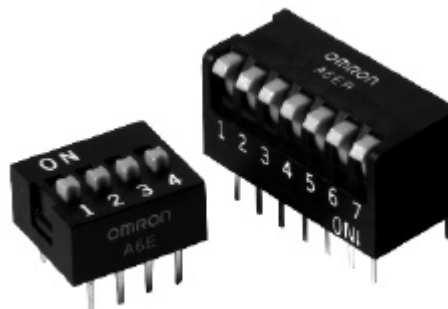


## DIP Switch

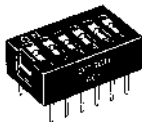
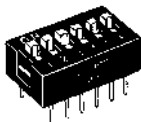
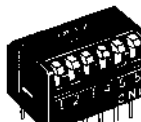
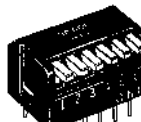
## A6E/A6ER

### DIP Switch

- The sealed bottom prevents flux penetration
- A variety of models including models with short or long levers are available



### Ordering Information

| No. of poles | Flat actuator                                                                                      | Raised actuator                                                                                    | Side actuated (short-lever)                                                                         | Side actuated (long-lever)                                                                           |
|--------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|              | DIP terminal<br> | DIP terminal<br> | DIP terminal<br> | DIP terminal<br> |
| 2            | A6E-2101                                                                                           | A6E-2104                                                                                           | A6ER-2101                                                                                           | A6ER-2104                                                                                            |
| 3            | A6E-3101                                                                                           | A6E-3104                                                                                           | A6ER-3101                                                                                           | A6ER-3104                                                                                            |
| 4            | A6E-4101                                                                                           | A6E-4104                                                                                           | A6ER-4101                                                                                           | A6ER-4104                                                                                            |
| 5            | A6E-5101                                                                                           | A6E-5104                                                                                           | A6ER-5101                                                                                           | A6ER-5104                                                                                            |
| 6            | A6E-6101                                                                                           | A6E-6104                                                                                           | A6ER-6101                                                                                           | A6ER-6104                                                                                            |
| 7            | A6E-7101                                                                                           | A6E-7104                                                                                           | A6ER-7101                                                                                           | A6ER-7104                                                                                            |
| 8            | A6E-8101                                                                                           | A6E-8104                                                                                           | A6ER-8101                                                                                           | A6ER-8104                                                                                            |
| 9            | A6E-9101                                                                                           | A6E-9104                                                                                           | A6ER-9101                                                                                           | A6ER-9104                                                                                            |
| 10           | A6E-0101                                                                                           | A6E-0104                                                                                           | A6ER-0101                                                                                           | A6ER-0104                                                                                            |

**Important note:** Switches cannot be water-washed.

# Specifications

## ■ CHARACTERISTICS

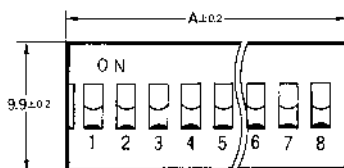
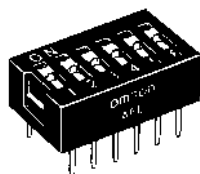
|                       |            |                                                                                                   |
|-----------------------|------------|---------------------------------------------------------------------------------------------------|
| Switching capacity    |            | 25 mA at 24 VDC                                                                                   |
| Insulation resistance |            | 100 MΩ min. (at 250 VDC)                                                                          |
| Contact resistance    |            | 200 mΩ 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)                                                                               |

# Dimensions

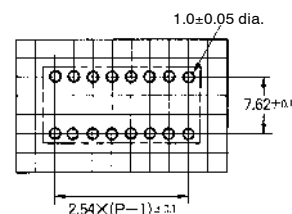
Unit: mm (inch)

Note: Unless otherwise specified, a tolerance of  $\pm 0.4$  mm applies to all dimensions.

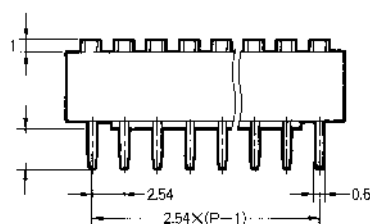
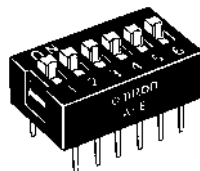
## ■ FLAT ACTUATED WITH DIP TERMINAL A6E-□101



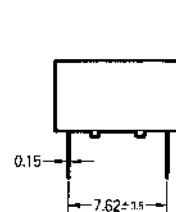
## PCB Dimensions (Top View)



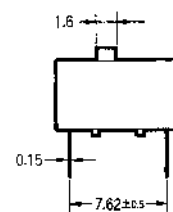
## ■ RAISED ACTUATOR WITH DIP TERMINAL A6E-□104



## Flat Actuated

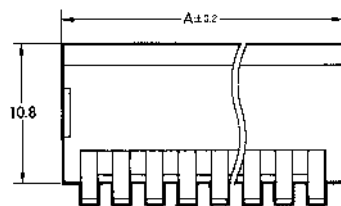
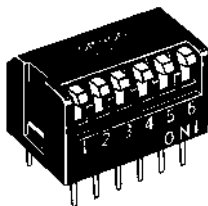


## Raised Actuator

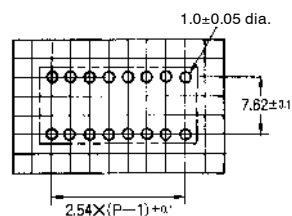


| No. of poles | Part number |          | A     |
|--------------|-------------|----------|-------|
| 2            | A6E-2101    | A6E-2104 | 6.64  |
| 3            | A6E-3101    | A6E-3104 | 9.18  |
| 4            | A6E-4101    | A6E-4104 | 11.72 |
| 5            | A6E-5101    | A6E-5104 | 14.26 |
| 6            | A6E-6101    | A6E-6104 | 16.80 |
| 7            | A6E-7101    | A6E-7104 | 19.34 |
| 8            | A6E-8101    | A6E-8104 | 21.88 |
| 9            | A6E-9101    | A6E-9104 | 24.42 |
| 10           | A6E-0101    | A6E-0104 | 26.96 |

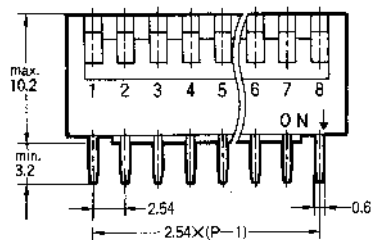
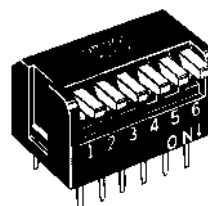
■ DIP TERMINAL  
SIDE ACTUATED  
(SHORT-LEVER)  
A6ER-□101



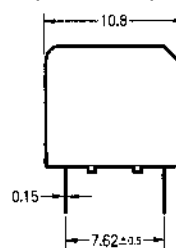
PCB Dimensions  
(Top View)



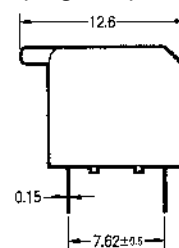
■ SIDE ACTUATED  
(LONG-LEVER)  
A6ER-□104



Side Actuated  
(short-lever)



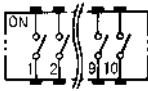
Side Actuated  
(long-lever)



| No. of poles | Part number |           | A     |
|--------------|-------------|-----------|-------|
| 2            | A6ER-2101   | A6ER-2104 | 6.64  |
| 3            | A6ER-3101   | A6ER-3104 | 9.18  |
| 4            | A6ER-4101   | A6ER-4104 | 11.72 |
| 5            | A6ER-5101   | A6ER-5104 | 14.26 |
| 6            | A6ER-6101   | A6ER-6104 | 16.80 |
| 7            | A6ER-7101   | A6ER-7104 | 19.34 |
| 8            | A6ER-8101   | A6ER-8104 | 21.88 |
| 9            | A6ER-9101   | A6ER-9104 | 24.42 |
| 10           | A6ER-0101   | A6ER-0104 | 26.96 |

## 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 to 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.

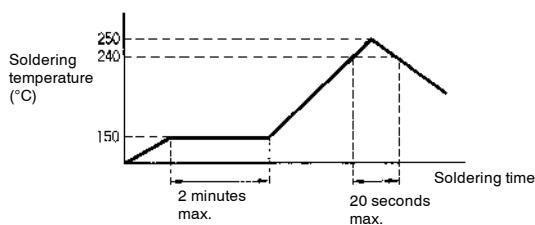
### ■ SOLDERING

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

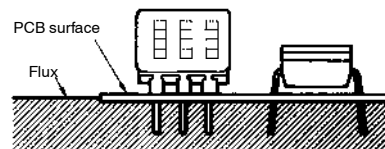
Set the pins of the DIP Switch to OFF before soldering the DIP Switch.

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

The A6E/A6ER DIP Switches are not washable.

### ■ 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.

NOTE: DIMENSIONS SHOWN ARE IN MILLIMETERS. To convert millimeters to inches divide by 25.4.

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