



## 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 min.  
 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 ..... SPDT  
 Switch Stroke ..... 1.5 ± 0.1 mm  
 Operating Force ..... 2 kgf max.  
 Operating Life ..... 10,000 cycles

## Product Dimensions

### Knurled Shaft



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



### Slotted Shaft



### Flatted Shaft



### Dimensions

	20 (0.787)	30 (1.181)
L		
B	7 (0.276)	10 (0.394)
F	10 (0.694)	12 (0.472)

\*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011.  
 Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.  
 Users should verify actual device performance in their specific applications.

# PTM90 Series Panel Control w/Push-Push Switch



## Mounting Hole Detail



## Locating Lug Detail



## Tapers



## 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

### Dual Gang



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