## : ©hipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation, and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!


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## omron

## Subminiature Toggle Switch

## Double-sided clip contact mechanism

## combined with see-saw action.

- Gold-plated clip contact and cleaning mechanisms ensure high reliability.
- Specially designed to prevent grease entry into the contact portion.
- Sealed against flux entry.
- Washable, equivalent to IP64 (IEC-60529).


## RoHS Compliant



## Typical Applications

## Security Control Boards

Electric Power Instrumentation
Program Controllers

## List of Models

## - DIP Terminal Models



Right Angle Terminal Models

| Actuator Shapes |  |  | Standard |  | Quantity per bag |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | ing Fun |  |  |  |  |
| $\Omega$ | $\Omega$ | $\Omega$ | SPDT | DPDT |  |
| ON | - | ON | A9T11-0012 | A9T21-0012 |  |
| ON | OFF | ON | A9T12-0012 | A9T22-0012 |  |
| (ON) | - | ON | A9T13-0012 | A9T23-0012 | 100 |
| (ON) | OFF | (ON) | A9T14-0012 | A9T24-0012 |  |
| (ON) | OFF | ON | A9T15-0012 | A9T25-0012 |  |

## - Vertical Mount Terminal Models

| Actuator Shapes |  |  | Standard |  | Quantity per bag |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Switching Functions |  |  |  |  |  |
| $\xrightarrow{n}$ | $\sqrt{4}$ | $\Omega$ | SPDT | DPDT |  |
| ON | - | ON | A9T11-0013 | A9T21-0013 | 100 |
| ON | OFF | ON | A9T12-0013 | A9T22-0013 |  |
| (ON) | - | ON | A9T13-0013 | A9T23-0013 |  |
| (ON) | OFF | (ON) | A9T14-0013 | A9T24-0013 |  |
| (ON) | OFF | ON | A9T15-0013 | A9T25-0013 |  |

Note: 1. (ON) shows Momentary.
2. Switching Functions show the view from the side of Type and Brand name marking.
3. Actuator does not stop at "-" position.

## Ratings/Characteristics

| Ratings |  | 50 mA at $60 \mathrm{VAC} / \mathrm{DC}, 1 \mu \mathrm{~A}$ (minimum current) at $20 \mathrm{mVAC} / \mathrm{DC}$ |
| :---: | :---: | :---: |
| Ambient operating temperature |  | -20 to $+80^{\circ} \mathrm{C} 60 \%$ RH max. (with no icing or condensation) |
| Ambient operating humidity |  | 45 to $85 \%$ RH (at +5 to $+35{ }^{\circ} \mathrm{C}$ ) |
| Insulation resistance |  | 1,000 $\mathrm{M} \Omega \mathrm{min}$. (Initial value) |
| Contact resistance |  | $50 \mathrm{~m} \Omega \mathrm{max}$. (Initial value) |
| Dielectric strength |  | 500 VAC for 1 min between terminals, between terminals and ground |
| Vibration resistance | Malfunction | 10 to $55 \mathrm{~Hz}, 1.5-\mathrm{mm}$ double amplitude |
| Shock resistance | Malfunction | $500 \mathrm{~m} / \mathrm{s}^{2} \mathrm{~min}$. |
| Durability | Mechanical | 50,000 operations min. |
|  | Electrical | 50,000 operations min. |
| Operating force |  | 0.49 to $3.43 \mathrm{~N}\{50$ to 350 gf$\}$ |
| Weight | DIP Terminal | Standard: 0.8 g |
|  | Right Angle Terminal | Standard: 1 g |
|  | Vertical Mount Terminal | Standard: 1 g |

Dimensions (Unit: mm)

## - DIP Terminal Models




Single Pole Type Double Pole Type
PCB Dimensions (Top View)


Note: No. (1) and (3) terminals in the SPDT models are dummys to support the Switch case.

## - Right Angle Terminal Models



- Vertical Mount Terminal Models



Single Pole Type


Double Pole Type

[^0]
## Switching Function / Internal Connections

|  |  |  |  | Contact Forms |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Switching Functions |  |  |  | $\Omega$ | $\bigcirc$ |
| SPDT Models | ON | - | ON | $5 \longrightarrow 4$ | - | $5 \longrightarrow-6$ |
|  | ON | OFF | ON |  | $5-\quad-6$ |  |
|  | (ON) | - | ON | $5-\frac{\Gamma}{-}(4)$ | - |  |
|  | (ON) | OFF | (ON) |  | $5-\quad-4$ | $\begin{aligned} & -4 \\ & \square(6) \end{aligned}$ |
|  | (ON) | OFF | ON |  |  | $\begin{array}{r} -4 \\ +\quad 6 \end{array}$ |
| DPDT Models | ON | - | ON | $\begin{aligned} & 2-1 \\ & 5-4 \\ & \hdashline-6 \end{aligned}$ | - |  |
|  | ON | OFF | ON |  | $\begin{array}{l:l} 2- & -1 \\ 5- & -4 \\ \hline \end{array}$ | $\begin{array}{l:l}  & +3 \\ & -4 \\ \hline \end{array}$ |
|  | (ON) | - | ON |  | - |  |
|  | (ON) | OFF | (ON) |  | $2-\quad-1$ | $\begin{array}{c:c}  & -1 \\ \hdashline & -(3) \\ 5- & -4 \\ & \boxed{-}(6) \end{array}$ |
|  | (ON) | OFF | ON |  | $5-\quad-4$ |  |

Note: (ON) shows Momentary.
©Safety Precautions
Be sure to read the Safety precautions common to all PCB-mount Manual Switches for correct use.

[^1]- Consult your OMRON representative before using the product under conditions which are not described in the manual or applying the product to nuclear control systems, railroad systems, aviation systems, vehicles, combustion systems, medical equipment, amusement machines, safety equipment, and other systems or equipment that may have a serious influence on lives and property if used improperly. Make sure that the ratings and performance characteristics of the product provide a margin of safety for the system or equipment, and be sure to provide the system or equipment with double safety mechanisms.

Note: Do not use this document to operate the Unit.


[^0]:    Note: Unless otherwise specified, a tolerance of $\pm 0.4 \mathrm{~mm}$ applies to all dimensions.

[^1]:    - Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.

