

## Features

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



## PTH90 Series Dual Concentric Shaft Panel Control w/Rotary 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  
 Standard Taper ..... Linear, Audio  
 Power Rating  
 Linear ..... 0.05 watt  
 Audio ..... 0.05 watt  
 Slider Noise ..... 100 mV max.  
 Operating Voltage ..... 50 VAC / 10 VDC

### Environmental Characteristics

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

### Mechanical Characteristics

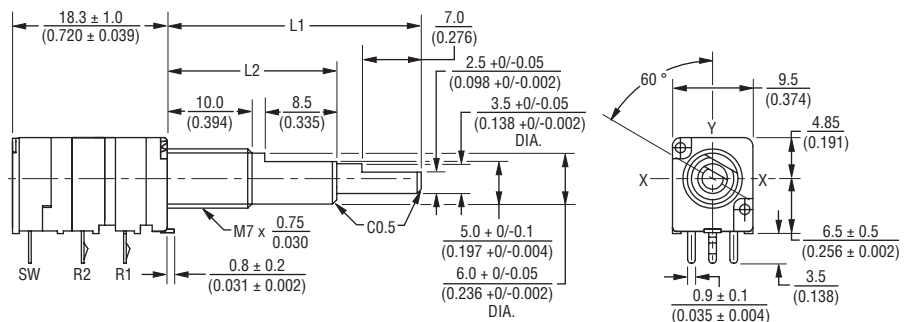
Mechanical Angle ..... 300 ° ±3 °  
 Operating Torque ..... 20~250 gf-cm  
 Stop Strength ..... 10 kgf-cm min.  
 Mounting Torque ..... 10 kgf-cm max.  
 Shaft Push/Pull Strength ..... 10 kgf max.  
 Soldering Condition  
 Manual ..... 300 °C ±5 °C for 3 sec.  
 Wave ..... 260 °C ±5 °C for 5 sec.  
 Wash ..... Not recommended

### 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 ..... Rotary  
 Contact Arrangement ..... SPST  
 Switching Angle ..... 50 ° max.  
 Detent Torque ..... 500 kgf-cm  
 Operating Life ..... 10,000 cycles

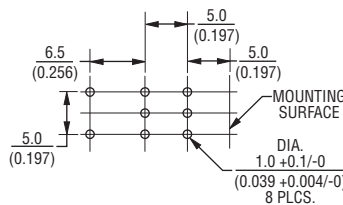
### Product Dimensions

(Shown with Flatted Shaft)

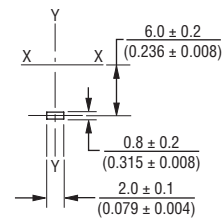


L1	L2
30.0 (1.181)	20.0 (.787)
35.0 (1.378)	25.0 (.984)

### Mounting Hole Detail

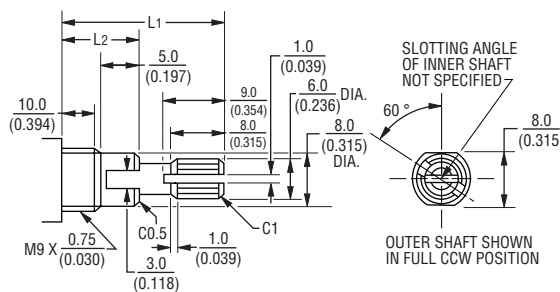


### Locating Lug Detail



### Additional Shaft Styles

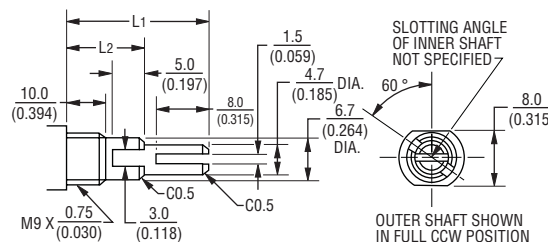
#### Knurled Shaft



L1	L2
30.0 (1.181)	20.0 (.787)
35.0 (1.378)	25.0 (.984)

DIMENSIONS: MM  
(INCHES)

#### Slotted Shaft



L1	L2
35.0 (1.378)	21.0 (.827)
40.0 (1.575)	26.0 (1.024)

\*RoHS Directive 2002/95/EC Jan 27 2003 including Annex Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

# Applications

- Multimedia sound systems
- Mixers / drums / DJ equipment
- Automotive sound systems
- Portable electronics
- Portable appliances

## PTH90 Series Dual Concentric Shaft Panel Control w/Rotary Switch



### How To Order

**PTH90 2 - 0 30 F - 103 B2**

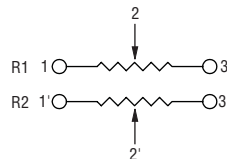
Model Number  
 Designator  
 PTH90 = Dual Concentric Shaft Panel Control w/Rotary Switch  
 Number of Sections  
 2 = Dual Gang  
 Center Detent  
 0 = No Detent  
 1 = Center Detent  
 Shaft Length (FMS)  
 \*30 = 30 mm  
 35 = 35 mm  
 40 = 40 mm  
 Shaft Style  
 F = Flatted Metal  
 S = Slotted Metal  
 K = Knurled (18 tooth serrated)  
 Resistance Code  
 (See Standard Resistance Table)  
 Resistance Taper (See Taper Charts)  
 Taper Series followed by Curve Number  
 \*Flatted and knurled shafts 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

### Schematic

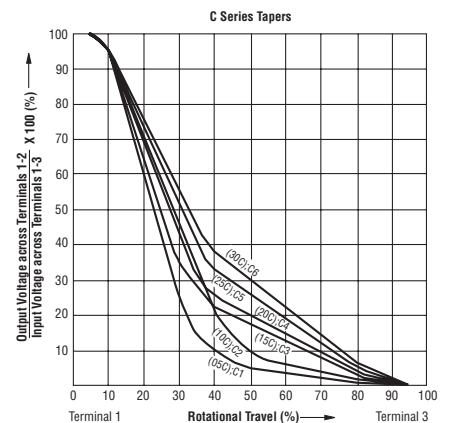
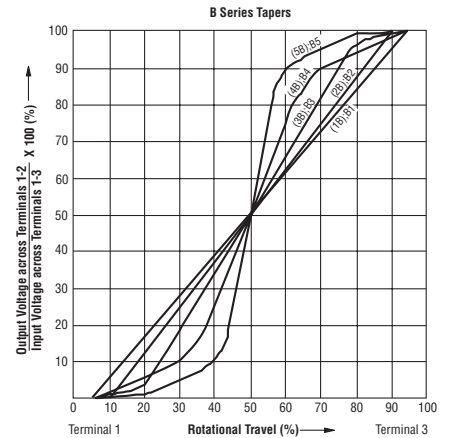
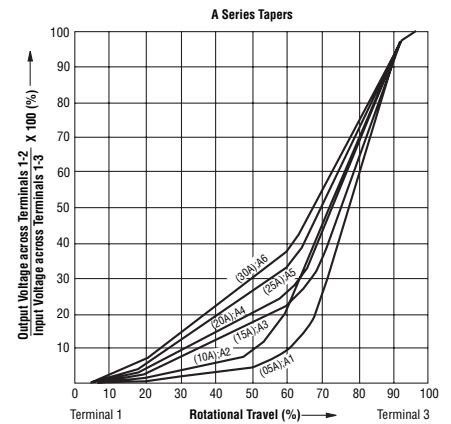
#### Dual Gang



### Switch Circuit



### Tapers



REV. 02/10

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