

## Features

- Single gang panel control
- RoHS compliant\*
- Carbon element
- Center detent option
- Wide range of resistance tapers
- Insulated shaft styles
- Assortment of pin layouts

## Applications

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

# PDB12 Series - 12 mm Rotary Potentiometer

### Electrical Characteristics

Taper..... Linear, audio  
 Standard Resistance Range ..... 1K ohms to 1M ohms  
 Standard Resistance Tolerance..... ±20 %  
 Residual Resistance ..... 10 ohms max.

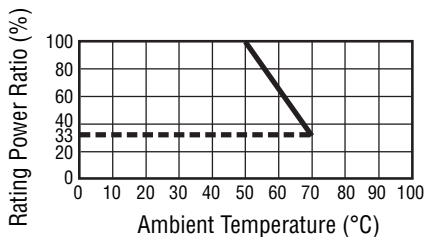
### Environmental Characteristics

Power Rating  
 Linear ..... 0.08 watt  
 Audio ..... 0.04 watt  
 Maximum Operating Voltage  
 Linear ..... 150 V  
 Audio ..... 100 V  
 Sliding Noise ..... 47 mV max.  
 Operating Temperature... -10 °C to +70 °C

### Mechanical Characteristics

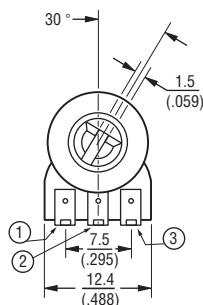
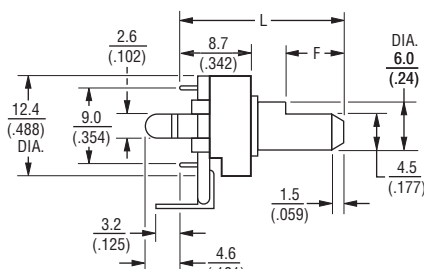
Mechanical Angle ..... 300 ° ±5 °  
 Rotational Torque ..... 20 to 200 g-cm  
 Stop Strength ..... 3 kg-cm min.  
 Rotational Life ..... 15,000 cycles  
 Soldering Condition  
 ..... 300 °C max. within 3 seconds  
 Hardware ..... No hardware supplied

### Derating Curve

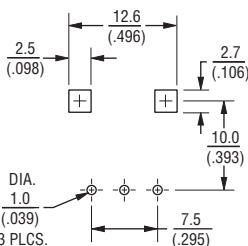


### Product Dimensions

PDB12-H

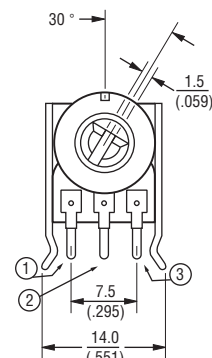
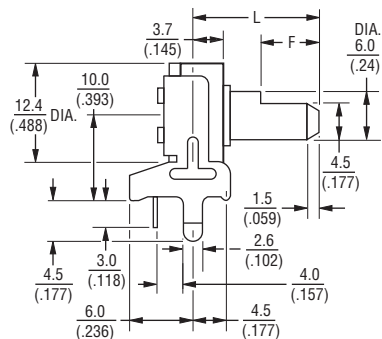


RECOMMENDED PCB LAYOUT

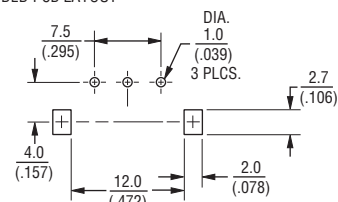


SHAFT SHOWN IN CCW POSITION

PDB12-G



RECOMMENDED PCB LAYOUT

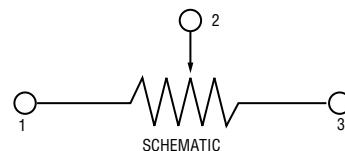


SHAFT SHOWN IN CCW POSITION

### PDB12 Dimensions

|   |              |              |              |               |
|---|--------------|--------------|--------------|---------------|
| L | 15<br>(.591) | 20<br>(.787) | 25<br>(.984) | 30<br>(1.181) |
| F | 7<br>(.276)  | 7<br>(.276)  | 12<br>(.472) | 12<br>(.472)  |

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



SCHEMATIC



**WARNING Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

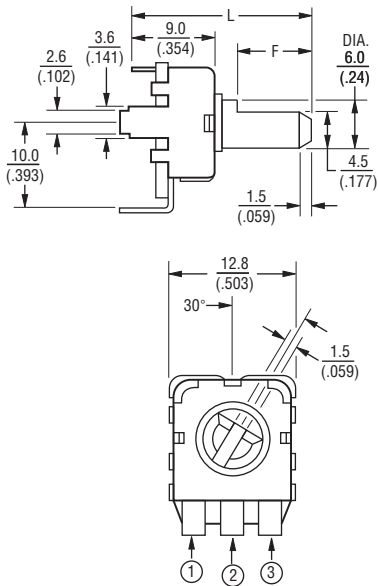
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# PDB12 Series - 12 mm Rotary Potentiometer

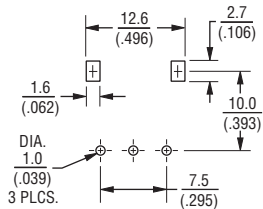
**BOURNS®**

## Product Dimensions

### PDB12-M



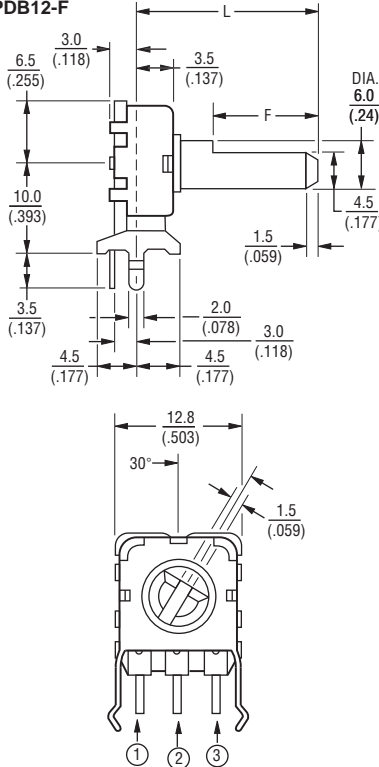
### RECOMMENDED PCB LAYOUT



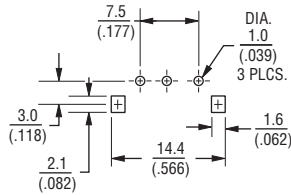
SHAFT SHOWN IN CCW POSITION

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

### PDB12-F



### RECOMMENDED PCB LAYOUT



SHAFT SHOWN IN CCW POSITION

## How To Order

**PDB12 - H 4 20 1 - 103 A F**

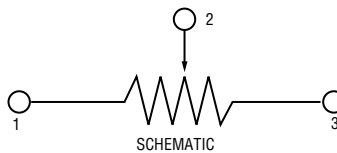
- Model
- Terminal Config. (see individual drawings)
- H = PC pins, rear facing snap mount
  - G = PC pins, vertical/down facing snap mount
  - M = PC pins, rear facing
  - F = PC pins, vertical/down facing snap mount
- Option
- 2 = Center Detent
  - 4 = No Detent
- Standard Shaft Length
- 15 = 15 mm
  - 20 = 20 mm
  - 25 = 25 mm
  - 30 = 30 mm
- Number of Gangs
- 1 = Single Gang
- Resistance Code (See Table)
- Resistance Taper
- A = Audio Taper
  - B = Linear Taper
- Shaft Style
- F = Flat Type Insulated Shaft
- Other styles available.

## 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             |

## PDB12 Dimensions

| L | 15<br>(.591) | 20<br>(.787) | 25<br>(.984) | 30<br>(1.181) |
|---|--------------|--------------|--------------|---------------|
| F | 7<br>(.276)  | 7<br>(.276)  | 12<br>(.472) | 12<br>(.472)  |



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REV. 10/19

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Users should verify actual device performance in their specific applications.

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