

6 dia.



RoHS compliant

### FEATURES

**1. Superior anti-inrush properties make it ideal for power supply switching. (AJ1 type)**

With a wedge mechanism that increases the contact pressure by  $\sqrt{2}$  times and through use of an Ag alloy for superior anti-weld properties, high-capacity switching is possible in a compact switch that also excels in resisting inrush properties.

The switch can withstand 5,000 switching times at an anti-inrush performance of 20 A (steady 3 A, 125 V AC).

**2. Ideal for low-level signal load switching and applications with a low frequency of switching. (AJ2 type)**

Au cladding is used on contacts for superior corrosion resistance. Stable contact reliability is maintained due to improved contact pressure thanks to the crossbar contact and the wiping effect during contact insertion thanks to the wedge mechanism.

**3. Structure prevents flux from flowing in.**

A sealing material used around the terminals completely prevents flux from flowing in.

**4. Inch grid terminal dimensions**

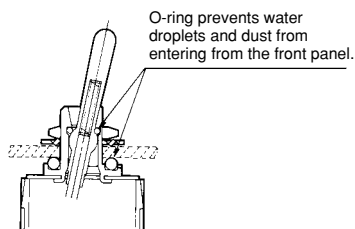
Terminal pitch is 2/10 of an inch (5.08 mm) for international terminal arrangements.

**5. Fire retardant molding material (UL94V-0) used in body.**

**6. Lever-lock type available which is ideal for preventing errors during operation due to inadvertent force on the lever.**

**7. Waterproof panel type available for preventing entry of water droplets and dust.**

**8. Lead-free.**

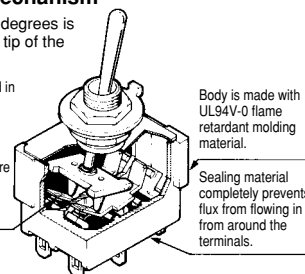


### CONSTRUCTION

**• Wedge mechanism**

An angle of 45 degrees is provided at the tip of the contact.

An Ag alloy is used in the contacts for superior anti-weld properties. The wedge mechanism controls temperature rising and enables high capacity switching.



### PRECAUTIONS WHEN USING CADMIUM-FREE CONTACT TYPE

Models with cadmium-free contacts have been introduced in order to reduce environmentally harmful substances. ("F" is affixed to the end of the part number.) (Only AJ1 type; AJ2 type is originally cadmium free.)

We ask customers who are currently using products with cadmium-containing contacts (no "F" at the end of the part number) to please make the switch to models with cadmium-free contacts. When switching, operating life may differ depending on the load. Please be sure to verify this by conducting an evaluation using actual equipment.

# AJ1, AJ2

## ASSORTMENT

Contact material	Pole	Handle shape			Kind of operation	Terminal shape	Color cap	Accessories
Ag alloy contact J1 type	1-pole	Standard toggle	Plastic flat lever	Paddle	ON-OFF ON-ON ON-OFF-ON ON-<ON> <ON>-OFF-<ON> ON-OFF-<ON>	Solder	Red Yellow Green Blue Black White Light grey Dark grey	Snap-in plate
	2-pole	Short toggle	Metal flat lever	Rocker		PC board		
		Long toggle	Metal short flat lever	Lever lock type		Bracket type		
	Au clad contact J2 type	4-pole	Plastic long lever	Metal long flat lever		Panel water-protected type		
						PC-V terminal		

## AJ1 ORDERING INFORMATION

**AJ**         **F**

AJ1 type switches

Number of poles  
1: 1-pole 2: 2-pole 4: 4-pole

Shape of handle  
11: Standard toggle  
12: Short toggle  
13: Long toggle  
23: Plastic long lever and plastic flat lever  
(common body block)  
34: Metal flat lever  
35: Metal short flat lever  
36: Metal long flat lever  
41: Rocker and Paddle  
(common body block)  
1R: Lever lock type  
1W: Panel water-protected type

Operation  
0: ON-OFF 3: ON-<ON>  
1: ON-ON 4: <ON>-OFF-<ON>  
2: ON-OFF-ON 5: ON-OFF-<ON>

Terminal shape  
1: Solder 4: PC-H  
2: PC board 5: PC-V  
3: Bracket type

Overseas standards  
No display: Standard product  
9: UL and CSA approved product  
(Other than lever lock type and panel water-protected type)

F: Cadmium-free product

# AJ1 (AgZnO alloy contact type) PRODUCT TYPES

## 1. Standard toggle and short toggle

Standard toggle



Short toggle



Change the asterisk to a "1" when ordering.

Change the asterisk to a "2" when ordering.

### 1) Solder terminal, PC board terminal and Bracket type

Number of poles	Operation < >: Momentary position	Solder terminal	PC board terminal	Bracket type
		Part No.	Part No.	Part No.
1-pole	ON-OFF	AJ111*01F	AJ111*02F	AJ111*03F
	ON-ON	AJ111*11F	AJ111*12F	AJ111*13F
	ON-OFF-ON	AJ111*21F	AJ111*22F	AJ111*23F
	ON-<ON>	AJ111*31F	AJ111*32F	AJ111*33F
	<ON>-OFF-<ON>	AJ111*41F	AJ111*42F	AJ111*43F
	ON-OFF-<ON>	AJ111*51F	AJ111*52F	AJ111*53F
2-pole	ON-OFF	AJ121*01F	AJ121*02F	AJ121*03F
	ON-ON	AJ121*11F	AJ121*12F	AJ121*13F
	ON-OFF-ON	AJ121*21F	AJ121*22F	AJ121*23F
	ON-<ON>	AJ121*31F	AJ121*32F	AJ121*33F
	<ON>-OFF-<ON>	AJ121*41F	AJ121*42F	AJ121*43F
	ON-OFF-<ON>	AJ121*51F	AJ121*52F	AJ121*53F
4-pole	ON-ON	AJ141*11F	AJ141*12F	—
	ON-OFF-ON	AJ141*21F	AJ141*22F	—
	ON-<ON>	AJ141*31F	AJ141*32F	—
	<ON>-OFF-<ON>	AJ141*41F	AJ141*42F	—
	ON-OFF-<ON>	AJ141*51F	AJ141*52F	—

### 2) PC-H terminal and PC-V terminal

Number of poles	Operation < >: Momentary position	PC-H terminal	PC-V terminal
		Part No.	Part No.
1-pole	ON-OFF	—	—
	ON-ON	AJ111*14F	AJ111*15F
	ON-OFF-ON	AJ111*24F	AJ111*25F
	ON-<ON>	AJ111*34F	AJ111*35F
	<ON>-OFF-<ON>	AJ111*44F	AJ111*45F
	ON-OFF-<ON>	AJ111*54F	AJ111*55F
2-pole	ON-OFF	—	—
	ON-ON	AJ121*14F	AJ121*15F
	ON-OFF-ON	AJ121*24F	AJ121*25F
	ON-<ON>	AJ121*34F	AJ121*35F
	<ON>-OFF-<ON>	AJ121*44F	AJ121*45F
	ON-OFF-<ON>	AJ121*54F	AJ121*55F

#### Remarks: Regarding standard toggles:

- When ordering please change the asterisk to a "1".
- Standard installation accessories are included with the product.
- When distinguishing by color, please use with the separately sold color caps (AJ281\*) if there is a possibility that static electricity might cause damage to the electronic components.

Standard toggle



Color cap



Switch with color cap

- For UL and CSA certified products, please add a "9" before the "F" at the end of the part number when ordering.

#### Regarding short toggles:

- When ordering please change the asterisk to a "2".
- Bracket type, PC-H terminals and PC-V terminals can be special ordered only if the order lot quantity is 50 pieces or higher.
- Standard installation accessories are included with the product.

#### Regarding long toggles (made-to-order product):

When ordering, the asterisk in the table above should be changed to a "3". Please inquire about deliver times.

# AJ1, AJ2

## 3) Standard installation accessories (repair parts)

Product name	Front hex nut (Nickel plated)	Back hex nut (Uni-chrome plated)	Keying washer	Lockwasher
Dimensions (Unit mm)				
Part number	AJ2081	AJ2082	AJ2083	AJ2084

Remark: A selling unit of each accessory is 10 pieces.

## 4) Accessories (Option)

Product name	Dimensions (mm)	Part No.
Color cap for standard toggle		AJ281*

Remark: Please specify the color cap color by replacing the asterisk in the part number with appropriate letter (W: white; B: black; R: red; Z: dark grey; H: light grey; L: blue; G: green; Y: yellow).

## 2. Plastic long lever and plastic flat lever

Plastic long lever



Plastic flat lever



### 1) Body block

Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal
		Part No.	Part No.
1-pole	ON-OFF	AJ112301F	AJ112302F
	ON-ON	AJ112311F	AJ112312F
	ON-OFF-ON	AJ112321F	AJ112322F
	ON-<ON>	AJ112331F	AJ112332F
	<ON>-OFF-<ON>	AJ112341F	AJ112342F
2-pole	ON-OFF-<ON>	AJ112351F	AJ112352F
	ON-OFF	AJ122301F	AJ122302F
	ON-ON	AJ122311F	AJ122312F
	ON-OFF-ON	AJ122321F	AJ122322F
	ON-<ON>	AJ122331F	AJ122332F
4-pole	<ON>-OFF-<ON>	AJ122341F	AJ122342F
	ON-OFF-<ON>	AJ122351F	AJ122352F
	ON-ON	AJ142311F	AJ142312F
	ON-OFF-ON	AJ142321F	AJ142322F
	ON-<ON>	AJ142331F	AJ142332F
	<ON>-OFF-<ON>	AJ142341F	AJ142342F
	ON-OFF-<ON>	AJ142351F	AJ142352F

Remarks: 1. Bracket type, PC-H terminals and PC-V terminals can be special ordered only if the order lot quantity is 50 pieces or higher.

a. When ordering please change the number "1" before the "F" in the part number for the soldered terminal type in the table above to one of the numbers below.

**Bracket type: 3; PC-H terminal: 4; PC-V terminal: 5**

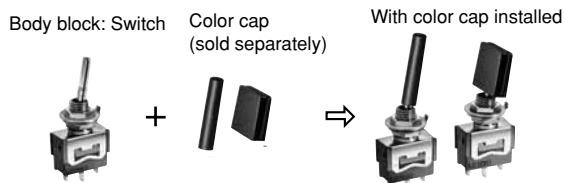
b. Only single pole and 2-pole types are available. Also, the ON-OFF type is only available in the bracket type.

2. Standard installation accessories are included with the product.

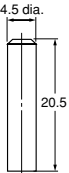
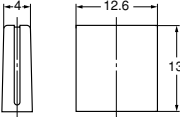
3. For UL and CSA certified products, please add a "9" before the "F" at the end of the part number when ordering.

### Product configuration

Please use body block "switch" with a color cap (sold separately).



## 2) Accessories (Option)

Product name	Dimensions (mm)	Part No.
Color cap for plastic long lever		AJ182*
Color cap for plastic flat lever		AJ183*

Remark: Please specify the color cap color by replacing the asterisk in the part number with appropriate letter (W: white; B: black; R: red; Z: dark grey; H: light grey; L: blue; G: green; Y: yellow).

## 3. Metal flat lever and metal short flat lever

Metal flat lever      Metal short flat lever



Change the asterisk to a "4" when ordering.      Change the asterisk to a "5" when ordering.

Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal
		Part No.	Part No.
1-pole	ON-OFF	AJ113*01F	AJ113*02F
	ON-ON	AJ113*11F	AJ113*12F
	ON-OFF-ON	AJ113*21F	AJ113*22F
	ON-<ON>	AJ113*31F	AJ113*32F
	<ON>-OFF-<ON>	AJ113*41F	AJ113*42F
	ON-OFF-<ON>	AJ113*51F	AJ113*52F
2-pole	ON-OFF	AJ123*01F	AJ123*02F
	ON-ON	AJ123*11F	AJ123*12F
	ON-OFF-ON	AJ123*21F	AJ123*22F
	ON-<ON>	AJ123*31F	AJ123*32F
	<ON>-OFF-<ON>	AJ123*41F	AJ123*42F
	ON-OFF-<ON>	AJ123*51F	AJ123*52F
4-pole	ON-ON	AJ143*11F	AJ143*12F
	ON-OFF-ON	AJ143*21F	AJ143*22F
	ON-<ON>	AJ143*31F	AJ143*32F
	<ON>-OFF-<ON>	AJ143*41F	AJ143*42F
	ON-OFF-<ON>	AJ143*51F	AJ143*52F

Remarks: **Regarding metal flat lever**

- Bracket type, PC-H terminals and PC-V terminals can be special ordered only if the order lot quantity is 50 pieces or higher.
  - When ordering please change the number "1" before the "F" in the part number for the soldered terminal type in the table above to one of the numbers below.  
**Bracket type: 3; PC-H terminal: 4; PC-V terminal: 5**
  - Only single pole and 2-pole types are available. Also, the ON-OFF type is only available in the bracket type.
- Standard installation accessories are included with the product.
- For UL and CSA certified products, please add a "9" before the "F" at the end of the part number when ordering.

# AJ1, AJ2

## 4. Metal long flat lever



Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal
		Part No.	Part No.
1-pole	ON-OFF	AJ113601F	AJ113602F
	ON-ON	AJ113611F	AJ113612F
	ON-OFF-ON	AJ113621F	AJ113622F
	ON-<ON>	AJ113631F	AJ113632F
	<ON>-OFF-<ON>	AJ113641F	AJ113642F
	ON-OFF-<ON>	AJ113651F	AJ113652F
2-pole	ON-OFF	AJ123601F	AJ123602F
	ON-ON	AJ123611F	AJ123612F
	ON-OFF-ON	AJ123621F	AJ123622F
	ON-<ON>	AJ123631F	AJ123632F
	<ON>-OFF-<ON>	AJ123641F	AJ123642F
	ON-OFF-<ON>	AJ123651F	AJ123652F
4-pole	ON-ON	AJ143611F	AJ143612F
	ON-OFF-ON	AJ143621F	AJ143622F
	ON-<ON>	AJ143631F	AJ143632F
	<ON>-OFF-<ON>	AJ143641F	AJ143642F
	ON-OFF-<ON>	AJ143651F	AJ143652F

### Remarks: Regarding metal long flat lever

- Bracket type, PC-H terminals and PC-V terminals can be special ordered only if the order lot quantity is 50 pieces or higher.
  - When ordering please change the number "1" before the "F" in the part number for the soldered terminal type in the table above to one of the numbers below.  
**Bracket type: 3; PC-H terminal: 4; PC-V terminal: 5**
  - Only single pole and 2-pole types are available. Also, the ON-OFF type is only available in the bracket type.
- Standard installation accessories are included with the product.
- For UL and CSA certified products, please add a "9" before the "F" at the end of the part number when ordering.

## 5. Paddle and rocker

Paddle      Rocker



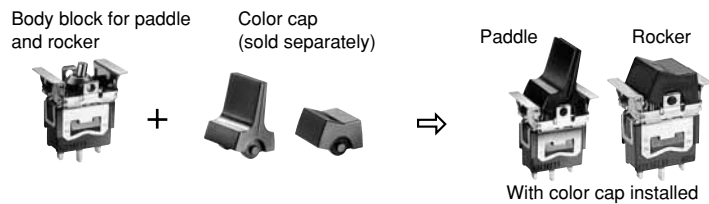
### 1) Body block

Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal	Bracket type
		Part No.	Part No.	Part No.
1-pole	ON-OFF	AJ114101F	AJ114102F	AJ114103F
	ON-ON	AJ114111F	AJ114112F	AJ114113F
	ON-OFF-ON	AJ114121F	AJ114122F	AJ114123F
	ON-<ON>	AJ114131F	AJ114132F	AJ114133F
	<ON>-OFF-<ON>	AJ114141F	AJ114142F	AJ114143F
	ON-OFF-<ON>	AJ114151F	AJ114152F	AJ114153F
2-pole	ON-OFF	AJ124101F	AJ124102F	AJ124103F
	ON-ON	AJ124111F	AJ124112F	AJ124113F
	ON-OFF-ON	AJ124121F	AJ124122F	AJ124123F
	ON-<ON>	AJ124131F	AJ124132F	AJ124133F
	<ON>-OFF-<ON>	AJ124141F	AJ124142F	AJ124143F
	ON-OFF-<ON>	AJ124151F	AJ124152F	AJ124153F

Remark: For UL and CSA certified products, please add a "9" before the "F" at the end of the part number when ordering.

## Product configuration

Please use body block "switch" with a color cap (sold separately).



If a snap-in plate is needed, please use one of the separately sold snap-in plates shown below. We do not sell LED. Bracket type switches cannot be used with snap-in plates.

With snap-in plate installed



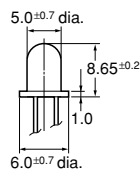
## 2) Accessories (Option)

Product name	Color cap for paddle	Color cap for rocker	Snap-in plate	Snap-in plate for LED
Dimensions (mm)				
Part No.	AJ284*	AJ285*	AJ271*	AJ272*

Remark: Please specify the color cap color by replacing the asterisk in the part number with appropriate letter (W: white; B: black; R: red; Z: dark grey; H: light grey; L: blue; G: green; Y: yellow).

## Regarding the LED

We do not sell LED for the snap-in plate for LED. Please use LED with the dimensions shown below.



# AJ1, AJ2

## 6. Lever lock type



Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal
		Part No.	Part No.
1-pole	ON-OFF	AJ111R01F	AJ111R02F
	ON-ON	AJ111R11F	AJ111R12F
	ON-OFF-ON	AJ111R21F	AJ111R22F
	ON-<ON>	AJ111R31F	AJ111R32F
	<ON>-OFF-<ON>	AJ111R41F	AJ111R42F
	ON-OFF-<ON>	AJ111R51F	AJ111R52F
2-pole	ON-OFF	AJ121R01F	AJ121R02F
	ON-ON	AJ121R11F	AJ121R12F
	ON-OFF-ON	AJ121R21F	AJ121R22F
	ON-<ON>	AJ121R31F	AJ121R32F
	<ON>-OFF-<ON>	AJ121R41F	AJ121R42F
	ON-OFF-<ON>	AJ121R51F	AJ121R52F
4-pole	ON-ON	AJ141R11F	AJ141R12F
	ON-OFF-ON	AJ141R21F	AJ141R22F
	ON-<ON>	AJ141R31F	AJ141R32F
	<ON>-OFF-<ON>	AJ141R41F	AJ141R42F
	ON-OFF-<ON>	AJ141R51F	AJ141R52F

- Remarks: 1. Bracket type, PC-H terminals and PC-V terminals can be special ordered only if the order lot quantity is 50 pieces or higher.  
a. When ordering please change the number "1" before the "F" in the part number for the soldered terminal type in the table above to one of the numbers below.  
**Bracket type: 3; PC-H terminal: 4; PC-V terminal: 5**  
b. Only single pole and 2-pole types are available. Also, the ON-OFF type is only available in the bracket type.  
2. Standard installation accessories are included with the product.  
3. Not certified for UL and CSA.

## 7. Panel water-protected type



Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal
		Part No.	Part No.
1-pole	ON-OFF	AJ111W01F	AJ111W02F
	ON-ON	AJ111W11F	AJ111W12F
	ON-OFF-ON	AJ111W21F	AJ111W22F
	ON-<ON>	AJ111W31F	AJ111W32F
	<ON>-OFF-<ON>	AJ111W41F	AJ111W42F
	ON-OFF-<ON>	AJ111W51F	AJ111W52F
2-pole	ON-OFF	AJ121W01F	AJ121W02F
	ON-ON	AJ121W11F	AJ121W12F
	ON-OFF-ON	AJ121W21F	AJ121W22F
	ON-<ON>	AJ121W31F	AJ121W32F
	<ON>-OFF-<ON>	AJ121W41F	AJ121W42F
	ON-OFF-<ON>	AJ121W51F	AJ121W52F
4-pole	ON-ON	AJ141W11F	AJ141W12F
	ON-OFF-ON	AJ141W21F	AJ141W22F
	ON-<ON>	AJ141W31F	AJ141W32F
	<ON>-OFF-<ON>	AJ141W41F	AJ141W42F
	ON-OFF-<ON>	AJ141W51F	AJ141W52F

- Remarks: 1. Of the standard installation accessories that come with the product, the front hex nut and lock washer are included.  
2. Not certified for UL and CSA.



## AJ2 ORDERING INFORMATION

AJ	<b>2</b>					
AJ2 type switches						
Number of pole 1: 1-pole 2: 2-pole 4: 4-pole						
Shape of handle 1: Standard toggle 2: Plastic long lever 3: Plastic flat lever 4: Rocker and Paddle (common body block) 6: Metal flat lever 1R: Lever lock type 1W: Panel water-protected type						
Kind of operation 0: ON-OFF      3: ON-<ON> 1: ON-ON        4: <ON>-OFF-<ON> 2: ON-OFF-ON   5: ON-OFF-<ON>						
Terminal shape 1: Solder        4: PC-H 2: PC board     5: PC-V 3: Bracket type						
Overseas standards No display: Standard product 9: UL and CSA approved product (Other than lever lock type and panel water-protected type)						

## AJ2 (AgNi alloy contact and Au clad contact type) PRODUCT TYPES

### 1. Standard toggle



#### 1) Solder terminal, PC board terminal and Bracket type

Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal	Bracket type
		Part No.	Part No.	Part No.
1-pole	ON-OFF	AJ21101	AJ21102	AJ21103
	ON-ON	AJ21111	AJ21112	AJ21113
	ON-OFF-ON	AJ21121	AJ21122	AJ21123
	ON-<ON>	AJ21131	AJ21132	AJ21133
	<ON>-OFF-<ON>	AJ21141	AJ21142	AJ21143
2-pole	ON-OFF-<ON>	AJ21151	AJ21152	AJ21153
	ON-OFF	AJ22101	AJ22102	AJ22103
	ON-ON	AJ22111	AJ22112	AJ22113
	ON-OFF-ON	AJ22121	AJ22122	AJ22123
	ON-<ON>	AJ22131	AJ22132	AJ22133
	<ON>-OFF-<ON>	AJ22141	AJ22142	AJ22143
4-pole	ON-OFF-<ON>	AJ22151	AJ22152	AJ22153
	ON-ON	AJ24111	AJ24112	—
	ON-OFF-ON	AJ24121	AJ24122	—
	ON-<ON>	AJ24131	AJ24132	—
	<ON>-OFF-<ON>	AJ24141	AJ24142	—
	ON-OFF-<ON>	AJ24151	AJ24152	—

# AJ1, AJ2

## 2) PC-H terminal and PC-V terminal

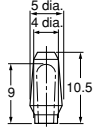
Number of poles	Kind of operation < >: Momentary position	PC-H terminal	PC-V terminal
		Part No.	Part No.
1-pole	ON-OFF	—	—
	ON-ON	AJ21114	AJ21115
	ON-OFF-ON	AJ21124	AJ21125
	ON-<ON>	AJ21134	AJ21135
	<ON>-OFF-<ON>	AJ21144	AJ21145
	ON-OFF-<ON>	AJ21154	AJ21155
2-pole	ON-OFF	—	—
	ON-ON	AJ22114	AJ22115
	ON-OFF-ON	AJ22124	AJ22125
	ON-<ON>	AJ22134	AJ22135
	<ON>-OFF-<ON>	AJ22144	AJ22145
	ON-OFF-<ON>	AJ22154	AJ22155

Remarks: 1. Standard installation accessories are included with the product.

2. When distinguishing by color, please use with the separately sold color caps (AJ281\*) for standard toggle if there is a possibility that static electricity might cause damage to the electronic components.

3. For UL and CSA certified products, please add a "9" before the "F" at the end of the part number when ordering.

## 3) Accessories (Option)

Product name	Dimensions (mm)	Part No.
Color cap for standard toggle		AJ281*

Remark: Please specify the color cap color by replacing the asterisk in the part number with appropriate letter (W: white; B: black; R: red; Z: dark grey; H: light grey; L: blue; G: green; Y: yellow).

## 2. Plastic long lever



### 1) Body block

Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal
		Part No.	Part No.
1-pole	ON-OFF	AJ21201	AJ21202
	ON-ON	AJ21211	AJ21212
	ON-OFF-ON	AJ21221	AJ21222
	ON-<ON>	AJ21231	AJ21232
	<ON>-OFF-<ON>	AJ21241	AJ21242
	ON-OFF-<ON>	AJ21251	AJ21252
2-pole	ON-OFF	AJ22201	AJ22202
	ON-ON	AJ22211	AJ22212
	ON-OFF-ON	AJ22221	AJ22222
	ON-<ON>	AJ22231	AJ22232
	<ON>-OFF-<ON>	AJ22241	AJ22242
	ON-OFF-<ON>	AJ22251	AJ22252
4-pole	ON-ON	AJ24211	AJ24212
	ON-OFF-ON	AJ24221	AJ24222
	ON-<ON>	AJ24231	AJ24232
	<ON>-OFF-<ON>	AJ24241	AJ24242
	ON-OFF-<ON>	AJ24251	AJ24252

Remarks: 1. Bracket type, PC-H terminals and PC-V terminals can be special ordered only if the order lot quantity is 50 pieces or higher.

a. When ordering please change the "1" at the end of the part number for the solder terminal type to one of the following numbers.

**Bracket type: 3; PC-H terminal: 4; PC-V terminal: 5**

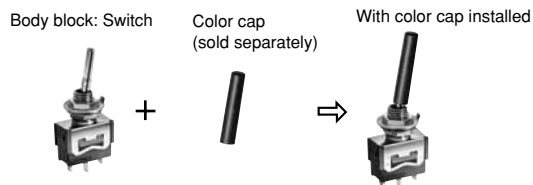
b. Only single pole and 2-pole types are available. Also, the ON-OFF type is only available in the bracket type.

2. Standard installation accessories are included with the product.

3. For UL and CSA certified products, please add a "9" at the end of the part number when ordering.

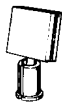
**Product configuration**

Please use body block "switch" with a color cap (sold separately).

**2) Accessories (Option) (AJ2 only)**

Product name	Dimensions (mm)	Part No.
Color cap for plastic long lever		AJ282*

Remark: Please specify the color cap color by replacing the asterisk in the part number with appropriate letter (W: white; B: black; R: red; Z: dark grey; H: light grey; L: blue; G: green; Y: yellow).

**3. Plastic flat lever****1) Body block**

Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal
		Part No.	Part No.
1-pole	ON-OFF	AJ21301	AJ21302
	ON-ON	AJ21311	AJ21312
	ON-OFF-ON	AJ21321	AJ21322
	ON-<ON>	AJ21331	AJ21332
	<ON>-OFF-<ON>	AJ21341	AJ21342
	ON-OFF-<ON>	AJ21351	AJ21352
2-pole	ON-OFF	AJ22301	AJ22302
	ON-ON	AJ22311	AJ22312
	ON-OFF-ON	AJ22321	AJ22322
	ON-<ON>	AJ22331	AJ22332
	<ON>-OFF-<ON>	AJ22341	AJ22342
	ON-OFF-<ON>	AJ22351	AJ22352
4-pole	ON-ON	AJ24311	AJ24312
	ON-OFF-ON	AJ24321	AJ24322
	ON-<ON>	AJ24331	AJ24332
	<ON>-OFF-<ON>	AJ24341	AJ24342
	ON-OFF-<ON>	AJ24351	AJ24352

Remarks: 1. Bracket type, PC-H terminals and PC-V terminals can be special ordered only if the order lot quantity is 50 pieces or higher.

a. When ordering please change the "1" at the end of the part number for the solder terminal type to one of the following numbers.

**Bracket type: 3; PC-H terminal: 4; PC-V terminal: 5**

b. Only single pole and 2-pole types are available. Also, the ON-OFF type is only available in the bracket type.

2. Standard installation accessories are included with the product.

3. For UL and CSA certified products, please add a "9" at the end of the part number when ordering.

**2) Accessories (Option) (AJ2 only)**

Product name	Dimensions (mm)	Part No.
Color cap for plastic flat lever		AJ283*

Remark: Please specify the color cap color by replacing the asterisk in the part number with appropriate letter (W: white; B: black; R: red; Z: dark grey; H: light grey; L: blue; G: green; Y: yellow).

# AJ1, AJ2

## 4. Metal flat lever



### 1) Solder terminal, PC board terminal and Bracket type

Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal	Bracket type
		Part No.	Part No.	Part No.
1-pole	ON-OFF	AJ21601	AJ21602	AJ21603
	ON-ON	AJ21611	AJ21612	AJ21613
	ON-OFF-ON	AJ21621	AJ21622	AJ21623
	ON-<ON>	AJ21631	AJ21632	AJ21633
	<ON>-OFF-<ON>	AJ21641	AJ21642	AJ21643
	ON-OFF-<ON>	AJ21651	AJ21652	AJ21653
2-pole	ON-OFF	AJ22601	AJ22602	AJ22603
	ON-ON	AJ22611	AJ22612	AJ22613
	ON-OFF-ON	AJ22621	AJ22622	AJ22623
	ON-<ON>	AJ22631	AJ22632	AJ22633
	<ON>-OFF-<ON>	AJ22641	AJ22642	AJ22643
	ON-OFF-<ON>	AJ22651	AJ22652	AJ22653
4-pole	ON-ON	AJ24611	AJ24612	—
	ON-OFF-ON	AJ24621	AJ24622	—
	ON-<ON>	AJ24631	AJ24632	—
	<ON>-OFF-<ON>	AJ24641	AJ24642	—
	ON-OFF-<ON>	AJ24651	AJ24652	—

### 2) PC-H terminal and PC-V terminal

Number of poles	Kind of operation < >: Momentary position	PC-H terminal	PC-V terminal
		Part No.	Part No.
1-pole	ON-OFF	—	—
	ON-ON	AJ21614	AJ21615
	ON-OFF-ON	AJ21624	AJ21625
	ON-<ON>	AJ21634	AJ21635
	<ON>-OFF-<ON>	AJ21644	AJ21645
	ON-OFF-<ON>	AJ21654	AJ21655
2-pole	ON-OFF	—	—
	ON-ON	AJ22614	AJ22615
	ON-OFF-ON	AJ22624	AJ22625
	ON-<ON>	AJ22634	AJ22635
	<ON>-OFF-<ON>	AJ22644	AJ22645
	ON-OFF-<ON>	AJ22654	AJ22655

Remarks: 1. Standard installation accessories are included with the product.  
2. For UL and CSA certified products, please add a "9" at the end of the part number when ordering.

## 5. Paddle and rocker

Paddle      Rocker



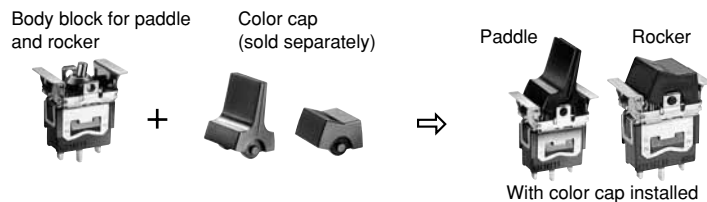
### 1) Body block

Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal	Bracket type
		Part No.	Part No.	Part No.
1-pole	ON-OFF	AJ21401	AJ21402	AJ21403
	ON-ON	AJ21411	AJ21412	AJ21413
	ON-OFF-ON	AJ21421	AJ21422	AJ21423
	ON-<ON>	AJ21431	AJ21432	AJ21433
	<ON>-OFF-<ON>	AJ21441	AJ21442	AJ21443
	ON-OFF-<ON>	AJ21451	AJ21452	AJ21453
2-pole	ON-OFF	AJ22401	AJ22402	AJ22403
	ON-ON	AJ22411	AJ22412	AJ22413
	ON-OFF-ON	AJ22421	AJ22422	AJ22423
	ON-<ON>	AJ22431	AJ22432	AJ22433
	<ON>-OFF-<ON>	AJ22441	AJ22442	AJ22443
	ON-OFF-<ON>	AJ22451	AJ22452	AJ22453

Remark: For UL and CSA certified products, please add a "9" at the end of the part number when ordering.

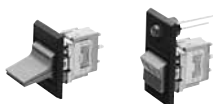
## Product configuration

Please use body block "switch" with a color cap (sold separately).



If a snap-in plate is needed, please use one of the separately sold snap-in plates shown below. We do not sell LED. Bracket type switches cannot be used with snap-in plates.

With snap-in plate installed



## 2) Accessories (Option)

Product name	Color cap for paddle	Color cap for rocker	Snap-in plate	Snap-in plate for LED
Dimensions (mm)				
Part No.	AJ284*	AJ285*	AJ271*	AJ272*

Remark: Please specify the color cap color by replacing the asterisk in the part number with appropriate letter (W: white; B: black; R: red; Z: dark grey; H: light grey; L: blue; G: green; Y: yellow).

## 6. Lever lock type



Number of poles	Kind of operation < >: Momentary position	Solder terminal	PC board terminal
		Part No.	Part No.
1-pole	ON-OFF	AJ211R01	AJ211R02
	ON-ON	AJ211R11	AJ211R12
	ON-OFF-ON	AJ211R21	AJ211R22
	ON-<ON>	AJ211R31	AJ211R32
	<ON>-OFF-<ON>	AJ211R41	AJ211R42
	ON-OFF-<ON>	AJ211R51	AJ211R52
2-pole	ON-OFF	AJ221R01	AJ221R02
	ON-ON	AJ221R11	AJ221R12
	ON-OFF-ON	AJ221R21	AJ221R22
	ON-<ON>	AJ221R31	AJ221R32
	<ON>-OFF-<ON>	AJ221R41	AJ221R42
	ON-OFF-<ON>	AJ221R51	AJ221R52
4-pole	ON-ON	AJ241R11	AJ241R12
	ON-OFF-ON	AJ241R21	AJ241R22
	ON-<ON>	AJ241R31	AJ241R32
	<ON>-OFF-<ON>	AJ241R41	AJ241R42
	ON-OFF-<ON>	AJ241R51	AJ241R52

Remarks: 1. Bracket type, PC-H terminals and PC-V terminals can be special ordered only if the order lot quantity is 50 pieces or higher.

a. When ordering please change the number "1" before the "F" in the part number for the soldered terminal type in the table above to one of the numbers below.

**Bracket type: 3; PC-H terminal: 4; PC-V terminal: 5**

b. Only single pole and 2-pole types are available. Also, the ON-OFF type is only available in the bracket type.

2. Standard installation accessories are included with the product.

3. Not certified for UL and CSA.

# AJ1, AJ2

## 7. Panel water-protected type



Number of poles	Kind of operation < >: Momentary position	Solder terminal		PC board terminal	
		Part No.	Part No.	Part No.	Part No.
1-pole	ON-OFF	AJ211W01		AJ211W02	
	ON-ON	AJ211W11		AJ211W12	
	ON-OFF-ON	AJ211W21		AJ211W22	
	ON-<ON>	AJ211W31		AJ211W32	
	<ON>-OFF-<ON>	AJ211W41		AJ211W42	
	ON-OFF-<ON>	AJ211W51		AJ211W52	
2-pole	ON-OFF	AJ221W01		AJ221W02	
	ON-ON	AJ221W11		AJ221W12	
	ON-OFF-ON	AJ221W21		AJ221W22	
	ON-<ON>	AJ221W31		AJ221W32	
	<ON>-OFF-<ON>	AJ221W41		AJ221W42	
	ON-OFF-<ON>	AJ221W51		AJ221W52	
4-pole	ON-ON	AJ241W11		AJ241W12	
	ON-OFF-ON	AJ241W21		AJ241W22	
	ON-<ON>	AJ241W31		AJ241W32	
	<ON>-OFF-<ON>	AJ241W41		AJ241W42	
	ON-OFF-<ON>	AJ241W51		AJ241W52	

Remarks: 1. Of the standard installation accessories that come with the product, the front hex nut and lock washer are included.  
2. Not certified for UL and CSA.

## 8. Special order lot products

(short toggle, long toggle, metal short flat lever, and metal long flat lever)

You can special order these products if the order lot quantity is 50 pieces or more. Please inquire.

## ORDERING INFORMATION

AJ2

Number of poles  
1: 1-pole 2: 2-pole 4: 4-pole

Shape of handle  
1S: Short toggle  
1L: Long toggle  
6S: Metal short flat lever  
6L: Metal long flat lever

Kind of operation  
0: ON-OFF 3: ON-OFF-<ON>  
1: ON-ON 4: <ON>-OFF-<ON>  
2: ON-OFF-ON 5: ON-OFF-<ON>

Terminal shape  
1: Solder 4: PC-H  
2: PC board 5: PC-V  
3: Bracket type

- ON-OFF type is only available with solder terminals, PC board terminals and bracket types for 1-pole and 2-pole.
- Bracket type, PC-H and PC-V terminals are only for 1-pole and 2-pole.
- For UL and CSA certified products, please add a "9" at the end of the part number when ordering.
- Standard installation accessories are included with the product

## 9. Standard installation accessories (repair parts)

Product name	Front hex nut (Nickel plated)	Back hex nut (Uni-chrome plated)	Keying washer	Lockwasher
Dimensions (Unit mm)				
Part number	AJ2081	AJ2082	AJ2083	AJ2084

Remark: A selling unit of each accessory is 10 pieces.

# SPECIFICATIONS

## 1. Contact rating

Kind of load	Type/Life						
	AJ1 (Ag alloy contact type)				AJ2 (Au clad contact type)		
	ON-OFF ON-ON	Electrical life	ON-OFF-ON ON-<ON> <ON>-OFF-<ON> ON-OFF-<ON>	Electrical life	1-pole and 2-pole	4-pole	Electrical life
Resistive load	7A 125V AC 4A 250V AC 6A 30V DC	3×10 <sup>4</sup>	7A 125V AC 4A 250V AC 6A 30V DC	10 <sup>4</sup>	6A 125V AC 3A 250V AC 6A 30V DC	4A 125V AC 2A 250V AC 4A 30V DC	3×10 <sup>4</sup>
Inductive load (cosφ = 0.6)	6A 125V AC 3A 250V AC	3×10 <sup>4</sup>	6A 125V AC 3A 250V AC	10 <sup>4</sup>	6A 125V AC 3A 250V AC	4A 125V AC 2A 250V AC	3×10 <sup>4</sup>
Incandescent lamp	100W 100V AC	10 <sup>4</sup>	—	—	—	—	—
Inrush load	20A 10ms Steady: 3A 125V AC	5×10 <sup>3</sup>	—	—	—	—	—
Low-level load	(Please use J2 type.)				1mA 5V DC		

## 2. Characteristics

Expected life (min. operations)	Mechanical (20 cpm)	10 <sup>5</sup>
	Electrical (20 cpm resistive)	See above
Insulation resistance (at 500V DC)	More than 100MΩ	
Breakdown voltage	Between contacts: 1,000 Vrms, Between terminals and ground: 1,500 Vrms, (Detection current: 10mA)	
Contact resistance (Initial)	For AJ1 type: Max. 10 mΩ (by voltage drop at 1 A, 2 to 4 V DC)	For AJ2 type: Max. 10 mΩ (by voltage drop at 0.1 A, 2 to 4 V DC)
Vibration resistance (Contact opening less than 10μs)	10 to 55 Hz at 1.5mm double amplitude	
Shock resistance (Contact opening less than 10μs)	Min. 490m/s <sup>2</sup>	
Temperature rise (at terminals)	Max. 45 deg.	
Ambient temperature	-25°C to +85°C (Not freezing below 0°C)	
Contact material	AJ1 type: AgZnO alloy, AJ2 type: AgNi alloy and Au clad	

## MOUNTING DIMENSIONS (for AJ1 type and AJ2 type)

### 1. Toggle and Lever type

Type	Toggle and Lever type (except panel water-protected type)			Panel water-protected type	
Panel cutout (mm)					
Panel thickness	Max. 2.4 mm	Max. 3.2 mm (without keying washer)	Max. 3.2 mm (without keying washer)	Max. 4.9 mm	Max. 4.9 mm
	Max. 4.5 mm (without back hex nut)	Max. 5.3 mm (without back hex nut and keying washer)	Max. 5.3 mm (without back hex nut and keying washer)		

Remark: A keying washer is not included with the panel water-protected type.

### 2. Paddle and Rocker type

	Installed alone	Adjacent installation with snap-in plate	Adjacent installation with snap-in plate for LED
Panel cutout (mm)			
Panel thickness	1 to 3.2mm	1 to 2.7mm	1 to 2.7mm

Remark: Adjacent installation is not possible unless a snap-in plate is used.

# AJ1, AJ2

## ELECTRICAL CIRCUIT DIAGRAM (for AJ1 type and AJ2 type)

Terminal arrangement (As seen from terminal side)		1-pole			2-pole			4-pole		
		Side with "Panasonic"			Side with "Panasonic"			Side with "Panasonic"		
Handle position and contact terminal number	ON-OFF		2-3	2-3, 5-6	—	—	—	—	—	
			—	—	—	—	—	—	—	
	ON-ON ON-<ON>		2-3	2-3, 5-6	2-3, 5-6, 8-9, 11-12					
			1-2	1-2, 4-5	1-2, 4-5, 7-8, 10-11					
	ON-OFF-ON <ON>-OFF-<ON> ON-OFF-<ON>		2-3	2-3, 5-6	2-3, 5-6, 8-9, 11-12					
			—	—	—					
		1-2	1-2, 4-5	1-2, 4-5, 7-8, 10-11						
Remark		ON-OFF type does not have a terminal No. 1.			ON-OFF type does not have terminal No. 1 and No. 4.			There is no ON-OFF type for the 4-pole type.		

Remark: For ON-<ON>, ON-OFF-<ON> type, the lever springs back (momentary position) when pushed toward the keyway side.

## HANDLE SHAPE (mm) (Tolerance: ±0.5)

### 1. Toggle and Lever type

Standard toggle	Standard toggle with color cap	Short toggle	Long toggle	Plastic long lever
Plastic flat lever	Metal flat lever	Metal short flat lever	Metal long flat lever	Lever lock type

### 2. Paddle and Rocker type

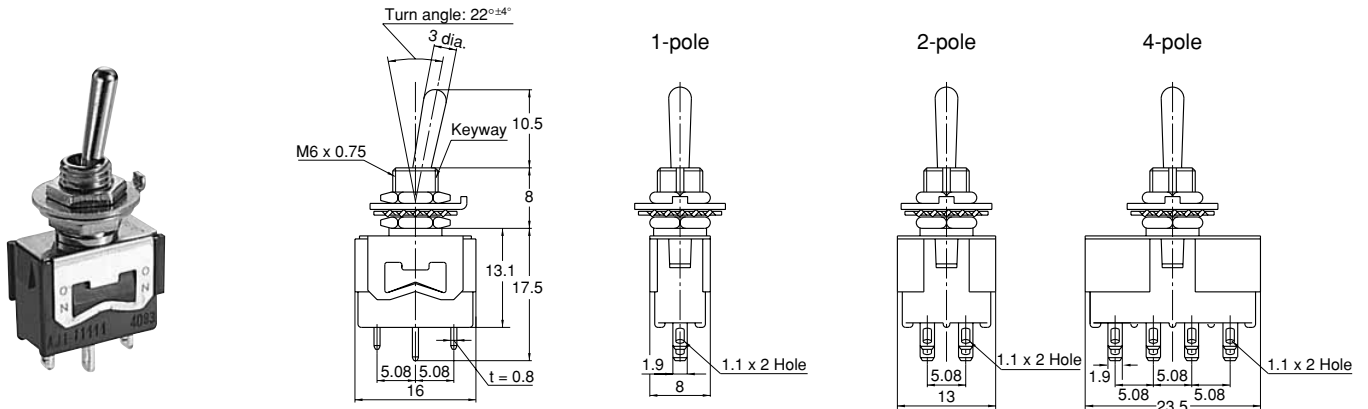
Paddle	Rocker



**DIMENSIONS** (mm) (for AJ1 type and AJ2 type) (General tolerance:  $\pm 0.5$ )

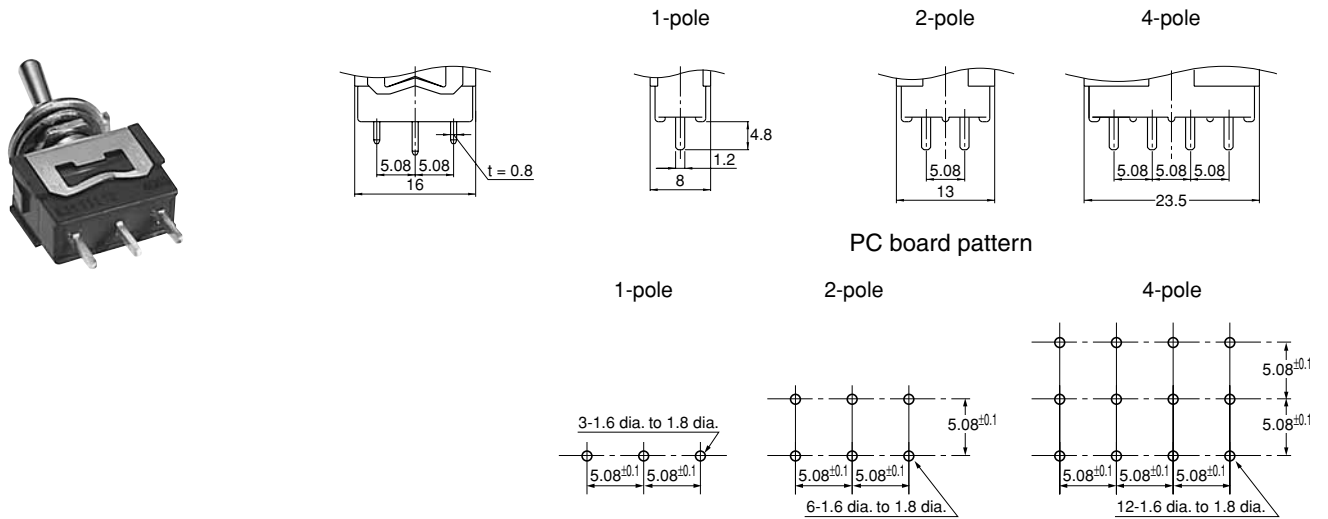
**1. Toggle and Lever type, Body and terminal shape (For standard toggle)**

1) Solder terminal



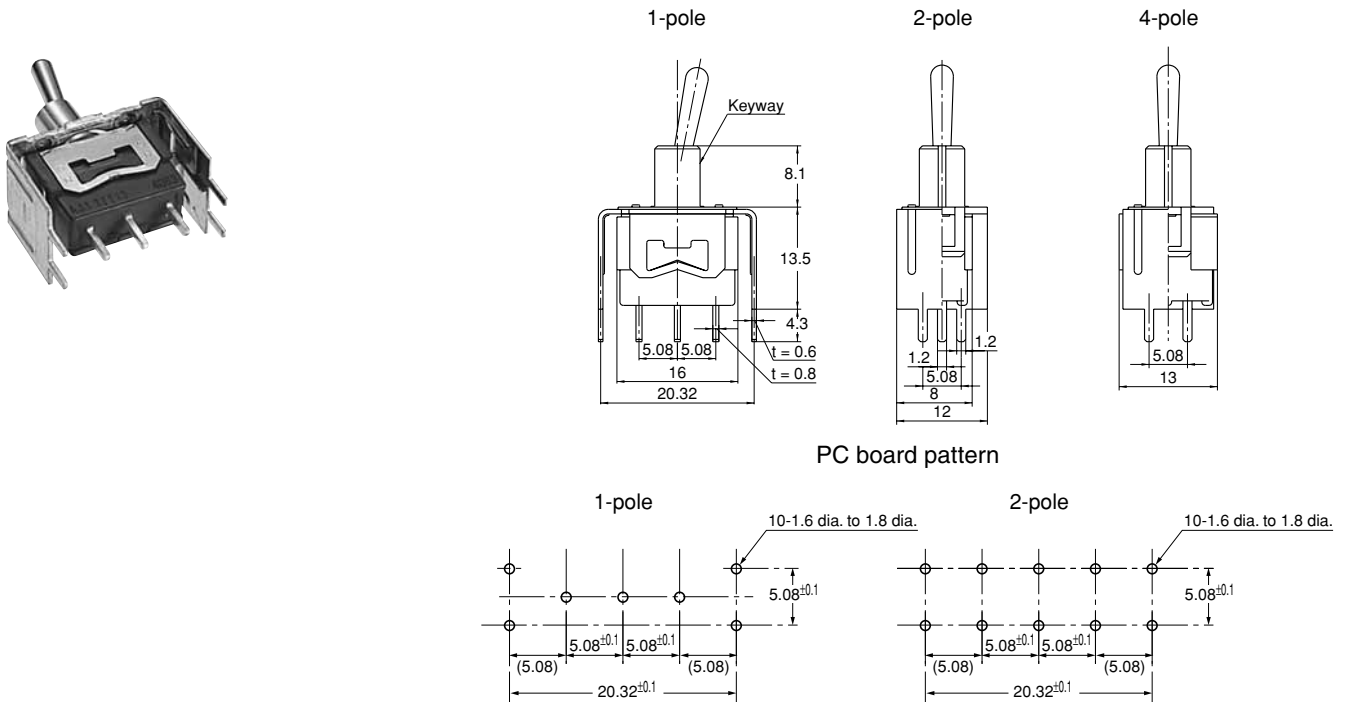
Remark: The waterproof panel type has an O-ring; therefore it does not have back hex nut "3". (\*1=7.6, \*2=13.5)

2) PC board terminal



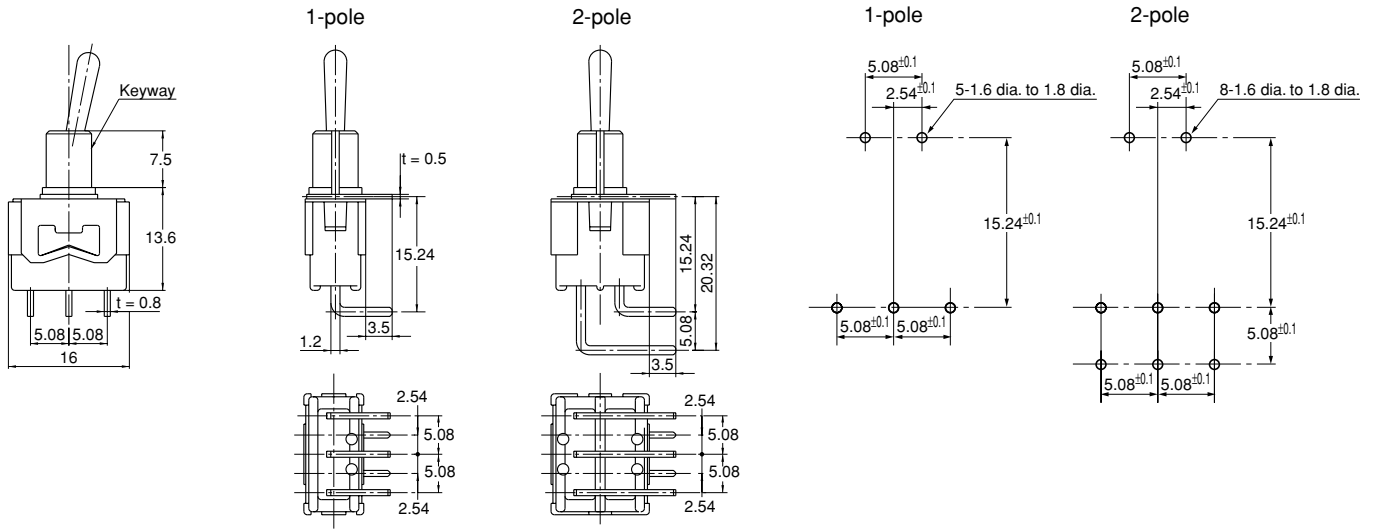
Remark: The main body dimensions are the same as the solder terminal type above.

3) Bracket type

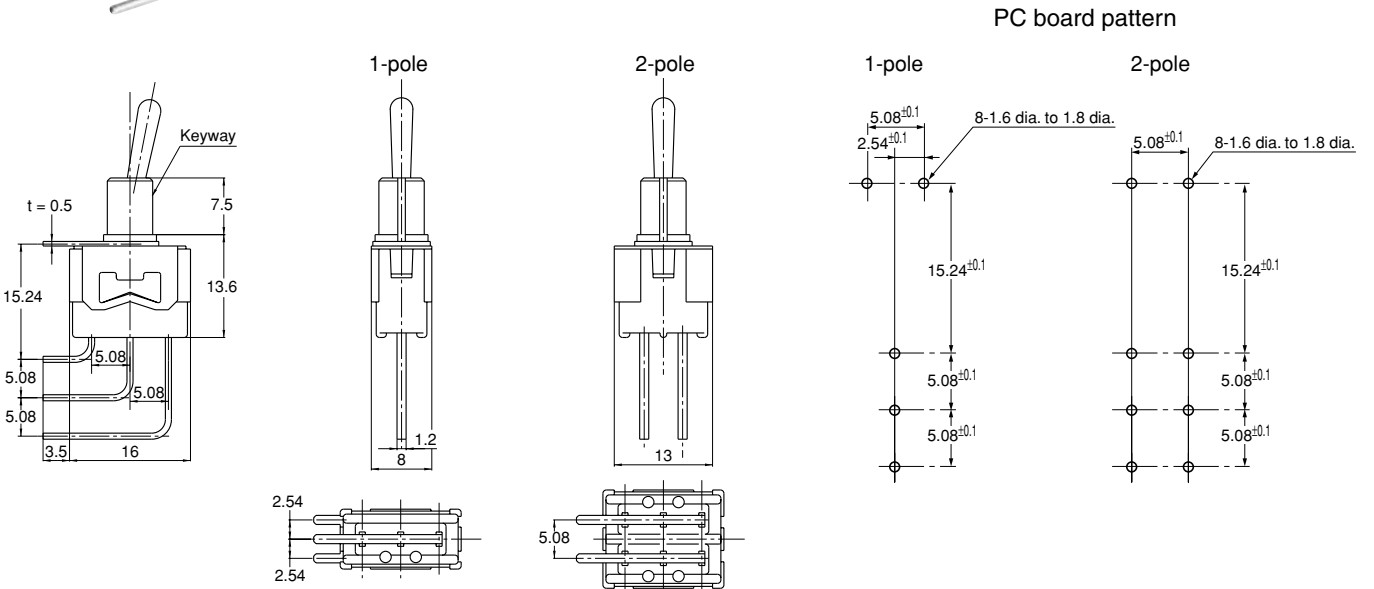


# AJ1, AJ2

## 4) PC-H terminal

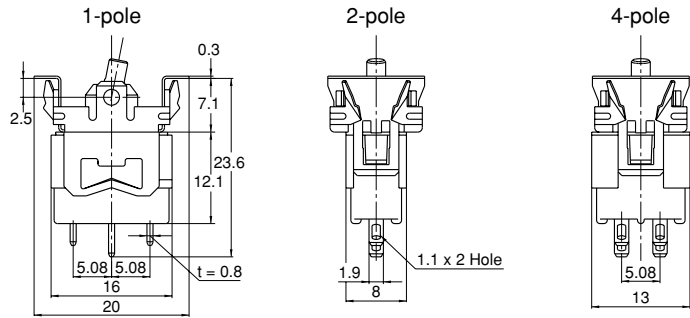


## 5) PC-V terminal



**2. Paddle and Rocker type, Body and terminal shape**

Solder terminal



Remark: The body and terminal shape of the PC board terminal and bracket types are the same as the toggle type.

**3. Panel water-protected type, Body and terminal shape**

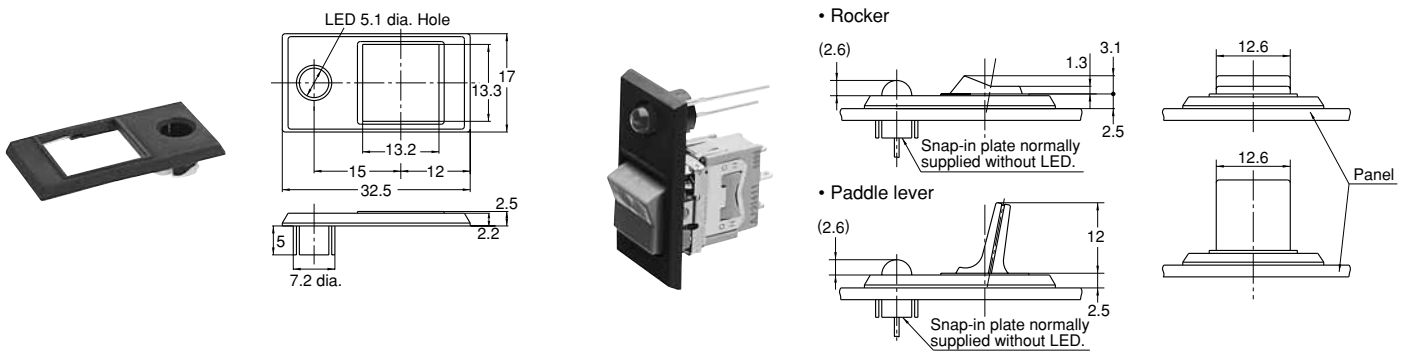
The water-protected type is only available in the standard toggle type. Please refer to the remarks for solder terminals.

**DIMENSIONS OF SNAP-IN PLATE (mm) (General tolerance: ±0.5)**

**1. Snap-in plate**



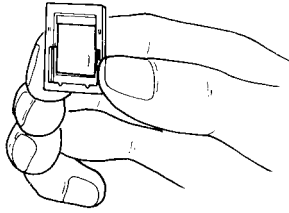
**2. Snap-in plate for LED**



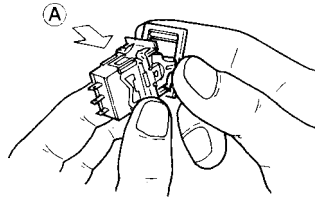
## HOW TO HANDLE SNAP-IN PLATE

### 1. Snap-in plate Mounting Method

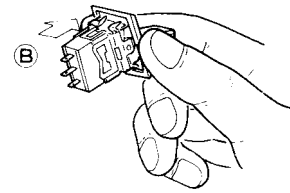
1) Hold a plate with spring groove down.



2) Put one side of mounting bracket of the switch into spring groove and push switch as indicated by arrow (A).

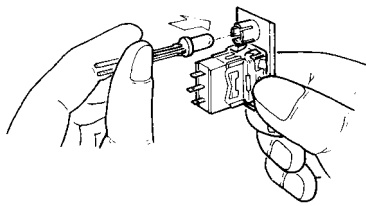


3) Push the switch in the direction (A) and snap it in as indicated by arrow (B). (Completed installation)

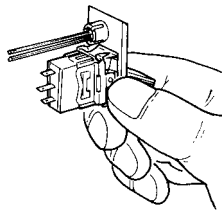


### 2. LED Mounting Method

1) Secure the switch and push the LED directly in the direction of the arrow.



2) Completed installation.



## NOTES

### 1. Panel installation

- 1) Do not tighten the nut, holding the switch.
- 2) Keep the panel tightening torque to less than 98.0 N·cm. However, for the waterproof panel type, use a torque of between 29.4 to 98.0 N·cm.

### 2. Soldering operations

- 1) For hand soldering 350°C soldering iron should be used with the soldering completed within 5 s. Force should not be applied to the terminal section. Also, care should be taken not to touch the body of the switch with the soldering iron.
- 2) When soldering is done with an automatic soldering bath, the soldering should be completed within 6 seconds at a bath temperature of 250°C and within 3 s at a bath temperature of 350°C.
- 3) Care should be taken not to move the terminal section within 1 min after the soldering has been completed. Also, sufficient care should be taken not to apply tensile load to the terminal section through the lead wires.

### 3. Static electricity

When switches are operated, if there is fear of damage to electronic components connected in the switch circuit due to static electricity generated by the human body, switches with colored caps should be used.

### 4. Color cap

In the color caps of the plastic long lever and flat lever types, when interchanging or removing the caps, strength is weakened. When an interchange is required, new color caps should be used.

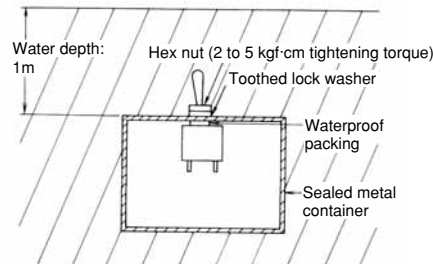
### 5.

For use in applications where the load is extremely small, or where the frequency of use is very low, type J2 which is provided with gold clad contacts should be used.

### 6. Waterproof panel type

- 1) Install the lock washer to the front side of the panel.
- 2) The waterproof panel type is only designed to seal the panel from water. It is not meant to be submerged in water.

#### Test of panel waterproofing



Conditions:  
 Water depth: 1m  
 Test time: 30 min.  
 Test condition: As shown in above figure.

### Criteria:

- 1) No entry of water into sealed container or inside of product.
- 2) Insulation resistance: at least 100 M $\Omega$  (at 500 V DC)

#### Measurement locations

- (1) Between each terminal in circuit
- (2) Between nozzle and all terminals
- 3) Breakdown voltage

(1) 1,000 V AC, 1 minute

(2) 1,500 V AC, 1 minute

Measurement locations are same as for insulation resistance.

### 7. Handle strength

Type	Handle strength (static load for 1 min.)
Standard toggle	68.6N
Short toggle	
Long toggle	
Plastic long lever	24.5N
Plastic flat lever	
Metal flat lever	39.2N
Metal short flat lever	
Metal long flat lever	
Paddle	19.6N
Rocker	
Lever lock type	49N
Panel water-protected type	68.6N

### 8. Environment

Avoid using and storing these switches in a location where they will be exposed to corrosive gases, silicon, or high dust levels, all of which can have an adverse effect on the contacts.