

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

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|   | <p>For more information please call 1-800-Belden1</p> <p><u>See Put-ups and Colors</u></p> |
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Description:

20 AWG solid .031" bare copper conductor, flame-retardant semi-foam polyethylene insulation, tinned copper/bare copper double braid shield (98% coverage), PVC jacket.

PHYSICAL CHARACTERISTICS:

CONDUCTOR:

| | |
|----------------------------|------------------|
| Number of Coax | 1 |
| Total Number of Conductors | 1 |
| RG Type | 59/U |
| AWG | 20 |
| Stranding | Solid |
| Conductor Diameter | .031 in. |
| Conductor Material | BC - Bare Copper |

INSULATION:

| | |
|---------------------|--|
| Insulation Material | FR Semi-Foam PE - Flame Retardant Semi-Foam Polyethylene |
| Insulation Diameter | .198 in. |

OUTER SHIELD:

| | |
|-------------------|-------------|
| Outer Shield Type | Braid/Braid |
|-------------------|-------------|

Outer Shield Material :

| Layer Number | Trade Name | Type | Material | % Coverage (%) |
|--------------|------------|-------|--------------------|----------------|
| 1 | | Braid | TC - Tinned Copper | 98 |
| 2 | | Braid | TC - Tinned Copper | 98 |

| | |
|-------------------------|------|
| Outer Shield % Coverage | 98 % |
|-------------------------|------|

OUTER JACKET:

| | |
|-----------------------|--------------------------|
| Outer Jacket Material | PVC - Polyvinyl Chloride |
|-----------------------|--------------------------|

OVERALL NOMINAL DIAMETER:

| | |
|--------------------------|----------|
| Overall Nominal Diameter | .305 in. |
|--------------------------|----------|

MECHANICAL CHARACTERISTICS:

| | |
|-----------------------------|-----------------|
| Operating Temperature Range | -40°C To +80°C |
| UL Temperature Rating | 80°C, 75°C |
| Bulk Cable Weight | 78 lbs/1000 ft. |

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|----------------------------------|----------|
| Max. Recommended Pulling Tension | 168 lbs. |
| Min. Bend Radius (Install) | 3 in. |
| Min. Flexing Radius | 6 in. |

APPLICABLE SPECIFICATIONS AND AGENCY COMPLIANCE:

APPLICABLE STANDARDS:

| | |
|---------------------------------------|---------------|
| NEC/(UL) Specification | CMR |
| CEC/C(UL) Specification | CMG |
| AWM Specification | UL Style 1354 |
| EU CE Mark (Y/N) | Yes |
| EU RoHS Compliant (Y/N) | Yes |
| EU RoHS Compliance Date (mm/dd/yyyy): | 10/13/2005 |

FLAME TEST:

| | |
|----------------|-----------------------|
| UL Flame Test | UL1666 Vertical Shaft |
| CSA Flame Test | FT4 |

SWEEP TEST:

| | |
|---------------|--------------------------------------|
| Sweep Testing | 100% sweep tested. 5 MHz to 850 MHz. |
|---------------|--------------------------------------|

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) | N |
| Plenum Number | 88281 |

ELECTRICAL CHARACTERISTICS:

| | |
|---|------------------|
| Nom. Characteristic Impedance | 75 Ohms |
| Nom. Inductance | 0.118 μ H/ft |
| Nom. Capacitance Conductor to Shield | 21 pF/ft |
| Nominal Velocity of Propagation | 66 % |
| Nominal Delay | 1.54 ns/ft |
| Nom. Conductor DC Resistance @ 20 Deg. C | 9.9 Ohms/1000 ft |
| Nominal Outer Shield DC Resistance @ 20°C | 1.1 Ohms/1000 ft |

Minimum Structural Return Loss :

| Description | Frequency (MHz) | Start Frequency (MHz) | Stop Frequency (MHz) | Minimum Structural Return Loss (dB) |
|-------------|-----------------|-----------------------|----------------------|-------------------------------------|
| | | 5 | 216 | 27 |
| | | 217 | 850 | 23 |

Nom. Attenuation :

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| Description | Frequency (MHz) | Start Frequency (MHz) | Stop Frequency (MHz) | Nom. 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 |
| | 540 | | | 6.6 |
| | 720 | | | 7.8 |
| | 750 | | | 8.0 |
| | 1000 | | | 10.2 |

| | |
|-----------------------------------|---|
| Max. Operating Voltage - UL | 30 V RMS, 300 V RMS |
| Max. Operating Voltage - Non-UL | 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. |

PUT-UPS AND COLORS:

| Item | Description | Put-Up (ft.) | Ship Weight (lbs.) | Jacket Color | Notes |
|---------------|-----------------------|--------------|--------------------|--------------|-------|
| 8281B 0021000 | #20 FRSFPE DBLB FRPVC | 1000 | 84 | RED | C |
| 8281B 0031000 | #20 FRSFPE DBLB FRPVC | 1000 | 84 | ORANGE | C |
| 8281B 0041000 | #20 FRSFPE DBLB FRPVC | 1000 | 84 | YELLOW | C |
| 8281B 0051000 | #20 FRSFPE DBLB FRPVC | 1000 | 84 | GREEN, DARK | C |
| 8281B 0061000 | #20 FRSFPE DBLB FRPVC | 1000 | 84 | BLUE, LIGHT | C |
| 8281B 0071000 | #20 FRSFPE DBLB FRPVC | 1000 | 84 | VIOLET | C |
| 8281B 0081000 | #20 FRSFPE DBLB FRPVC | 1000 | 84 | GRAY | C |
| 8281B 0091000 | #20 FRSFPE DBLB FRPVC | 1000 | 84 | WHITE | C |
| 8281B 0101000 | #20 FRSFPE DBLB FRPVC | 1000 | 84 | BLACK | C |

C = CRATE REEL PUT-UP.

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