## ENVIRONMENTALLY SEALED TOGGLE

The T9 Toggle Switch is an ideal switch for demanding applications, compliant 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 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.


## Quality Features:

- Compliant to MIL-DTL-3950
- Sealed per IP68 or per MIL-DTL-3950
- Electrical life 20,000 cycles full load
- Mechanical life 40,000 cycles
- Lever lockout option available
- Temperature range $-65^{\circ} \mathrm{C}-+71^{\circ} \mathrm{C}$
- UL, CSA, and CE approvals (pending)
- Maintained and momentary toggle action
- Optional panel seal

T9 Part Number Code

S. STANDARD (SILVER PLATING)
L. LOW LEVEL (GOLD PLATING) AVAILABLE IN COMMERCIAL ONLY

## POLES

1. SINGLE POLE
2. DOUBLE POLE
*Optional panel seal P/N 710196


## TOGGIE SWITCHES

Single Pole


| $\begin{gathered} \text { OTTO PART } \\ \text { NO. } \end{gathered}$ | $\begin{gathered} \text { MILITARY } \\ \text { NO. } \end{gathered}$ | $\begin{aligned} & \text { DASH } \\ & \text { NO. } \end{aligned}$ | CIRCUIT BY TOGGLE LEVER POSITION |  |  | ELECTRICAL RATINGS - SEA LEVEL \& 65,000 FT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | KEYWAY | CENTER | $\begin{gathered} \text { OPP. KEYWAY } \\ 2-3 \\ \hline \end{gathered}$ | 28 VDC |  |  | 115 VAC |  |  |
|  |  |  | 1-2 |  |  | LAMP | RESISTIVE | I NDUCTIVE | LAMP | RESISTIVE | INDUCTIVE |
| T9-MSI - | MS24523- | 21 | ON | OFF | ON | 5 | 20 | 15 | 3 | 15 | 10 |
|  |  | 22 | OFF | NONE | ON |  |  |  |  |  |  |
|  |  | 23 | ON | NONE | ON |  |  |  |  |  |  |
|  |  | 24 | NONE | OFF | ON |  |  |  |  |  |  |
|  |  | 25 | NONE | MOM OFF | ON | 4 | 15 | 10 | 2 | 15 | 7 |
|  |  | 26 | MOM ON | NONE | ON |  |  |  |  |  |  |
|  |  | 27 | MOM ON | OFF | MOM ON |  |  |  |  |  |  |
|  |  | 28 | MOM ON | OFF | NONE |  |  |  |  |  |  |
|  |  | 29 | MOM OFF | NONE | ON |  |  |  |  |  |  |
|  |  | 30 | MOM ON | NONE | OFF |  |  |  |  |  |  |
|  |  | 31 | MOM ON | OFF | ON |  |  |  |  |  |  |
| OTTO | $\begin{gathered} \hline \text { MILITARY } \\ \text { NO. } \end{gathered}$ | $\begin{aligned} & \text { DASH } \\ & \text { NO. } \end{aligned}$ | KEYWAY | CENTER$1-2$ | $\begin{gathered} \text { OPP. KE YWAY } \\ 2-3 \end{gathered}$ | 28 VDC |  |  | 115 VAC |  |  |
| PART NO. |  |  |  |  |  | LAMP | RESISTIVE | INDUCTIVE | LAMP | RESISTIVE | INDUCTIVE |
| T9-MSI - | MS24523- | 32 | NONE | ON | MOM ON | 4 | 15 | 10 | 2 | 15 | 7 |
|  |  | 33 | NONE | ON | ON | 5 | 20 | 15 | 3 | 15 | 10 |

## Lever/Lock Single Pole



| OTTO BASE <br> PART NO | $\begin{aligned} & \text { MILITARY } \\ & \text { NO. } \end{aligned}$ | $\begin{aligned} & \text { DASH } \\ & \text { NO. } \end{aligned}$ | AVAILABLE LOCKOUTS (SEE CHART) | CIRCUIt by toggle lever position |  |  | ELECTRICAL RATINGS - SEA LEVEL \& 65,000 FT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{gathered} \text { KEYWAY } \\ 1-2 \end{gathered}$ | CENTER | OPP. KEYWAY 2-3 | 28 VDC |  |  | 115 VAC |  |  |
|  |  |  |  |  |  |  | LAMP | RESISTIVE | I NDUCTIVE | LAMP | RESISTIVE | inductive |
| T9-MSI - | MS24658- | 21 | ALL | ON | OFF | ON | 5 | 20 | 15 | 3 | 15 | 10 |
|  |  | 22 | D F G | OFF | NONE | ON |  |  |  |  |  |  |
|  |  | 23 | D F G | ON | NONE | ON |  |  |  |  |  |  |
|  |  | 24 | E F K M | NONE | OFF | ON | 4 | 15 | 10 | 2 | 15 | 7 |
|  |  | 25 | F | NONE | OFF (M) | ON |  |  |  |  |  |  |
|  |  | 26 | F | MOM ON | NONE | ON |  |  |  |  |  |  |
|  |  | 27 | E L N | MOM ON | OFF | MOM ON |  |  |  |  |  |  |
|  |  | 28 | E | MOM ON | OFF | NONE |  |  |  |  |  |  |
|  |  | 29 | F | MOM OFF | NONE | ON |  |  |  |  |  |  |
|  |  | 30 | F | MOM ON | NONE | OFF |  |  |  |  |  |  |
|  |  | 31 | E F K L M N | MOM ON | OFF | ON |  |  |  |  |  |  |
| OTTO | MILITARY | DASH | AVAILABLELOCKOUT | KEYWAY |  |  | 28 VDC |  |  | 115 VAC |  |  |
| BASE NO. | NO. | NO. |  |  | $1-2$ | $2-3$ | LAMP | RESISTIVE | I NDUCTIVE | LAMP | RESISTIVE | INDUCTIVE |
|  | MS24658- | 32 | E | NONE | ON | MOM ON | 4 | 15 | 10 | 2 | 15 | 7 |
| T9-MS - |  | 33 | E F K M | NONE | ON | ON | 5 | 20 | 15 | 3 | 15 | 10 |

## Double Pole



| OTTO BASE PART NO. | MILITARY <br> STANDARD | $\begin{aligned} & \text { DASH } \\ & \text { NO. } \end{aligned}$ | CIRCUIT CONFIGURATION |  |  | ELECTRICAL CURRENT RATINGS (AMPS) - SEA LEVEL \& 65,000 FT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | KEYWAY | CENTER | $\begin{array}{cl} \text { OPP. KEYWAY } \\ 2-3 / 5-6 \\ \hline \end{array}$ | 28 VDC |  |  | $115 \mathrm{VAC}, 60 \mathrm{~Hz}$ \& 400 Hz |  |  |
|  |  |  | ।-2/4-5 |  |  | LAMP | RESISTIVE | INDUCTIVE | LAMP | RESISTIVE | INDUCTIVE |
| T9-MS2- | MS24524- | 21 | ON | OFF | ON | 7 | 20 | 15 | 4 | 15 | 10 |
|  |  | 22 | OFF | NONE | ON |  |  |  |  |  |  |
|  |  | 23 | ON | NONE | ON |  |  |  |  |  |  |
|  |  | 24 | NONE | OFF | ON |  |  |  |  |  |  |
|  |  | 25 | NONE | MOM OFF | ON | 5 | 18 | 10 | 2 | 11 | 8 |
|  |  | 26 | MOM ON | NONE | ON |  |  |  |  |  |  |
|  |  | 27 | MOM ON | OFF | MOM ON |  |  |  |  |  |  |
|  |  | 28 | MOM ON | OFF | NONE |  |  |  |  |  |  |
|  |  | 29 | MOM OFF | NONE | ON |  |  |  |  |  |  |
|  |  | 30 | MOM ON | NONE | OFF |  |  |  |  |  |  |
|  |  | 31 | MOM ON | OFF | ON |  |  |  |  |  |  |
| OTTO BASE | MILITARY | DASH | KEYWAY | CENTER | OPP. KEYWAY$2-3 / 5-6$ | 28 VDC |  |  | 115 VAC |  |  |
| PART NO. | STANDARD | NO. |  | \|-2/4-5 |  | LAMP | RESISTIVE | INDUCTIVE | LAMP | RESISTIVE | INDUCTIVE |
| T9-MS2- | MS24524- | 32 | NONE | ON | MOM ON | 5 | 18 | 10 | 2 | 11 | 8 |
|  |  | 33 | NONE | ON | ON | 7 | 20 | 15 | 4 | 15 | 15 |



## Lever/Lock Double Pole



| OTTO BASE PART NO. | MILITARY STANDARD | $\begin{aligned} & \text { DASH } \\ & \text { NO. } \end{aligned}$ | AVAILABLE LOCKOUTS (SEE CHART) | CIRCUIT CONFIGURATION |  |  | ELECTRICAL CURRENT RATINGS (AMPS) - SEA LEVEL \& 65,000 FT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | KEYWAY | CENTER | OPP. KEYWAY | 28 VDC |  |  | $115 \mathrm{VAC}, 60 \mathrm{~Hz} \& 400 \mathrm{~Hz}$ |  |  |
|  |  |  |  | 1-2/4-5 |  | 2-3/5-6 | LAMP | RESISTIVE | INDUCTIVE | LAMP | RESISTIVE | INDUCTIVE |
| T9-MS2- | MS24659 - | 21 | ALL | ON | OFF | ON | 7 | 20 | 15 | 4 | 15 | 10 |
|  |  | 22 | D, F, G | OFF | NONE | ON |  |  |  |  |  |  |
|  |  | 23 | D, F, G | ON | NONE | ON |  |  |  |  |  |  |
|  |  | 24 | E, F, K, M | NONE | OFF | ON |  |  |  |  |  |  |
|  |  | 25 | F | NONE | MOM OFF | ON | 5 | 18 | 10 | 2 | 11 | 8 |
|  |  | 26 | F | MOM ON | NONE | ON |  |  |  |  |  |  |
|  |  | 27 | E, L, N | MOM ON | OFF | MOM ON |  |  |  |  |  |  |
|  |  | 28 | E | MOM ON | OFF | NONE |  |  |  |  |  |  |
|  |  | 29 | F | MOM OFF | NONE | ON |  |  |  |  |  |  |
|  |  | 30 | F | MOM ON | NONE | OFF |  |  |  |  |  |  |
|  |  | 31 | E, F, K, L, M, N | MOM ON | OFF | ON |  |  |  |  |  |  |
| OTTO BASE | MILITARY |  | F | KEYWAY | CENTER | OPP. KEYWAY | 28 VDC |  |  | 115 VAC |  |  |
| PART NO. | STANDARD | NO. | E |  | 1-2/4-5 | 2-3/5-6 | LAMP | RESISTIVE | INDUCTIVE | LAMP | RESISTIVE | INDUCTIVE |
| T9-MS2- | MS24659 - | 32 | E | NONE | ON | MOM ON | 5 | 18 | 10 | 2 | 11 | 8 |
|  |  | 33 | E, F, K, M | NONE | ON | ON | 7 | 20 | 15 | 4 | 15 | 15 |

## TG SERIES

The TG series toggle guards are offered for two \& three position switches with 15/32-32 threaded bushings and slotted or flat keyways. All models feature spring loaded covers that lock in either the open or closed positions. In the open position the switch actuator operates on all positions freely, in the closed position, the switch actuator is locked in the desired position.

The toggle guard is easily installed on the switch from the front panel with two mounting hex nuts and an optional panel seal provided with each switch.

MS approved and OPL'd per MIL-DTL-7703 and MS25224-1


## X-ON Electronics

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