

# Detailed Specifications & Technical Data

METRIC MEASUREMENT VERSION

**BELDEN**  
SENDING ALL THE RIGHT SIGNALS

## 8281F Coax - Double Braided RG-59/U Type



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please call

1-800-Belden1



### General Description:

22 AWG stranded (7x29) .031" bare compacted copper conductor, polyethylene insulation, tinned copper/bare copper double braid shield (95% coverage), PVC jacket.

### Physical Characteristics (Overall)

#### Conductor

AWG:

# Coax	AWG	Stranding	Conductor Material	Dia. (mm)
1	22	7x29	BCC - Bare Compacted Copper	0.7874

Total Number of Conductors: 1

#### Insulation

Insulation Material:

Insulation Material	Dia. (mm)
PE - Polyethylene	4.9022

#### 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: 7.722 mm

### Mechanical Characteristics (Overall)

Operating Temperature Range:	-20°C To +60°C
Non-UL Temperature Rating:	60°C
Bulk Cable Weight:	93.757 Kg/Km
Max. Recommended Pulling Tension:	480.406 N
Min. Bend Radius/Minor Axis:	76.200 mm
Min. Flexing Radius:	11.430 cm

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

EU Directive 2011/65/EU (ROHS II):	Yes
EU CE Mark:	No
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
RG Type:	59/U

#### Suitability

Suitability - Indoor:	Yes
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### Plenum/Non-Plenum

Plenum (Y/N):  No

### Electrical Characteristics (Overall)

#### Nom. Characteristic Impedance:

Impedance (Ohm)  
75

#### Nom. Inductance:

Inductance ( $\mu$ H/m)  
0.387158

#### Nom. Capacitance Conductor to Shield:

Capacitance (pF/m)  
68.901

#### Nominal Velocity of Propagation:

VP (%)  
66

#### Nominal Delay:

Delay (ns/m)  
5.05274

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/km)  
40.0282

#### Nominal Outer Shield DC Resistance:

DCR @ 20°C (Ohm/km)  
5.5777

#### Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100m)
1	0.9843
3.6	1.6405
10.0	2.9529
71.5	8.2025
135	11.8116
270	16.7331
360	19.686
540	24.2794
720	28.5447
750	29.2009
1000	34.4505

#### Max. Operating Voltage - Non-UL:

Voltage  
2900 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.

#### 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	830	23

#### Sweep Test

##### Sweep Testing:

100% sweep tested. 5 MHz to 850 MHz.

### Notes (Overall)

Notes: Compacted copper combines the impedance uniformity of solid conductors and the "nick-resistance" of stranded conductors.

### Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
8281F G7V1000	305 MT	29.484 KG	RED, MATTE	C	#21H PE DBLB PVC
8281F G7W1000	305 MT	29.484 KG	GREEN, MATTE	C	#21H PE DBLB PVC
8281F G7X1000	305 MT	29.484 KG	BLUE, MATTE	C	#21H PE DBLB PVC
8281F J5C1000	305 MT	29.484 KG	BLACK, VIVID MATTE	C	#21H PE DBLB PVC
8281F J5C500	152 MT	15.876 KG	BLACK, VIVID MATTE		#21H PE DBLB PVC

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8281F U901000	305 MT	29.484 KG	GRAY, MATTE	C	#21H PE DBLB PVC
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**Notes:**

C = CRATE REEL PUT-UP.

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