### **Panel Potentiometer**

### P170



#### Features:

- 17mm
- 100,000 cycle life
- Switch option
- Metal shaft / bushing
- Conductive plastic element
- RoHS compliant
- Customizable



Our contacting panel potentiometers are designed for high quality, long lasting panel controls. We offer a wide product range designed to serve both commercial applications and high performance position sensors with a wide variety of features such as the P170 switch option.

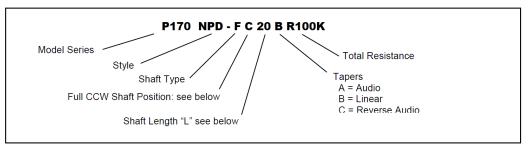
#### **Applications:**

- Audio/video controls
- Industrial and commercial joysticks
- Power supply
- Controls for medical equipment
- Pedal position

# **Model Styles**

Side adjust, Solder lugs	P170N
Side adjust, Solder lugs with switch	P170S
Side adjust, PCB pins	P170N2
Side adjust, PCB pins with switch	P170S2
Top adjust, PCB pins	P170NP1
Top adjust, PCB pins with switch	P170SP1
Rear adjust, PCB pins	P170NPD
Rear adjust, PCB pins with switch	P170SPD

### **Ordering Information**



General Note

TT Electronics | BI Technologies Circulo de la Amistad #102 PIMSA IV Mexicali B.C. Mexico C.P 21210 Ph: +1 714 447 2345 www.ttelectronics.com/bi-technologies

# **Panel Potentiometer**

P170



# **Electrical Specifications**

Resistance range, Ohms	100-1M (for "B" taper), 5K-1M (for other tapers)
Standard resistance tolerance	±20%
Residual resistance	10 ohms max.
nput voltage, maximum	200 Vac max.
Power rating, Watts	0.1W ("B" taper), 0.05W (other tapers)
Dielectric strength	500Vac, 1 minute
nsulation resistance, minimum	50M ohms at 500Vdc
Sliding noise	100mV max.
Actual electrical travel, nominal	240°
Switch contact resistance	50M ohms max.
Switch power rated	1.0A at 12 Vdc

# **Mechanical Specifications**

Total mechanical travel	260° ±10°
Static stop strength	40 oz-in
Rotational torque	0.5 to 1.25 oz-in
Switch rotational angle	30° ±10°

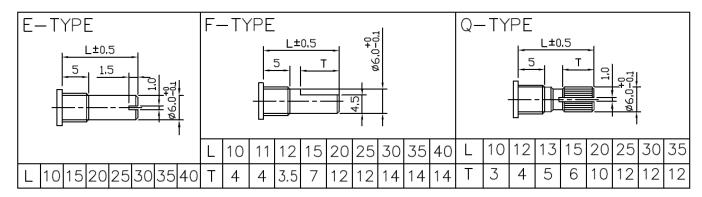
# **Environmental Specifications**

Operating temperature range	-20°C to +70°C
Rotational life (potentiometer)	100,000 cycles
Rotational life (switch)	15,000 cycles

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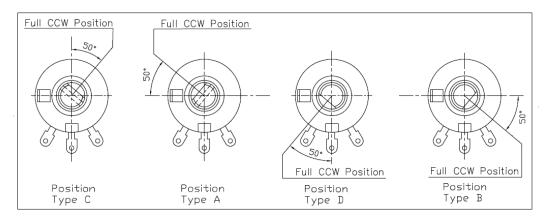


# **Shaft Types**



### **Shaft Position (F-Type Shaft)**

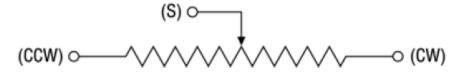
Dashed lines on Type "C" and Type "A" shows position of adjustment slot for E-Type and Q-Type shafts



# **Standard Resistance Values, Ohms**

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

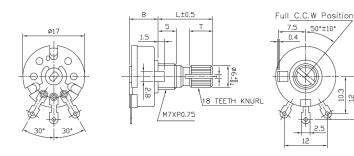
### **Circuit Diagram**

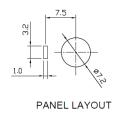


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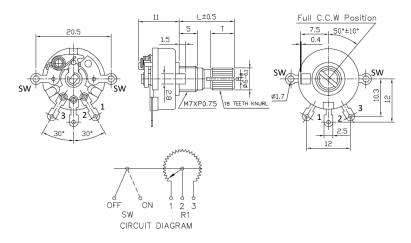


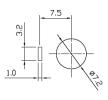
#### MODEL P170N (Side Adjust, Solder Lugs)





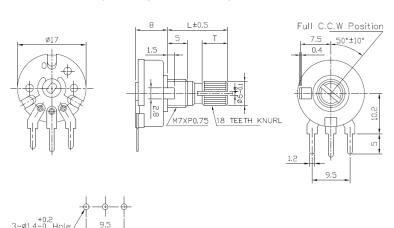
#### MODEL P170S (Side Adjust, Solder Lugs with Switch)

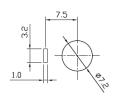




PANEL LAYOUT

#### MODEL P170N2 (Side Adjust, PCB Pins)



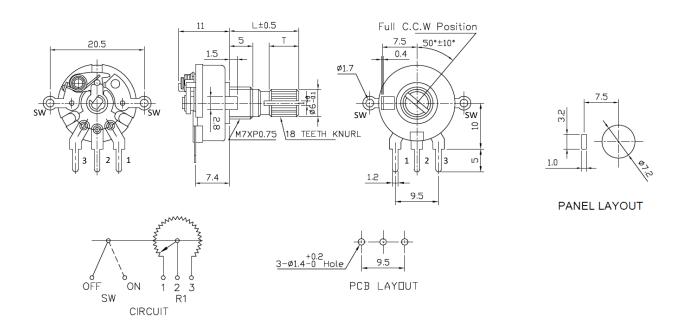


PANEL LAYOUT

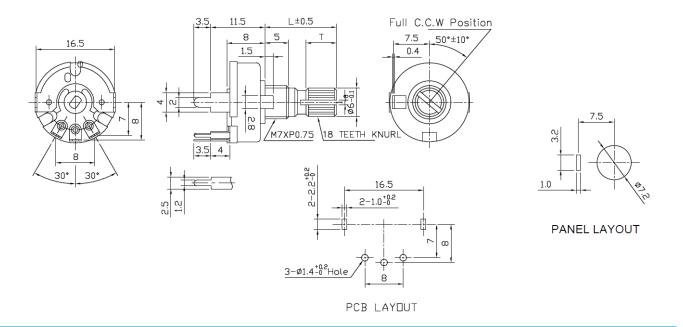
PCB LAYDUT



#### MODEL P170S2 (Side Adjust, PCB Pins with Switch)

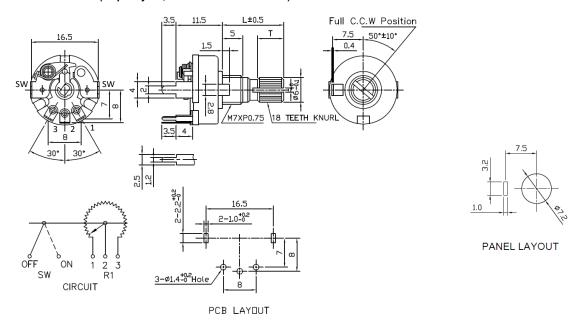


### MODEL P170NP1 (Top Adjust, PCB Pins)

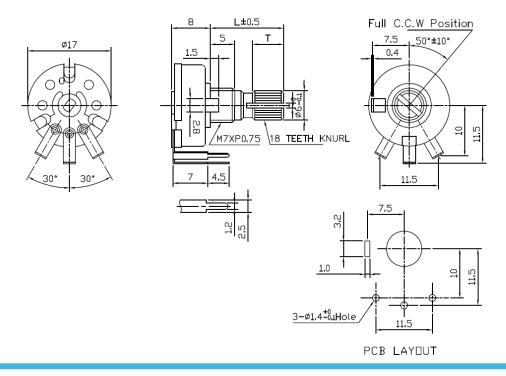




#### MODEL P170SP1 (Top Adjust, PCB Pins with Switch)

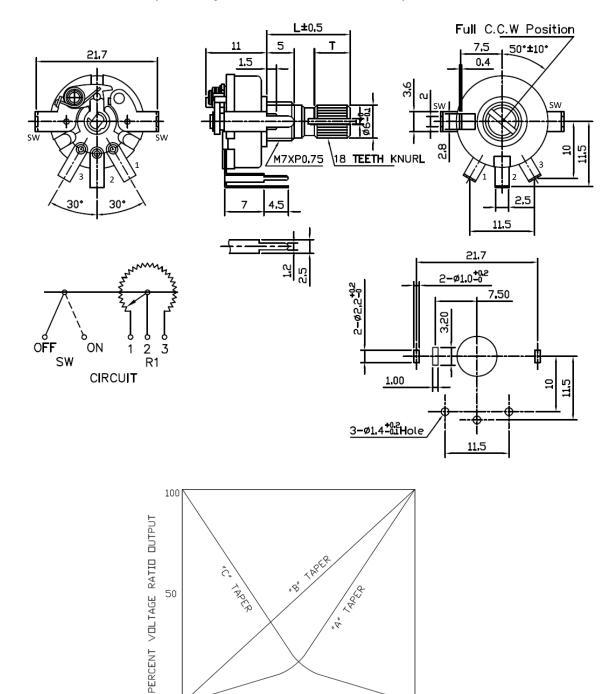


### MODEL P170NPD (Rear Adjust, PCB Pins)





### MODEL P170SPD (Rear Adjust, PCB Pins with Switch)



CLOCKWISE ELECTRICAL ROTATION