



## Features

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

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

### Electrical Characteristics

|   |                         |
|---|-------------------------|
| Standard Resistance Range   |                         |
| Linear Tapers   | 500 ohms to 1 megohm    |
| 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  | .75 watt                |
| Audio   | .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                                      |
| Total Resistance Shift                                 | ±1 % maximum                              |
| Voltage Ratio Shift                                    | ±20 % maximum                             |
| Shock  | 50 G                                      |
| Total Resistance Shift                                 | ±1 % maximum                              |
| Voltage Ratio Shift                                    | ±20 % maximum                             |
| Load Life  | 1,000 Hours @ Rated Power, 20 % RH, 70 °C |
| Total Resistance Shift                                 | ±10 % maximum                             |
| Rotational Life (No Load)                              | 50,000 cycles                             |
| Total Resistance Shift (Linear taper)                  | ±10 ohms or 12 %, whichever is greater    |
| Total Resistance Shift (Audio taper)                   | ±20 % maximum                             |
| Contact Resistance Variation                           | ±5 % maximum                              |
| Moisture Resistance                                    | MIL-STD-202, Method 103, Condition B      |
| Total Resistance Shift                                 | ±20 % maximum                             |
| IP Rating  | IP 40                                     |

### Mechanical Characteristics

|  |  |
|--|--|
| Stop Strength (1/4 " and 6 mm Shaft Diameters) | 79.09 N-cm (7 lb.-in.)   |
| Mechanical Angle                               | 300° ± 5°  |
| 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 gm (0.75 oz.) maximum  |
| Terminals                                      | PC pin or solder lug   |
| Soldering Condition                            |  |
| Manual Soldering                               | 96.5Sn/3.0Ag/0.5Cu solid wire or no-clean rosin cored wire<br>370 °C (700 °F) max. for 3 seconds               |
| Wave Soldering                                 | 96.5Sn/3.0Ag/0.5Cu solder with no-clean flux<br>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   |

For additional features or specifications not shown, consult factory.

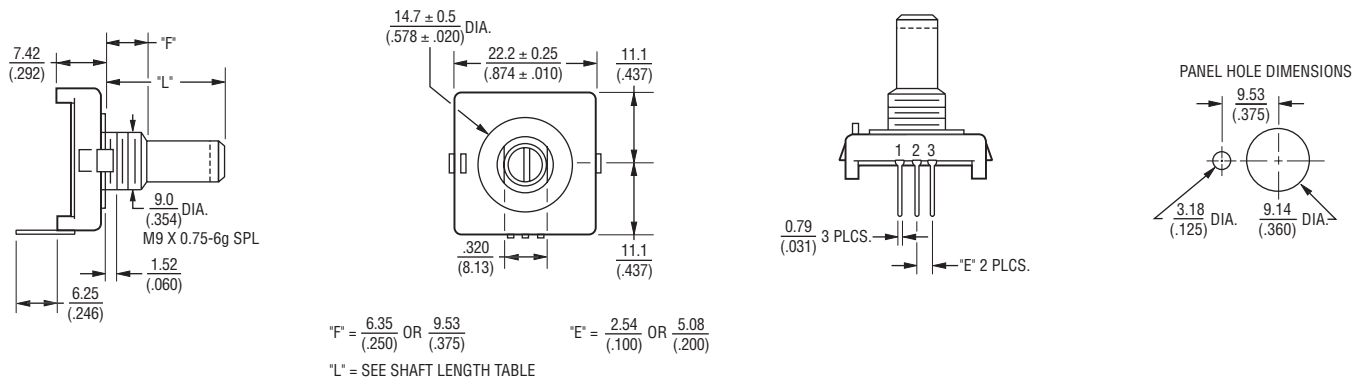
FOR ORDERING INFORMATION SEE PAGE 4.

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

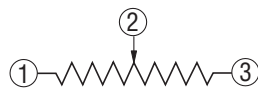
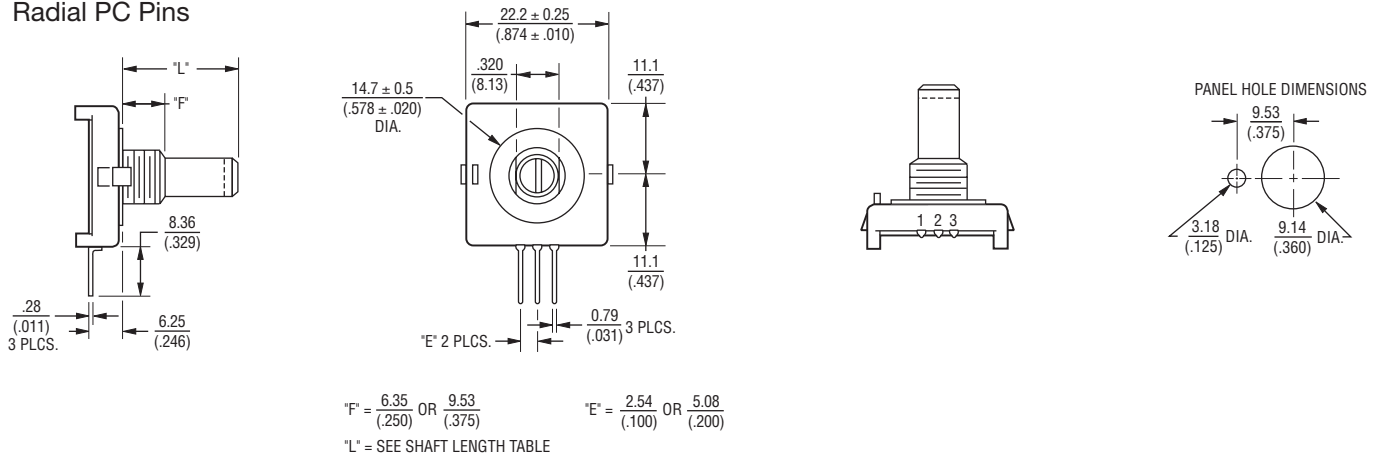
**BOURNS®**

## Product Dimensions

### Axial PC Pins



### Radial PC Pins



TOLERANCES EXCEPT WHERE NOTED:

.XX = ±  $\frac{.25}{(.010)}$   
 .XXX = ±  $\frac{.13}{(.005)}$

DIMENSIONS ARE:  $\frac{\text{MM}}{\text{(INCHES)}}$

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

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## Product Dimensions

### SOLDER LUGS

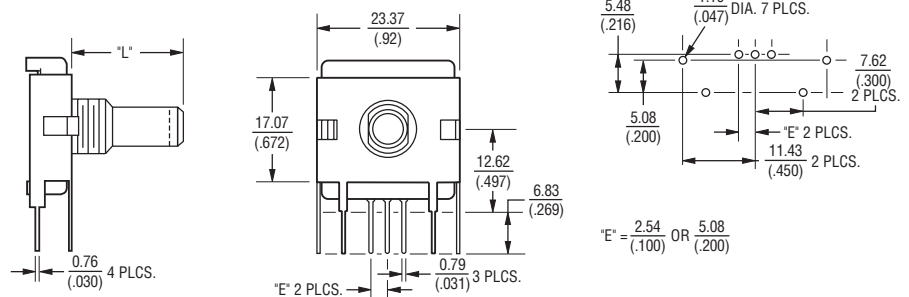
(Dimensions not given are the same as Axial PC pins.)



### Axial PC PINS With Rear Mounting Bracket



### Radial PC PINS With Side Mounting Bracket



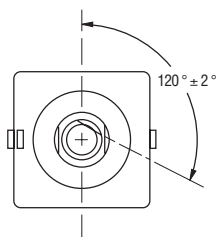
## SHAFT STYLES AND ORIENTATION (Full CCW Rotation)



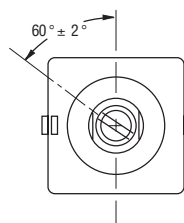
"D" dimensions extend from shaft end to bushing face "D" = (shaft length, FMS) - (bushing length)

### Shaft Orientations

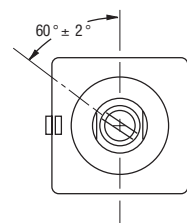
#### Shaft Styles C, J



#### Shaft Styles B, R



#### Shaft Style Y



DIMENSIONS: MM (IN.)

TOLERANCES EXCEPT WHERE NOTED:

.XX = ± .25 (.010)

.XXX = ± .13 (.005)

# How to Order PC "Slimline" Panel Controls

**BOURNS®**

P C W 1 J - B 2 4 - B A B 1 0 3 L

| RoHS IDENTIFIER |             |
|-----------------|-------------|
| Code            | Description |
| L               | Compliant   |

| SHAFT LENGTH (FMS) |                          |                        |
|--------------------|--------------------------|------------------------|
| Code               | Description              | Available Shaft Styles |
| 16                 | 1/2 " (12.7 mm) Length   | B                      |
| 20                 | 5/8 " (15.9 mm) Length   | J                      |
| 24                 | 3/4 " (19 mm) Length     | B, C, J, Y             |
| 28                 | 7/8 " (22.2 mm) Length   | B, C, J, Y             |
| 32                 | 1 " (25.4 mm) Length     | B, C, J, Y             |
| 36                 | 1-1/8 " (28.6 mm) Length | B, C, J, Y             |
| Metric             |                          |                        |
| 19                 | 19 mm Length             | R                      |
| 22                 | 22 mm Length             | R                      |
| 24                 | 24 mm Length             | R                      |

| RESISTANCE VALUES |        |      |       |      |        |
|-------------------|--------|------|-------|------|--------|
| Code              | TR     | Code | TR    | Code | TR     |
| 501               | 500 Ω  | 103  | 10 KΩ | 104  | 100 KΩ |
| 102               | 1 KΩ   | 203  | 20 KΩ | 254  | 250 KΩ |
| 252               | 2.5 KΩ | 253  | 25 KΩ | 504  | 500 KΩ |
| 502               | 5 KΩ   | 503  | 50 KΩ | 105  | 1 MΩ   |

| ELEMENT TAPER VERSIONS |                    |
|------------------------|--------------------|
| Code                   | Taper Description  |
| B                      | Lin. CP ±20 %      |
| D                      | CW Audio CP ±20 %  |
| G                      | CCW Audio CP ±20 % |

| SHAFT STYLES (See Outline Drawing) |   |
|------------------------------------|---|
| Code                               | Description                                 |
| B                                  | 1/4 " (6.35 mm) Dia. Slotted                |
| C                                  | 1/4 " (6.35 mm) Dia. Flatted                |
| J                                  | 3/16 " (4.76 mm) Dia. Flatted               |
| R                                  | 6 mm Dia. Slotted (Use Metric Lengths Only) |
| Y                                  | 3/16 " (4.76 mm) Dia. Split Shaft           |

| DETENT CONFIGURATIONS |                    |
|-----------------------|--------------------|
| Code                  | Taper Description  |
| A                     | No Detents         |
| B                     | 10 Detents         |
| C                     | Center Detent Only |
| D                     | 20 Detents         |
| E                     | 30 Detents         |
| F                     | CCW Detent Only    |

| ANTI-ROTATION LUG |               |
|-------------------|---------------|
| Code              | Description   |
| J                 | 9:00 Position |
| D                 | None          |

| NO. SECTIONS |             |
|--------------|-------------|
| Code         | Description |
| 1            | Single      |

| HOUSING TERMINAL CONFIGURATION           |      |   |   |   |   |   |   |   |   |   |   |   |   |
|--|------|---|---|---|---|---|---|---|---|---|---|---|---|
| Features                                 | Code |   |   |   |   |   |   |   |   |   |   |   |   |
|  | A    | B | C | D | E | F | G | H | J | K | L | M | N |
| Rear Mounting Bracket                    |      | X |   |   |   |   |   |   | X | X |   |   | X |
| Side Mounting Bracket                    |      |   |   |   | X |   | X |   |   |   | X | X |   |
| Axial Terminals .100" (2.54 mm) Centers  | X    | X |   |   |   |   |   |   |   | X |   |   |   |
| Radial Terminals .100" (2.54 mm) Centers |      |   |   | X | X |   |   |   |   |   | X |   |   |
| Radial Terminals .200" (5.08 mm) Centers |      |   |   |   |   | X | X |   |   |   |   | X |   |
| Solder Lugs .200" (5.08 mm) Centers      |      |   | X |   |   |   |   |   |   |   |   |   |   |
| Axial Terminals .200" (5.08 mm) Centers  |      |   |   |   |   |   |   | X | X |   |   |   | X |
| Hardware Included                        | X    |   | X | X |   | X |   | X |   | X | X | X | X |

| BUSHING CONFIGURATION |  |                        |
|-----------------------|--|------------------------|
| Code                  | Description  | Available Shaft Styles |
| W                     | 9 mm x .250" (6.35 mm) Length Threaded M9 x 0.75 6g 5 PI | All                    |
| L                     | 9 mm x .375" (9.53 mm) Length Threaded M9 x 0.75 6g 5 PI | B, C, R                |

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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Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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