

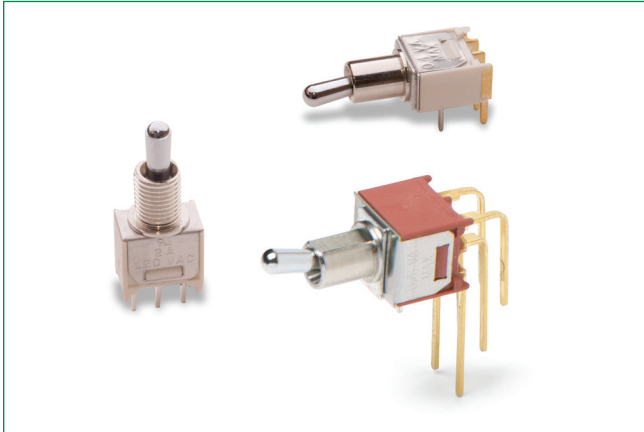


**THE DATASHEET OF
T103MH9CBE**




T Series

Subminiature Toggle Switches



Agency Approvals

Agency	Agency File Number
	E42363

Specifications

Contact Rating	B contact material: 0.4 VA max. @ 20 V AC or DC max. Q contact material (TX01 models): 3 amps @ 120 V AC or 28 V DC. All other models: 2 amps @ 120 V AC or 28 V DC.
Electrical Life	TX01 models: 60,000 make-and-break cycles at full load. All other models: 30,000 cycles.
Contact Resistance	Below 20 m Ω typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.
Insulation Resistance	10 ⁹ Ω min.
Dielectric Strength	1000 Vrms min. @ sea level.
Operating Temperature	-30°C to 85°C
Solderability	Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

Notes:

Any models supplied with P, R, Q, B or G contact material are RoHS compliant and compatible. Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Description

The T series subminiature toggle switch is an RoHS-compliant, compact toggle switch most often used in hand-held communications and medical instrumentation devices. In addition to a small footprint, with the T series, engineers have the option of PC or panel-mounted versions and the choice between single and double pole models to power their product designs.

Features & Benefits

- Compact size—small footprint
- Single and double pole models
- PC and panel mount options available
- RoHS compliant models available

Applications

- Hand-held telecommunications
- Instrumentation
- Medical equipment

Materials

Case	Glass filled nylon 6/6, flame retardant, heat stabilized ordiallyl phthalate (DAP), (UL 94V-0) or glass filled nylon 4/6, flame retardant, heat stabilized
Actuator	Brass, chrome plated.
Switch Support	Brass, matte-tin plated.
Bushing	Brass, nickel plated.
Housing	Stainless Steel
End Contacts	B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Coin silver, silver plated. See above for additional contact materials.
Center Contacts & Terminals	B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated.
Terminal Seal	Epoxy
Hardware	Nut & Locking Ring: Brass, nickel plated. Lockwasher: Steel, nickel plated. Additional hardware available separately.

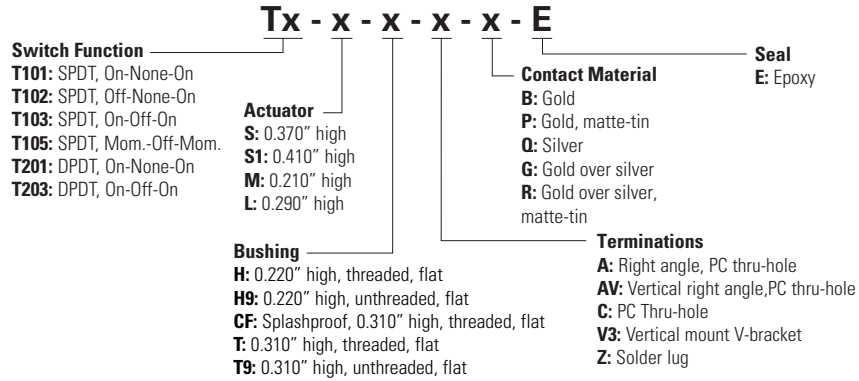
T Series

Subminiature Toggle Switches



Ordering Number

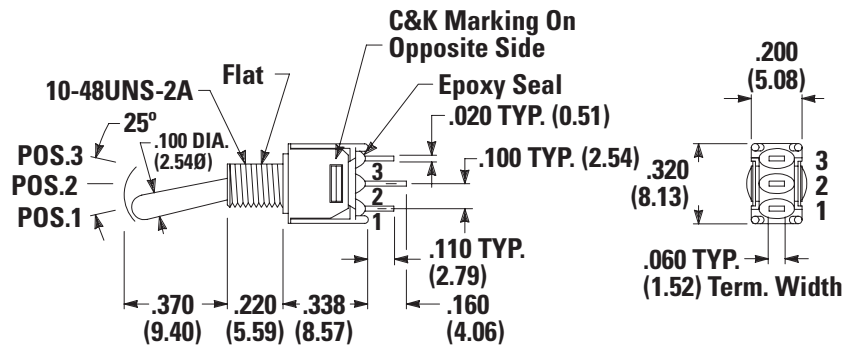
To order, simply select desired option from each category and place in the appropriate box. For additional options not shown in catalog, consult Customer Service Center. All models have epoxy terminal seal and are compatible with all "bottom-wash" PCB cleaning methods.



Switch Function

SPDT

No. Poles	Model No.	Switch Function			Connected Terminals			Schematic
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
		C&K Marking on Opposite Side						
SP	T101	ON	NONE	ON	2-3	N/A	2-1	
	T103		OFF			OPEN		
	T105	MOM.		MOM.				
	T102	OFF	NONE	ON	OPEN	N/A	2-1	



Part number shown: T101SHZ0E

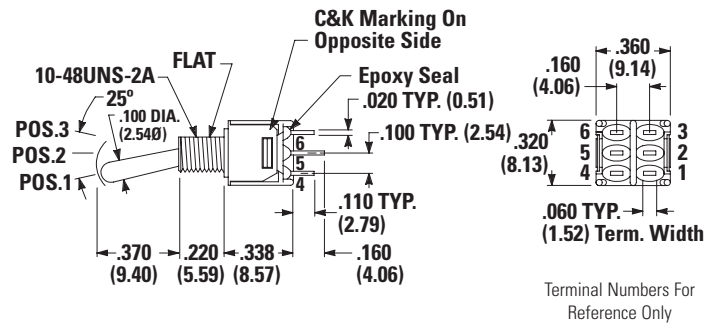
T Series

Subminiature Toggle Switches



DPDT

No. Poles	Model No.	Switch Function			Connected Terminals			Schematic
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
		C&K Marking on Opposite Side						
DP	T201	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4	
	T203	ON	OFF	ON	2-3,5-6	OPEN	2-1,5-4	



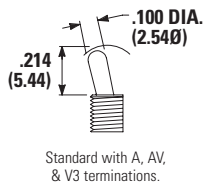
Part number shown: T201SHZQE

Notes:
 MOM. = Momentary.
 Wiring for 3 way switch.

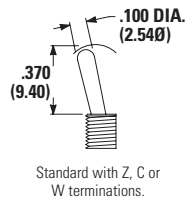
All models **C&K** us with all options when ordered with G, L, R or Q contact material.

Actuator

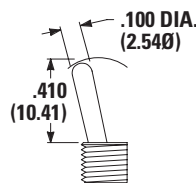
M 0.210" High



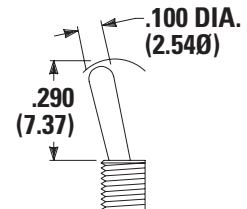
S 0.370" High



S1 0.410" High (with "T" bushing)



L 0.290" High



Notes:
 1. Actuator shown with standard H bushing. Subtract 0.090 (2.29) for T, T9 & CF bushings.
 2. Actuators shown with T, T9, TK & CF bushings, add 0.090 (2.29) for H & H9 bushings. All actuators have chrome finish (except K).

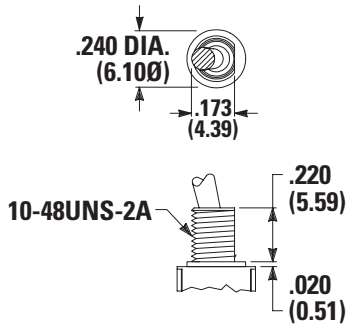
T Series

Subminiature Toggle Switches

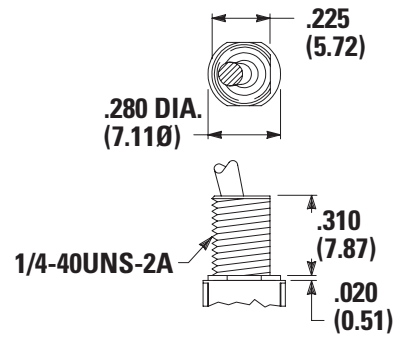


Bushing

H 0.220" High Threaded, Flat
H9 0.220" High Unthreaded, Flat

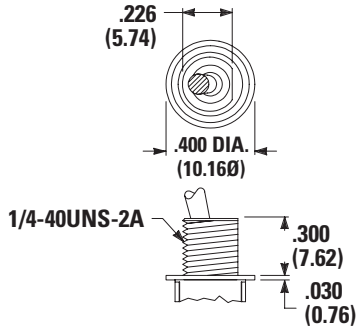


T 0.310" High Threaded, Flat
T9 0.310" High Unthreaded, Flat

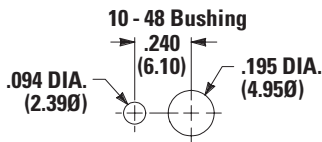


Notes: H standard with C, W & Z terminations.
 H9 standard with A, AV & V3 terminations.

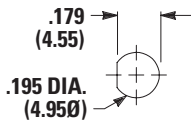
CF Splashproof, 0.310" High Threaded, Flat



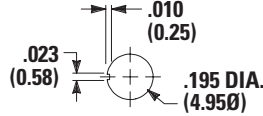
Notes: IP67 Degree of protection. Internal o-ring actuator seal and external bushing seal washer standard.



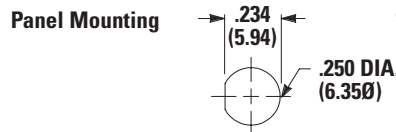
With Standard Locking Ring



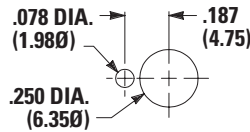
Without Locking Ring



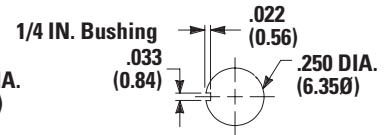
Without Locking Ring



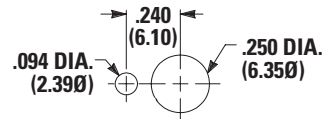
Without Locking Ring



With Small Locking Ring



Without Locking Ring



With Standard Locking Ring

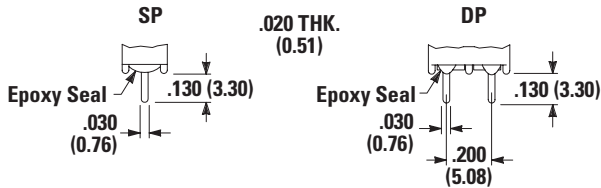
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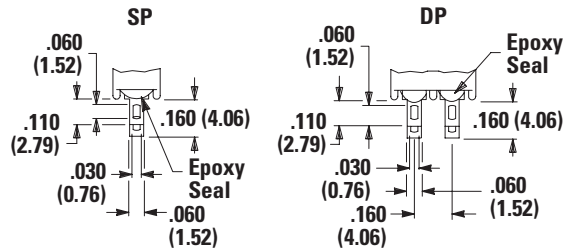


Terminations

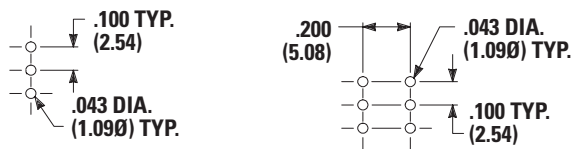
C PC Thru-hole



Z Solder Lug



PC Mounting



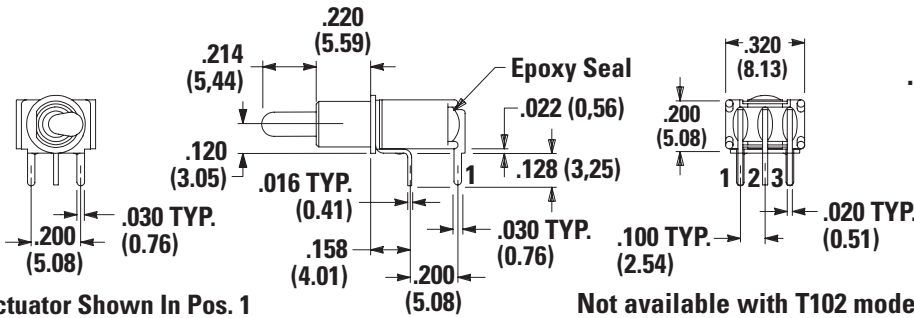
T102 – omit center hole.

.020 THK. (0.51)

Notes: Not available with P or R contact materials.

T101MH9ABE Horizontal Actuation SPDT

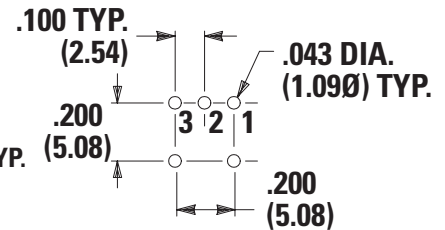
A Right Angle, PC Thru-hole



Actuator Shown In Pos. 1

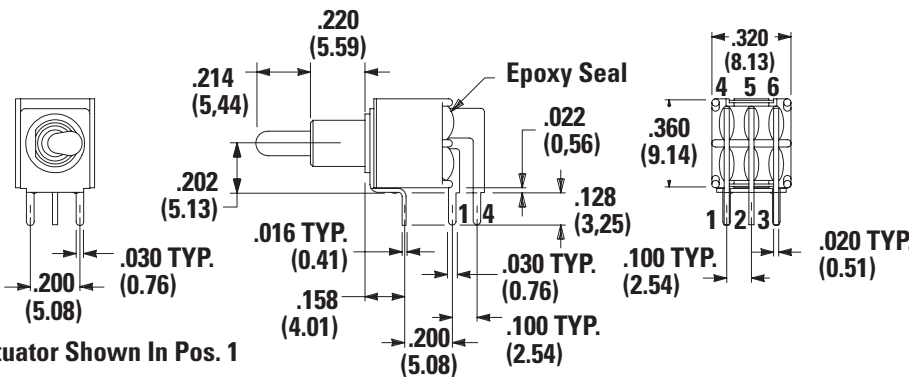
Not available with T102 model.

PC Mounting



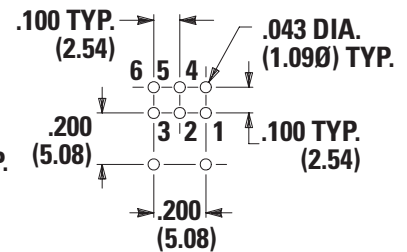
T201MH9ABE Horizontal Actuation DPDT

A Right Angle, PC Thru-hole



Actuator Shown In Pos. 1

PC Mounting



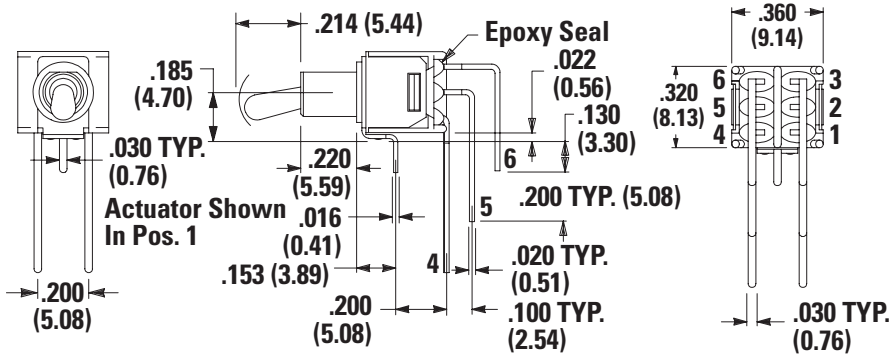
T Series

Subminiature Toggle Switches



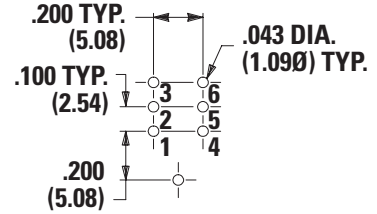
T101MH9AVBE Vertical Actuation SPDT

AV Vertical Right Angle, PC Thru-hole



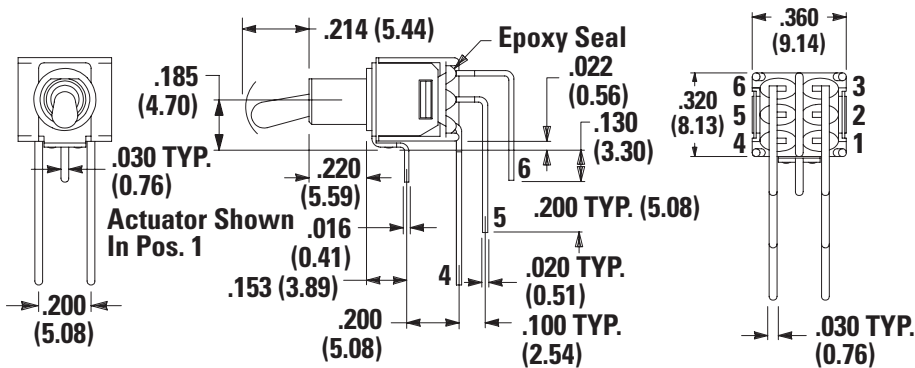
Notes: Terminal bend radii and lead-in manufacturing option.

PC Mounting



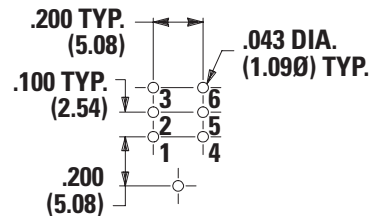
T201MH9AVBE Vertical Actuation DPDT

AV Vertical Right Angle, PC Thru-hole



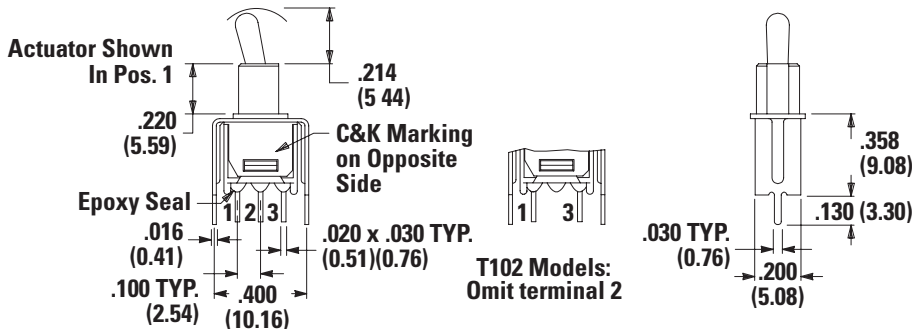
Notes: Terminal bend radii and lead-in manufacturing option.

PC Mounting

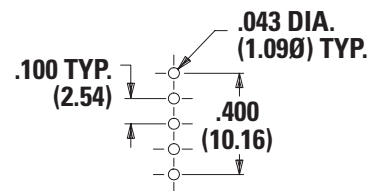


T101MH9V3BE SPDT

V3 Vertical Mount V-bracket



PC Mounting



T102 Models:
Omit center hole.

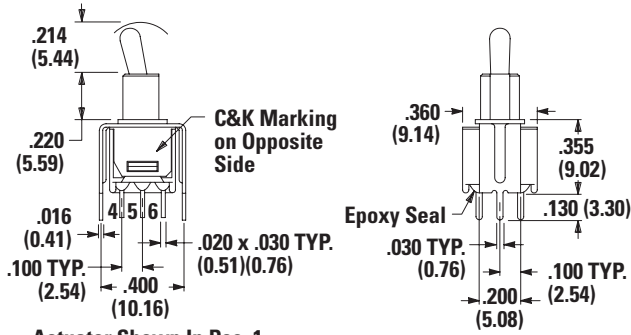
T Series

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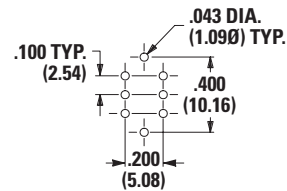
T201MH9V3BE DPDT

V3 Vertical Mount, V-bracket



Actuator Shown In Pos. 1

PC Mounting



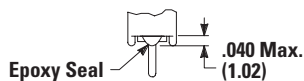
Contact Material

Option Code	Contact Material	Terminal Plating		Ratings
B	Gold ¹	Gold ¹	Low Level / Dry Circuit	0.4 VA max. @ 20 V AC or DC max.
P		Matte-Tin ⁶		
Q	Silver ^{4,5}	Silver ⁵	Power	TX01 models: 3 amps @ 120 V AC OR 28 V DC. All other models: 2 amps @ 120 V AC OR 28 V DC.
G	Gold over Silver ^{2,3}	Gold ³	Low Level / Dry Level Circuit or Power	TX01 models: 0.4 VA max. @ 20 V AC or DC max. or 3 amps @ 120 V AC or 28 V DC. All other models: 0.4 VA max. @ 20 V AC or DC max. or 2 amps @ 120 V AC or 28 V DC.
R		Matte-Tin ⁶		

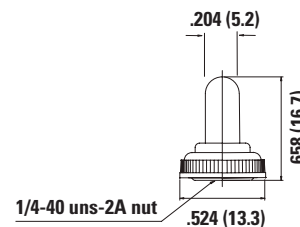
Notes:

- Contacts & Terminals:** Copper alloy, with gold plate over nickel plate.
 - End Contacts:** Coin silver, with gold plate over nickel plate.
 - Center Contacts & All Terminals:** Copper alloy, with gold plate over nickel plate.
 - End Contacts:** Coin silver, silver plated.
 - Center Contacts & All Terminals:** Copper alloy, silver plated.
 - Terminals:** Copper alloy, with matte tin alloy nickel plate.
- Any models supplied with Q, B, G, P or R contact material are RoHS compliant.
All models **compliant** with all options (except M3 actuator) when ordered with G, L, R, or Q contact material except with F1 conductive bushings.

Seal E Epoxy Seal



Available Hardware 759D02000 Sealing Boot



Notes: For use with S1 actuator style when combined with T and CF bushings.

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