

## Features

- Carbon element
- Assortment of resistance tapers
- Variety of shaft lengths
- Flatted, knurled and slotted shaft styles
- Center detent option



## PTM90 Series Panel Control w/Push-Push Switch

### Electrical Characteristics

Standard Resistance Range ..... 1K ohms to 1 megohm  
 Standard Resistance Tolerance  
 R < 250K ohms ..... ±20 %  
 R ≥ 250K ohms ..... ±30 %  
 End Resistance  
 R < 50K ohms ..... 30 ohms max.  
 R ≥ 50K ohms ..... 0.1 % of TR max.  
 Insulation Resistance @ 250 VDC  
 ..... 100 megohms min.  
 Dielectric Withstanding Voltage .... 300 VAC  
 Tracking Error (-40 dB to 0 dB) ..... ±3 dB  
 Standard Taper ..... Linear, Audio  
 Power Rating  
 Linear ..... 0.05 watt  
 Audio ..... 0.025 watt  
 Slider Noise ..... 100 mV max.  
 Operating Voltage ..... 50 VAC / 10 VDC

### Environmental Characteristics

Operational Life ..... 15,000 cycles  
 TR Shift ..... ±15 %  
 Operating Temp. Range .... -10 °C to +55 °C  
 Resistance to Solder Heat ..... ±5 %  
 IP Rating ..... IP 40

### Mechanical Characteristics

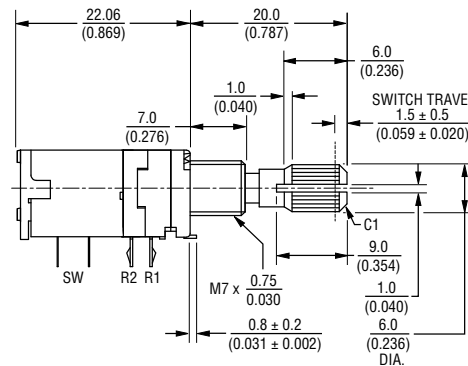
Mechanical Angle ..... 300 ° ±3 °  
 Operating Torque ..... 20~250 gf-cm  
 Stop Strength ..... 5 kgf-cm max.  
 Mounting Torque ..... 10 kgf-cm max.  
 Shaft Push/Pull Strength ..... 10 kgf max.  
 Soldering Condition  
 Manual ..... 300 °C ±5 °C for 3 sec.  
 Wave ..... 260 °C ±5 °C for 5 sec.  
 Wash ..... Not recommended  
 Hardware ..... One flat washer and one mounting nut supplied with each potentiometer

### Switch Characteristics

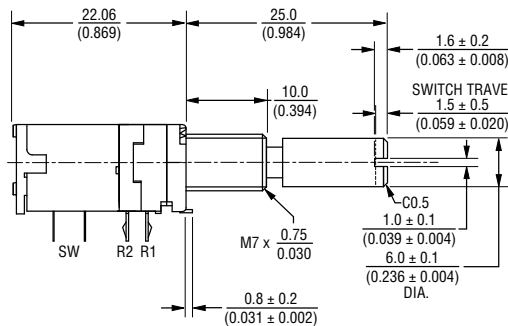
Power Rating ..... 3 A @ 16 VDC  
 Contact Resistance ..... 100 milliohms  
 Dielectric Strength  
 Bushing to Terminals ..... 300 VAC  
 Switch Terminals ..... 50 VAC  
 Insulation Resistance  
 Bushing to Terminals @ 250 VAC  
 ..... 100 megohms  
 Switch Terminals @ 50 VAC  
 ..... 10 megohms  
 Switch Type ..... Push on - Push off  
 Contact Arrangement ..... DTSP  
 Switch Stroke ..... 1.5 ± 0.1 mm  
 Operating Force ..... 2 kgf max.  
 Operating Life ..... 10,000 cycles

### Product Dimensions

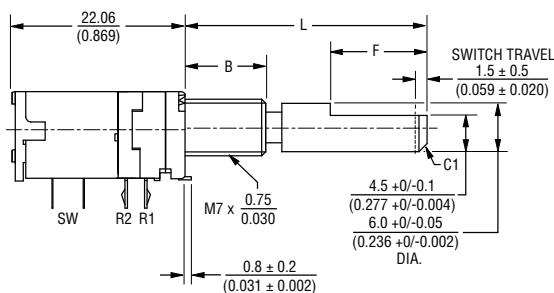
#### Knurled Shaft



#### Slotted Shaft

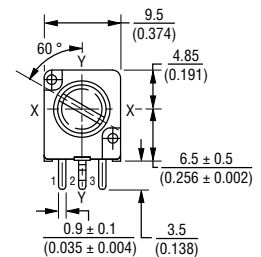
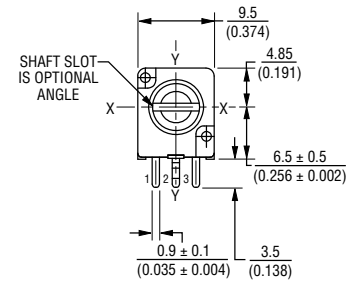


#### Flatted Shaft

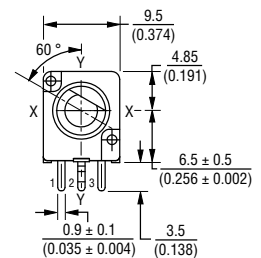


Dimensions		
L	$\frac{20}{(0.787)}$	$\frac{30}{(1.181)}$
B	$\frac{7}{(0.276)}$	$\frac{10}{(0.394)}$
F	$\frac{10}{(0.694)}$	$\frac{12}{(0.472)}$

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



SHAFT SHOWN IN FULL CCW POSITION



SHAFT SHOWN IN FULL CCW POSITION



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

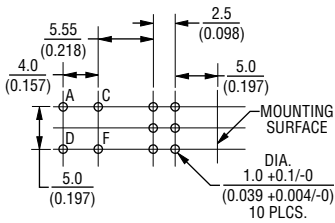
\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.  
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Users should verify actual device performance in their specific applications.  
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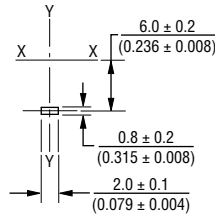
# PTM90 Series Panel Control w/Push-Push Switch

**BOURNS®**

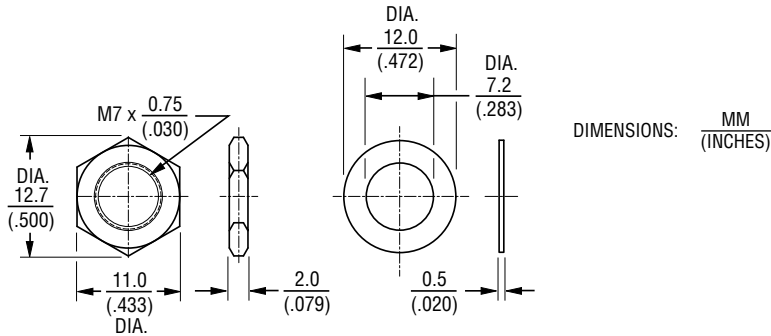
## Mounting Hole Detail



## Locating Lug Detail



## Hardware



## How To Order

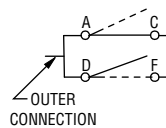
**PTM90 2 - 0 25 S - 103 B2**

- Model Number
- Designator
  - PTM90 = Panel Control w/Push-Push Switch
- Number of Sections
  - 2 = Dual Gang
- Center Detent
  - 0 = No Detent
  - 1 = Center Detent
- Shaft Length (FMS)
  - 20 = 20 mm (Knurled and Flatted shaft)
  - 25 = 25 mm (Slotted shaft only)
  - 30 = 30 mm (Flatted shaft only)
- Shaft Style
  - F = Flatted Metal
  - K = Knurled (18 tooth serrated)
  - S = Slotted Metal
- Resistance Code
  - (See Standard Resistance Table)
- Resistance Taper (See Taper Charts)
  - Taper Series followed by Curve Number

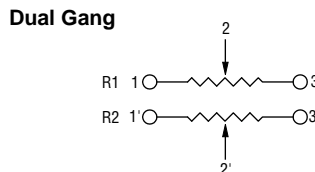
## Standard Resistance Table

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

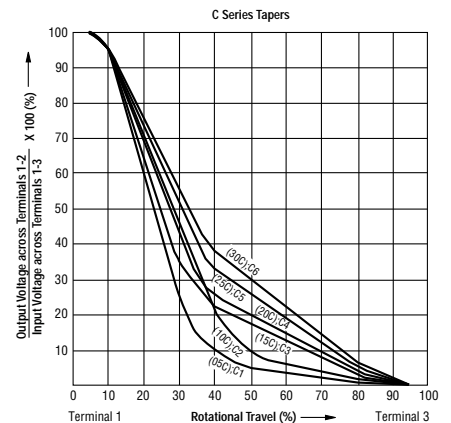
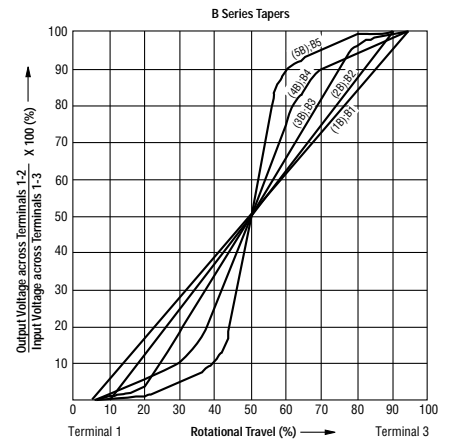
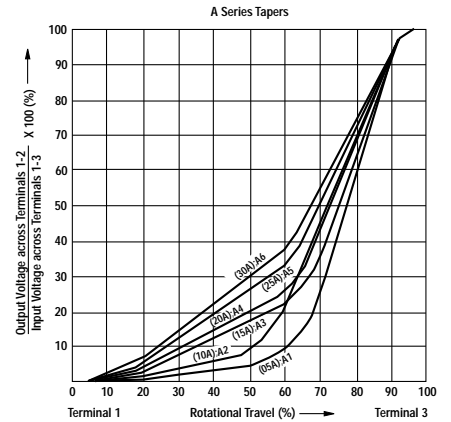
## Switch Circuit



## Schematic



## Tapers



REV. 10/19

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