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

### Electrical Characteristics

<table>
<thead>
<tr>
<th>Standard Resistance Range</th>
<th>500 ohms to 1 megohm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linear Tapers</td>
<td>1 K ohms to 500 K ohms</td>
</tr>
<tr>
<td>Total Resistance Tolerance</td>
<td>±20 %</td>
</tr>
<tr>
<td>Independent Linearity</td>
<td>±5 %</td>
</tr>
<tr>
<td>Absolute Minimum Resistance</td>
<td>5 ohms minimum</td>
</tr>
<tr>
<td>Effective Electrical Angle</td>
<td>270 ° ± 5 °</td>
</tr>
<tr>
<td>Contact Resistance Variation</td>
<td>7 % of total resistance</td>
</tr>
</tbody>
</table>

### 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

### Environmental Characteristics

<table>
<thead>
<tr>
<th>Operating Temperature Range</th>
<th>+1 °C to +125 °C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temperature Range</td>
<td>-40 °C to +125 °C</td>
</tr>
<tr>
<td>Temperature Coefficient Over Storage Temperature Range</td>
<td>±1000 ppm/°C</td>
</tr>
<tr>
<td>Vibration</td>
<td>20 G</td>
</tr>
<tr>
<td>Total Resistance Shift</td>
<td>±1 % maximum</td>
</tr>
<tr>
<td>Voltage Ratio Shift</td>
<td>±20 % maximum</td>
</tr>
<tr>
<td>Shock</td>
<td>50 G</td>
</tr>
<tr>
<td>Total Resistance Shift</td>
<td>±1 % maximum</td>
</tr>
<tr>
<td>Voltage Ratio Shift</td>
<td>±20 % maximum</td>
</tr>
<tr>
<td>Load Life</td>
<td>1,000 Hours @ Rated Power, 20 % RH, 70 °C</td>
</tr>
<tr>
<td>Total Resistance Shift</td>
<td>±10 % maximum</td>
</tr>
<tr>
<td>Rotational Life (No Load)</td>
<td>50,000 cycles</td>
</tr>
<tr>
<td>Total Resistance Shift (Linear taper)</td>
<td>±10 ohms or 12 %, whichever is greater</td>
</tr>
<tr>
<td>Total Resistance Shift (Audio taper)</td>
<td>±20 % maximum</td>
</tr>
<tr>
<td>Contact Resistance Variation</td>
<td>±5 % maximum</td>
</tr>
<tr>
<td>Moisture Resistance</td>
<td>MIL-STD-202, Method 103, Condition B</td>
</tr>
<tr>
<td>Total Resistance Shift</td>
<td>±20 % maximum</td>
</tr>
<tr>
<td>IP Rating</td>
<td>IP 40</td>
</tr>
</tbody>
</table>

### Mechanical Characteristics

<table>
<thead>
<tr>
<th>Stop Strength (1/4” and 6 mm Shaft Diameters)</th>
<th>79.09 N-cm (7 lb-in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Angle</td>
<td>300 ° ± 5 °</td>
</tr>
</tbody>
</table>

#### 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

<table>
<thead>
<tr>
<th>Weight (Single Section)</th>
<th>21 gm (0.75 oz.) maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terminals</td>
<td>PC pin</td>
</tr>
</tbody>
</table>

### Soldering Condition
- Manual Soldering: 96.5Sn3.0Ag0.5Cu solid wire or no-clean rosin cored wire
  - 370 °C (700 °F) max. for 3 seconds
- Wave Soldering: 96.5Sn3.0Ag0.5Cu 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 (H-37-2) and one mounting nut (H-38-11) is shipped with each potentiometer

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

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1. Electrical specifications tested at 200 RPM, at room ambient: +25 °C nominal.
   - Specifications are subject to change without notice.
   - Users should verify actual device performance in their specific applications.
   - The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.
PC – “Slimline” 22 mm Square Single Turn Panel Control

Product Dimensions

Axial PC Pins

Radial PC Pins

Hardware

Date Code Description

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PC – “Slimline” 22 mm Square Single Turn Panel Control

**Product Dimensions**

**Axial PC PINS**
*With Rear Mounting Bracket*

**Radial PC PINS**
*With Side Mounting Bracket*

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

<table>
<thead>
<tr>
<th>Shaft Style C</th>
<th>Shaft Style J</th>
<th>Shaft Style R</th>
<th>Shaft Style B</th>
<th>Shaft Style Y</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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:**

**DIMENSIONS:**

**Specifications are subject to change without notice.**

Users should verify actual device performance in their specific applications.  
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How to Order PC “Slimline” Panel Controls

**SHAPER TERMINAL CONFIGURATION**

<table>
<thead>
<tr>
<th>Code</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1/8” (15.9 mm) Length</td>
</tr>
<tr>
<td>24</td>
<td>3/4” (19 mm) Length</td>
</tr>
<tr>
<td>28</td>
<td>7/8” (22.2 mm) Length</td>
</tr>
<tr>
<td>32</td>
<td>1” (25.4 mm) Length</td>
</tr>
<tr>
<td>36</td>
<td>1-1/8” (28.6 mm) Length</td>
</tr>
</tbody>
</table>

**Housing Mounting Brackets**

- **Rear Mounting Bracket**: X
- **Side Mounting Bracket**: X

**Axial Terminals**

- 0.100” (2.54 mm) Centers: X
- 0.200” (5.08 mm) Centers: X

**Radial Terminals**

- 0.100” (2.54 mm) Centers: X
- 0.200” (5.08 mm) Centers: X

**Solder Lugs**

- 0.200” (5.08 mm) Centers: X

**Hardware Included**

- X

**Available Shaft Styles**

- **B**: 9 mm x .250” (6.35 mm) Length
- **C**: 9 mm x .375” (8.53 mm) Length
- **L**: Threaded M9 x 0.75 g5 5 PI

**Available Resistance Values**

- **100 Ω**: 100 KΩ
- **250 Ω**: 250 KΩ
- **500 Ω**: 500 KΩ
- **1 MΩ**: 1 MΩ

**Bushing Configurations**

- **W**: 9 mm x .250” (6.35 mm) Length
- **L**: 9 mm x .375” (8.53 mm) Length

**Element Taper Versions**

- **A**: Lin CP ±20 %
- **B**: CW Audio CP ±20 %
- **C**: CCW Audio CP ±20 %

**Anti-Rotation Lug**

- **J**: 9:00 Position
- **D**: None

**No. Sections**

- **1 Single**

**RoHS IDENTIFIER**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>Compliant</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.

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