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**T7**  
 SEALED  
 TOGGLES

# SEALED TOGGLE SWITCHES

LOW COST TOGGLE FOR WET & DUSTY ENVIRONMENTS

These toggle switches are rugged, high performance sealed switches designed for use under severe conditions found in heavy equipment, industrial control, marine and appliance applications. The T7 series is sealed to both IP68S and IP69K. OTTO's front panel seal is accomplished with an O-ring under the bat handle. However, now a secondary visible bushing seal is offered as an option.

T7 toggles are offered in single and double pole configurations. A choice of models are offered to handle power levels to 16 amps, 0.5HP and logic level electronic switching applications.

These toggles feature positive detent action for safe switching operation. In conjunction with the unique OTTO snap-action switch mechanism, the T7 offers non-teasible contact transfer.

High contact pressure and superior contact wiping action of the OTTO design makes the T7 an excellent choice for switching loads from logic level up to 16 amps.

Mounting hardware provided includes two hex nuts, one lockwasher and one keyway washer. An optional panel seal is available, P/N C710196, MIL. P/N M5423/16-01.

## Features:

- Sealed to IP68S and IP69K
- Switches up to 16 amps
- Withstands extreme shock & vibration
- Positive detent, non-teasible contact transfer
- 2 & 3-position, momentary & maintained action
- Choice of terminal styles
- UL recognized & CSA certified
- RoHS compliant
- Black matte finish available (contact factory)



### Standard Characteristics/Ratings:

#### ELECTRICAL RATINGS:

| Load        | Sea Level @ 28VDC | Sea Level @ 125VAC 60/400 Hz | Cycles    |
|-------------|-------------------|------------------------------|-----------|
| Resistive   | 16A               | 5A                           | 25,000    |
| Resistive   | 10A               | N/A                          | 50,000    |
| Inductive   | 7A                | 2A                           | 25,000    |
| DWV         | 1000 VRMS         | 1000 VRMS                    | 1000 VRMS |
| Logic Level | 10mA @ 5VDC       | N/A                          | 50,000    |

**Electrical Life:** See Rating Chart

**Mechanical Life:** 100,000 cycles

**Seal:** IP68S and IP69K

**Operating Temp Range:** -30°C to +85°C

#### MATERIALS:

**Case:** Thermoplastic

**Bushing:** Anodized aluminum alloy

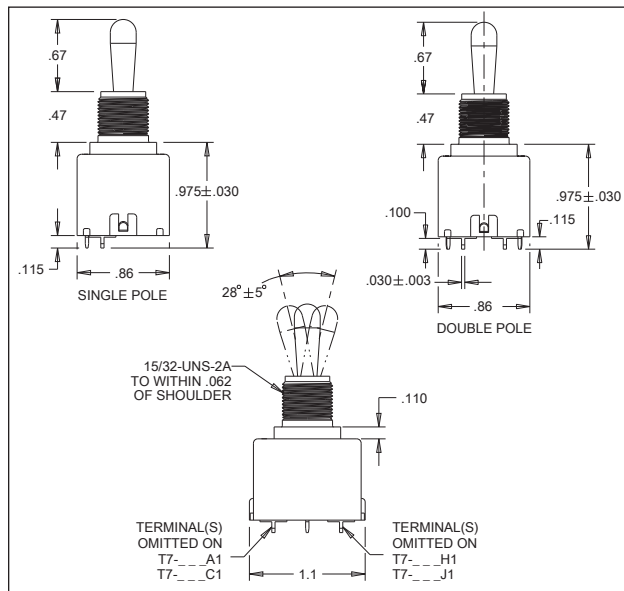
**Toggle:** Stainless steel

**Contacts:** Fine silver/silver cadmium oxide

**Logic Level:** Gold over silver

**Terminal Hardware:** 6-32 screw when applicable  
 T7 recommended Quick Connect terminals:  
 AMP 60253-2 for 12-16 AWG  
 AMP 42100-2 for 14-18 AWG

**Mounting Hardware:** Hex nuts, lockwasher, keyway washer



## T7 PART NUMBER CODE

| T7-X                   | X  | X                         | X  | X   | X  |  |   |
|------------------------|--|---------------------------|--|---|--|--|---|
| Circuitry              | Terminal Style   | Contact Rating            | Circuit Made With Toggle At:   |   |  | Toggle Style   | Button Color*   |
| 1. 1 Pole<br>2. 2 Pole | 1. .250" Q.C.<br>2. Screw<br>3. Solder<br>4. PC Pin<br>(consult factory) | 1. Std.<br>2. Logic Level | Keyway Side  | Center  | Opposite Keyway  | 1. Bat Handle<br>2. Lever Lockout<br>(consult factory)*<br>3. Dome Button<br>4. Rocker Button<br>5. Bat Handle With Bushing Seal | 1. Red<br>2. Black<br>3. Orange<br>4. Yellow<br>5. Green<br>6. Blue<br>7. Purple<br>8. Gray<br>9. White |
|                        |  |                           | A. ON<br>B. ON<br>C. (ON)<br>D. (ON)<br>E. (ON)<br>F. ON<br>G. (ON)<br>H. OFF<br>J. OFF<br>K. ON | NONE<br>NONE<br>NONE<br>NONE<br>OFF<br>OFF<br>NONE<br>NONE<br>OFF | OFF<br>ON<br>OFF<br>ON<br>ON<br>ON<br>ON<br>ON<br>(ON)<br>(ON) |  |   |

NOTE: ( ) denotes momentary action.

\*See Lockout Configuration Codes

T7 Connector P/N C801765

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.

