

COMMERCIAL & MIL MINIATURE TOGGLES

FEATURING OTTO'S UNIQUE SNAP-ACTION ACTUATION

These miniature toggles are rugged, highly reliable switches offering positive detent action for safe switching operation. Featuring the unique OTTO snap-action switch actuation in conjunction with a unique toggle actuator design.

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 amps.

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.

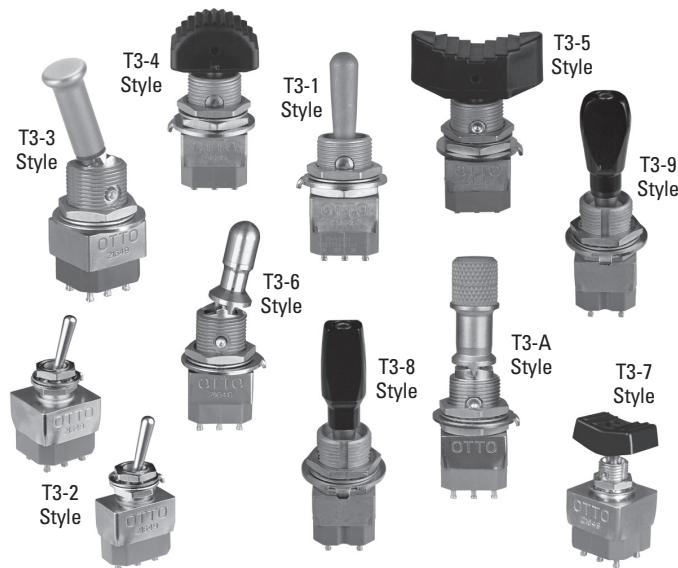
Molded-in terminals seal the contacts against moisture and solder flux wicking. The front-panel side of 15/32-32 bushing models are sealed against water and other liquids per MIL-DTL-83731.

In addition to the single turret solder terminal specified in MIL-DTL-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.

Features:

- Snap-action actuation
- Shorter behind panel depth
- Superior wiping action keeps contacts clean
- Positive tactile response prevents operating errors
- Weighs up to 25% less than competitive products
- More contact/terminal plating choices
- Highly reliable, simpler design, fewer parts
- Black matte finish available. Contact factory.
- RoHS compliant



Standard Characteristics/Ratings:

ELECTRICAL RATINGS:

Load	Sea Level @ 28VDC or 115VAC, 400Hz	@ 65,000 Feet
Resistive	5A	5A
Inductive	2A	2A
Lamp	1A	N/A
DVW	1200Vrms	400Vrms
Contact Resistance	25 mΩ max initial	
Electrical Life:	30,000 cycles	
Mechanical Life:	100,000 cycles	
Seal:	MIL-DTL-83731 (15/32-32 bushing style only)	
Operating Temp Range:	-65°C to +85°C	

MATERIALS:

Handle:	303 Stainless
Bushing:	Per MIL-DTL-83731
Body:	Per MIL-DTL-83731
Terminal Hardware:	None required
Mounting Hardware:	Hex nuts, lockwasher and keyway washer

T3 PART NUMBER CODE

T3	-	X	X	X	X	X	- or	X	Button Color ② For bushing styles 4, 5 and 7
Bushing Style		Terminal Style	Circuitry		Circuit Made With Lever At:	Contact Material	Lockout Feature		
1. 15/32-32		1. Single Turret	1. Single Pole	Keyway	Center	Opposite	1. Silver/Gold Flash	Lockout feature configuration code letters A-P for bushing styles 3, 6 and A only. Otherwise omit.	1. Red
2. 1/4-40		4. PC Pin 0.150" lg.	2. Double Pole	Side	ON	Keyway	2. Gold Plate		2. Black
3. 15/32-32 With Lockout ①		5. PC Pin 0.270" lg.		1.	OFF	ON			8. Gray
4. 15/32-32 With Convex Button ②				2.	OFF	NONE			
5. 15/32-32 With Concave Button ②				3.	ON	NONE			
6. 15/32-32 With Lockout and Smaller Bat Handle ①				4.	(ON)	NONE			
7. 1/4-40 with Rocker Button ②				5.	(ON)	OFF			
8. 15/32-32 with Small Paddle Bat Handle				6.	(ON)	OFF			
9. 15/32-32 with Large Paddle Bat Handle									
A. 15/32-32 With Lockout and Knurled Lockout Handle									

NOTE: () denotes momentary action.

① Add appropriate lockout feature configuration code letter (A thru P) for bushing styles 3 and 6 only.

② Button color codes (1, 2 and 8) for bushing styles 4, 5 and 7 at end of Part Number.

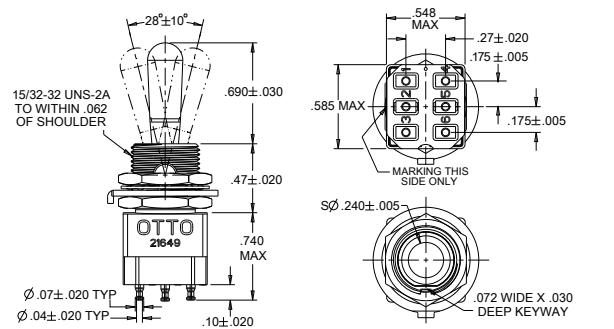
MEETS MIL-DTL-83731, COMMERCIAL & MILITARY GRADES

Circuit Made With Lever At				15/32" Bushing (Sealed)		1/4-40" Bushing (Unsealed)		Lever Lock-15/32" Bushing (Sealed)		
No. Poles	Keyway Side	Center Position	Opposite Keyway	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
1-2	4-5	2-3	5-6							
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	(ON)	None	ON	MS27718-26-1	T3-11141	MS27716-26-1	T3-21141	MS27720-26-1	T3-31141	F
1	(ON)	OFF	(ON)	MS27718-27-1	T3-11151	MS27716-27-1	T3-21151	MS27720-27-1	T3-31151	E, L, N
1	(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	(ON)	None	ON	MS27719-26-1	T3-11241	MS27717-26-1	T3-21241	MS27721-26-1	T3-31241	F
2	(ON)	OFF	(ON)	MS27719-27-1	T3-11251	MS27717-27-1	T3-21251	MS27721-27-1	T3-31251	E, L, N
2	(ON)	OFF	ON	MS27719-31-1	T3-11261	MS27717-31-1	T3-21261	MS27721-31-1	T3-31261	E, F, K, L, M, N

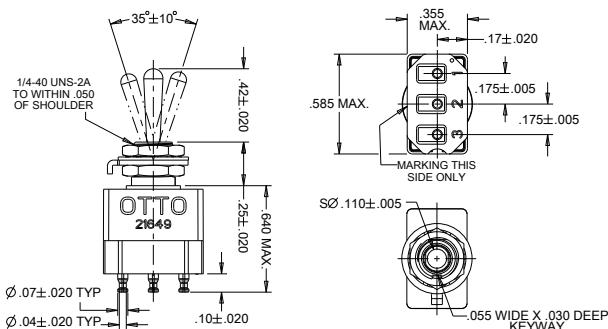
NOTE: () denotes momentary action.

T3-1 Standard Toggle, 15/32-32 Bushing

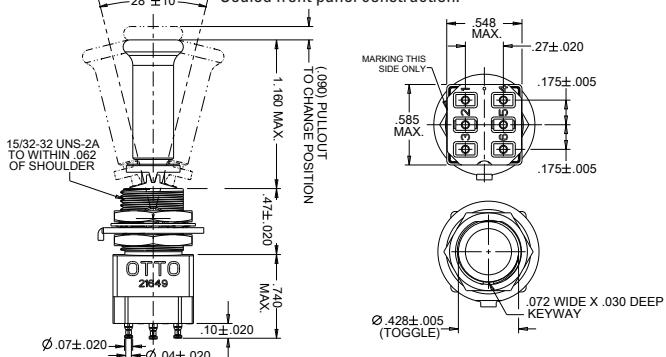
Sealed front panel construction.

**T3-2 Standard Toggle, 1/4-40 Bushing**

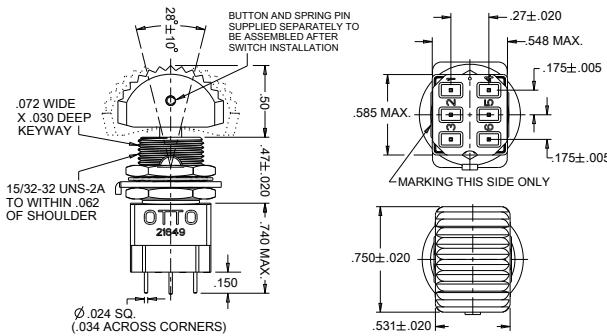
Unsealed front panel construction. Optional front panel seal P/N C700223.

**T3-3 Standard Toggle with Lockout, 15-32/32 Bushing**

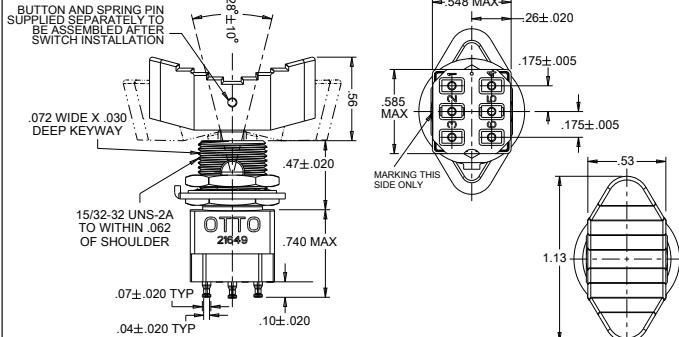
Sealed front panel construction.

**T3-4 Standard Toggle with Convex Button, 15/32-32 Bushing**

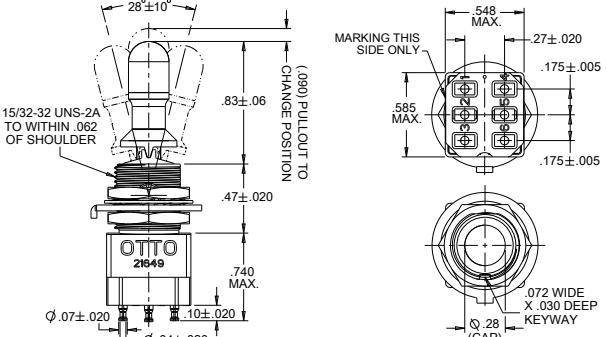
Sealed front panel construction.

**T3-5 Standard Toggle with Concave Button, 15/32-32 Bushing**

Sealed front panel construction.

**T3-6 Toggle with Lockout and Smaller Bat Handle, 15/32-32 Bushing**

Sealed front panel construction.

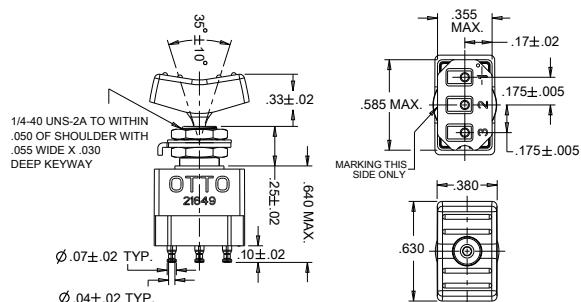


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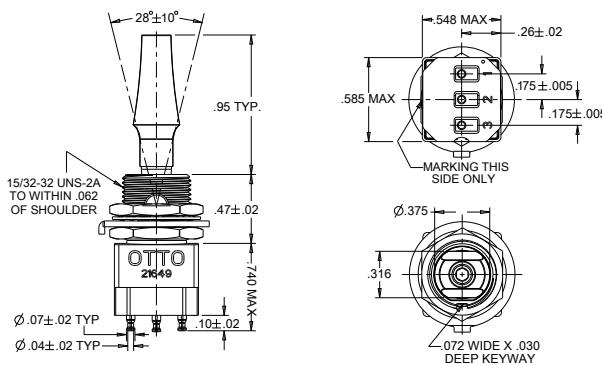
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T3-7 Standard Toggle with Rocker Button, 1/4-40 Bushing

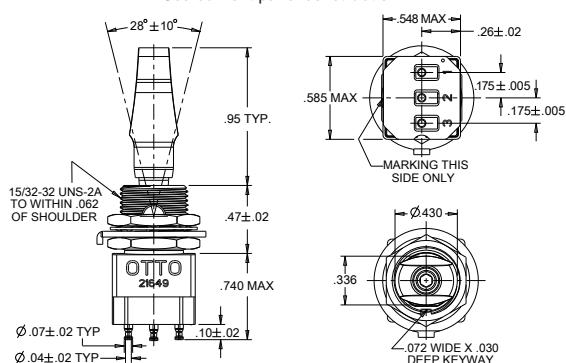
Unsealed front panel construction. Optional front panel seal P/N C700223.

**T3-8 Small Paddle Bat Handle Toggle, 15/32-32 Bushing**

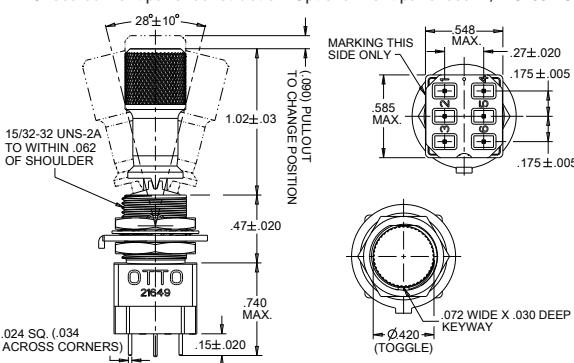
Sealed front panel construction.

**T3-9 Large Paddle Bat Handle Toggle, 15/32-32 Bushing**

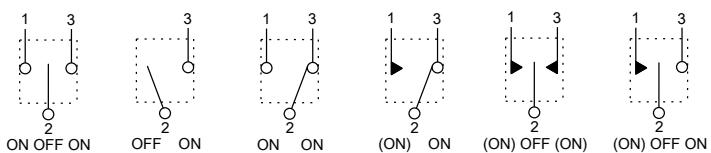
Sealed front panel construction.

**T3-A Standard Toggle, 1/4-40 Bushing**

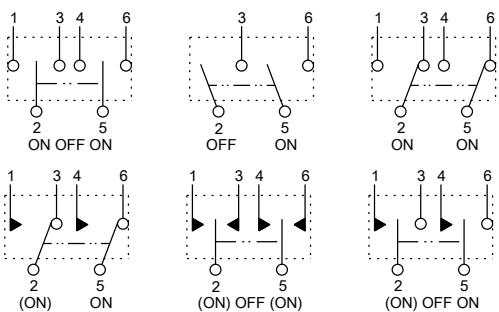
Unsealed front panel construction. Optional front panel seal P/N C700223.



SINGLE POLE SCHEMATICS

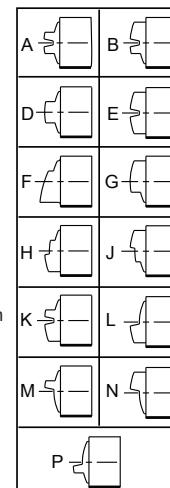


DOUBLE POLE SCHEMATICS

**Lever Lockout Configuration Codes**

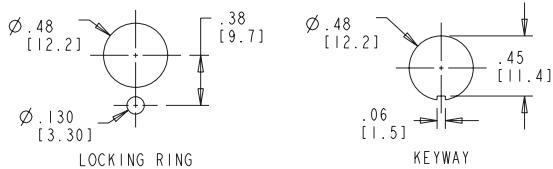
Figures A thru P are schematics to illustrate lockout configurations and momentary positions. They do not represent details of construction.

- A Locked in all three positions
- B Locked in Center and 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 and Keyway Side Position
- J Locked out of Center and Opposite Keyway position
- K Locked in Center and Opposite Keyway position
- L Locked out of Keyway Side position
- M Locked out of and into Opposite Keyway position
- N Locked out of Opposite Keyway position
- P Locked out of and 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

