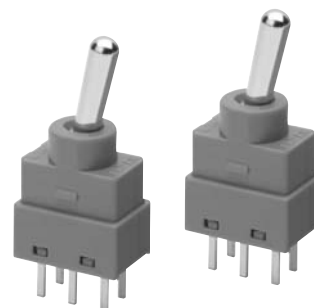


Toggle Switch (Microminaturize) A9T

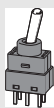
Two-point clip contact mechanism combined with see-saw action.

- Gold-plated clip contact and cleaning mechanisms ensure high reliability.
- Specially designed to allow no grease entry into the contact portion.
- Sealed against flux entry and a built-in "O-ring ensures immersion wash ability.
- Easy to select from 4 styles of terminal and actuator shapes.
- RoHS


NEW

Ordering Information

● DIP terminal

Actuator Shape			Standard		Flat		Anti-Electrostatic	
Switching Function								
			Single Pole Double Throw	Double Pole Double Throw	Single Pole Double Throw	Double Pole Double Throw	Single Pole Double Throw	Double Pole Double Throw
ON	—	ON	A9T11-0011	A9T21-0011	A9T11-0021	A9T21-0021	A9T11-0011-E	A9T21-0011-E
ON	OFF	ON	A9T12-0011	A9T22-0011	A9T12-0021	A9T22-0021	—	—
(ON)	—	ON	A9T13-0011	A9T23-0011	A9T13-0021	A9T23-0021	—	—
(ON)	OFF	(ON)	A9T14-0011	A9T24-0011	A9T14-0021	A9T24-0021	—	—
(ON)	OFF	ON	A9T15-0011	A9T25-0011	A9T15-0021	A9T25-0021	—	—

● Right Angle

Actuator Shape			Standard		Flat	
Switching Function						
			Single Pole Double Throw	Double Pole Double Throw	Single Pole Double Throw	Double Pole Double Throw
ON	—	ON	A9T11-0012	A9T21-0012	A9T11-0022	A9T21-0022
ON	OFF	ON	A9T12-0012	A9T22-0012	A9T12-0022	A9T22-0022
(ON)	—	ON	A9T13-0012	A9T23-0012	A9T13-0022	A9T23-0022
(ON)	OFF	(ON)	A9T14-0012	A9T24-0012	A9T14-0022	A9T24-0022
(ON)	OFF	ON	A9T15-0012	A9T25-0012	A9T15-0022	A9T25-0022

● Vertical Mount

Actuator Shape			Standard		Flat	
Switching Function						
			Single Pole Double Throw	Double Pole Double Throw	Single Pole Double Throw	Double Pole Double Throw
ON	—	ON	A9T11-0013	A9T21-0013	A9T11-0023	A9T21-0023
ON	OFF	ON	A9T12-0013	A9T22-0013	A9T12-0023	A9T22-0023
(ON)	—	ON	A9T13-0013	A9T23-0013	A9T13-0023	A9T23-0023
(ON)	OFF	(ON)	A9T14-0013	A9T24-0013	A9T14-0023	A9T24-0023
(ON)	OFF	ON	A9T15-0013	A9T25-0013	A9T15-0023	A9T25-0023

● Bracket Mounting

Actuator Shape			Standard		Flat		Long	
								
Switching Function			Single Pole Double Throw	Double Pole Double Throw	Single Pole Double Throw	Double Pole Double Throw	Single Pole Double Throw	Double Pole Double Throw
			A9T11-0014	A9T21-0014	A9T11-0024	A9T21-0024	—	A9T21-0034
ON	OFF	ON	A9T12-0014	A9T22-0014	A9T12-0024	A9T22-0024	—	—
(ON)	—	ON	A9T13-0014	A9T23-0014	A9T13-0024	A9T23-0024	—	—
(ON)	OFF	(ON)	A9T14-0014	A9T24-0014	A9T14-0024	A9T24-0024	—	—
(ON)	OFF	ON	A9T15-0014	A9T25-0014	A9T15-0024	A9T25-0024	—	—

Note: (ON) is Momentary

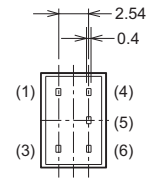
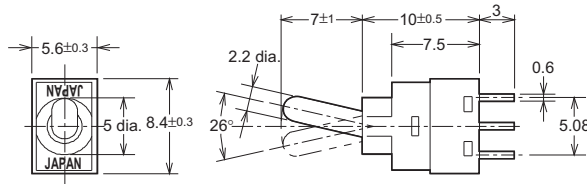
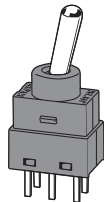
Specifications

Switching capacity		AC/DC 60V 50mA, AC/DC 20mV 1 μ A (minimum current)
Ambient temperature		-20 to 80 °C 60% RH Max. (with no icing or condensation)
Ambient humidity		operating : 45% to 85% (5 to 35 °C)
Insulation resistance		1000 MΩ min (Initial value)
Contact resistance		50 mΩ max (Initial value)
Dielectric strength		500VAC for 1 min between terminals, between terminals and ground
Vibration resistance	Malfunction	Malfunction:10 to 55HZ,1.5-mm double amplitude
Shock resistance	Malfunction	Malfunction: 500m/s ² min
Life expectancy	Mechanical	50,000 operations min
	Electrical	50,000 operations min
Operating force		0.49 to 3.43 N
Weight	DIP terminal	Standard / Flat Actuator : 0.8 g
	Right Angle	Standard / Flat Actuator : 1 g
	Vertical Mount	Standard / Flat Actuator : 1 g
	Bracket Mounting	Long Actuator : 1.3 g

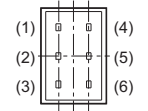
Dimensions

(Unit: mm)

● DIP terminal

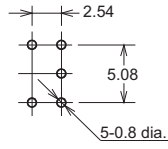


Single Pole Type

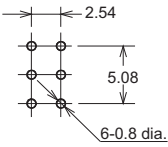


Double Pole Type

PCB Dimensions (Top View)

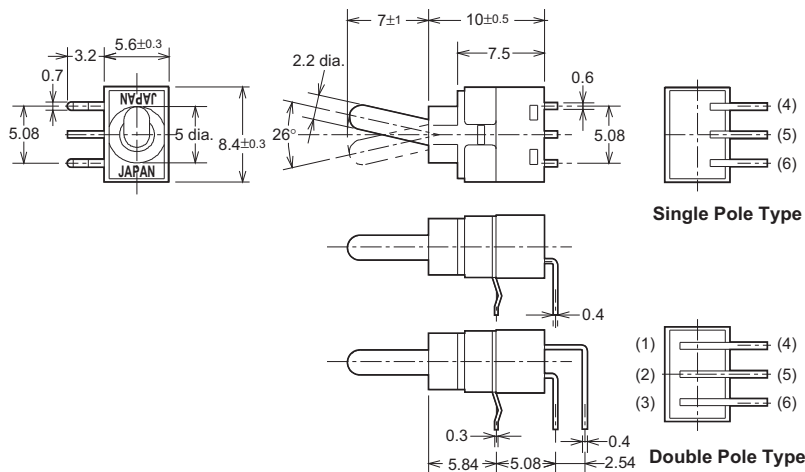
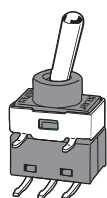


Single Pole Type

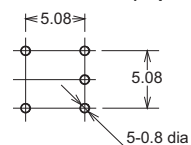


Double Pole Type

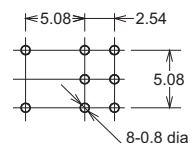
● Right Angle



PCB Dimensions (Top View)

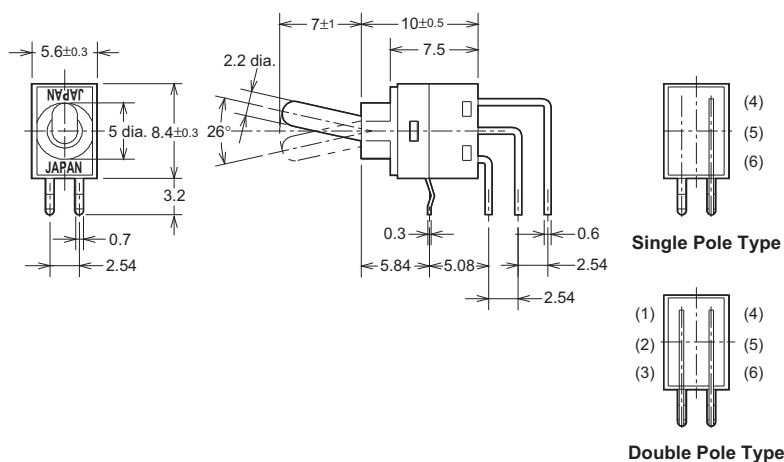
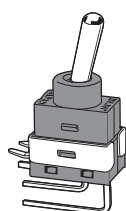


Single Pole Type

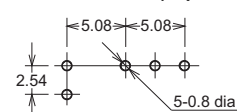


Double Pole Type

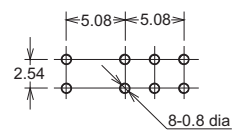
● Vertical Mount



PCB Dimensions (Top View)

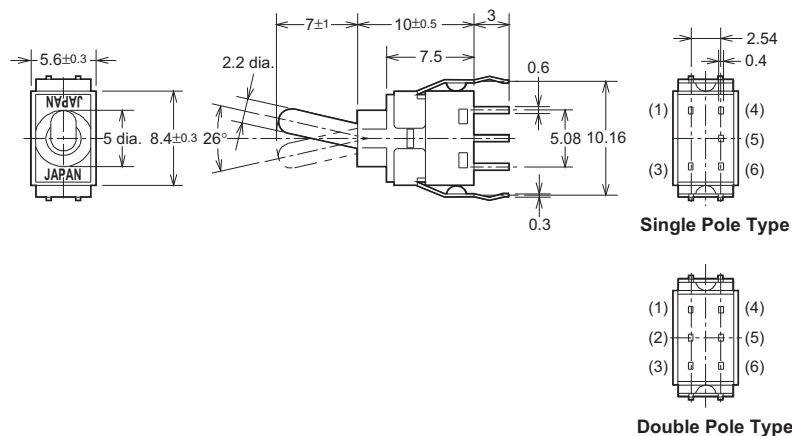
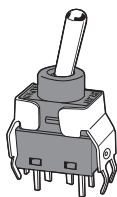


Single Pole Type

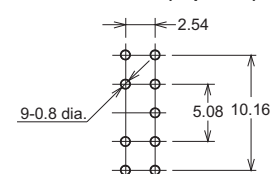


Double Pole Type

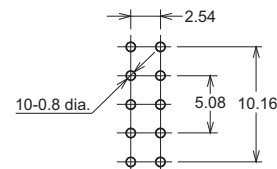
● Bracket Mounting



PCB Dimensions (Top View)



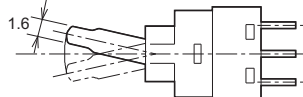
Single Pole Type



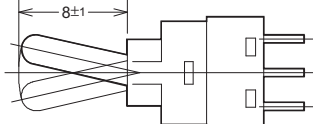
Double Pole Type

● Actuator Shape

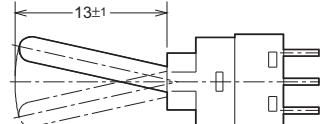
Flat



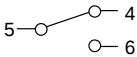
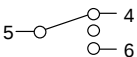
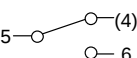
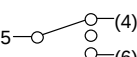
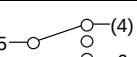
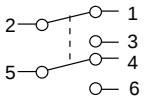
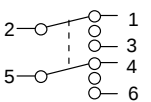
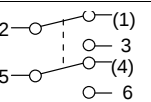
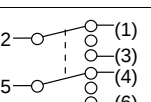
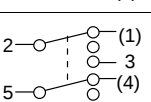
Anti-Electrostatic



Long



Switching Function / Internal Connections

				Circuit
Single Pole Type	ON 4 - 5	—	ON 5 - 6	
	ON 4 - 5	OFF	ON 5 - 6	
	(ON) 4 - 5	—	ON 5 - 6	
	(ON) 4 - 5	OFF	(ON) 5 - 6	
	(ON) 4 - 5	OFF	ON 5 - 6	
Double Pole Type	ON 1 - 2 4 - 5	—	ON 2 - 3 5 - 6	
	ON 1 - 2 4 - 5	OFF	ON 2 - 3 5 - 6	
	(ON) 1 - 2 4 - 5	—	ON 2 - 3 5 - 6	
	(ON) 1 - 2 4 - 5	OFF	(ON) 2 - 3 5 - 6	
	(ON) 1 - 2 4 - 5	OFF	ON 2 - 3 5 - 6	

Safety Precautions

● Cautions

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

● Handling

Do not apply excessive operating force to the Switch. Otherwise the Switch may be damaged or deformed, and the switch mechanism may malfunction as a result. Apply an operating force not exceeding 9.8 N. Apply the operating load from the side of the striker. Do not apply a load from an angle or from above the striker. Doing so may deform the Switch contact.

● Soldering

Observe the following conditions when soldering the Toggle Switch.

Automatic Soldering Bath

Soldering temperature: 260°C max. (Preheating: 100°C 120 s)

Soldering time: 5 s max.

Manual Soldering

Soldering temperature: 350°C at the tip of the soldering iron.

Soldering time: 3 s max.

● Washing

Apply alcohol or fluorine based solvents to clean.

Do not clean the switch immediately after soldering. Wait for at least five minutes after soldering before cleaning.

Ultrasonic cleaning is not available dip into the switch washing agents for two minute maximum.

● 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.

● 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.

● Environment for Storage and Use

To prevent discoloration of the terminals and other problems during storage, do not store the switch in locations subject to the following conditions.

1. High temperatures or humidity
2. Corrosive gases
3. Direct sunlight

Also, the switch is not waterproof or splash-resistant. Do not install or use the switch in locations that are subject to contact with water.

Do not subject the switch to freezing or condensation.

● Packing

100 per plastoc bag.

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. A172-E1-01 **In the interest of product improvement, specifications are subject to change without notice.**

OMRON Corporation

Electronic Components Company

Switch Division

Manual Switch Department

Shiokoji Horikawa, Shimogyo-ku,

Kyoto, 600-8530 Japan

Tel: (81)75-344-7096/Fax: (81)75-344-7188

Printed in Japan

0108 (0108)