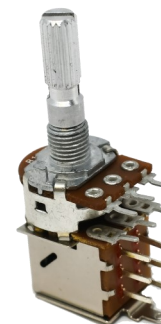


# 17 mm Rotary Potentiometer with Push-Pull Switch

## P161 Series

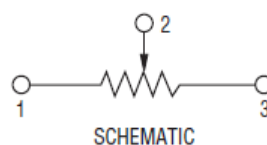


### Features:

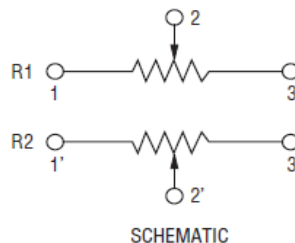
- Resistance range 1 kΩ to 1 MΩ
- Temperature range -10°C to +70°C
- Rotational cycles of 15,000 minimum
- Switch option
- Vertical and horizontal mount versions
- RoHS compliant

### Description:

17mm rotary dual gang potentiometer with push-pull switch. Options include metal shaft; audio and linear tapers; metal bushing; knurled or plain shaft types.



**Single Gang**



**Dual Gang**

### Applications:

- Electric guitars
- Amplifiers
- Mixers
- Drum machines
- Synthesizers

## Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

Resistance Range	1 kΩ to 1 MΩ
Standard Resistance Tolerance	500 Ω <math>R < 1 \text{ M } \Omega \pm 20\%</math> <math&gt;r 1="" 30\%&lt;="" 500="" \geq="" \leq="" \omega="" \pm="" \text{="" m="" math="" or="" r="" }=""></math&gt;r>
Residual Resistance	Term. 1~2: Less than 20 Ω Term: 2~3: Less than 20 Ω
Resistance Taper	A, B, C, D
Maximum Operating Voltage	Linear Taper B: 200 Vac Other Tapers: 150 Vac
Rated Power	Linear Taper B: 0.2 W Audio: 0.1 W
Dielectric Strength	1 minute at 500 Vac
Rotational Noise	Less than 100 mV
Insulation Resistance	More than 100 MΩ at 500 Vdc
Gang Error (Dual Unit)	-40 dB ~ 0 dB $\pm 3$ dB

#### General Note

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### Switch Characteristics

T<sub>A</sub> = 25°C unless otherwise noted

Switch Circuit	SPST
Contact Resistance	Less than 50 mΩ
Rated Power	Single Unit: 1.0 A at 12 Vac/dc
Push/Pull Travel	4 mm
Push/Pull Strength	70~250 gf.cm.
Switch Life	15,000 cycles minimum

### Mechanical Characteristics

T<sub>A</sub> = 25°C unless otherwise noted

Mechanical Travel	300 ° ± 5 °
Rotational Torque	20 gf.cm~200 gf.cm
Rotational Stop Strength	6 kgf.cm minimum
Shaft Pull Strength	6 kgf minimum for 60 seconds
Detent Torque	100~300 gf.cm
Nut Tightening Strength	8 kgf.cm minimum
Rotational Life	15,000 cycles minimum

### Environmental Characteristics

T<sub>A</sub> = 25°C unless otherwise noted

Operating Temperature	-10 °C to +70 °C
IP Rating	IP 40
Soldering Condition	Wave Soldering 260 °C maximum for 1-3 seconds Hand Soldering 300 °C maximum for 3 seconds
RoHS	Please refer to TT Electronics website
REACH	Please refer to TT Electronics website

# 17 mm Rotary Potentiometer

## P161 Series



### Ordering Information

P161	G	1	00	Q	S	C	20	B	102
------	---	---	----	---	---	---	----	---	-----

**Part Family**

**Terminal Configuration**

G - PC Pins, Down Facing

K - Solder Lugs, Rear Facing

**Gang Number**

1 - 1 Gang

2 - 2 Gangs (Only w/ Term. Type "G")

**Detents/ Rotation**

00 - No Position

01 - Center Detent

**Shaft Style**

Q - Metal Knurled Type

P - Metal Plain Type Shaft

**Switch Option**

S - Push-Pull Switch

**Full CCW Position**

A/C/N (see note 1 page 4)

**Shaft Length (mm) - L**

20/25/30

**Resistance Taper**

A - Audio (15A)

B - Linear (1B)

C - Reverse Audio (15C)

D - Audio (10A)

**Resistance**

See Resistance Table

Resistance Table	
Resistance (Ohms)	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

General Note

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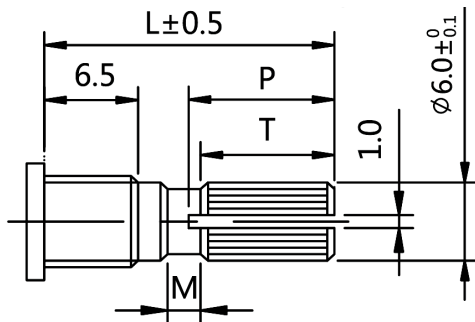
### Outline Drawings

#### Shaft Style & Length

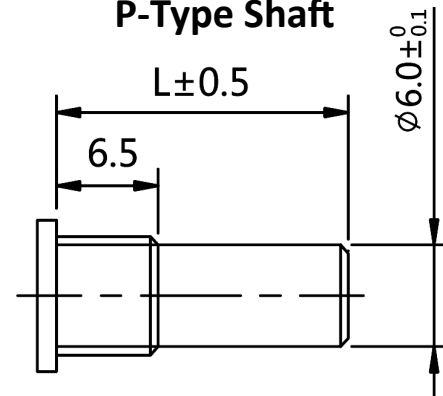
Q Type—With Switch Option			
L	20	25	30
	P - 12	P - 14	P - 14
	T - 10	T - 12	T - 12
	M - 2	M - 2	M - 4

P Type			
L	20	25	30

#### Q-Type Shaft

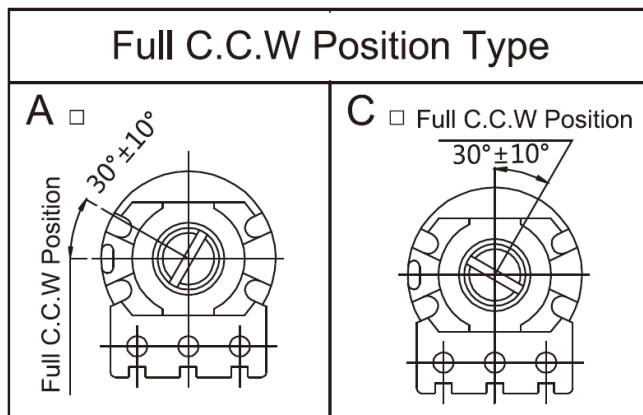


#### P-Type Shaft

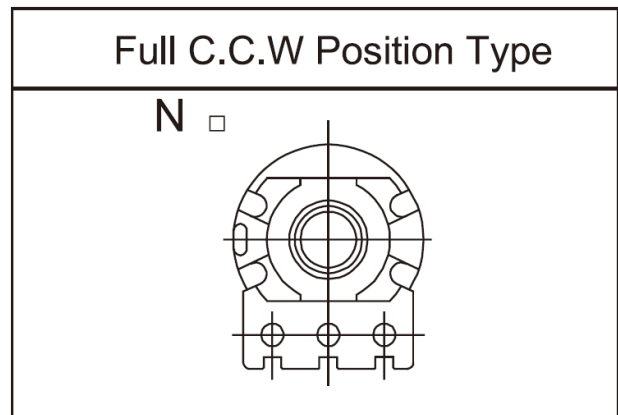


Note 1: Full CCW Position

#### Q-Type Shaft

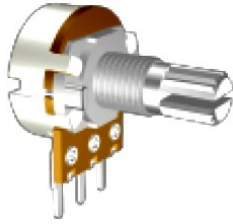


#### P-Type Shaft

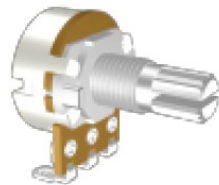
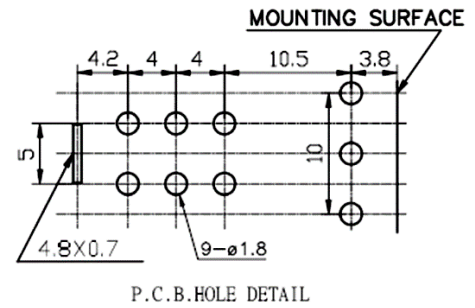
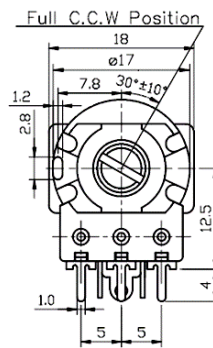
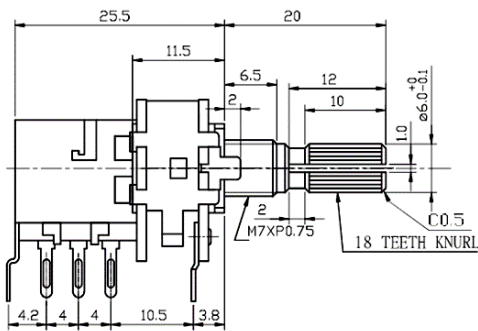


# 17 mm Rotary Potentiometer

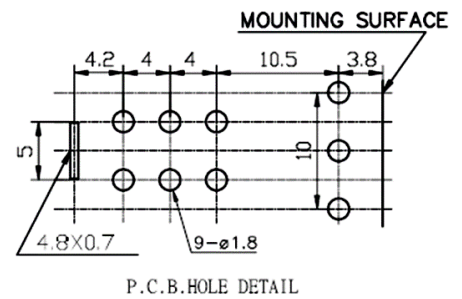
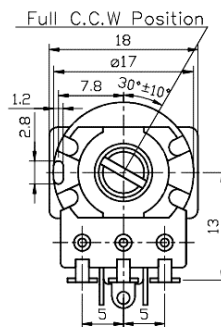
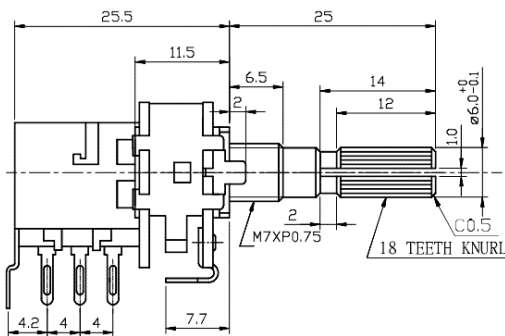
## P161 Series



**G - PC Pins, Down Facing, Single Gang with Push-Pull Switch**



**K - Solder Lugs, Rear Facing, Single Gang with Push-Pull Switch**



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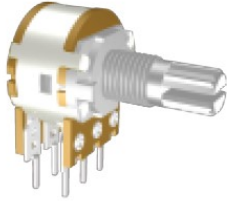
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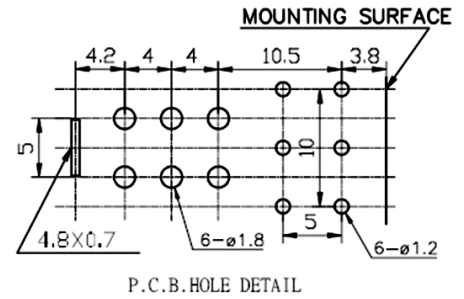
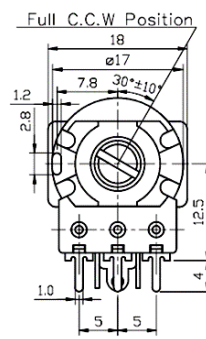
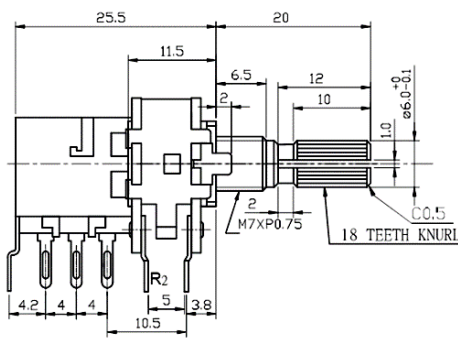
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# 17 mm Rotary Potentiometer

## P161 Series



G - PC Pins, Down Facing, Dual Gang with Push-Pull Switch



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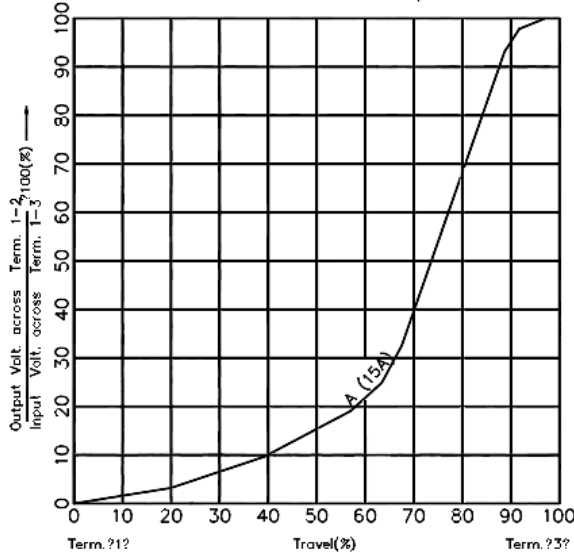
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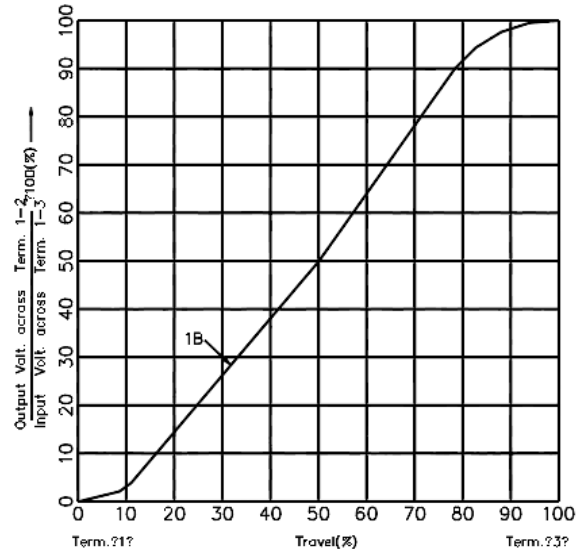
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### Standard Tapers

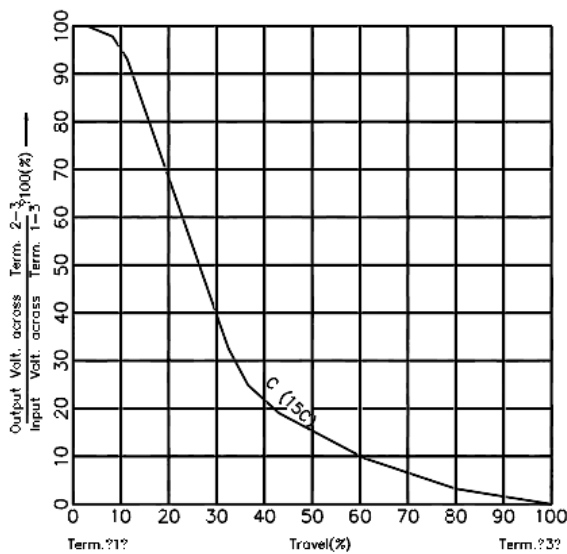
**"A" AUDIO (15A)**  
Middle without tap



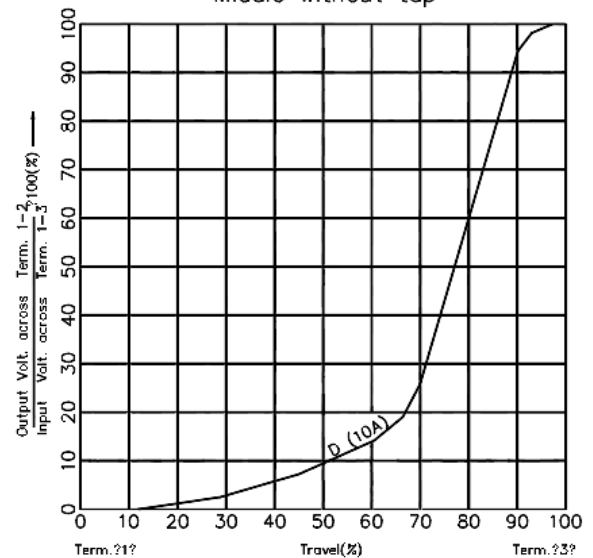
**"B" LINEAR (1B)**  
Middle without tap



**"C" REVERSE AUDIO (15C)**  
Middle without tap



**"D" AUDIO (10A)**  
Middle without tap

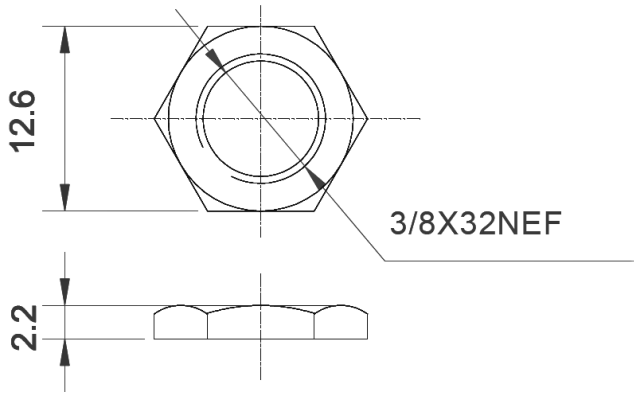


# 17 mm Rotary Potentiometer

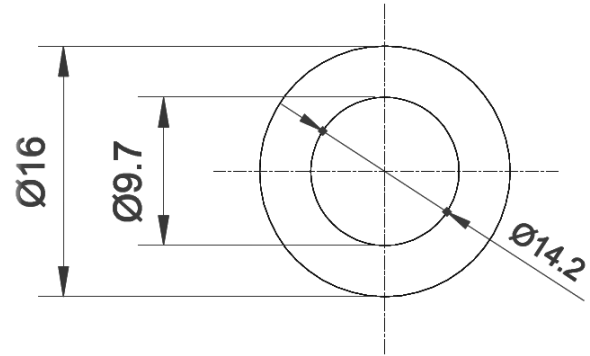
P161 Series



## Screw & Washer Dimensions



NUT 1 PC



WASHER 1 PC t=0.4

## Packaging Information

Standard Packaging	Plastic Trays
Hardware	Two flat washers and mounting nut

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