

*RoHS COMPLIANT



BOURNS®

Features

- Carbon element
- Insulated shaft
- Snap-in clip
- Center detent
- Center tap option
- Assorted pin layouts
- Dual gang option
- Various taper options

PTV/PTT Series - 12 mm Potentiometer

Electrical Characteristics

Taper..... Linear, audio
 Standard Resistance Range 1 K ohms to 1 M ohms
 Standard Resistance Tolerance..... ±20 %
 Residual Resistance..... 1 % max.

Environmental Characteristics

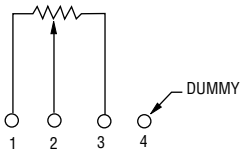
Operating Temperature -10 °C to +50 °C
 Power Rating..... 0.05 Watt
 Maximum Operating Voltage 50 V AC, 20 V DC
 Sliding Noise 100 mV max.

Mechanical Characteristics

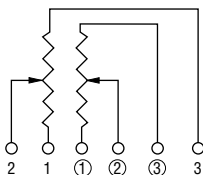
Mechanical Angle..... 300 ° ±5 °
 Rotational Torque 20 to 200 g-cm
 Detent Torque..... 30 to 300 g-cm
 Stop Strength
 no bushing 3 kg-cm min.
 with bushing..... 3 kg-cm min.
 Rotational Life 15,000 cycles
 Soldering Condition
 300 °C max. within 3 seconds
 Hardware One flat washer and mounting nut supplied per potentiometer with bushing

Electrical Diagrams

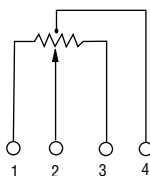
MODEL PTV 111



MODEL PTV 112

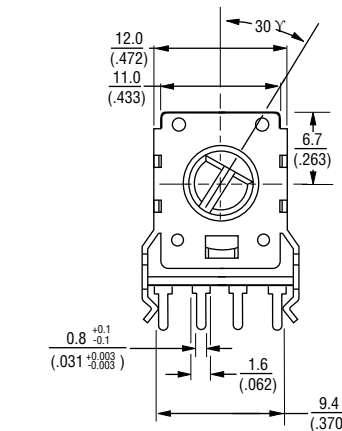
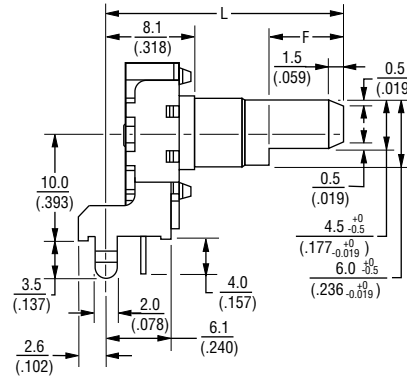


MODEL PTT 111

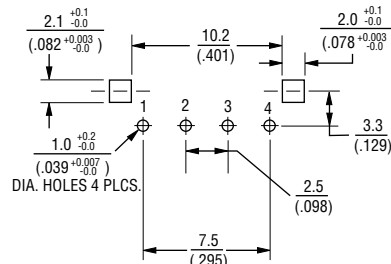


Product Dimensions

PTV111-2



RECOMMENDED PCB LAYOUT

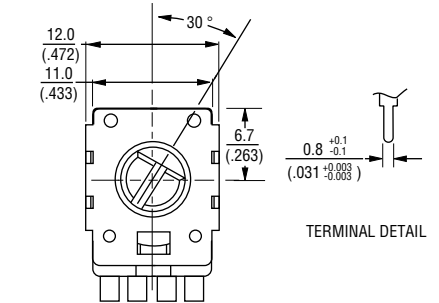
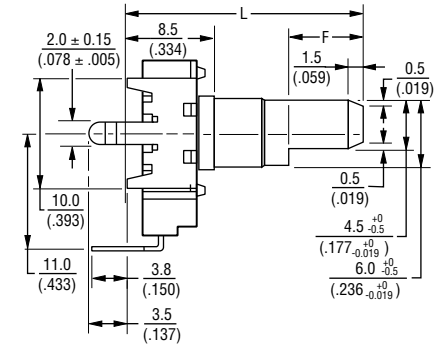


SHAFT SHOWN IN CCW POSITION

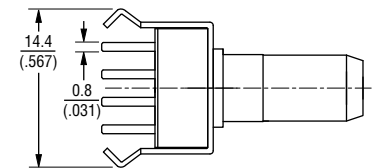
Dimensions Without Bushing

| | | | | | |
|---|---------------|--------------|----------------|--------------|-----------------|
| L | 15 (.591) | 20 (.787) | 22.5 (.886) | 25 (.984) | 27.5 (1.083) |
| F | 4.5 (.177) | 7 (.276) | 7 (.276) | 12 (.472) | 12 (.472) |

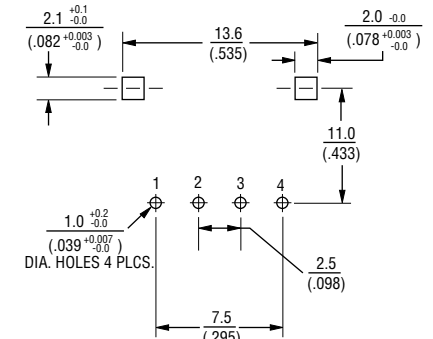
PTV111-4



TERMINAL DETAIL



RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

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



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

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

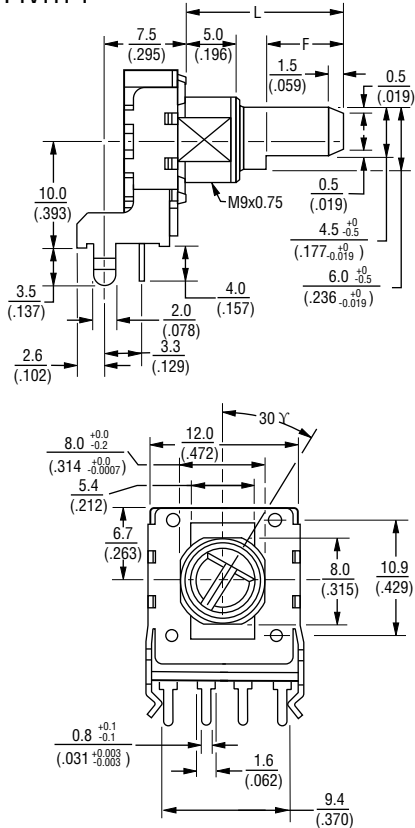
- Audio/TV sets
- Amplifiers/mixers/drum machines/synthesizers
- PCs/monitors
- Appliances

PTV/PTT Series - 12 mm Potentiometer

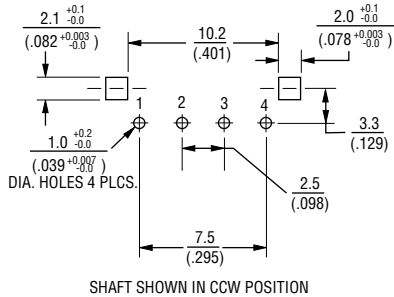
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Product Dimensions

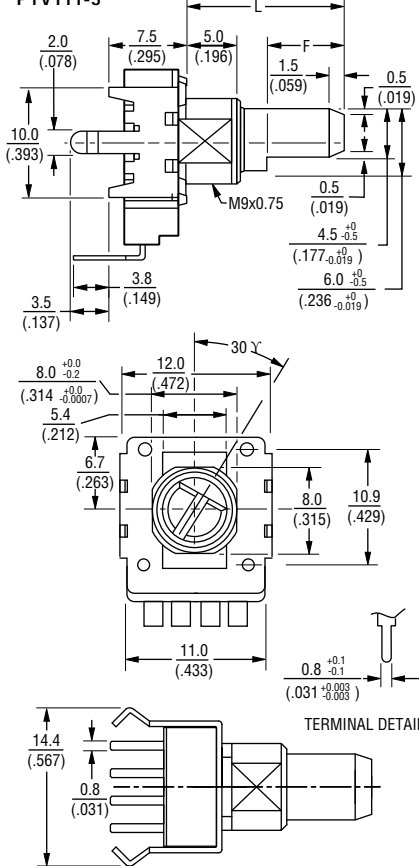
PTV111-1



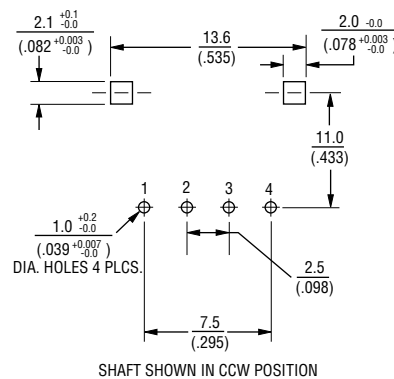
RECOMMENDED PCB LAYOUT



PTV111-3



RECOMMENDED PCB LAYOUT



Dimensions With Bushing

| | 12.5 (.492) | 15 (.591) | 17.5 (.689) | 20 (.787) |
|---|----------------|--------------|----------------|--------------|
| L | | | | |
| F | 7 (.276) | 7 (.276) | 12 (.472) | 12 (.472) |

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

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PTV/PTT Series - 12 mm Potentiometer

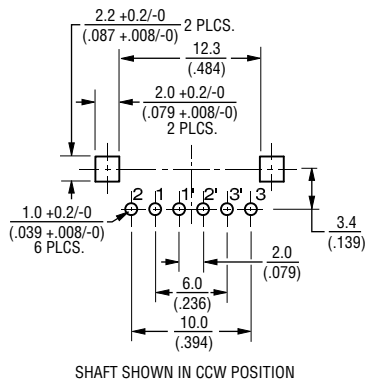
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Product Dimensions

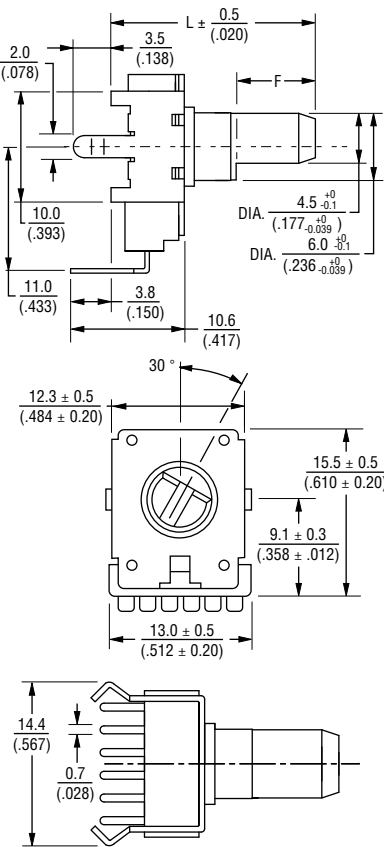
PTV112-2 DUAL GANG



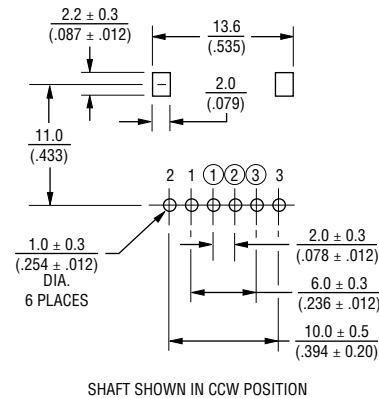
RECOMMENDED PCB LAYOUT



PTV112-4 DUAL GANG



RECOMMENDED PCB LAYOUT



Dimensions Without Bushing

| | | | | | |
|---|----------------------|---------------------|-----------------------|---------------------|------------------------|
| L | $\frac{15}{(.591)}$ | $\frac{20}{(.787)}$ | $\frac{22.5}{(.886)}$ | $\frac{25}{(.984)}$ | $\frac{27.5}{(1.083)}$ |
| F | $\frac{4.5}{(.177)}$ | $\frac{7}{(.276)}$ | $\frac{7}{(.276)}$ | $\frac{12}{(.472)}$ | $\frac{12}{(.472)}$ |

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

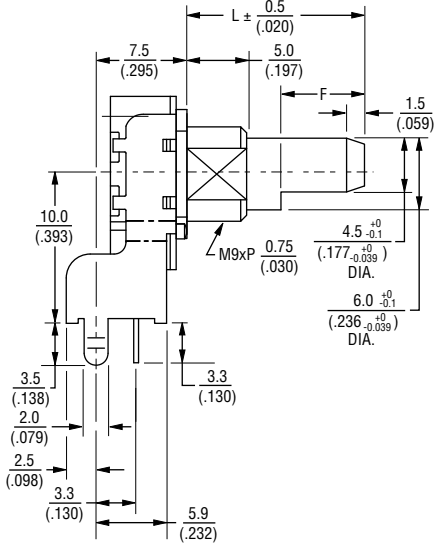
PTV/PTT Series - 12 mm Potentiometer

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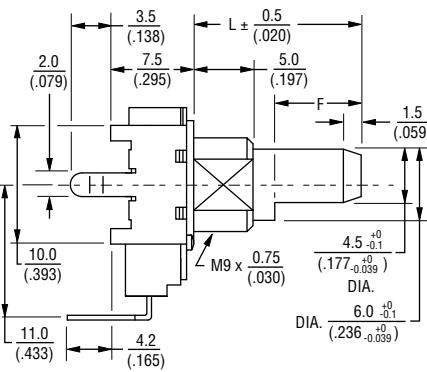
Product Dimensions

Dimensions With Bushing

PTV112-1 DUAL GANG

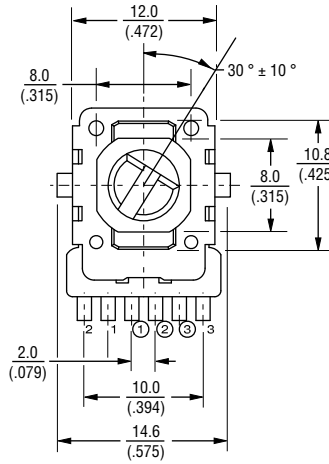
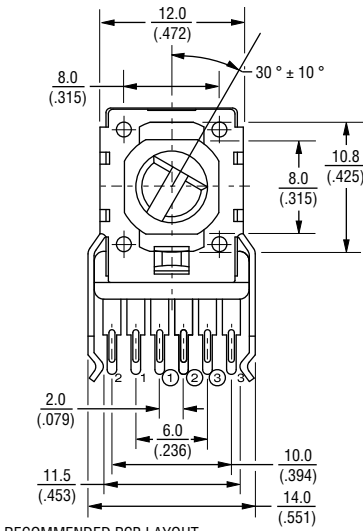


PTV112-3 DUAL GANG

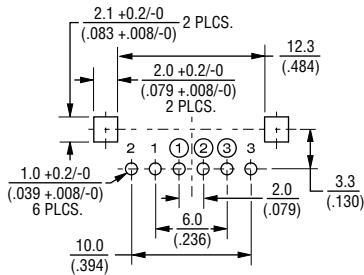


| | | | | |
|---|-----------------------|---------------------|-----------------------|---------------------|
| L | $\frac{12.5}{(.492)}$ | $\frac{15}{(.591)}$ | $\frac{17.5}{(.689)}$ | $\frac{20}{(.787)}$ |
| F | $\frac{7}{(.276)}$ | $\frac{7}{(.276)}$ | $\frac{12}{(.472)}$ | $\frac{12}{(.472)}$ |

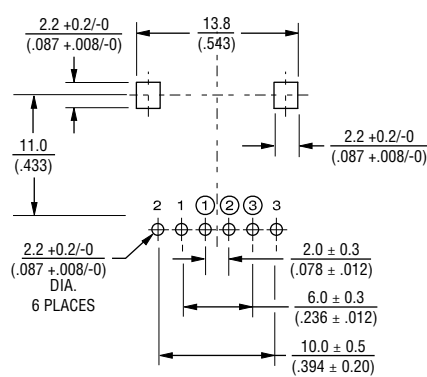
DIMENSIONS: $\frac{\text{MM}}{\text{INCHES}}$



RECOMMENDED PCB LAYOUT



RECOMMENDED PCB LAYOUT



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PTV/PTT Series - 12 mm Potentiometer

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How To Order

PTV111 - 2 4 20 A - A1 104

Model

(See Diagrams)

- PTV111 Standard
- PTT111 With Tap
- PTV112 Dual Gang

Pin Style

PC Pins vertical/
Down Facing:

- 1 = With Bushing
- 2 = No Bushing

PC Pins horizontal/
Rear Facing:

- 3 = With Bushing
- 4 = No Bushing

Center Detent Option

- 4 = No Detent
- 2 = Center Detent

Standard Shaft Length

- 12 = 12.5 mm*
- 15 = 15 mm
- 17 = 17.5 mm*
- 20 = 20 mm
- 22 = 22.5 mm**
- 25 = 25 mm**
- 27 = 27.5 mm**

Shaft Styles

- A = Flat Type Insulated Shaft

Resistance Taper (See Taper Chart)

Taper Series followed by Curve Number

Resistance Code (See Table)

Other styles available.

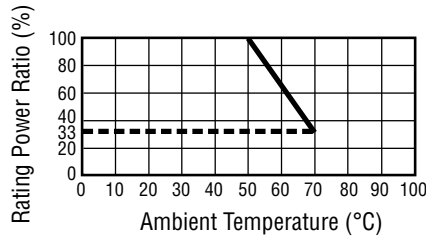
* Available with Pin Styles 1 & 3 only.

** Available with Pin Styles 2 & 4 only.

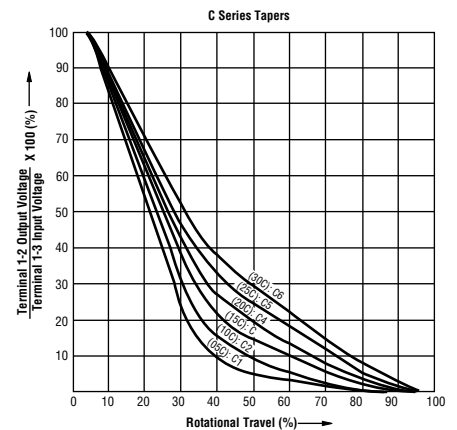
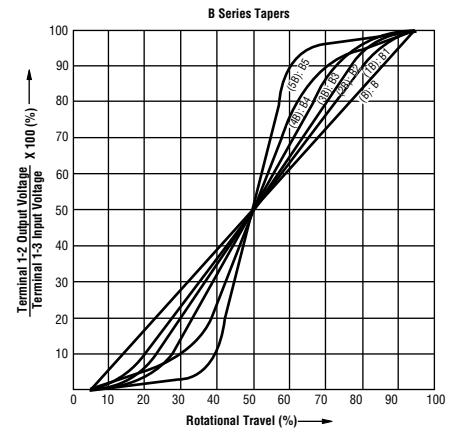
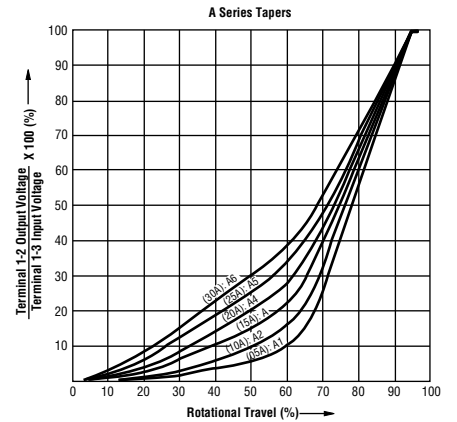
Standard Resistance Table

| Resistance (Ohms) | Resistance Code |
|-------------------|-----------------|
| 1,000 | 102 |
| 2,000 | 202 |
| 5,000 | 502 |
| 10,000 | 103 |
| 20,000 | 203 |
| 50,000 | 503 |
| 100,000 | 104 |
| 200,000 | 204 |
| 500,000 | 504 |
| 1,000,000 | 105 |

Derating Curve



Tapers



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www.bourns.com

REV. 10/19

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