

ENVIRONMENTALLY SEALED TOGGLE

The T9 Toggle Switch is an ideal switch for demanding applications. Qualified to MIL-DTL-3950, this high performance switch is a logical choice for use in environments where sealing and resistance to shock and vibration are required. The T9 is particularly suitable for applications in military, off-highway, aviation, commercial and industrial equipment. This compact, environmentally sealed switch is available in single and double pole configurations with a lever lockout option. Circuitry configurations include two or three positions with many combinations of OFF-ON in momentary and maintained action including ON-ON-ON.

Features:

- Qualified to MIL-DTL-3950
- Commercial version is sealed per IP68S
- Lever lockout option available
- Maintained & momentary toggle action
- Optional panel seal
- RoHS compliant
- Black matte finish available. Contact factory.

**Standard Characteristics/Ratings:****ELECTRICAL RATINGS:** See Product Family Table**Electrical Life:** 20,000 cycles**Mechanical Life:** 40,000 cycles**Seal:** IP68S and per MIL-DTL-3950**Operating Temp Range:** -65°C to +71°C**MATERIALS:****Toggle:** Stainless steel, passivated**Bushing & Cover:** Aluminum, clear anodized or zinc alloy**Case:** Thermoset plastic**Terminal Hardware:** Included

Mounting Hardware: Hardware is not installed on switches.
Hex nuts, MS35333-136 lockwasher, MS25081-C4 keyway washer, 0.138-32 UNC-2A screw with lockwasher (as required).

Votre distributeur officiel



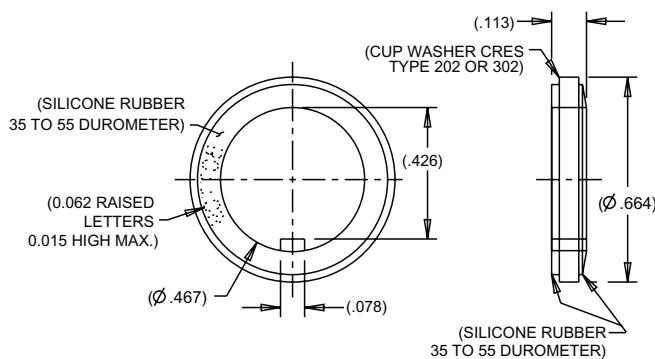
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T9 PART NUMBER CODE

T9	-	X	X	-	XX	X
Type		Contacts	Poles	Circuit ID		Lockout Suffix
M. MIL Qualified to MIL-PRF-3950		S. Std. (Silver Plate)	1. Single Pole	21. to 33. 1 or 2-Pole (See Chart)		A, B, D, E, F, G, H, J, K, L, M, N, P (See Chart, otherwise omit)
C. Commercial Version		L. Low Level (Gold Plate)*	2. Double Pole	01. to 06. 2-Pole Only (See Chart)		

* Available in commercial only.

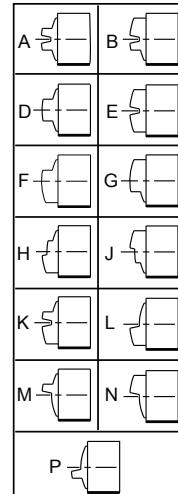


Optional Panel Seal P/N C710196, MIL-DTL- 5423/16

Lever Lockout Configuration Codes

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

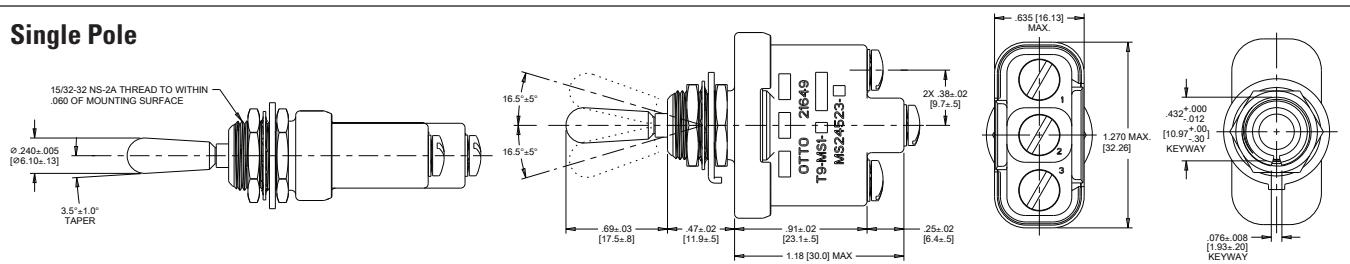
- A** Locked in all three positions
- B** Locked in Center and Keyway Side position
- D** Locked out of Center position
- E** Locked in Center position
- F** Locked in Opposite Keyway position
- G** Locked in Keyway Side position
- H** Locked out of Center and Keyway Side Position
- J** Locked out of 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



COMMERCIAL & MIL TOGGLE SWITCHES

PRODUCT FAMILY TABLE

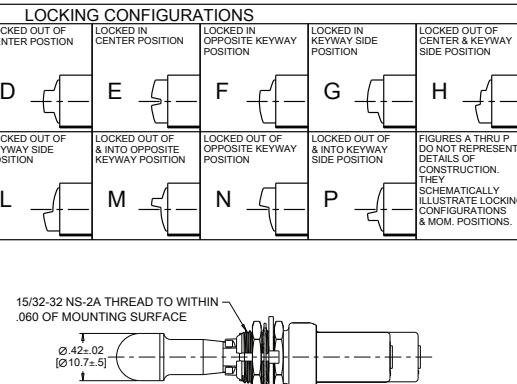
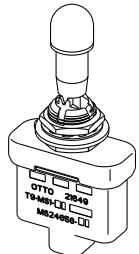
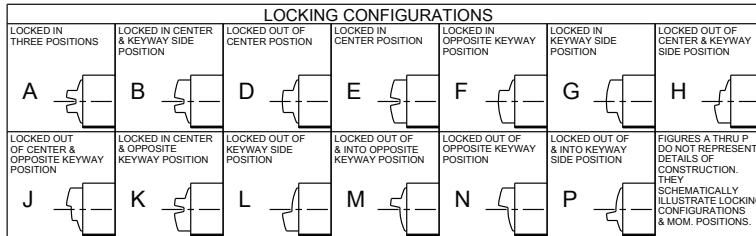
Single Pole



Low level 10mA @ 30mV

OTTO PART NO.	MILITARY NO.	CIRCUIT BY TOGGLE LEVER POSITION			SWITCH POSITION MARKING	ELECTRICAL RATINGS - SEA LEVEL & 65,000 FT						
		KEYWAY 1-2	CENTER	OPP. KEYWAY 2-3		28 VDC			115 VAC			
						LAMP	RESISTIVE	INDUCTIVE	LAMP	RESISTIVE	INDUCTIVE	
T9-MS1-21	MS24523-21	ON	OFF	ON	ON OFF ON	5	20	15	3	15	10	
T9-MS1-22	MS24523-22	OFF	NONE	ON	OFF ON							
T9-MS1-23	MS24523-23	ON	NONE	ON	ON ON							
T9-MS1-24	MS24523-24	NONE	OFF	ON	OFF ON							
T9-MS1-25	MS24523-25	NONE	MOM OFF	ON	OFF ON							
T9-MS1-26	MS24523-26	MOM ON	NONE	ON	ON ON							
T9-MS1-27	MS24523-27	MOM ON	OFF	MOM ON	ON OFF ON							
T9-MS1-28	MS24523-28	MOM ON	OFF	NONE	ON OFF	4	15	10	2	15	7	
T9-MS1-29	MS24523-29	MOM OFF	NONE	ON	OFF ON							
T9-MS1-30	MS24523-30	MOM ON	NONE	OFF	ON OFF							
T9-MS1-31	MS24523-31	MOM ON	OFF	ON	ON OFF ON							
OTTO PART NO.	MILITARY NO.	KEYWAY	CENTER	OPP. KEYWAY	SWITCH POSITION MARKING	28 VDC			115 VAC			
						LAMP	RESISTIVE	INDUCTIVE	LAMP	RESISTIVE	INDUCTIVE	
T9-MS1-32	MS24523-32	NONE	ON	MOM ON	ON ON	4	15	10	2	15	7	
T9-MS1-33	MS24523-33	NONE	ON	ON	ON ON	5	20	15	3	15	10	

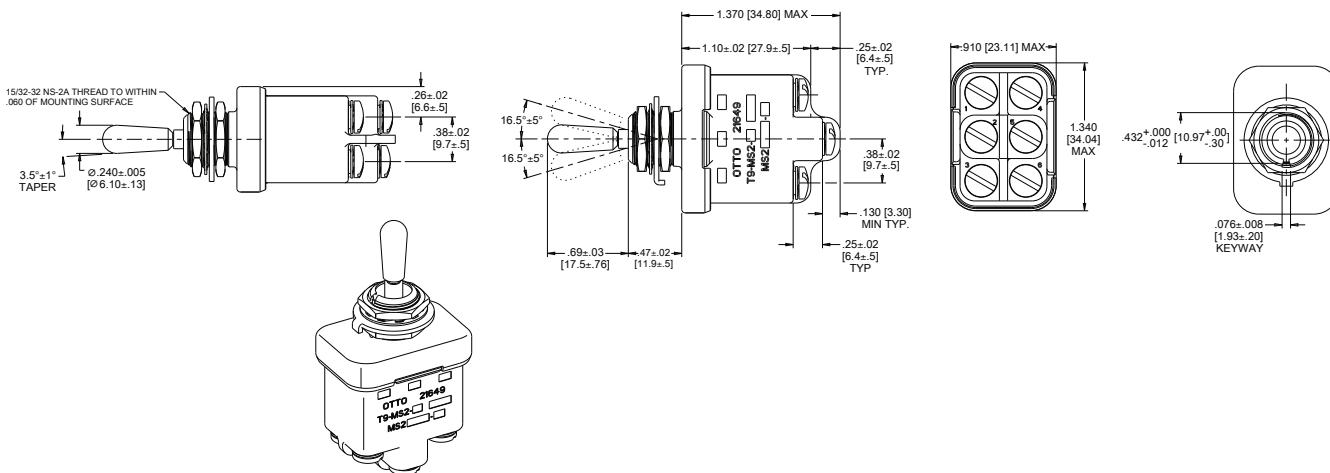
Lever/Lock Single Pole



OTTO BASE PART NO.	MILITARY NO.	DASH NO.	AVAILABLE LOCKOUTS (SEE CHART)	CIRCUIT BY TOGGLE LEVER POSITION			SWITCH POSITION MARKING	ELECTRICAL RATINGS - SEA LEVEL & 65,000 FT						
				KEYWAY 1-2	CENTER	OPP. KEYWAY 2-3		28 VDC			115 VAC			
								LAMP	RESISTIVE	INDUCTIVE	LAMP	RESISTIVE	INDUCTIVE	
21	ALL	ON	OFF	ON	ON OFF ON		5	20	15	3	15	10		
22	D F G	OFF	NONE	ON	OFF ON									
23	D F G	ON	NONE	ON	ON ON									
24	E F K M	NONE	OFF	ON	OFF ON									
25	F	NONE	OFF (M)	ON	OFF ON									
26	F	MOM ON	NONE	ON	ON ON									
27	E L N	MOM ON	OFF	MOM ON	ON OFF ON		4	15	10	2	15	7		
28	E	MOM ON	OFF	NONE	ON OFF									
29	F	MOM OFF	NONE	ON	OFF ON									
30	F	MOM ON	NONE	OFF	ON OFF									
31	E F K L M N	MOM ON	OFF	ON	ON OFF ON									
OTTO BASE NO.	MILITARY NO.	DASH NO.	AVAILABLE LOCKOUT	KEYWAY	CENTER	OPP. KEYWAY	SWITCH POSITION MARKING	28 VDC			115 VAC			
								LAMP	RESISTIVE	INDUCTIVE	LAMP	RESISTIVE	INDUCTIVE	
T9-MS1-	MS24658-	32	E	NONE	ON	MOM ON	ON ON	4	15	10	2	15	7	
		33	E F K M	NONE	ON	ON	ON ON	5	20	15	3	15	10	

PRODUCT FAMILY TABLE

Double Pole



Low level 10mA @ 30mV

OTTO BASE PART NO.	MILITARY STANDARD	DASH NO.	CIRCUIT CONFIGURATION			SWITCH POSITION MARKING	ELECTRICAL RATINGS - SEA LEVEL & 65,000 FT					
			KEYWAY 1-2 / 4-5	CENTER	OPP. KEYWAY 2-3 / 5-6		28 VDC			115 VAC, 60Hz & 400Hz		
T9-MS2-	MS24524-	21	ON	OFF	ON	ON OFF ON	7	20	15	4	15	15
		22	OFF	NONE	ON	OFF ON						
		23	ON	NONE	ON	ON ON						
		24	NONE	OFF	ON	OFF ON						
		25	NONE	MOM OFF	ON	OFF ON						
		26	MOM ON	NONE	ON	ON ON	5	18	10	2	11	8
		27	MOM ON	OFF	MOM ON	ON OFF ON						
		28	MOM ON	OFF	NONE	ON OFF						
		29	MOM OFF	NONE	ON	OFF ON						
		30	MOM ON	NONE	OFF	ON OFF						
		31	MOM ON	OFF	ON	ON OFF ON						
OTTO BASE PART NO.	MILITARY STANDARD	DASH NO.	KEYWAY	CENTER	OPP. KEYWAY	SWITCH POSITION MARKING	28 VDC			115 VAC		
T9-MS2-	MS24524-	32	NONE	ON	MOM ON	ON ON	5	18	10	2	11	8
		33	NONE	ON	ON	ON ON	7	20	15	4	15	15
OTTO PART NO.	MILITARY STANDARD	DASH NO.	KEYWAY	CENTER	OPPOSITE KEYWAY	SWITCH POSITION MARKING	28 VDC			115 VAC, 60Hz & 400Hz		
T9-MS2-01	MS27407-	1	1-2 ON 4-5	2-3 ON 4-5	2-3 ON 5-6	ON ON ON	7	20	15	4	15	15
		2	MOM, 1-2 ON 4-5	2-3 ON 4-5	2-3 ON 5-6	ON ON ON	5	18	10	2	11	8
		3	MOM, 1-2 ON 4-5	2-3 ON 4-5	MOM, 2-3 ON 5-6	ON ON ON						
		4	1-2 ON 4-5	1-2 ON 5-6	2-3 ON 5-6	ON ON ON	7	20	15	4	15	15
		5	MOM, 1-2 ON 4-5	1-2 ON 5-6	2-3 ON 5-6	ON ON ON	5	18	10	2	11	8
		6	MOM, 1-2 ON 4-5	1-2 ON 5-6	MOM, 2-3 ON 5-6	ON ON ON						

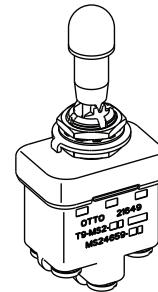
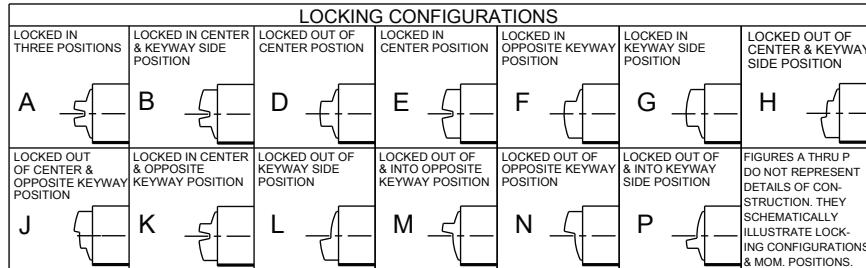
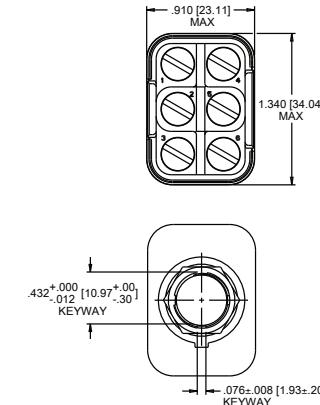
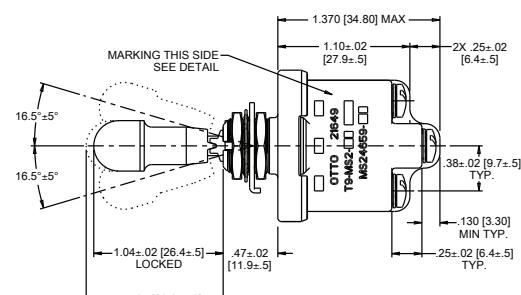
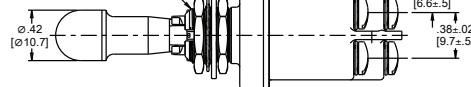
COMMERCIAL & MIL TOGGLE SWITCHES

PRODUCT FAMILY TABLE

Lever/Lock

Double Pole

15/32-32 NS-2A THREAD TO WITHIN .060 OF MOUNTING SURFACE.



OTTO BASE PART NO.	MILITARY STANDARD	DASH NO.	AVAILABLE LOCKOUTS (SEE CHART)	CIRCUIT CONFIGURATION			SWITCH POSITION MARKING	ELECTRICAL RATINGS - SEA LEVEL & 65.000 FT						
				KEYWAY 1-2 / 4-5	CENTER	OPP. KEYWAY 2-3 / 5-6		28 VDC			115 VAC, 60Hz & 400Hz			
								LAMP	RESISTIVE	INDUCTIVE	LAMP	RESISTIVE	INDUCTIVE	
T9-MS2-	MS24659-	21	ALL	ON	OFF	ON	ON OFF ON	7	20	15	4	15	15	
		22	D,F,G	OFF	NONE	ON	OFF ON							
		23	D,F,G	ON	NONE	ON	ON ON							
		24	E,F,K,M	NONE	OFF	ON	OFF ON							
		25	F	NONE	MOM OFF	ON	OFF ON							
		26	F	MOM ON	NONE	ON	ON ON	5	18	10	2	11	8	
		27	E,L,N	MOM ON	OFF	MOM ON	ON OFF ON							
		28	E	MOM ON	OFF	NONE	ON OFF							
		29	F	MOM OFF	NONE	ON	OFF ON							
		30	F	MOM ON	NONE	OFF	ON OFF							
OTTO BASE PART NO.	MILITARY STANDARD	DASH NO.	AVAILABLE LOCKOUT	KEYWAY	CENTER	OPP. KEYWAY	SWITCH POSITION MARKING	28 VDC			115 VAC			
								LAMP	RESISTIVE	INDUCTIVE	LAMP	RESISTIVE	INDUCTIVE	
								5	18	10	2	11	8	
T9-MS2-	MS24659-	32	E	NONE	ON	MOM ON	ON ON	7	20	15	4	15	15	
		33	E,F,K,M	NONE	ON	ON	ON ON							