



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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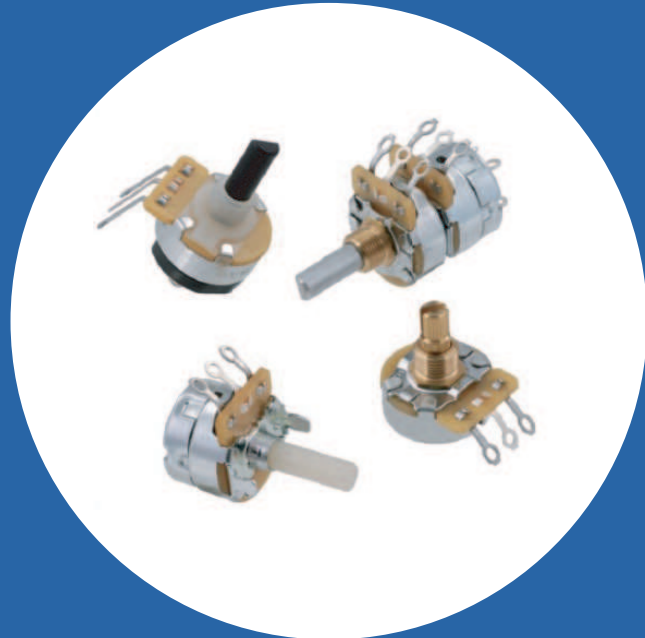
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Industrial 24mm Diameter 1/2 Watt, Composition Rotary Potentiometer

Features

- Versatile Mounting Styles
 - Bushing
 - Twist or Bend Tab
 - Snap-in PC Bracket
 - PC Terminal
- Single, Tandem, or Concentric Units
- Power Switch Available
- Panel Seal Available
- Wide Resistance Range
- Low Noise
- RoHS compliant



Electrical and Mechanical Specifications

Resistance Range

100 ohms through 10 Megohms, linear
1K ohms through 1 Megohms, audio

Resistance Tolerance

±30%, ±20%, ±10%

Power Rating

1/2 watts @ 55°C (Resistance up to 100K ohms)
1/3 watts @ 55°C (Resistance above 100K ohms)

Dielectric Strength

1080 VAC for 1 minute

Maximum Operating Voltage

750 VDC

Insulation Resistance

100 Megohms minimum @ 250 VDC

Angle of Rotation

Total Rotation (Potentiometer and Switch)
With rotary switch: 320°
Without switch or with push switch: 300°
Electrical Effective Angle (Potentiometer)
300°

Rotational Torque

Standard: 54 - 432 gf-cm
(Consult CTS for special torque)

Stop Strength

10.36 kgf-cm minimum

Push-Pull Strength of Shaft

10 kg for 10 seconds

Rotational Life

Standard: 10K cycles
Special: 100K, 250K cycles

Operating Temperature

-10°C to +80°C

Solder Heat Resistance

260°C for 5 seconds

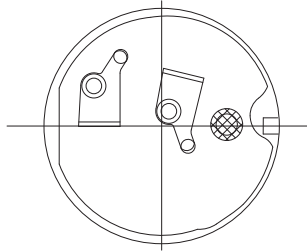
Mounting Information

- Bushing
- Twist Tab
- Bend Tab
- Snap-in PC Bracket
- PC Terminal

OPTIONAL POWER SWITCHES

Series	Contact Arrangement	Electrical Rating	Outline Drawing
FR-GC	SPST Rotary	3 amps @ 125 volts, 1 amp @ 250 volts AC UL Recognized	
GC	SPST Rotary	5 amps @ 20 volts DC (Automotive)	

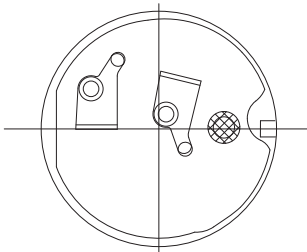
Actuating Angle – 20°
Actuating Torque – 7 to 17 in. oz.
(504 to 1225 gf-cm)



DIMENSION: $\frac{\text{mm}}{\text{inch}}$

TGC	SPST Rotary	6 amps @ 125 volts AC UL & CSA Recognized	

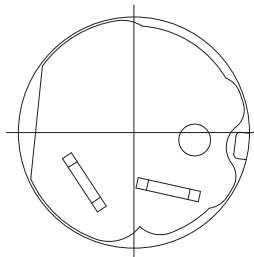
Actuating Angle – 20°
Actuating Torque – 7 to 17 in. oz.
(504 to 1225 gf-cm)



DIMENSION: $\frac{\text{mm}}{\text{inch}}$

TV-023	SPST Rotary	TV-5 rating UL & CSA Recognized	

Actuating Angle – 20°
Actuating Torque – 10 to 20 in. oz.
(720 to 1441 gf-cm)



DIMENSION: $\frac{\text{mm}}{\text{inch}}$

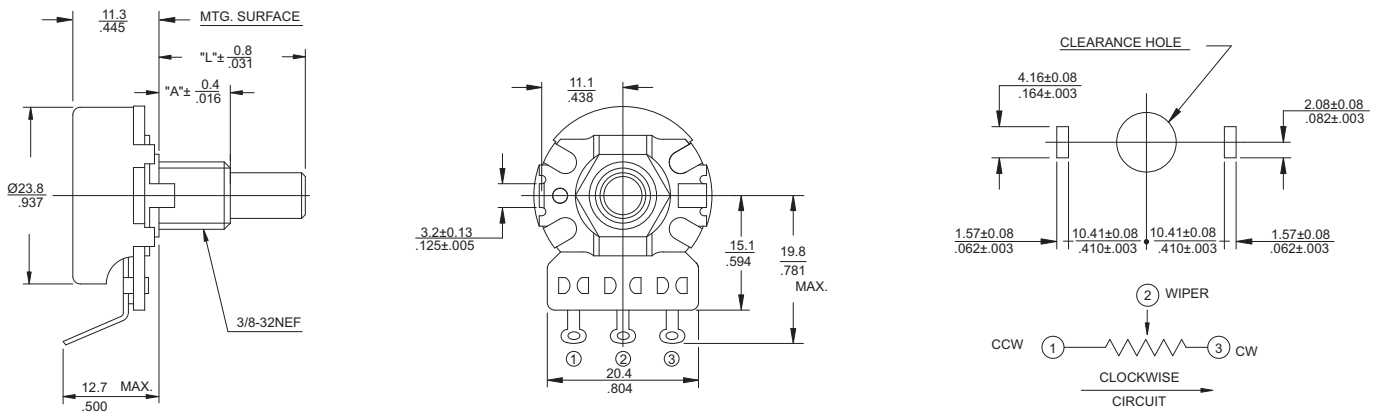
OPTIONAL POWER SWITCHES

Series	Contact Arrangement	Electrical Rating	Outline Drawing
040	SPST Push-on Push-off	6 amps @ 125 volts AC	
Pre-travel 13/64" (5.2 mm) Activating Force: 2 to 5 lb (0.9 to 2.3 kg)			
DIMENSION: $\frac{\text{mm}}{\text{inch}}$			
041	SPDT Push-on Push-off	6 amps @ 125 volts AC	
Pre-travel 13/64" (5.2mm) Activating Force: 2 to 5 lb (0.9 to 2.3 kgf)			
DIMENSION: $\frac{\text{mm}}{\text{inch}}$			
050	SPST Rotary	3 amps @ 125 volts AC (Shallow construction switch) UL & CSA Recognized 7.5 amps @ 20 volts DC (Automotive)	
Actuating Angle: 25° Actuating Torque: 2 to 15 in. oz. (144 to 1080 gf-cm)			
DIMENSION: $\frac{\text{mm}}{\text{inch}}$			
FR-027	DPST Rotary	3 amps @ 125 volts, 1 amp @ 250 volts AC UL Recognized	
Actuating Angle: 20° Actuating Torque: 10 to 20 in. oz. (720 to 1441 gf-cm)			
DIMENSION: $\frac{\text{mm}}{\text{inch}}$			

OPTIONAL POWER SWITCHES

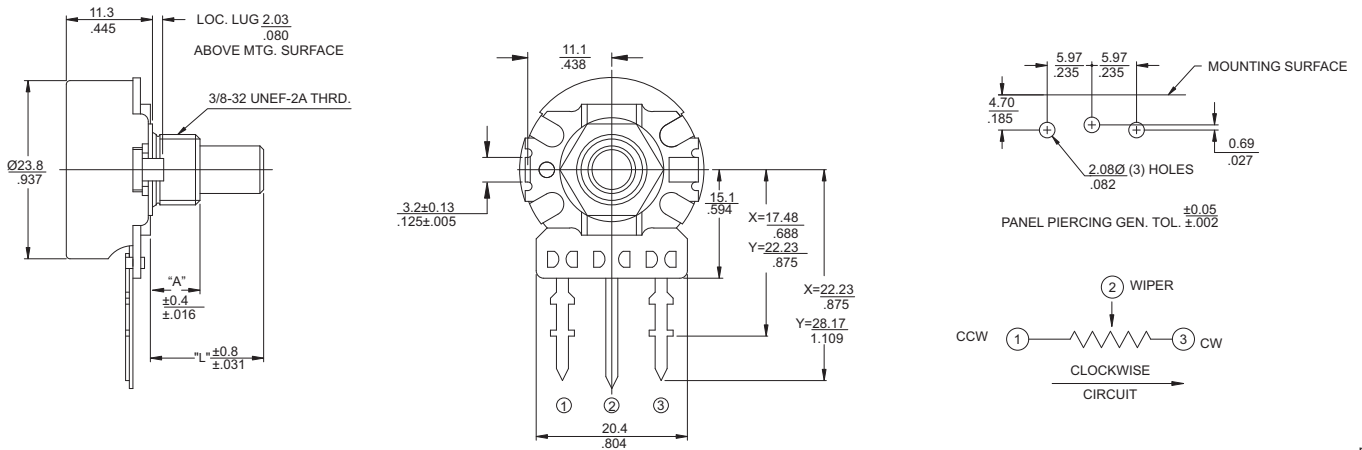
Series	Contact Arrangement	Electrical Rating	Outline Drawing	
<p>TV-020</p> <p>Actuating Angle: 20° Actuating Torque: 10 to 20 in. oz. (720 to 1440 gf-cm)</p> <p>DIMENSION: $\frac{\text{mm}}{\text{inch}}$</p>	<p>DPST Rotary</p>	<p>125 volts AC Pole #1, TV-1 rating Pole #2, TV-3 rating UL & CSA Recognized</p>		
<p>FR-028</p> <p>Actuating Angle: 20° Actuating Torque: 10 to 20 in. oz. (720 to 1440 gf-cm)</p> <p>DIMENSION: $\frac{\text{mm}}{\text{inch}}$</p>	<p>SPDT Rotary</p>	<p>3 amps @ 125 volts AC UL Recognized</p>		
<p>TV-021</p> <p>Actuating Angle: 20° Actuating Torque: 10 to 20 in. oz. (720 to 1440 gf-cm)</p> <p>DIMENSION: $\frac{\text{mm}}{\text{inch}}$</p>	<p>SPDT Rotary</p>	<p>TV-4 rating UL Recognized</p>		
<p>FR-K</p> <p>Pre-travel: 5/32" (3.97mm) Actuating force: 7 to 16 oz. - Single section control (198 to 454 gf) 7 to 20 oz. - Tandem control (198 to 567 gf)</p> <p>DIMENSION: $\frac{\text{mm}}{\text{inch}}$</p>	<p>SPST Pull-on Push-off</p>	<p>3 amps @ 125 volts AC UL & CSA Recognized</p>		

450T Metal Shaft, Bushing Mou, Type "T" Solder Lug Terminals



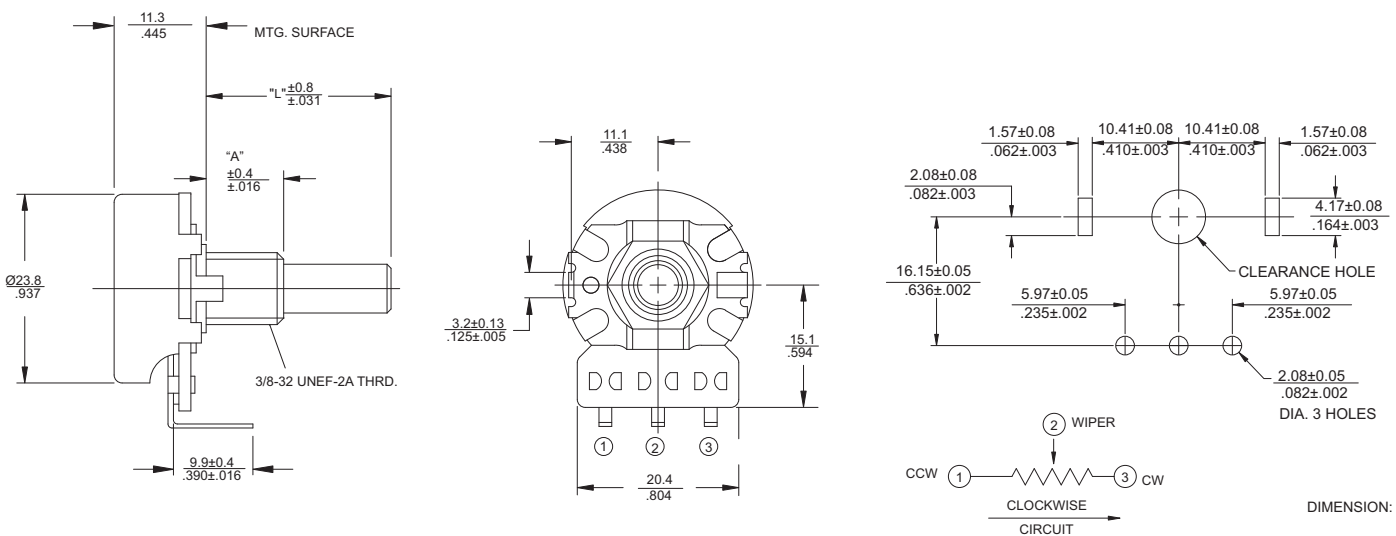
DIMENSION: $\frac{\text{mm}}{\text{inch}}$

450X / 450Y Metal Shaft, Bushing Mount, Printed Circuit Type "X" Or "Y" Terminals



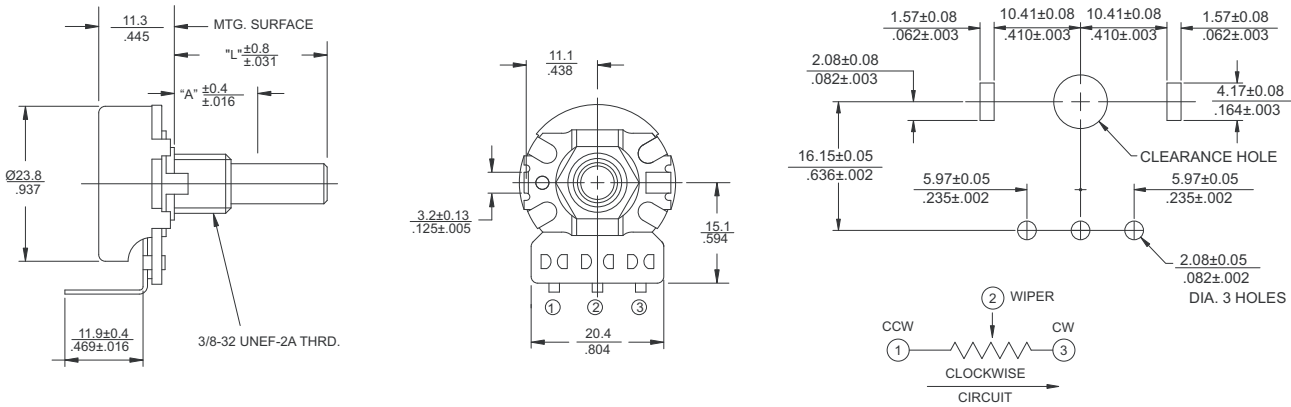
DIMENSION: $\frac{\text{mm}}{\text{inch}}$

450U Metal Shaft, Bushing Mount, Printed Circuit Type "U" Terminals



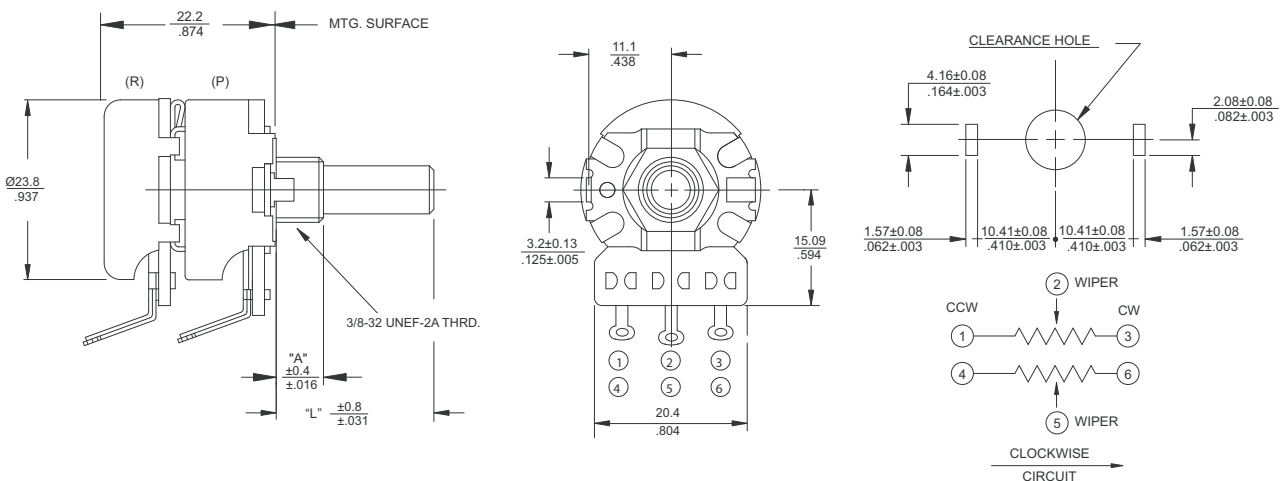
DIMENSION: $\frac{\text{mm}}{\text{inch}}$

450V Metal Shaft, Bushing Mount, Printed Circuit Type "V" Terminals



DIMENSION: $\frac{\text{mm}}{\text{inch}}$

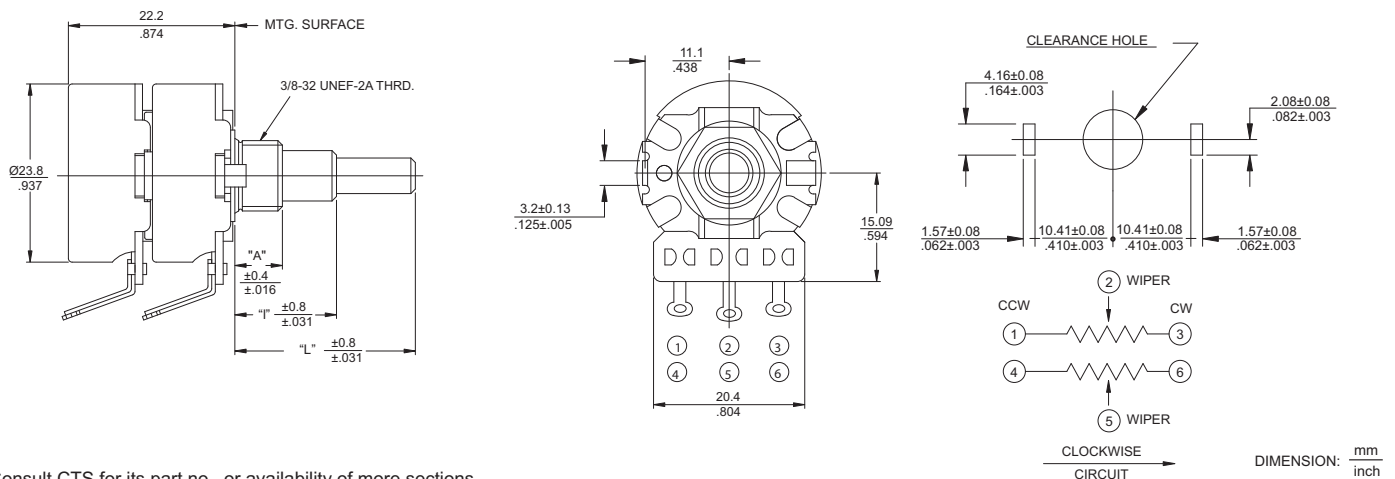
T2-450 Dual-section, Metal Shaft, Bushing Mount, Type "T" Solder Lug Terminals



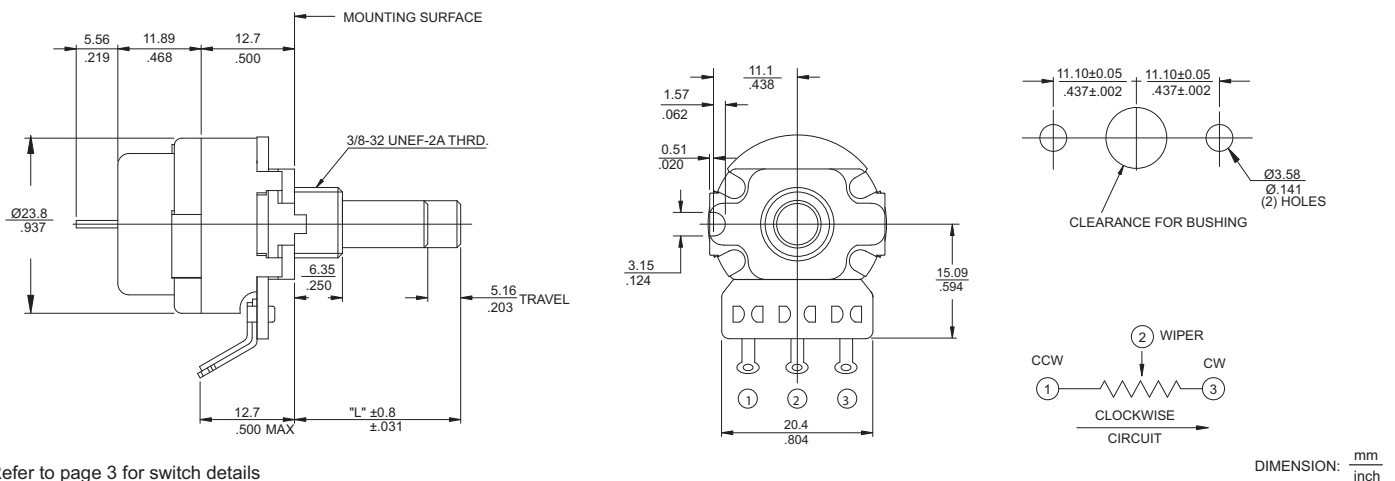
* Consult CTS for its part no. or availability of more sections

DIMENSION: $\frac{\text{mm}}{\text{inch}}$

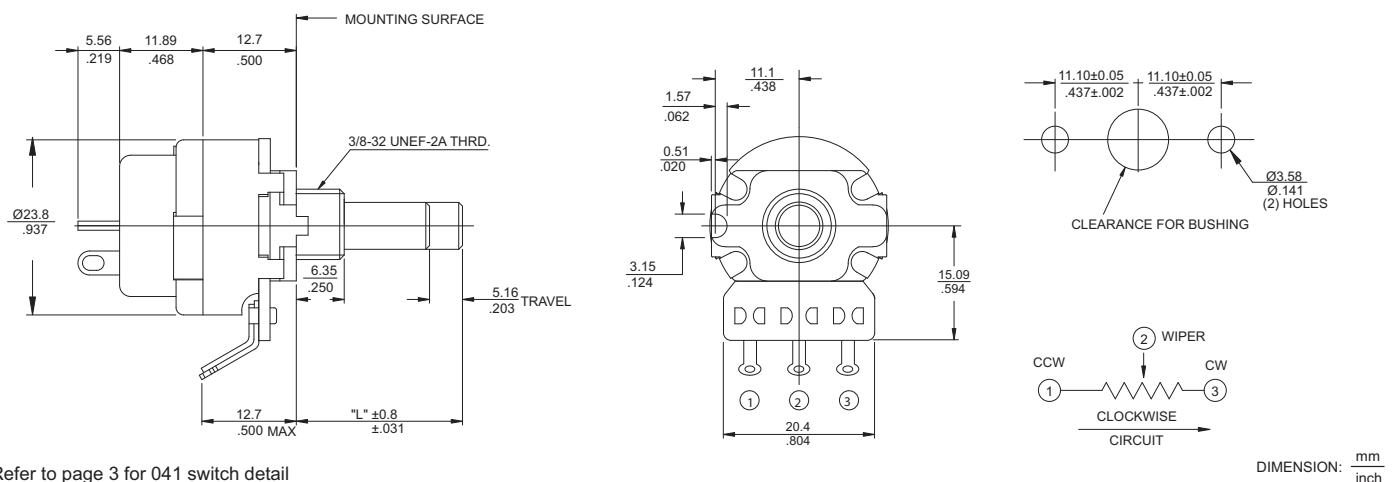
TC2-450 Dual-section, Concentric Metal Shafts, Bushing Mount, Type "T" Solder Lug Terminals



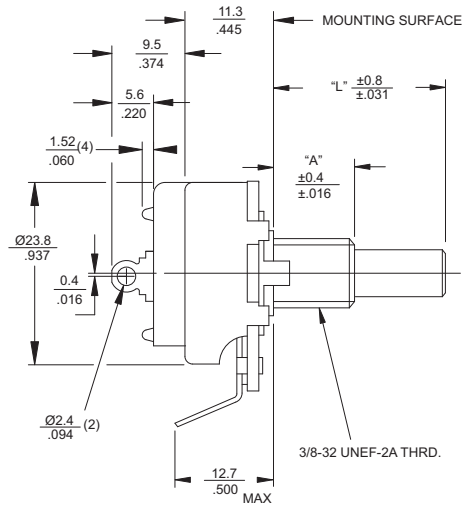
040-TMG450 Metal Shaft, Bushing Mount with Insulated Plate, Type "T" Solder Lug Terminals, 040 Switch



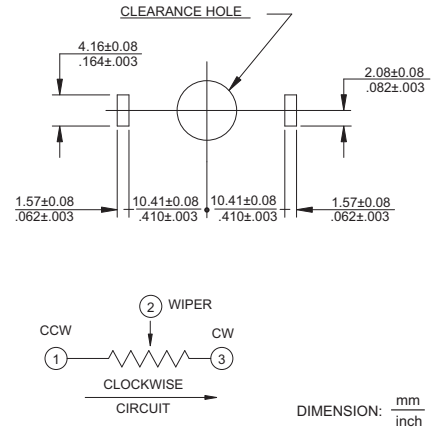
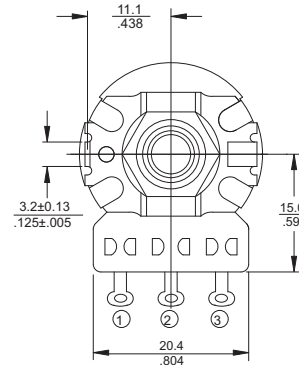
041-TMG450 Metal Shaft, Bushing Mount with Insulated Plate, Type "T" Solder Lug Terminals, 041 Switch



050-T450 Metal Shaft, Bushing Mount, Solder Lug terminals, 050 Switch

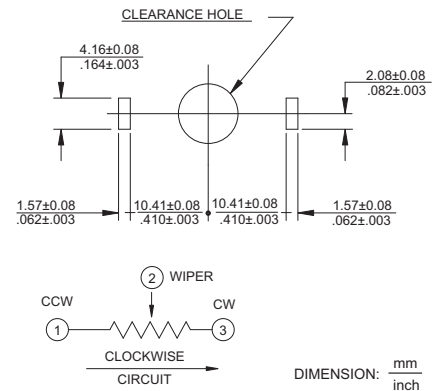
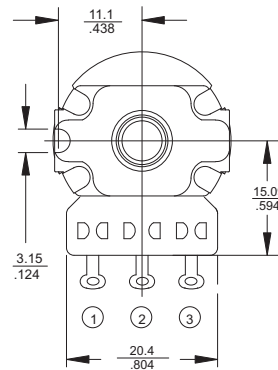
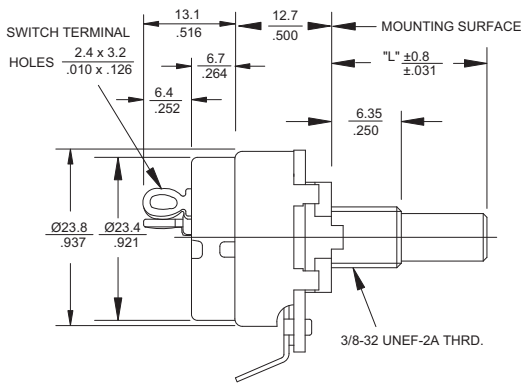


* Refer to Ordering Information for switch details



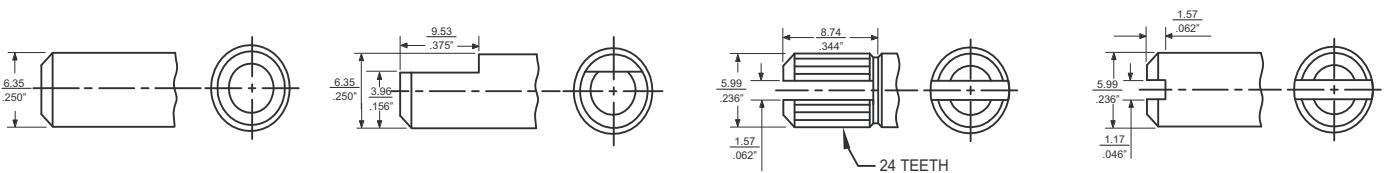
* Refer to page 3 for 050 switch detail

TGC-TMG450 Metal Shaft, Bushing Mount with Insulated Plate, Type "T" Solder Lug Terminals, TGC Switch



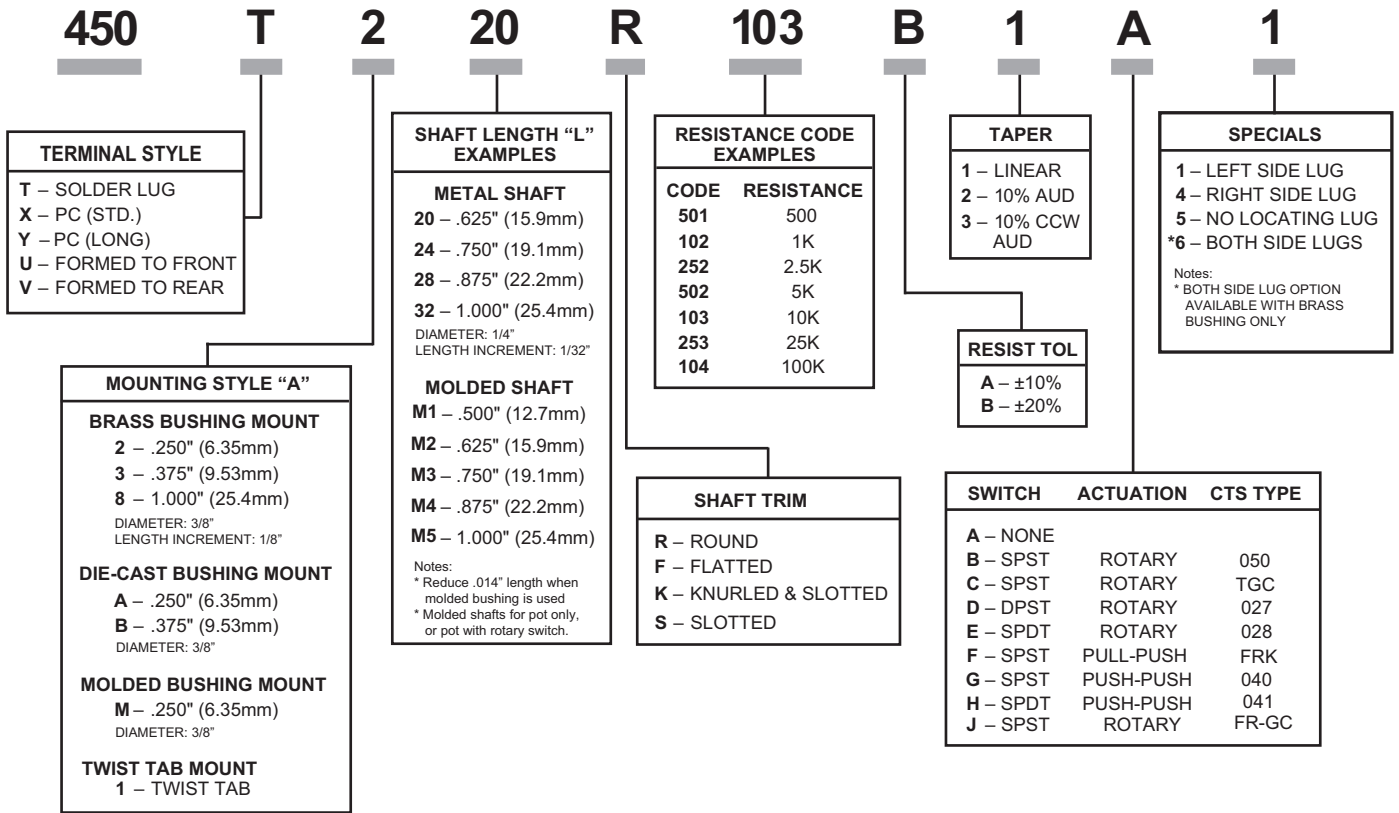
* Refer to page 2 for TGC switch detail

Shaft Trim Options



DIMENSION: $\frac{\text{mm}}{\text{inch}}$

Ordering Information



Please consult factory for other mounting options or custom features not listed.