

# OMRON

## DIP Switch

## A6T/A6S

### Low-cost DIP Switch with Slide Pins

- Allows automatic mounting with DIP IC insertion machines.
- Washable models with seal tape are available.
- SMT (surface-mounted terminal) models are available.



### Ordering Information

No. of poles	Flat actuated		Raised actuator	Flat actuated		Raised actuator
	Standard	With seal tape		Standard	With seal tape	
	DIP terminal	DIP terminal	DIP terminal	SMT terminal	SMT terminal	SMT terminal
1	A6T-1101	A6T-1102	A6T-1104	---	---	---
2	A6T-2101	A6T-2102	A6T-2104	A6S-2101	A6S-2102	A6S-2104
3	---	---	---	A6S-3101	A6S-3102	A6S-3104
4	A6T-4101	A6T-4102	A6T-4104	A6S-4101	A6S-4102	A6S-4104
5	---	---	---	A6S-5101	A6S-5102	A6S-5105
6	A6T-6101	A6T-6102	A6T-6104	A6S-6101	A6S-6102	A6S-6104
7	---	---	---	A6S-7101	A6S-7102	A6S-7104
8	A6T-8101	A6T-8102	A6T-8104	A6S-8101	A6S-8102	A6S-8104
9	---	---	---	A6S-9101	A6S-9102	A6S-9104
10	A6T-0101	A6T-0102	A6T-0104	A6S-0101	A6S-0102	A6S-0104

## Specifications

### ■ Ratings/Characteristics

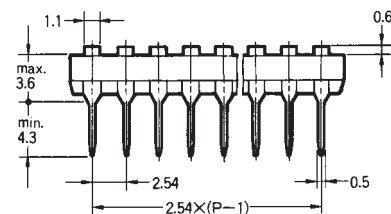
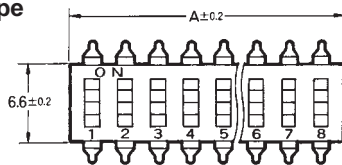
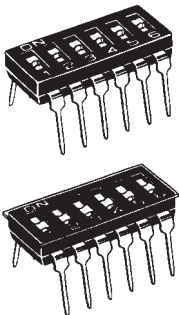
Switching capacity	25 mA at 24 VDC
Insulation resistance	100 M $\Omega$ min. (at 250 VDC)
Contact resistance	200 m $\Omega$ max. (initial value)
Dielectric strength	500 VAC for 1 min between terminals of same polarity, and between terminals of different polarity
Vibration resistance	Malfunction: 10 to 55 Hz, 1.5-mm double amplitude
Shock resistance	Malfunction: 300 m/s <sup>2</sup> min. (approx. 30G min.)
Life expectancy	Mechanical: 1,000 operations min. Electrical: 1,000 operations min.
Ambient temperature	Operating: -20°C to 70°C (with no icing)
Ambient humidity	Operating: 35% to 90%
Operating force	0.29 N min. (30 gf)
Flammability rating	UL 94-0

## Dimensions

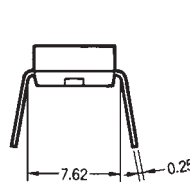
- Note:** 1. All units are in millimeters unless otherwise indicated.  
2. Unless otherwise specified, a tolerance of  $\pm 0.4$  mm applies to all dimensions.

### Flat Actuated with DIP Terminal Standard/With Seal Tape

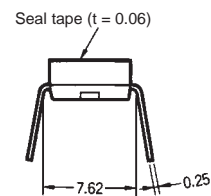
A6T-□101  
A6T-□102



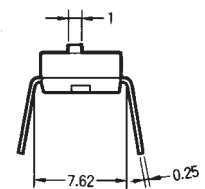
### Flat Actuated Standard



### With Seal Tape

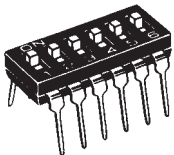


### Raised Actuator

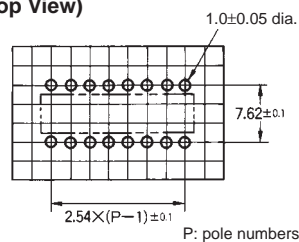


### Raised Actuator with DIP Terminal

A6T-□104



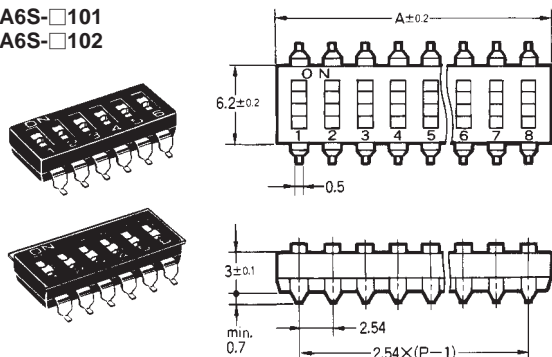
### PCB Dimensions (Top View)



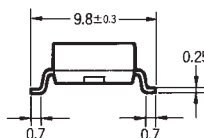
No. of poles	Model			A
	A6T-1101	A6T-1102	A6T-1104	
1	A6T-2101	A6T-2102	A6T-2104	3.48
2	A6T-4101	A6T-4102	A6T-4104	6.02
4	A6T-6101	A6T-6102	A6T-6104	11.10
6	A6T-8101	A6T-8102	A6T-8104	16.18
8	A6T-0101	A6T-0102	A6T-0104	21.26
10				26.34

**Flat Actuated with SMT Terminal  
Standard/With Seal Tape**

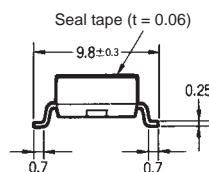
A6S-□101  
A6S-□102



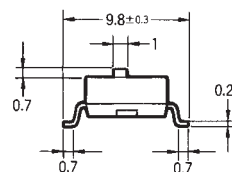
**Flat Actuated  
Standard**



**With Seal Tape**

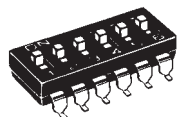


**Raised Actuator**

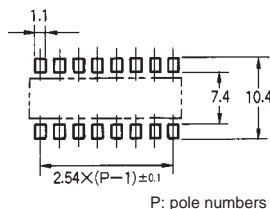


**Raised Actuator  
with SMT Terminal**

A6S-□104



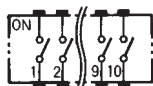
**PCB Dimensions  
(Top View)**



No. of poles	Model			A
	A6S-2101	A6S-2102	A6S-2104	
2	A6S-3101	A6S-3102	A6S-3104	6.02
3	A6S-4101	A6S-4102	A6S-4104	8.56
4	A6S-5101	A6S-5102	A6S-5104	11.10
5	A6S-6101	A6S-6102	A6S-6104	13.64
6	A6S-7101	A6S-7102	A6S-7104	16.18
7	A6S-8101	A6S-8102	A6S-8104	18.72
8	A6S-9101	A6S-9102	A6S-9104	21.26
9	A6S-0101	A6S-0102	A6S-0104	23.80
10	A6S-0101	A6S-0102	A6S-0104	26.34

**Installation**

■ **Internal Connections (Top View)**



**Precautions**

**Circuit Design**

Use the DIP Switch within the rated voltage and current ranges, otherwise the DIP Switch may have a shortened life expectancy, radiate heat, or burn out.

**Mounting**

Do not operate the DIP Switch while mounting, soldering, or washing the DIP Switch, otherwise the DIP Switch may deform due the heat of the solder, the DIP Switch may malfunction due to the penetration of the washing agent, or the machine incorporating the DIP Switch may operate or be set incorrectly.

An automatic insertion machine incorporating a body stopper is available for mounting the DIP Switch. When using an automatic insertion machine incorporating a half-lead stopper to mount the DIP Switch, make sure that the automatic insertion machine will not deform the terminals of the DIP Switch, otherwise the improper insertion of the DIP Switch may result.

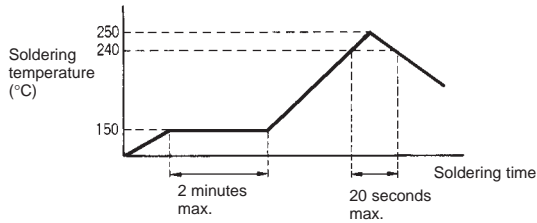
## Soldering

Observe the following conditions when soldering the DIP Switch.

### Automatic Soldering Bath

Soldering temperature: 260°C max.  
Soldering time: 5 s max. for a 1.6-mm thick, single-side PCB

### Reflow Soldering



### Manual Soldering

Soldering temperature: 350°C at the tip of the soldering iron.  
Soldering time: 3 s max. for a 1.6-mm thick, single-side PCB

Set the pins of the DIP Switch to OFF before soldering the DIP Switch.

Before soldering the DIP Switch on a PCB, make sure that there is no unnecessary space between the DIP Switch and PCB.

Before soldering the DIP Switch on a multilayer PCB, make sure that the DIP Switch will not be deformed by the soldering heat on the pattern or land of the multilayer PCB.

Do not solder the DIP Switch more than twice including rectification soldering. An interval of five minutes is required between the first and second solderings.

Make sure that there is no flux rise on the surface of the PCB.



## Washing

<b>Washable</b>	A6T (with seal tape), A6S (with seal tape)
<b>Not washable</b>	A6T (standard/raised actuator), A6S (standard/raised actuator)

Ultrasonic cleaning is unavailable to any A6T or A6S-series DIP Switch with a seal tape. It is possible to wipe or dip these models into washing agents for one minute maximum.

Apply fluorocarbon or alcoholic solvents to clean washable models. Do not apply any other solvents or water to clean any washable model because they may deteriorate the materials or performance of the model.

Washing equipment incorporating more than one washing bath can be used to clean washable models provided that the washable models are cleaned for one minute maximum per bath and the total cleaning time does not exceed three minutes.

Do not impose any external force on washable models while washing.

Do not clean washable models immediately after soldering. Wait for at least three minutes to clean washable models after soldering.

The A6T or A6S-series DIP Switch with a seal tape can be washed provided that the seal tape is not removed or pasted before washing the DIP Switch.

**Handling**

Do not apply excessive operating force to the DIP Switch, otherwise the DIP Switch may be damaged or deformed, thus causing the switch mechanism to malfunction as a result. Apply an operating force not exceeding 200% of the maximum rated operating force to the DIP Switch.

Set the DIP Switch incorporating slide pins with a tiny, rounded object, such as the tip of a ball-point pen or small screwdriver. Do not set the DIP Switch using tweezers or any other sharp object, which may damage the DIP Switch. Do not set the DIP Switch using the point of a mechanical pencil, otherwise lead powder or fragments may fall into the DIP Switch and internal circuit board, causing the DIP Switch to malfunction and reducing the dielectric strength of the circuit board.

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**

To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. A102-E1-1 **In the interest of product improvement, specifications are subject to change without notice.**

**OMRON Corporation**

Control Components Division H.Q.  
28th Fl., Crystal Tower Bldg.  
1-2-27, Shiromi, Chuo-ku,  
Osaka 540 Japan  
Phone: 06-949-6115 Fax: 06-949-6134

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