

Features

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

Additional Information

Click these links for more information:



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

Electrical Characteristics¹

| | |
|---|-------------------------|
| 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 |
| 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 (H-37-2) and one mounting nut (H-38-11) is shipped with each potentiometer |
| Detents..... | Center, 10, 20, 30, none |

For additional features or specifications not shown, consult factory.

FOR ORDERING INFORMATION SEE PAGE 4.

¹ Electrical specifications tested at 200 RPM, at room ambient: +25 °C nominal.

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

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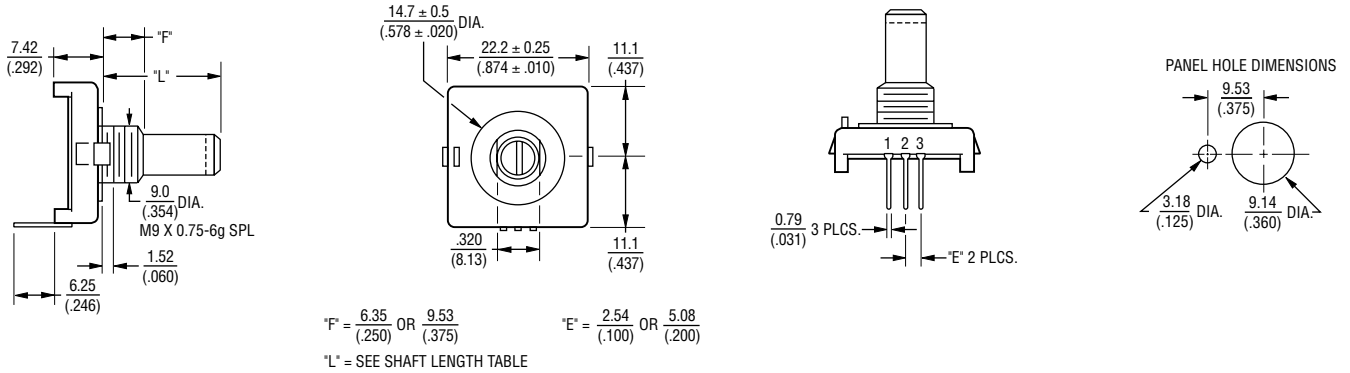
WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

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

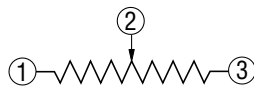
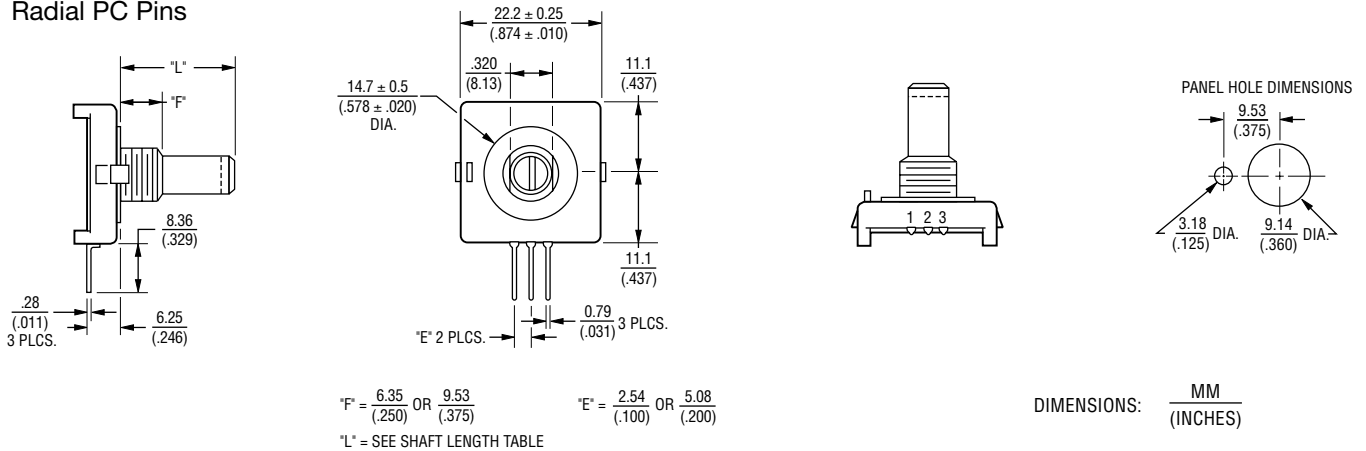
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Product Dimensions

Axial PC Pins



Radial PC Pins

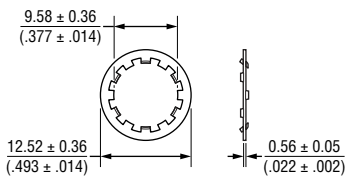


TOLERANCES EXCEPT WHERE NOTED:

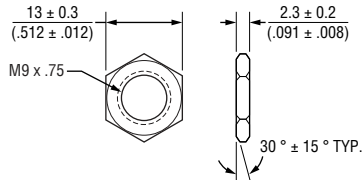
.XX = ± $\frac{.25}{(0.010)}$
 .XXX = ± $\frac{.13}{(0.005)}$

Hardware

LOCKWASHER H-37-2



NUT H-38-11



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

Date Code Description

YYWWMM

M = COUNTRY OF MANUFACTURE (MEXICO)
 WW = WEEK NUMBER
 YY = LAST TWO DIGITS OF YEAR MANUFACTURED

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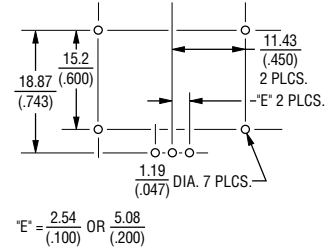
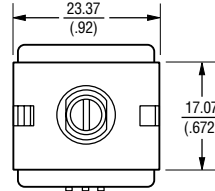
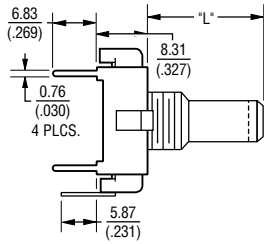
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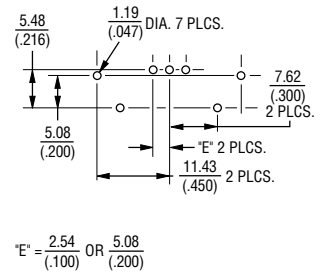
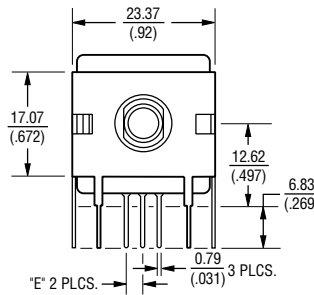
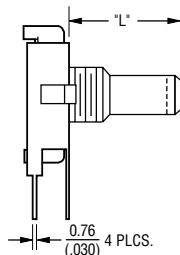
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Product Dimensions

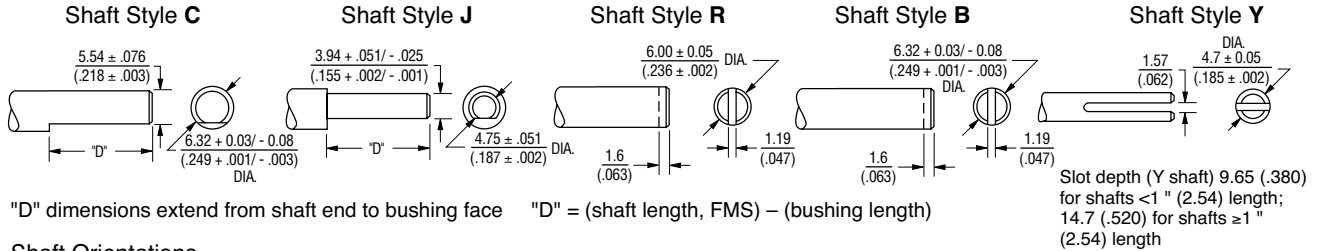
Axial PC PINS With Rear Mounting Bracket



Radial PC PINS With Side Mounting Bracket

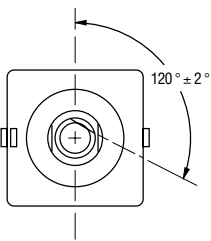


SHAFT STYLES AND ORIENTATION (Full CCW Rotation)

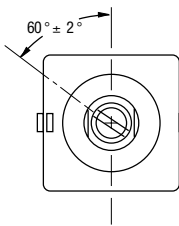


Shaft Orientations

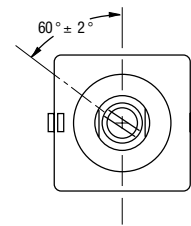
Shaft Styles C, J



Shaft Styles B, R



Shaft Style Y



TOLERANCES EXCEPT WHERE NOTED:

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

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

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How to Order PC "Slimline" Panel Controls



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 |

| Features | HOUSING TERMINAL CONFIGURATION | | | | | | | | | | | | |
|--|--------------------------------|---|---|---|---|---|---|---|---|---|---|---|--|
| | A | B | D | E | F | G | H | J | K | L | M | N | |
| Rear Mounting Bracket | | X | | | | | | X | X | | | X | |
| Side Mounting Bracket | | | | X | 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 | 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 Pl | All |
| L | 9 mm x .375" (9.53 mm) Length Threaded M9 x 0.75 6g 5 Pl | 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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