

# 17 mm Rotary Potentiometer with Push-Pull Switch

P163 Series



**OBSOLETE**

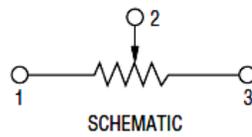
**Features:**

- 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

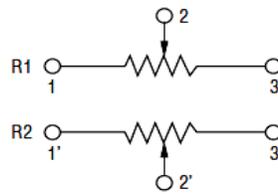


**Description:**

17mm guitar potentiometer, with push-pull switch. Options include single or dual gangs, 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<sub>A</sub> = 25°C unless otherwise noted

Resistance Range	1 kΩ to 1 MΩ
Standard Resistance Tolerance	500 Ω < R < 1 MΩ ± 20% R ≤ 500 Ω or R ≥ 1 MΩ ± 30%
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 ± 3 dB

General Note  
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

### 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

### Mechanical Characteristics

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

Mechanical Travel	300 ° ±5 °
Rotational Torque	20 gf.cm~100 gf.cm
Rotational Stop Strength	6 kgf.cm minimum
Shaft Pull Strength	6 kgf minimum for 60 sec
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 Pro Audio Potentiometer



P163 Series

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## Ordering Information

P163	G	2	00	Q	S	C	19	B	103
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**Part Family**

**Terminal Configuration**

- G - PC Pins, Down Facing
- K - Solder Lugs, Rear Facing

**Gang Number**

- 1 - 1 Gang
- 2 - 2 Gangs (Only w/ "G" Term. Type)

**Detents/ Rotation**

- 00 - No Position

**Shaft Style**

- Q - Metal Knurled Type
- P - Plain Type

**Switch Option**

- S - Push-Pull Switch

**Full CCW Position**

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

**Shaft Length (mm) - L**

- 19

**Resistance Taper**

- A - Audio (15A)
- B - Linear (Single unit: 1B; Dual & Multi-gangs: 3B)
- C - Reverse Audio (15C)
- D - Audio (10A)

**Resistance**

See Resistance Table

Resistance Table	
Resistance (Ohms)	Code
10,000	103
25,000	253
50,000	503
100,000	104
250,000	254
300,000	304
500,000	504
1,000,000	105

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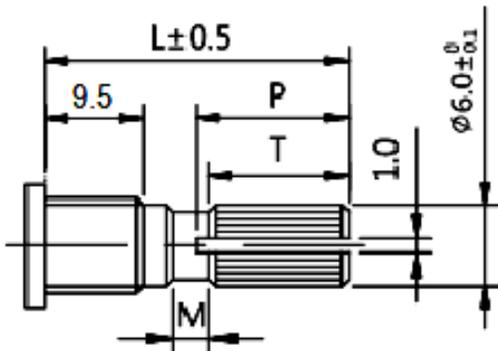
## Outline Drawings

### Shaft Style & Length

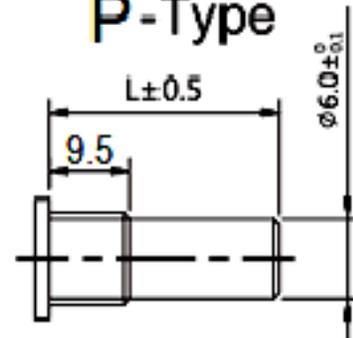
Q Type—With Switch Option	
L	19
	P - 7 T - 6.5 M - 1.5

P Type	
L	19

### Q - Type (Switch Option)

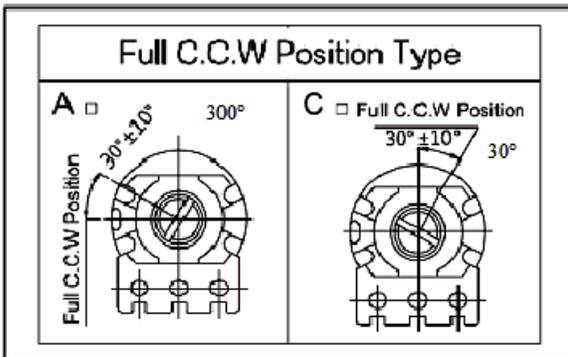


### P-Type

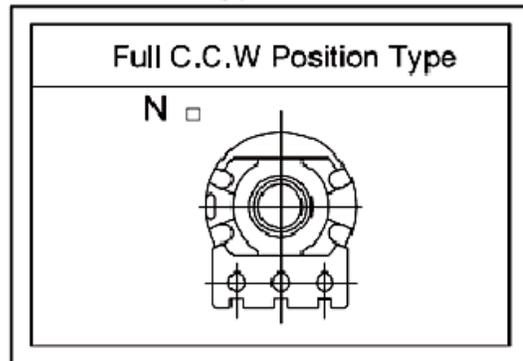


Note 1: Full CCW Position

### Q-type shaft



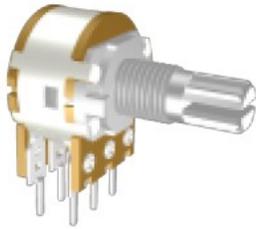
### P-type shaft



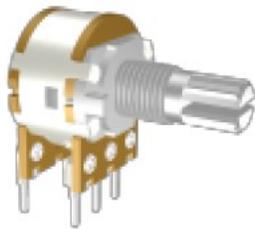
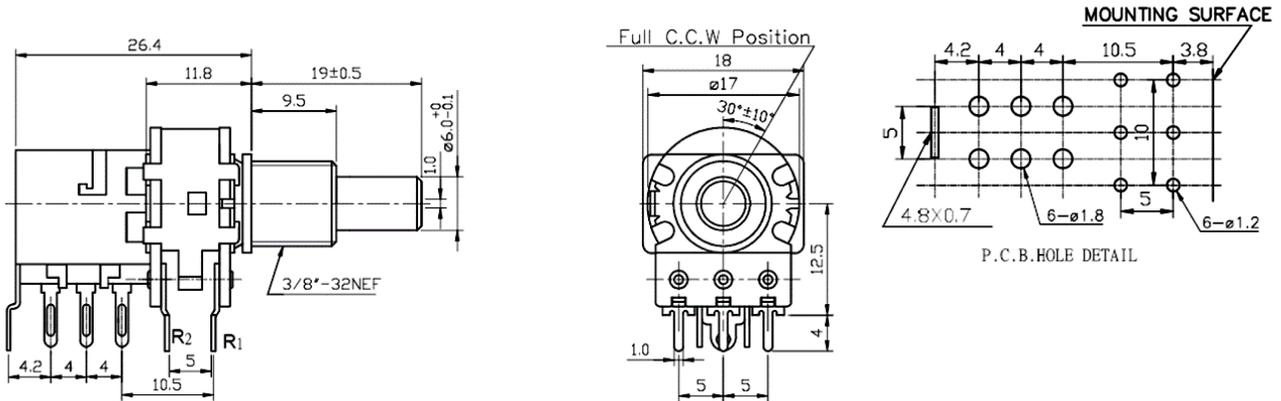
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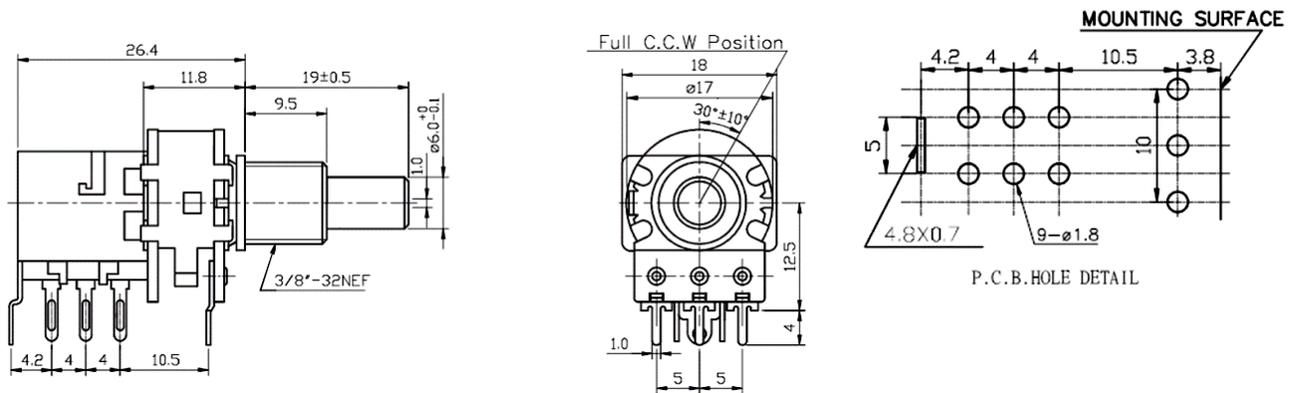
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**G - PC Pins, Down Facing , Dual Gang with Push-Pull Switch**



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



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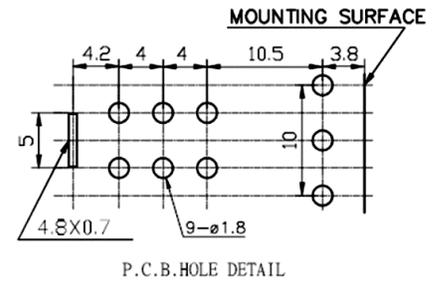
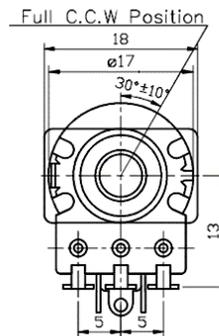
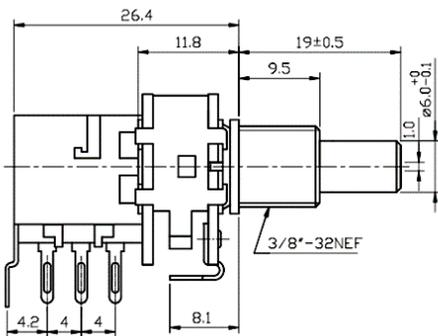
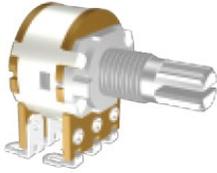
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K - Solder Lugs, Rear Facing, Dual Gang with Push-Pull Switch



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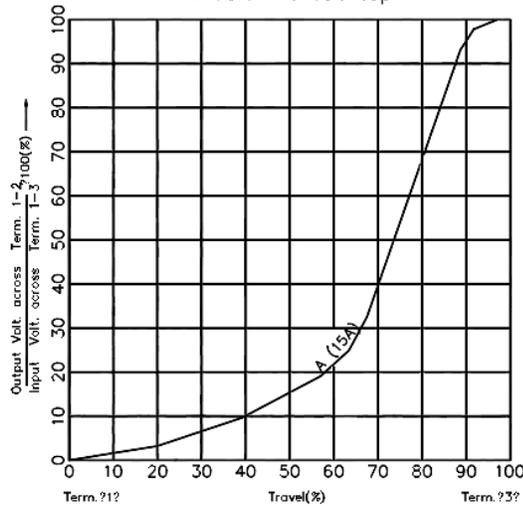
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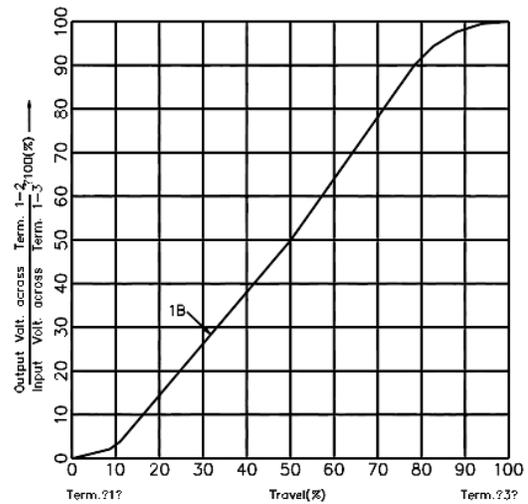
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### Standard Tapers

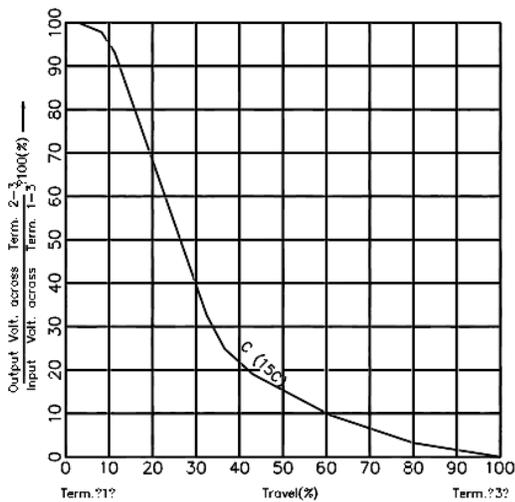
**"A" AUDIO (15A)**  
Middle without tap



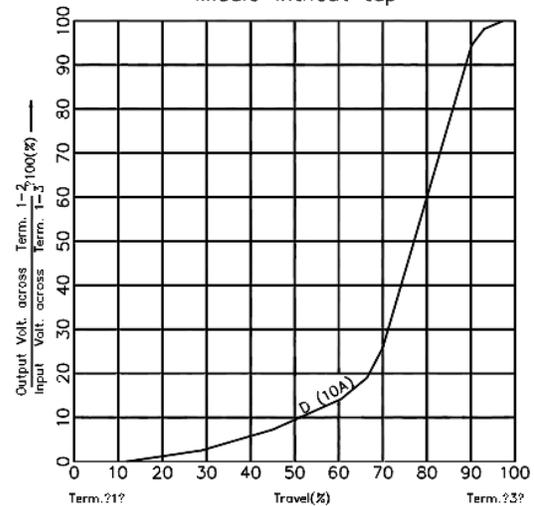
**"B" LINEAR (1B)**  
Middle without tap



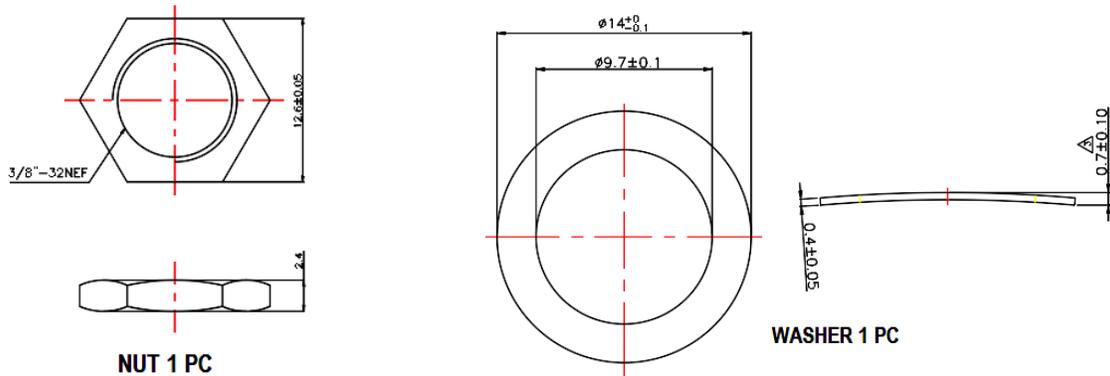
**"C" REVERSE AUDIO (15C)**  
Middle without tap



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



### Screw & Washer Dimensions



### Packaging

Standard Packaging	Plastic Trays
Hardware	Two flat washers and mounting nut