8 Series Pushbutton Switches

■Features

1. Contacts
Silver or gold-plated contacts.

2. Epoxy resin case
UL94V-0 self-extinguishing epoxy.

3. Actuator style
Over 30 actuator variations.

4. Insulation between terminal and ground: 4 mm minimum.

5. Prevention of flux entry
The epoxy resin seal on bottom of the switch helps prevent the entry of solder and flux.

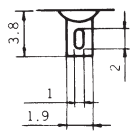
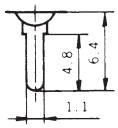
6. Insulation barrier:
Insulation barrier design between poles helps prevent short-circuiting between poles ensuring high reliability.

■ Specifications

Rating	Max. rating	6A 125VAC/3A 250VAC/4A 30VDC	
Initial contact resistance		10mΩmax. (1A 2～4VDC)	
Initial dielectric strength		1,500VAC 1 minute	
Initial insulation resistance		1,000MΩ min. (500VDC)	
Electrical life (Excluding **8R** & **8W**)		Alternate type	40,000 operations
		Momentary type	25,000 operations
Operating temperature range		−30℃～+85℃	
Storage temperature range		−40℃～+85℃	

(Excluding **8R** & **8W**. Specifications on 8R and 8W series are specified separately on P.264 and P.269.)

■ Terminal Styles

Solder (Style:**1**)	Straight (Style:**2**)
t=0.8 	t=0.8 

UL-Recognized, CSA certified Products (Pushbutton type Only)

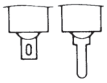
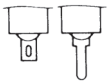
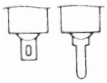
■Eight Switch Series

Poles	Switching function		UL (※2.)			CSA (※3.)		
			8N	**8P**	**8Y**	**8N**	**8P**	**8Y**
1 pole	**1011−Z**	ON − ON	○	○	○	○	○	○
	1012−Z		○	○		○	○	
	1021−Z	ON −(ON)	○		○	○		○
	1022−Z		○	○		○	○	
2 poles	**2011−Z**	ON − ON	○	○	○	○	○	○
	2012−Z		○	○		○	○	
	2021−Z	ON −(ON)	○	○	○	○	○	○
	2022−Z		○	○		○	○	
3 poles	**3011−Z**	ON − ON	○	○	○	○	○	○
	3021−Z	ON −(ON)	○	○	○	○	○	○
4 poles	**4011−Z**	ON − ON	○	○	○	○	○	○
	4021−Z	ON −(ON)	○	○	○	○	○	○

(※2.) **UL File No.E43275**
(※3.) **CSA File No.LR38341**

If **UL** or **CSA** marking is required, please specify when ordering.

8 Series Pushbutton Switches Selection Table

Part No.	Name	Actuator shape	Number of poles	Switching function	Terminal style	Page
8N	Standard Pushbutton		1.2.3.4	ON — ON ON — (ON)	 S/D Solder P/C Straight	**261**
8P	Splash Proof Pushbutton		1.2	ON — ON ON — (ON)	 S/D Solder	**263**
8Y	Mustang Pushbutton		1.2.3	ON — ON ON — (ON)	 S/D Solder	**265**
8R-N	Soft Touch Pushbutton		1.2	ON — ON ON — (ON)	 S/D Solder P/C Straight	**267**
8W-N	Snap-in Pushbutton		1.2	ON — (ON)	 S/D Solder P/C Straight	**269**

■Part Numbering

8 **N** **1** **01** **1** **B** — **Z**

- **8**: Series code
- **N**: Actuator shape
- **1**: Number of poles
- **01**: Switching function
- **1**: Terminal style
- **B**: (※1) Contact plating and material

Code	Actuator
N	Standard
P	Splash proof
Y	Mustang
R	Soft Touch
W	Snap-in

Fig.	Number of poles
1	1
2	2
3	3
4	4

Fig.	Switching function
01	ON — ON
02	ON — (ON)

Fig.	Terminal style
1	Solder
2	PC/Straight

Code	Contact material	Plating
None	Bs+Ag or Cu+Ag	Ag
B	Bs or Cu	Ni+Au
C	Bs+Ag or Cu+Ag	Ni+Au

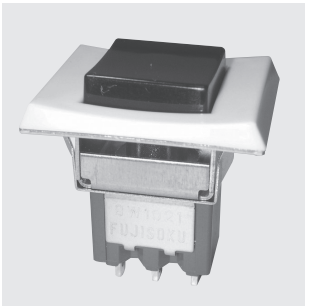
※1 Bs= Brass
Cu= Copper
Ag= Silver
Ni= Nickel
Au= Gold

Note : Some combinations may not be available. Please check the "**Table of Part Numbers**" for each series.

(ON) : Momentary.

8W-N

Snap-in Pushbutton Switches



RoHS compliant

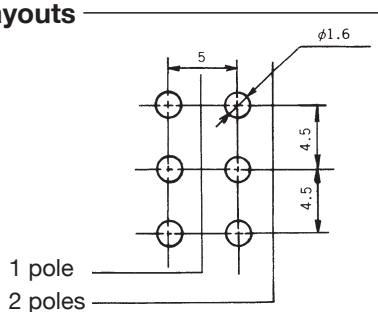
■Features

The **8W** Snap-in Pushbutton switch is an **8R** Soft Touch Pushbutton switch with a 12 mm square **button** and a **mounting frame**.
The panel cut-out dimensions are the same as the **8H** series Lever & Rocker switcheswhich enables side-by-side mounting.
Buttons and **mounting frames** are available in 4 colors.

■ Specifications

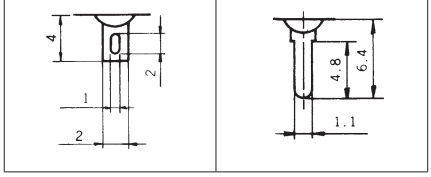
Rating	Silver plated	3A 125VAC (Resistive load)	
	Gold plated	Max. 60mA 30VDC (Resistive load)	
Initial contact resistance	Silverplated	10mΩ max.(1A 2～4VDC)	
	Gold plated	20mΩ max.(5mA 200μVAC)	
Initial dielectric strength	1,000VAC 1 minute		
Initial insulation resistance	1,000MΩ min. (500VDC)		
Electrical life	25,000 operations (50,000 operations:Gold plate)		
Operating temperature range	−20℃～+85℃		
Storage temperature range	−40℃～+85℃		
Operating force	**8W102■−N−Z**	2.94±0.98N	
	8W202■−N−Z	$4.9\pm^{1.96}_{0.98}$N	

■PC Hole Layouts



■Terminal Styles

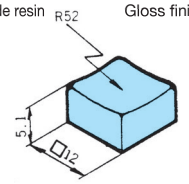
Solder(Style:**1**)	PC(Style:**2**)
t=0.8	t=0.8



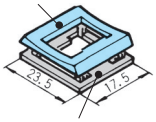
■Standard Accessories

《Supplied with switch》

Button		
Dimensions	Color	Part No.
Polyamide resin Gloss finish R52	White	**140000480634**
	Red	**140000480639**
	Black	**140000480640**
	Gray	**140000480641**



Mounting Frame		
Dimensions	Color	Part No.
Polyamide resin Gloss finish	White	**140000340135 +140000600181**
	Red	**140000340136 +140000600181**
	Black	**140000340137 +140000600181**
	Gray	**140000340138 +140000600181**



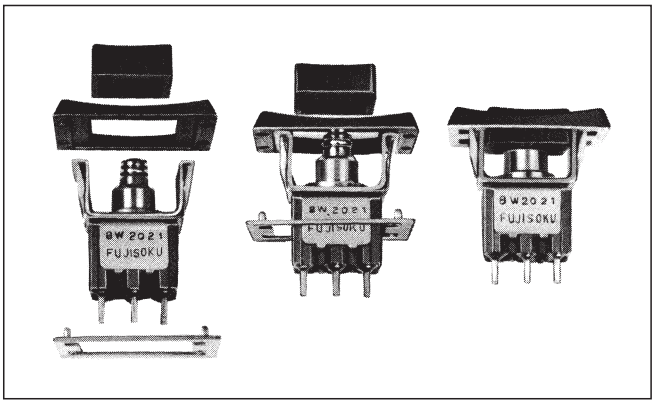
Stainless-steel plate

●Please specify the Button and the Mounting Frame when ordering.

■Table of Part Numbers

Terminal style	ploe / Switching function	1 pole	2 poles
S/D	ON — (ON)	**8W1021−N−Z**	**★8W2021−N−Z**
P/C	ON — (ON)	**★8W1022B−N−Z**	——

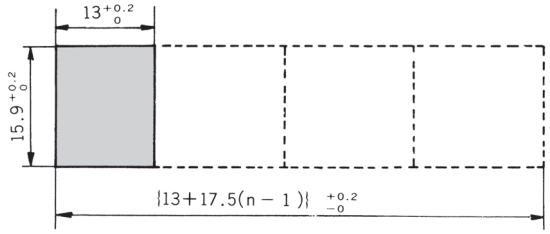
■Button and Mounting Frame Installation



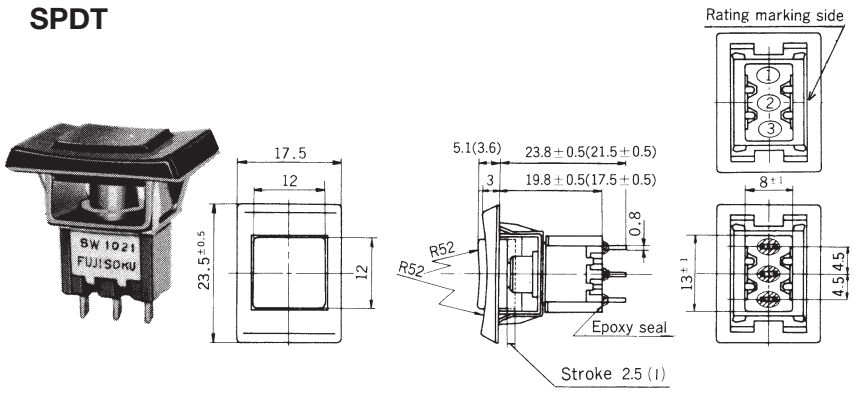
○Specify part number of **Button** and **Mounting Frame** when ordering.

■Panel Cut-Out Dimensions

Panel thickness (with **Mounting Frame**) : 1 mm to 2.5 mm



SPDT



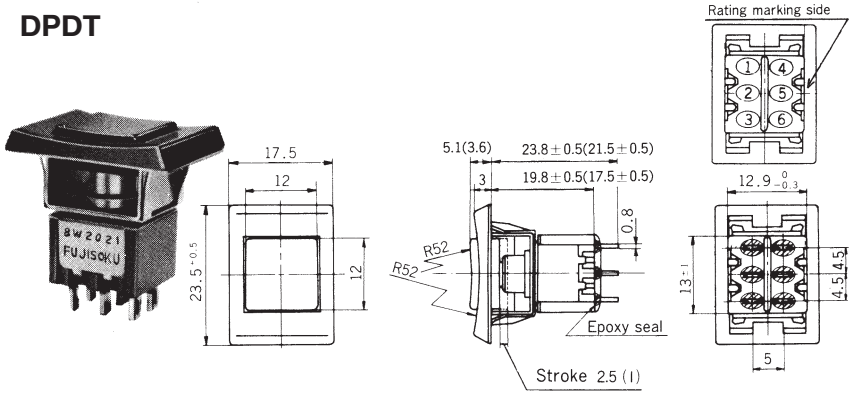
Terminal numbers are not shown on the switch.

Part No. \ Switching function		
8W102■−N−Z	ON	(ON)
Connecting terminals	3−2	3−1

※ : The circuit switches each time the switch button is pressed.

■ : Please refer to "Table of Part Numbers" above for a list of full part numbers.

DPDT



Terminal numbers are not shown on the switch.

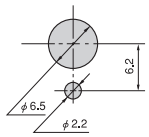
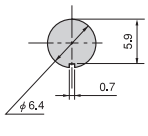
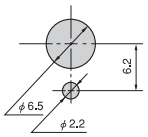
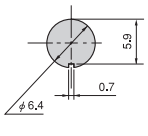
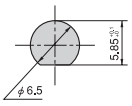
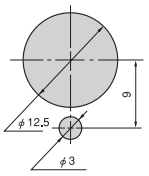
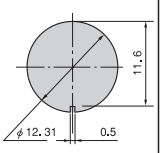
Part No. \ Switching function		
8W202■−N−Z	ON	(ON)
Connecting terminals	3−2 6−5	3−1 6−4

※ : The circuit switches each time the switch button is pressed.

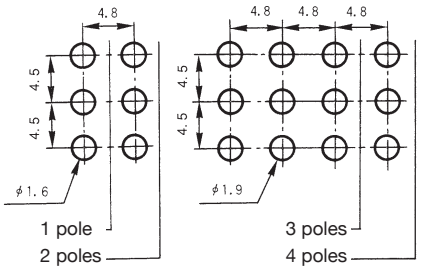
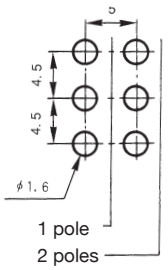
■ : Please refer to "Table of Part Numbers" above for a list of full part numbers.

(ON) : Momentary. ★ : Made to order products.

■Panel Cut-Out Dimensions

Series	8N		8R		8P	8Y	
Panel thickness	1.5 mm Max.	2.5 mm Max.	2 mm Max.	3 mm Max.	4.5 mm Max.	5 mm Max.	6 mm Max.
Dimensions							
	With **Locking Ring**	Without **Locking Ring**	With **Locking Ring**	Without **Locking Ring**		With **Locking Ring**	Without **Locking Ring**

■PC Hole Layouts

Series	8N・8P	8R・8W
Dimensions		
	1 pole 2 poles 3 poles 4 poles	1 pole 2 poles

■Precautions (8N・8P・8R・8W・8Y)

1. Soldering Specifications

(1)Manual soldering

Device : Solder iron

①420℃ Max. 3 sec. Max.

(2)Auto soldering

②The above-stated soldering conditions shall apply only to switches with straight terminals. Auto soldering is not possible with right-angle terminals. Switches with right-angle terminals should be soldered manually according to the conditions specified in (1) above.

(3)When putting the switches through an aging process after they were soldered onto the printing board or after installed into a complete end product, be sure to remove the buttons ofthe switches.,

2. Mounting

- Do not bend the terminals before mounting the switch on the PC board.
- After mounting the switch, do not place the device in such a way that the device weight will be applied on to the actuator of the switch.
- For switches with straight terminals, solder the switch on the PC board after fixing the switch on the panel with a nut.

3. Flux Cleaning

(1)Solvent : Fluorine or Alcohol type.

(2)**8A/B/C/D/E/F/J/S** series are not washable. To wash the PC board, clean the soldering surface of the PC board with a brush so that the switch is not exposed to the cleaning solution.

■Packaging Specification

Perforated Plastic Bag 25 pcs/pack