

MIL & COMMERCIAL MINIATURE TOGGLES

FEATURING OTTO'S UNIQUE SNAP-ACTION MECHANISM

These miniature toggles are rugged, highly reliable switches offering positive detent action for safe switching operation. Featuring the unique OTTO snap-action switch mechanism in conjunction with a unique toggle actuator design, the T3 series offers non-teasible contact transfer.

High contact pressure and superior wiping action of the OTTO design makes the T3 series an excellent choice for switching loads from logic level up to 5 amperes.

Choose sealed one or two-pole circuitry, 15/32-32 sealed or 1/4-40 unsealed bushing construction, momentary and/or maintained operation. The 15/32-32 bushing model is also available with lever lockout toggle feature or thumb button actuators.

Molded-in terminals seal the contacts against moisture and solder flux wicking. The front-panel side of 15/32-32 bushing models are sealed against water and other liquids per MIL-S-83731.

In addition to the single turret solder terminal specified in MIL-S-83731, we also offer two different lengths of pins for printed circuit soldering.

Mounting hardware provided includes two hex nuts, one lockwasher and one keyway washer.

Exclusive Quality Features:

- **Non-teasible snap-action contact actuation**
- **Shorter behind panel depth**
- **Superior wiping action keeps contacts clean**
- **Positive tactile response prevents operating errors**
- **Weights up to 25% less than competitive products**
- **More contact/terminal plating choices**
- **Highly reliable: simpler design, less parts**



Standard Characteristics/Ratings:

OPERATIONAL:

Electrical Life, at full load: 30,000 cycles

Mechanical Life: 100,000 cycles

PHYSICAL:

Temperature Range: Continuous -65°C to +85°C

Bushing Seal: Watertight per MIL-S-83731 (15/32-32 Model only)

Materials:
Handle: 303 Stainless
Bushing: Per MIL-S-83731
Body: Per MIL-S-83731

ELECTRICAL: (at 28VDC and 115 VAC, 400 Hz.)

Load	At Sea Level	At 65,000 Ft.
Resistive	5.0 A	5.0 A
Inductive	2.0 A	2.0 A
Lamp	1.0 A	—
DWV	1050 Vrms	400 Vrms

T3 PART NUMBER CODE

T 3 - X X X X X ① or ②						
Bushing Size	Terminal Style	Circuitry	Circuit Made with Lever at...			Button Color (If Required)
			Keyway Side	Center	Opposite Keyway	
1. 15/32-32	1. Single Turret	1. Single Pole	1. On	Off	On	1. Red
2. 1/4-40	4. P.C. Pin .150"lg.	2. Double Pole	2. Off	None	On	2. Black
3. 15/32-32 w/Lockout①	5. P.C. Pin .270"lg.		3. On	None	On	8. Gray
4. 15/32-32 w/ Convex Btn②			4. (On)③	None	On	
5. 15/32-32 w/ Concave Button②			5. (On)③	Off	(On)③	
			6. (On)③	Off	On	

① Add appropriate Lockout feature configuration code letter (A-P) for Bushing Style 3

② Button Color codes (-1, -2 -8) for Bushing Styles 4 and 5 at end of Part Number.

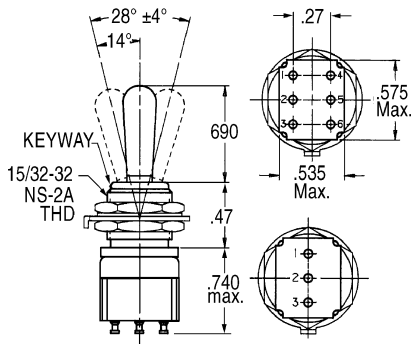
③ Parenthesis () denotes momentary contact action.

MEETS MIL-S-83731, COMMERCIAL & MILITARY GRADES

Circuit Made with Lever at...				15/32" Bushing (Sealed)		1/4-40" Bushing (Unsealed)		Lever Lock-15/32" Bushing (Sealed)		
No. Poles	Keyway Side 1-2 4-5	Center Position	Opposite Keyway 2-3 5-6	MIL-SPEC Part Number	OTTO Part Number	MIL-SPEC Part Number	OTTO Part Number	MIL-SPEC Part Number	OTTO Part Number	Suffix for Lockout Feature
1	On	Off	On	MS27718-21-1	T3-11111	MS27716-21-1	T3-21111	MS27720-21-1	T3-31111	All
1	Off	None	On	MS27718-22-1	T3-11121	MS27716-22-1	T3-21121	MS27720-22-1	T3-31121	D, F, G
1	On	None	On	MS27718-23-1	T3-11131	MS27716-23-1	T3-21131	MS27720-23-1	T3-31131	D, F, G
1	Mom-On	None	On	MS27718-26-1	T3-11141	MS27716-26-1	T3-21141	MS27720-26-1	T3-31141	F
1	Mom-On	Off	Mom-On	MS27718-27-1	T3-11151	MS27716-27-1	T3-21151	MS27720-27-1	T3-31151	E, L, N
1	Mom-On	Off	On	MS27718-31-1	T3-11161	MS27716-31-1	T3-21161	MS27720-31-1	T3-31161	E,F,K,L,M,N
2	On	Off	On	MS27719-21-1	T3-11211	MS27717-21-1	T3-21211	MS27721-21-1	T3-31211	All
2	Off	None	On	MS27719-22-1	T3-11221	MS27717-22-1	T3-21221	MS27721-22-1	T3-31221	D, F, G
2	On	None	On	MS27719-23-1	T3-11231	MS27717-23-1	T3-21231	MS27721-23-1	T3-31231	D, F, G
2	Mom-On	None	On	MS27719-26-1	T3-11241	MS27717-26-1	T3-21241	MS27721-26-1	T3-31241	F
2	Mom-On	Off	Mom-On	MS27719-27-1	T3-11251	MS27717-27-1	T3-21251	MS27721-27-1	T3-31251	E, L, N
2	Mom-On	Off	On	MS27719-31-1	T3-11261	MS27717-31-1	T3-21261	MS27721-31-1	T3-31261	E,F,K,L,M,N

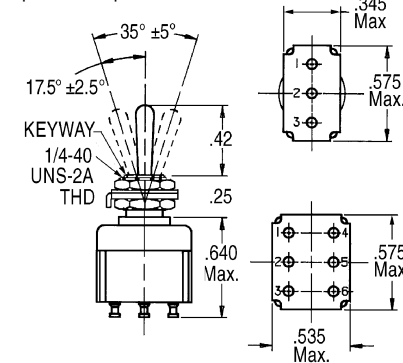
Standard Toggle, 15/32-32 Bushing

Sealed front panel construction.

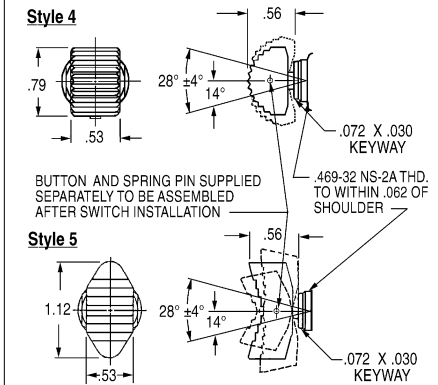
**Standard Toggle, 1/4-40 Bushing**

Unsealed front panel construction.

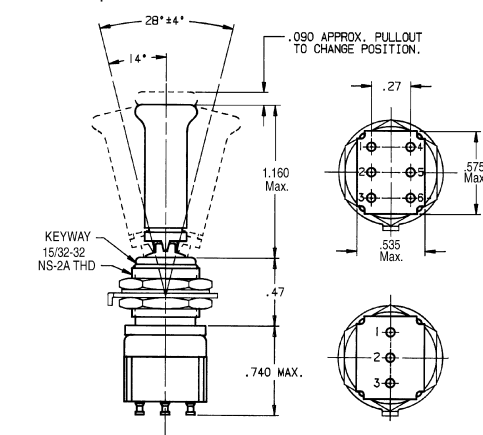
Optional front panel seal P/N 700223.

**Thumb Actuators, 15/32-32 Bushing**

Sealed front panel construction. Behind-panel dimensions same as 15/32-32 Bushing style.

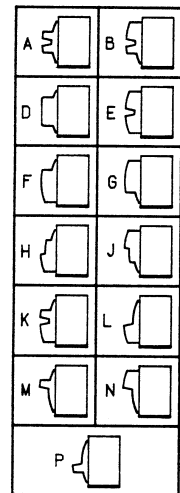
**Lever Lockout Toggle, 15/32-32 Bushing**

Sealed front panel construction.

**Lever Lockout Configuration Codes**

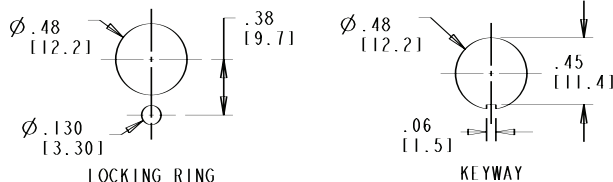
Figures A thru P are schematics to illustrate Lockout configurations and momentary positions. They do not represent details of construction.

- A Locked in all three positions
- B Locked in Center & Keyway Side position
- D Locked out of Center position
- E Locked in Center position
- F Locked in Opposite Keyway position
- G Locked in Keyway Side position
- H Locked out of Center & Keyway Side Position
- J Locked out of Center & Opposite Keyway position
- K Locked in Center & Opposite Keyway position
- L Locked out of Keyway Side position
- M Locked out of & into Opposite Keyway position
- N Locked out of Opposite Keyway position
- P Locked out of & into Keyway Side position



TOGGLE SWITCH MOUNTING DIMENSIONS (FOR REFERENCE ONLY)

MOUNTING DETAIL FOR 15/32" DIA. BUSHING SWITCHES



MOUNTING DETAIL FOR 1/4" DIA. BUSHING SWITCHES

