## Electrical Characteristics

### Standard Resistance Range
- **Linear Tapers**: 500 ohms to 1 megarohm
- **Audio Tapers**: 1 K ohms to 500 K ohms
- **Total Resistance Tolerance**: ±20 %
- **Independent Linearity**: ±5 %
- **Absolute Minimum Resistance**: 5 ohms maximum
- **Effective Electrical Angle**: 270 ° ± 5 °
- **Contact Resistance Variation**: 7 % of total resistance

### Dielectric Withstanding Voltage
- **MIL-STD-202, Method 301**: 1,000 VAC minimum
- **70,000 Feet**: 500 VAC minimum

### Insulation Resistance (500 V)
- 1,000 ohms minimum

### Power Rating
- **70 °C (Voltage Limited by Power Dissipation or 350 VAC, Whichever is Less)**
- **Linear Audio Tapers**: 75 watt
- **25 watt**

### Theoretical Resolution
- Essentially infinite

### Environmental Characteristics

### Operating Temperature Range
- +1 °C to +125 °C

### Storage Temperature Range
- -40 °C to +125 °C

### Temperature Coefficient Over Storage Temperature Range
- ±1000 ppm/°C

### Vibration
- 20 G

### Rotational Life (No Load)
- 50,000 cycles

### Load Life
- 1,000 Hours @ Rated Power, 20 % RH, 70 °C

### Mechanical Characteristics

### Stop Strength (1/4 “ and 6 mm Shaft Diameters)
- 79.09 N-cm (7 lb.-in.)

### Torque
- **Starting (Detented)**: 0.5-1.5 N-cm (0.75-2.25 oz.-in.)
- **Starting (Undetented)**: 1.5 N-cm (2.25 oz.-in.) maximum
- **Running (Undetented)**: 0.18 to 1.06 N-cm (0.25 to 1.5 oz.-in.)
- **Mounting**: 79.09 N-cm (7 lb.-in.) maximum

### Weight (Single Section)
- 21 g (0.75 oz.)

### Terminals
- **PC pin or solder lug**

### Soldering Condition
- **Manual Soldering**: 96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire
  - 370 °C (700 °F) max. for 3 seconds
- **Wave Soldering**: 96.5Sn/3.0Ag/0.5Cu solder with no-clean flux
  - 260 °C (500 °F) max. for 5 seconds

### Wash processes
- Not recommended

### Marking
- Manufacturer's trademark, resistance value, part number, and date code

### Ganging
- 1 cup maximum

### Hardware
- One lockwasher and one mounting nut is shipped with each potentiometer, except where noted in the part number.

### Detents
- Center, 10, 20, 30, none

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For additional features or specifications not shown, consult factory.

FOR ORDERING INFORMATION SEE PAGE 4.


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http://www.potentiometers.com

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### Features
- RoHS compliant*
- Linear or audio taper versions
- Space saving design
- Wide range of resistance values
- PC pin or solder lug terminals
- Metric shaft and bushing option
- Mounting brackets available

---

### PC - "Slimline" 22 mm Square Single Turn Panel Control

**Electrical Characteristics**

**Standard Resistance Range**
- **Linear Tapers**: 500 ohms to 1 megarohm
- **Audio Tapers**: 1 K ohms to 500 K ohms

**Total Resistance Tolerance**
- ±20 %

**Independent Linearity**
- ±5 %

**Absolute Minimum Resistance**
- 5 ohms maximum

**Effective Electrical Angle**
- 270 ° ± 5 °

**Contact Resistance Variation**
- 7 % of total resistance

**Dielectric Withstanding Voltage (MIL-STD-202, Method 301)**
- **Sea Level**: 1,000 VAC minimum
- **70,000 Feet**: 500 VAC minimum

**Insulation Resistance (500 V)**
- 1,000 ohms minimum

**Power Rating @ 70 °C (Voltage Limited by Power Dissipation or 350 VAC, Whichever is Less)**
- **Linear Audio Tapers**: 75 watt
- **25 watt**

**Theoretical Resolution**
- Essentially infinite
Product Dimensions

Axial PC Pins

Radial PC Pins

Specifications are subject to change without notice.
The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.
Users should verify actual device performance in their specific applications.
**Product Dimensions**

**SOLDER LUGS**

(Dimensions not given are the same as Axial PC pins.

**Axial PC PINS**

With Rear Mounting Bracket

**Radial PC PINS**

With Side Mounting Bracket

**SHAFT STYLES AND ORIENTATION (Full CCW Rotation)**

**Shaft Style C**

- **Shaft Style J**

- **Shaft Style R**

- **Shaft Style B**

- **Shaft Style Y**

*"D" dimensions extend from shaft end to bushing face

"D" = (shaft length, FMS) – (bushing length)

**Shaft Orientations**

**Shaft Styles C, J**

**Shaft Styles B, R**

**Shaft Style Y**

**TOLERANCES EXCEPT WHERE NOTED:**

XX = ± .005

XXX = ± .005

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time. Users should verify actual device performance in their specific applications.
How to Order PC "Slimline" Panel Controls

SHAFT LENGTH (FMS)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Available Shaft Styles</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>1/2&quot; (12.7 mm) Length</td>
<td>B</td>
</tr>
<tr>
<td>20</td>
<td>3/8&quot; (19.0 mm) Length</td>
<td>J</td>
</tr>
<tr>
<td>24</td>
<td>3/4&quot; (19 mm) Length</td>
<td>B, C, J, Y</td>
</tr>
<tr>
<td>28</td>
<td>7/8&quot; (22.2 mm) Length</td>
<td>B, C, J, Y</td>
</tr>
<tr>
<td>32</td>
<td>1&quot; (25.4 mm) Length</td>
<td>B, C, J, Y</td>
</tr>
<tr>
<td>36</td>
<td>1-1/8&quot; (28.6 mm) Length</td>
<td>B, C, J, Y</td>
</tr>
</tbody>
</table>

Available Shaft Codes:
- JO: Single
- N: None

RESISTANCE VALUES

<table>
<thead>
<tr>
<th>Code</th>
<th>TR</th>
<th>Code</th>
<th>TR</th>
<th>Code</th>
<th>TR</th>
</tr>
</thead>
<tbody>
<tr>
<td>500</td>
<td>1</td>
<td>100</td>
<td>2</td>
<td>200</td>
<td>2</td>
</tr>
<tr>
<td>250</td>
<td>3</td>
<td>500</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Available Resistance Codes:
- 1K: 1KΩ
- 2K: 2KΩ
- 5K: 5KΩ
- 10K: 10KΩ
- 50K: 50KΩ

BUSHING CONFIGURATION

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Available Shaft Styles</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>9 mm x .250&quot; (6.35 mm) Length Threaded M9 x 0.75 6g 5 Pt</td>
<td>All</td>
</tr>
<tr>
<td>L</td>
<td>9 mm x .375&quot; (8.33 mm) Length Threaded M9 x 0.75 6g 5 Pt</td>
<td>B, C, K</td>
</tr>
</tbody>
</table>

Panel mount hardware not included as standard on bracketed versions.
The sample part number demonstrates the identification code for Bourns Slimline Potentiometers. The part number shown is a commonly used model, typically available from stock.

Boldface features are Bourns standard options. All others are available with higher minimum order quantities.

REV. 08/14

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Users should verify actual device performance in their specific applications.

For more information about this product, visit our website at: www.potentiometers.com