

COMMERCIAL & MIL MINIATURE TOGGLES

T3
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.

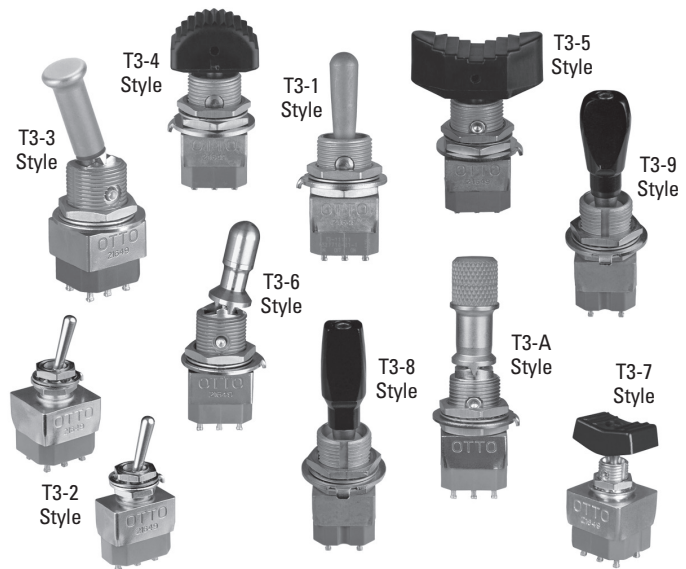
Molded-in terminals seal the contacts against moisture and solder flux wicking. The front-panel side of 15/32-32 bushing models are sealed against water and other liquids per MIL-DTL-83731.

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 |
| DWV | 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

| Bushing Style | Terminal Style | Circuitry | Circuit Made With Lever At: | | | Contact Material | Lockout Feature | Button Color ② |
|---|--|----------------------------------|--|---|---|---------------------------------------|--|--|
| 1. 15/32-32 2. 1/4-40 3. 15/32-32 With Lockout ① 4. 15/32-32 With Convex Button ② 5. 15/32-32 With Concave Button ② 6. 15/32-32 With Lockout and Smaller Bat Handle ① 7. 1/4-40 with Rocker Button ② 8. 15/32-32 with Small Paddle Bat Handle 9. 15/32-32 with Large Paddle Bat Handle A. 15/32-32 With Lockout and Knurled Lockout Handle | 1. Single Turret 4. PC Pin 0.150" lg. 5. PC Pin 0.270" lg. | 1. Single Pole 2. Double Pole | Keyway Side 1. ON 2. OFF 3. ON 4. (ON) 5. (ON) 6. (ON) | Center OFF NONE NONE OFF OFF | Opposite Keyway ON ON ON ON (ON) ON | 1. Silver/Gold Flash 2. Gold Plate | Lockout feature configuration code letters A-P for bushing styles 3, 6 and A only. Otherwise omit. | For bushing styles 4, 5 and 7 1. Red 2. Black 8. Gray Lever Color For bushing styles 1 & 2 - bat handle & bushing A. Black No Selection. Clear For bushing styles 3 & 6 - bat handle & bushing (available only in clear) No Selection. Clear For bushing styles 8 & 9 - bat handle only 1. Clear 2. Red No Selection. Black |

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.

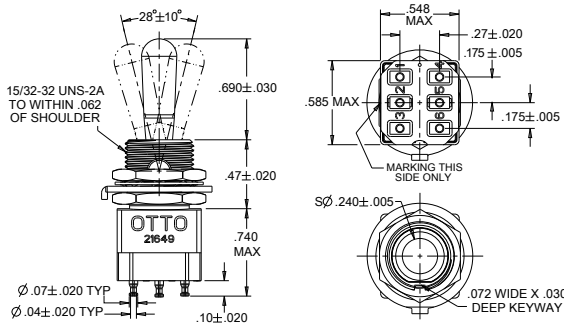
MEETS MIL-DTL-83731, COMMERCIAL & MILITARY GRADES

| Circuit Made With Lever At | | | | 15/32" Bushing (Sealed) | | 1/4-40" Bushing (Unsealed) | | Lever Lock-15/32" Bushing (Sealed) | | |
|----------------------------|---------------------|-----------------|-------------------------|-------------------------|------------------|----------------------------|------------------|------------------------------------|------------------|----------------------------|
| No. Poles | Keyway Side 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 | (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.

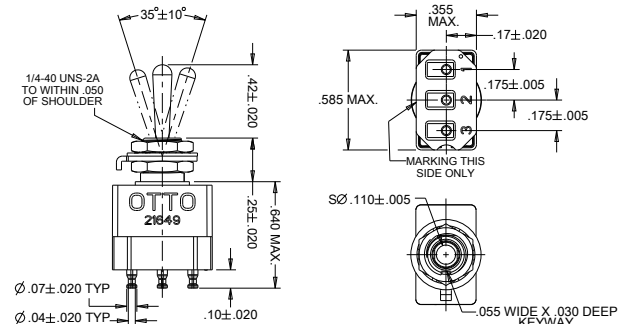
T3-1 Standard Toggle, 15/32-32 Bushing

Sealed front panel construction.



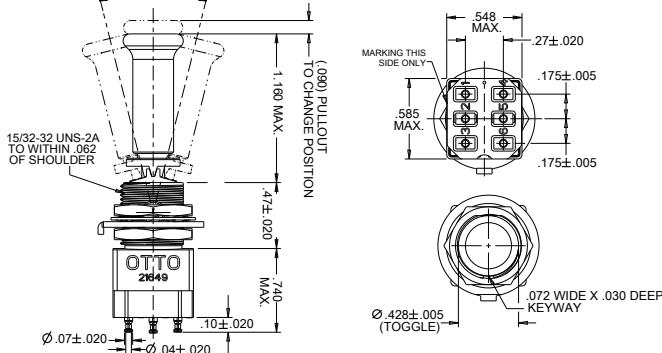
T3-2 Standard Toggle, 1/4-40 Bushing

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



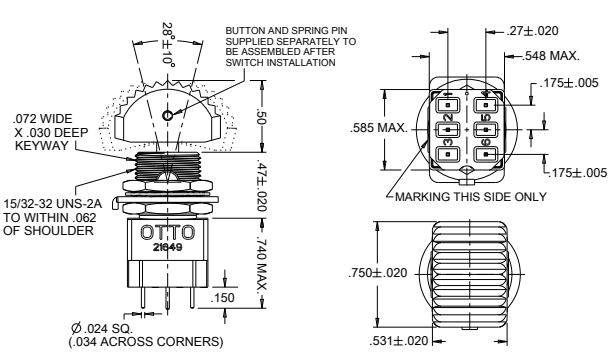
T3-3 Standard Toggle with Lockout, 15/32-32 Bushing

Sealed front panel construction.



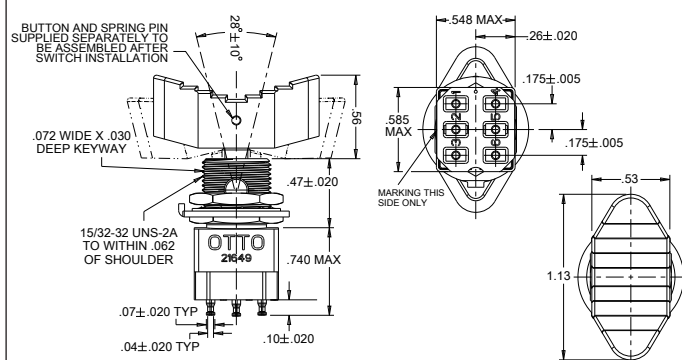
T3-4 Standard Toggle with Convex Button, 15/32-32 Bushing

Sealed front panel construction.



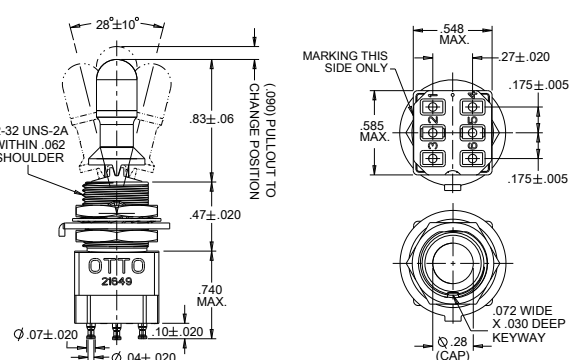
T3-5 Standard Toggle with Concave Button, 15/32-32 Bushing

Sealed front panel construction.



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

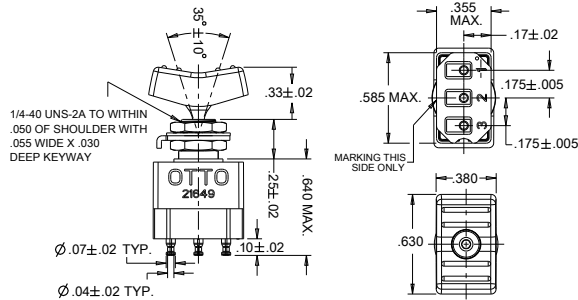
Sealed front panel construction.



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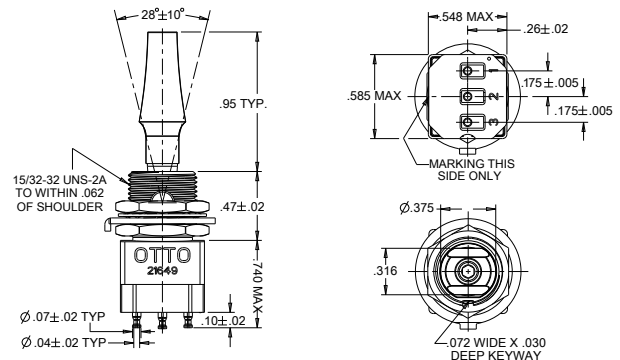
T3-7 Standard Toggle with Rocker Button, 1/4-40 Bushing

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



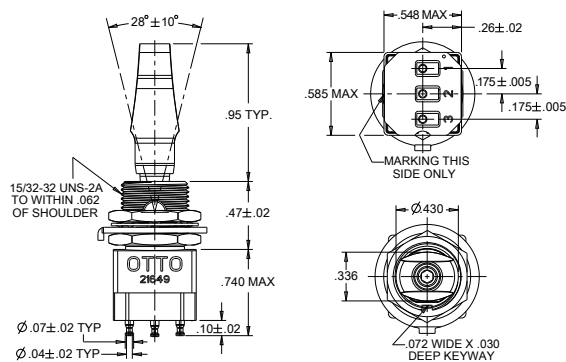
T3-8 Small Paddle Bat Handle Toggle, 15/32-32 Bushing

Sealed front panel construction.



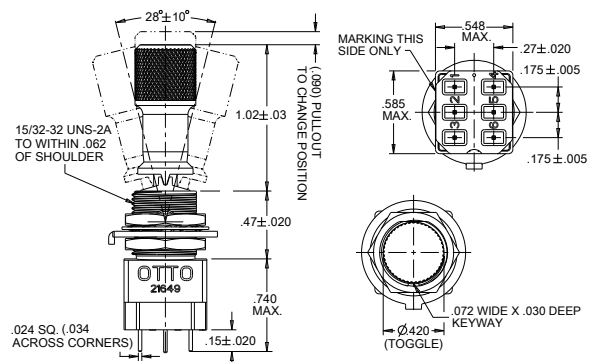
T3-9 Large Paddle Bat Handle Toggle, 15/32-32 Bushing

Sealed front panel construction.

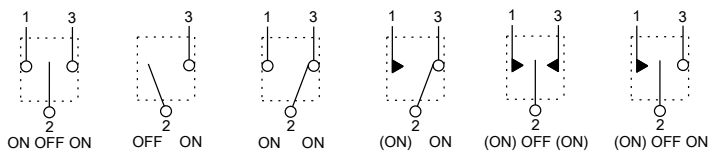


T3-A Standard Toggle, 1/4-40 Bushing

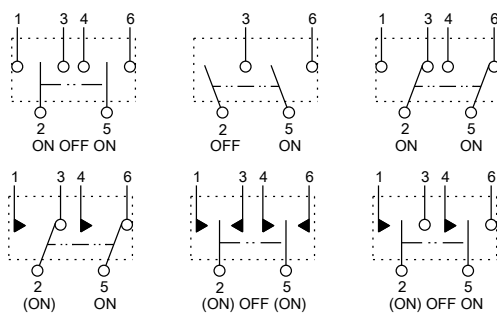
Unsealed front panel construction. Optional front panel seal P/N C700223.



SINGLE POLE SCHEMATICS



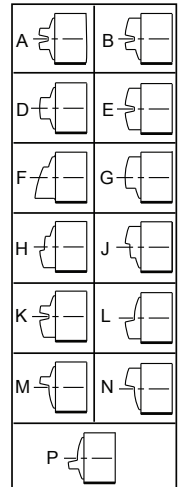
DOUBLE POLE SCHEMATICS



Lever Lockout Configuration Codes

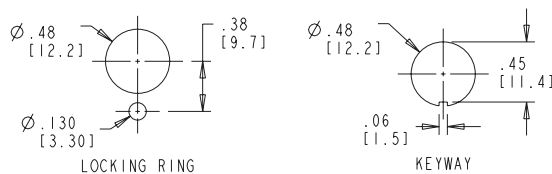
Figures A thru P are schematics to illustrate lockout configurations and momentary positions. They do not represent details of construction.

- 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

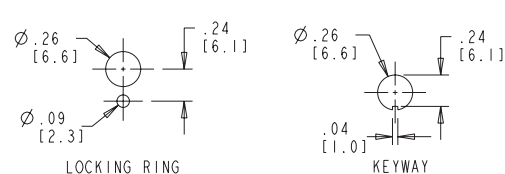


TOGGLE SWITCH MOUNTING DIMENSIONS (FOR REFERENCE ONLY)

MOUNTING DETAIL FOR 15/32" DIA. BUSHING SWITCHES



MOUNTING DETAIL FOR 1/4" DIA. BUSHING SWITCHES



Mouser Electronics

Authorized Distributor

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