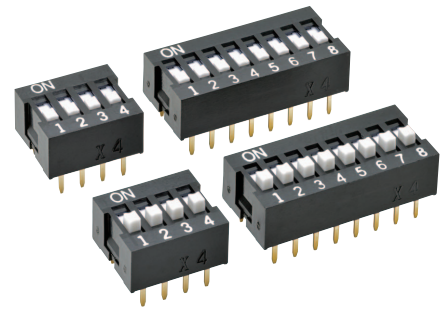


# A6E-N

DIP Switch

## A6E-N series is a renewal of A6E series


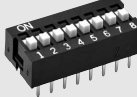
- Change of contact mechanisms.
  - Push-type to slide-type
  - 1 contact point to 2 contact points
- Both gold-plated contacts and self-cleaning mechanisms ensure high reliability.
- Available ON-set soldering.
- Available replacement of A6E series
  - White colored actuators.



RoHS Compliant

## List of Models

### ● Models in Tube Packages

| Type (actuator color) |                   | Slide Types   |   |
|-----------------------|-------------------|---|---|
|                       |                   | Flat actuator (white)   | Raised actuator (white)   |
| Appearance            |                   |  |  |
| No. of poles          | Quantity per tube |   |   |
| 2                     | 72                | A6E-2101-N  | A6E-2104-N  |
| 3                     | 51                | A6E-3101-N  | A6E-3104-N  |
| 4                     | 40                | A6E-4101-N  | A6E-4104-N  |
| 5                     | 32                | A6E-5101-N  | A6E-5104-N  |
| 6                     | 27                | A6E-6101-N  | A6E-6104-N  |
| 7                     | 24                | A6E-7101-N  | A6E-7104-N  |
| 8                     | 21                | A6E-8101-N  | A6E-8104-N  |
| 9                     | 19                | A6E-9101-N  | A6E-9104-N  |
| 10                    | 17                | A6E-0101-N  | A6E-0104-N  |

Note: Order in multiples of the package quantity.

### Typical Applications

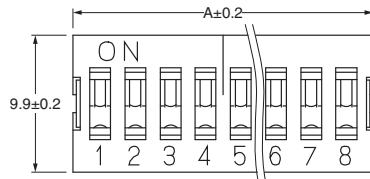
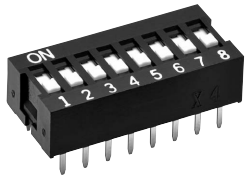
Mode-setting of Program controllers, micro-computer etc.

## Ratings / Characteristics

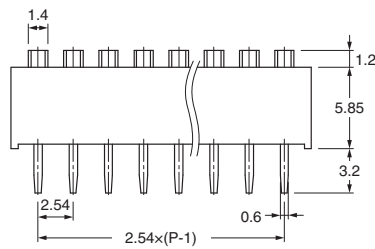
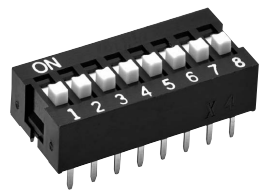
|                                    |  |                                      |
|------------------------------------|--|--------------------------------------|
| Ratings(resistive load)            | 25 mA at 24 VDC<br>10 $\mu$ A (minimum current) at 3.5 VDC   |                                      |
| Ambient operating temperature      | -20 to +70°C at 60% max. (with no icing or condensation)   |                                      |
| Ambient operating humidity         | 35% to 95% (at +5 to +35°C)  |                                      |
| Insulation resistance              | 100 M $\Omega$ min. (at 250 VDC with insulation tester)  |                                      |
| Contact resistance (initial value) | 200 m $\Omega$ max. (initial value)  |                                      |
| Dielectric strength                | Between terminals 500 VAC for 1 min  |                                      |
| Vibration resistance               | Malfunction  | 10 to 55 Hz, 1.5-mm double amplitude |
| Shock resistance                   | Malfunction  | 300 m/s <sup>2</sup> min.            |
| Durability                         | 1,000 operations min.  |                                      |
| Washing                            | Not possible   |                                      |
| Degree of protection               | IEC IP40   |                                      |
| Operating force                    | 0.29 to 9.8 N  |                                      |
| Weight                             | Raised actuator: 0.43 g (2 poles) 0.78 g (4 poles) 1.12 g (6 poles) 1.47 g (8 poles) 1.82 g (10 poles) |                                      |

## Dimensions (Unit: mm)

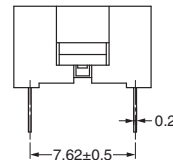
● Slide  
Flat Actuator  
A6E-□101-N



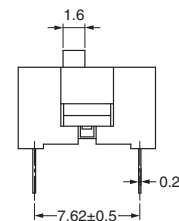
● Slide  
Raised Actuator  
A6E-□104-N



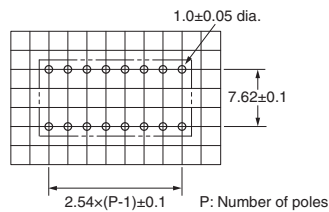
Flat Actuator



Raised Actuator



PCB Dimensions  
(Top View)

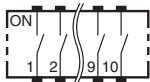


| No. of poles | Model      |            | Dimension A |
|--------------|------------|------------|-------------|
|              | Flat       | Raised     |             |
| 2            | A6E-2101-N | A6E-2104-N | 6.44        |
| 3            | A6E-3101-N | A6E-3104-N | 8.98        |
| 4            | A6E-4101-N | A6E-4104-N | 11.52       |
| 5            | A6E-5101-N | A6E-5104-N | 14.06       |
| 6            | A6E-6101-N | A6E-6104-N | 16.60       |
| 7            | A6E-7101-N | A6E-7104-N | 19.14       |
| 8            | A6E-8101-N | A6E-8104-N | 21.68       |
| 9            | A6E-9101-N | A6E-9104-N | 24.22       |
| 10           | A6E-0101-N | A6E-0104-N | 26.76       |

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

## Internal Connections

Contact Form  
(Top View)



## Safety Precautions

### Cautions

Do not wire the DIP Switch or touch any terminal of the Switch while power is being supplied. Or it may result in electric shock.

### Precautions for Safe Use

- Use the DIP Switch within the rated voltage and current ranges, otherwise the DIP Switch may have a shortened durability, radiate heat, or burn out. This particularly applies to the instantaneous voltages and currents when switching.

### Correct Use

#### ● Soldering

- Observe the following conditions for soldering.
- 1. General Precautions for Soldering**
    - Make sure that the actuator of DIP switch is set fully to either ON or OFF.
    - Before soldering, make sure there is no unnecessary space between the Switch and the PCB.
    - Do not solder the Switch more than twice including any rectification soldering.  
An interval of five minutes is required between the first and second soldering.
  - 2. Automatic Soldering Bath (Flow Soldering)**
    - Soldering temperature: 260°C max.  
Soldering time: 5 s max. for a 1.6-mm thick, single-side PCB
    - Confirm in advance that flux will not bubble up onto the side of the PCB to which the Switch is mounted. Depending on the type of Switch, the flux may have an adverse effect if it enters the Switch.
  - 3. 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
  - 4. Using Flux**
    - Making mistakes in the type of flux or in the amount or method in which it is applied can cause flux to enter the interior of the Switch, with adverse effects on Switch performance. Assess the proper flux, conditions, and methods prior to using it.

#### ● Washing

- Washing process is not applicable to this switch.  
It is recommended to use alcohol when wiping away the dust on surface is needed.

#### ● Environment for Storage and Use

- Please avoid storing with the following conditions in order to prevent discoloration or deterioration of terminals.
  - 1) High temperature and high humidity atmosphere
  - 2) Corrosive gas atmosphere
  - 3) Locations which receive direct sunlight
  - 4) Locations which receive sea breeze
  - 5) Locations which receive large temperature difference
 This switch is not sealed to prevent to enter the dust particles and liquid perfectly. Test the switch under the actual operating conditions before use.

#### ● RoHS Compliant

The "RoHS Compliant" designation indicates that the listed models do not contain the six hazardous substances covered by the RoHS Directive.

Reference: The following standards are used to determine compliance for the six substances.

|                     |                  |
|---------------------|------------------|
| Lead                | : 1,000 ppm max. |
| Mercury             | : 1,000 ppm max. |
| Cadmium             | : 100 ppm max.   |
| Hexavalent chromium | : 1,000 ppm max. |
| PBB                 | : 1,000 ppm max. |
| PBDE                | : 1,000 ppm max. |

• Application examples provided in this document are for reference only. In actual applications, confirm equipment functions and safety before using the product.  
• 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.**