUE, LIGHT	C	#20 FRSFPE DBLB FRPVC
8281B 0071000	1,000 FT	83.000 LB	VIOLET	C	#20 FRSFPE DBLB FRPVC
8281B 0081000	1,000 FT	83.000 LB	GRAY	C	#20 FRSFPE DBLB FRPVC
8281B 0091000	1,000 FT	83.000 LB	WHITE	C	#20 FRSFPE DBLB FRPVC
8281B 0101000	1,000 FT	83.000 LB	BLACK	C	#20 FRSFPE DBLB FRPVC

Notes:

C = CRATE REEL PUT-UP.

Revision Number: 2 Revision Date: 08-27-2012

© 2013 Belden, Inc
 All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.