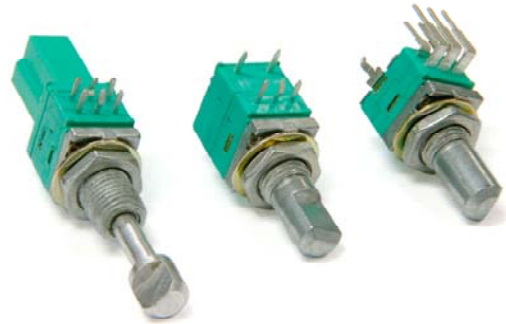


Model P09x  
 9mm Rotary Potentiometer  
 Multi - Ganged  
 Conductive Plastic Element  
 100,000 Cycle Life  
 Metal shaft / Bushing  
 Switch / Push-Lock Option  
 RoHS Compliant



#### MODEL STYLES

Side Adjust, PCB pins, up to 8 gangs	P09xN
Side Adjust, PCB pins, up to 8 gangs, with Switch	P09xS
Top Adjust, PCB pins, up to 2 gangs	P09x5N
Side Adjust, PCB pins, with Push-Lock, up to 2 gangs	P09xP

#### ELECTRICAL<sup>1</sup>

Resistance Range, Ohms	1K-500K
Standard Resistance Tolerance	± 20%
Residual Resistance	20 ohms max.
Input Voltage, maximum	50 Vac max.
Power rating, Watts	Taper B: 0.05W Other Tapers: .025W
Dielectric Strength	300Vac, 1 minute
Insulation Resistance, Minimum	100M ohms at 250Vdc
Sliding Noise	100mV max.
Gang Error ( Multi-ganged )	-40dB – 0dB, ±3dB
Switch Contact Resistance	< 100 milliohms
Switch Power Rated	3.0A at 16Vdc

#### MECHANICAL

Total Mechanical Travel	300°± 10°
Static Stop Strength	50 oz-in
Rotational Torque	0.5 to 1.25 oz-in
Switch Rotational Angle, Maximum	50°

<sup>1</sup> Specifications subject to change without notice.

# Model P09x

## ENVIRONMENTAL

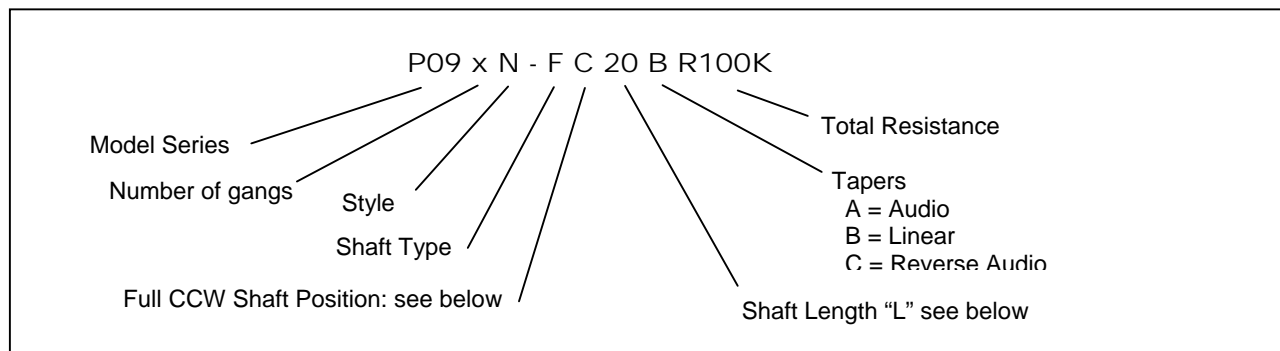
Operating Temperature Range

-10°C to +70°C

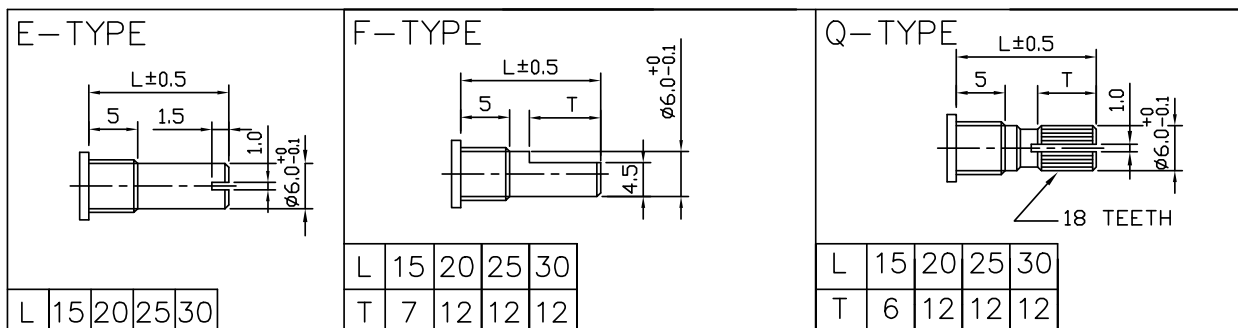
Rotational Life

100,000 cycles

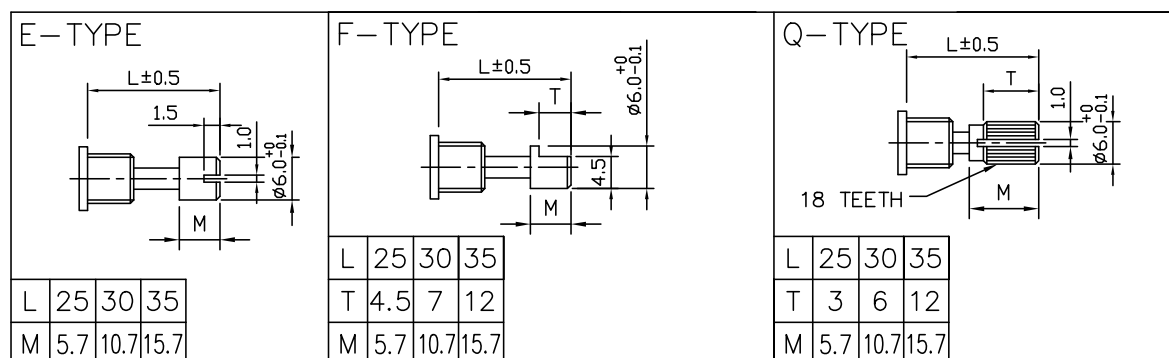
## ORDERING INFORMATION<sup>2</sup>



### Shaft Types (P09xN, P09xS, P09x5N)



### Shaft Types for Push-Lock (P09xP)

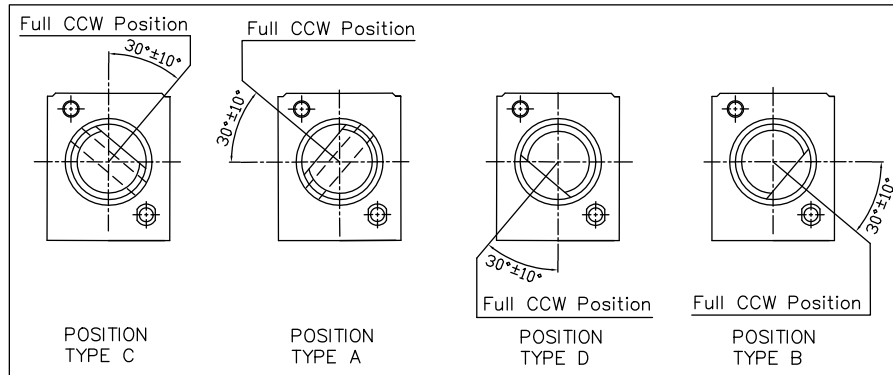


<sup>2</sup> Contact our customer service for custom designs and features.

# Model P09x

## Shaft Position (F-Type Shaft)

Dashed lines on Type "C" and Type "A" shows position of adjustment slot for E-Type and Q-Type shafts



## STANDARD RESISTANCE VALUES, OHMS

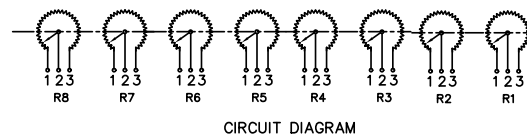
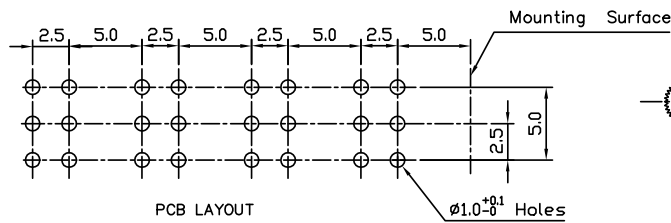
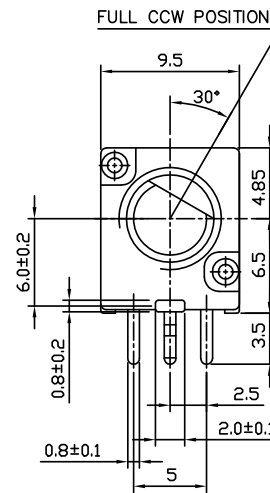
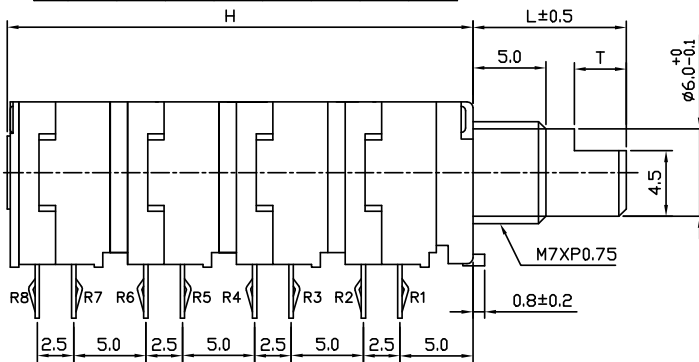
1K 2K 5K 10K 20K 50K 100K 200K 500K

## OUTLINE DRAWING

### Model P09xN (Side Adjust, PCB pins, up to 8 gangs)

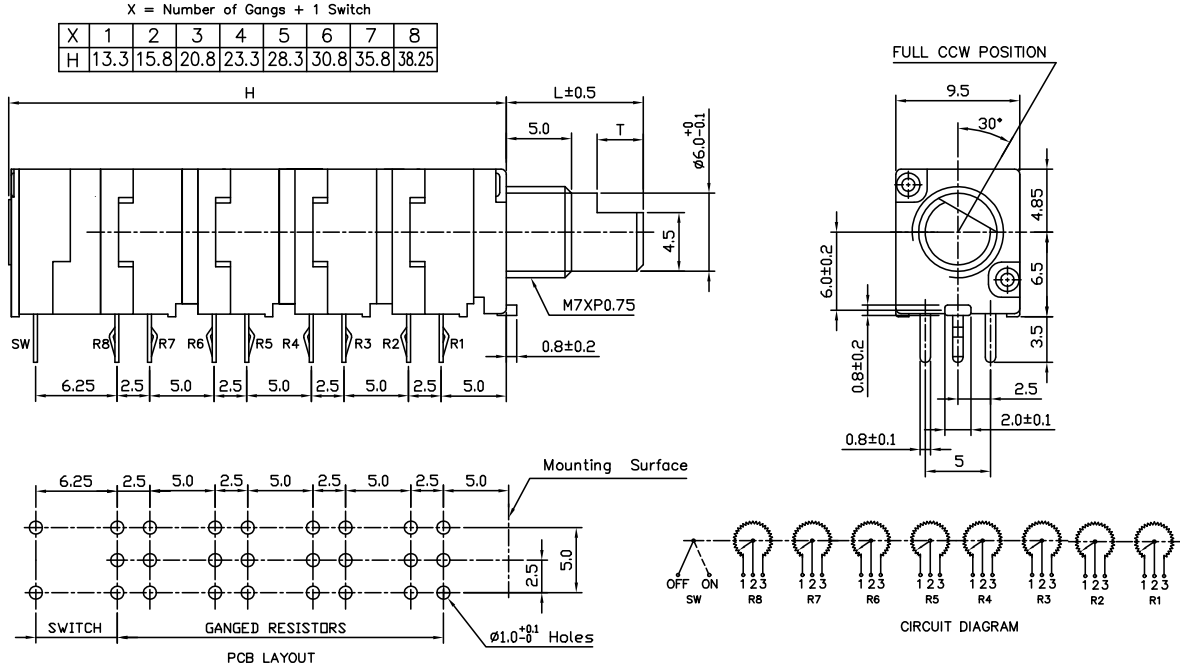
X = Number of Gangs

X	1	2	3	4	5	6	7	8
H	7.05	9.55	14.55	17.05	22.05	24.55	29.55	32.0

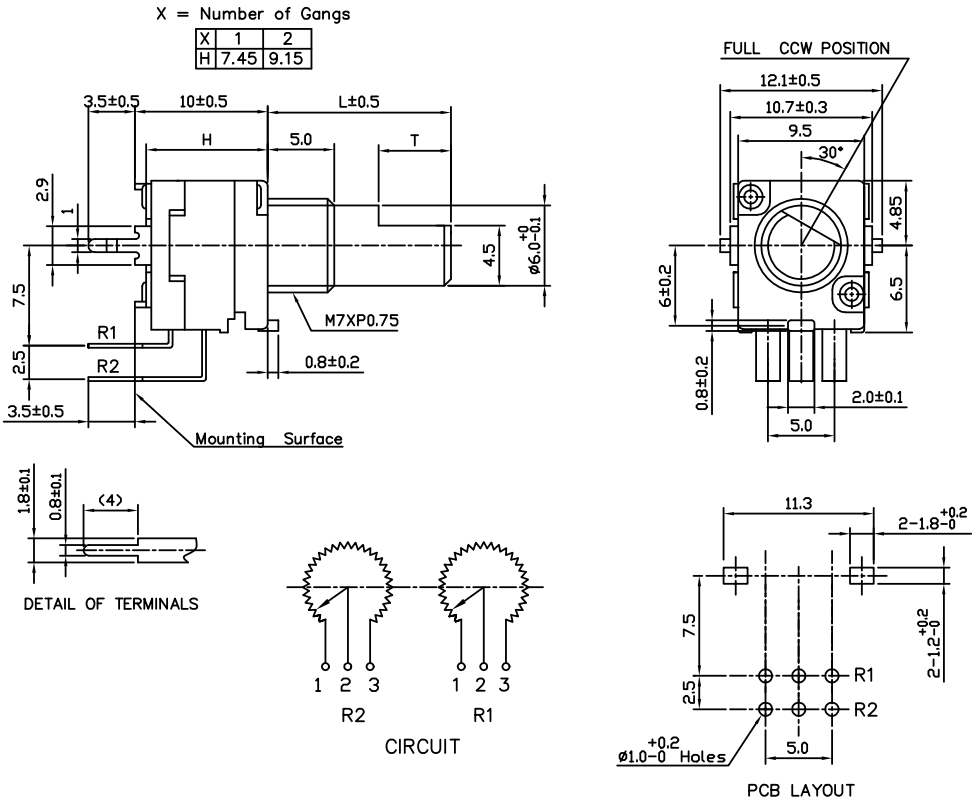


# Model P09x

## Model P09xS (Side Adjust, PCB pins, up to 8 gangs, with Switch)



## Model P09x5N (Top Adjust, PCB pins, up to 2 gangs)

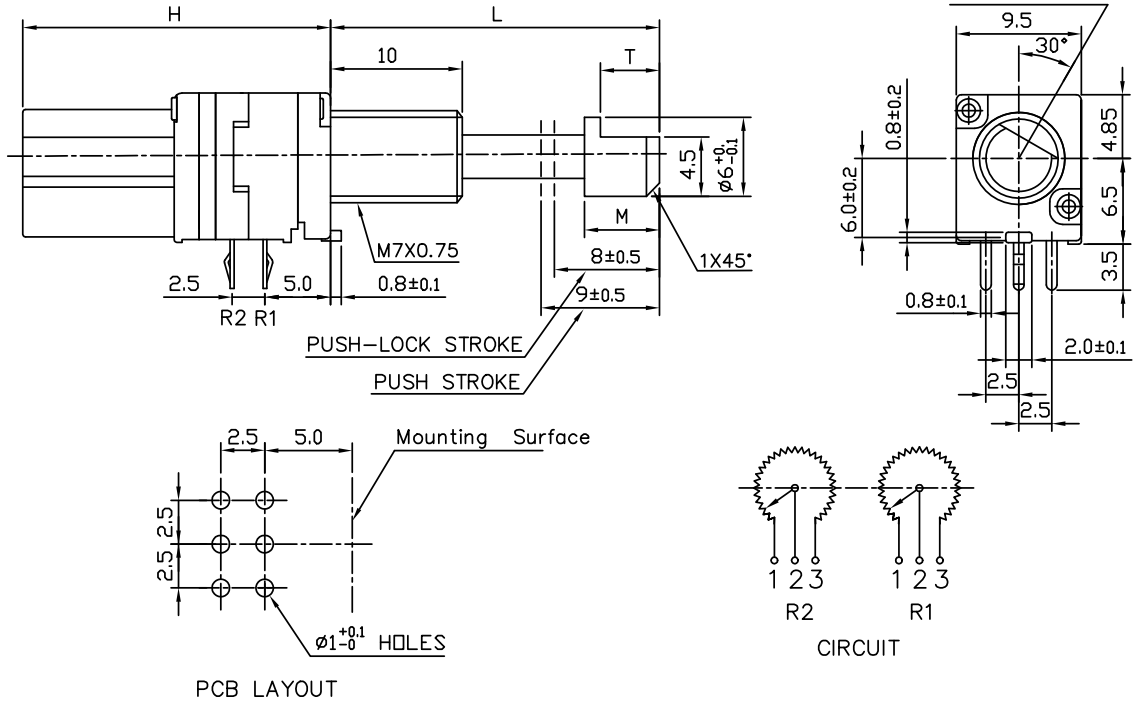


# Model P09x

## Model P09xP (Side Adjust, PCB pins, with Push-Lock, up to 2 gangs)

X = Number of Gangs

X	1	2
H	20.75	23.25





## Features

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



## PTP90 Series Panel Control w/Push Latching Shaft

### 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 Temperature Range  
 ..... -10 °C to +55 °C  
 Resistance to Solder Heat..... ±5 %  
 IP Rating ..... IP 40

### Mechanical Characteristics

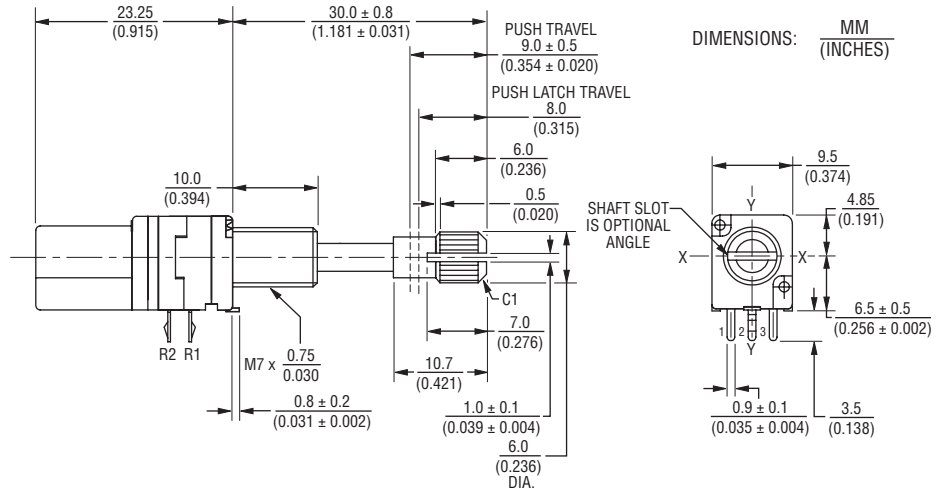
Mechanical Angle ..... 310 ° max.  
 Operating Torque ..... 20~250 gf-cm  
 Stop Strength ..... 4 kgf-cm min.  
 Mounting Torque ..... 10 kgf-cm max.  
 Shaft Push Latch Force..... 40~500 gf  
 Push Latch Operating Life  
 ..... 10,000 cycles  
 Soldering Condition  
 Manual ..... 300 °C ±5 °C for 3 sec.  
 Wave ..... 260 °C ±5 °C for 5 sec.  
 Wash ..... Not recommended

### Standard Resistance Table

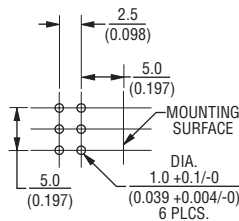
Resistance (Ohms)	Resistance Code
1,000	102
2,000	202
5,000	502
10,000	103
20,000	203
50,000	503
100,000	104
200,000	204
500,000	504
1,000,000	105

### Product Dimensions

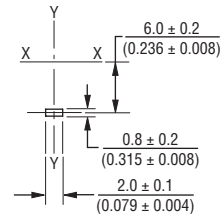
(Shown with Knurled Shaft)



### Mounting Hole Detail

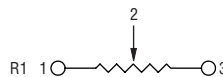


### Locating Lug Detail

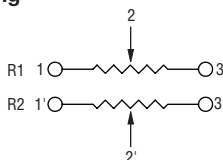


### Schematics

#### Single Gang



#### Dual Gang



### How To Order

**PTP90 2 - 0 30 K - 103 B2**

Model Number \_\_\_\_\_  
 Designator \_\_\_\_\_  
 PTP90 = Panel Control w/Push Latching Shaft  
 Number of Sections \_\_\_\_\_  
 1 = Single Gang  
 2 = Dual Gang  
 Center Detent \_\_\_\_\_  
 0 = No Detent  
 1 = Center Detent  
 Shaft Length (FMS) \_\_\_\_\_  
 30 = 30 mm  
 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

\*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.

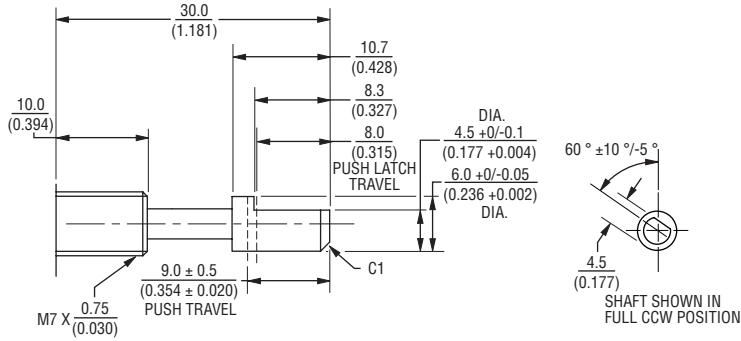
# Applications

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

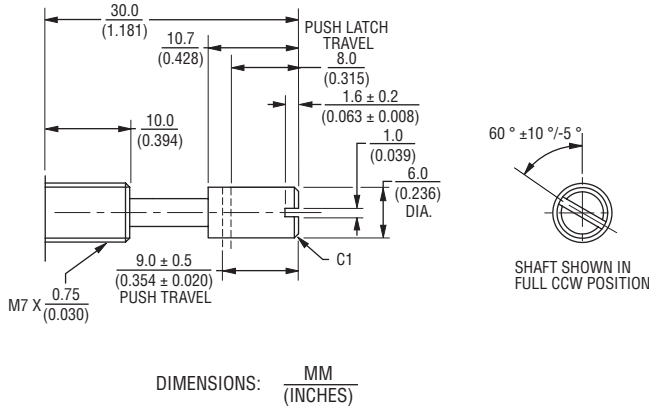
## PTP90 Series Panel Control w/Push Latching Shaft **BOURNS®**

### Additional Shaft Styles

#### Flatted Shaft



#### Slotted Shaft



### Tapers

