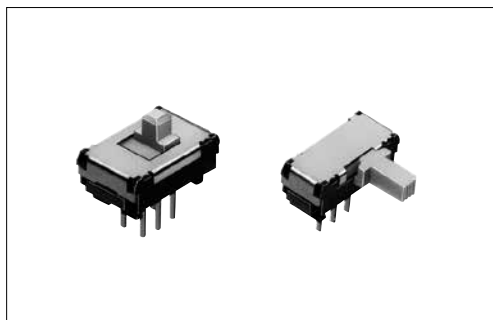


SSSS9 5(H)mm, 2mm-travel Type

Mid-size general purpose type well established for user friendliness



Typical Specifications



Items		Specifications	
Rating (max.)/(min.) (Resistive load)		0.1A 12V DC / 1mA 5V DC	
Contact resistance (Initial performance / After lifetime)		30mΩ max. / 80mΩ max.	
Operating force		2-position	3-position
		3±1.5N	a, c → b 2±1N b → a, c 3±1.5N
Operating life	Without load	10,000 cycles	
	With load	10,000 cycles (0.1A 12V DC)	

Product Line

Travel (mm)	Actuator direction	Actuator length (mm)	Poles	Positions	Mounting method	Changeover timing	Soldering	Minimum order unit (pcs.)		Products No.	Drawing No.			
								Japan	Export					
2	Vertical	2	1	2	Standard	Non shorting	Manual, Dip	1,000	5,000	SSSS912000	1			
					Snap-in (t1.6)					SSSS910400	2			
				3	Standard	Not specified				SSSS919500	3			
					Snap-in (t1.6)					SSSS918500	4			
			2	2	Standard	Non shorting				SSSS922000	5			
				3		Not specified		800	4,000	SSSS921800	6			
		4	1	2	Standard	Non shorting		1,000	5,000	SSSS912500	1			
					Snap-in (t1.6)					SSSS910800	2			
				3	Standard	Not specified				SSSS919800	3			
					Snap-in (t1.6)					SSSS918700	4			
			2	2	Standard	Non shorting				SSSS922500	5			
				3		Not specified		800	4,000	SSSS923200	6			
	Horizontal	2	1	2	Standard	Non shorting		1,000	5,000	SSSS916900	8			
					Snap-in (t1.6)					SSSS915001	9			
				3	Standard	Not specified				SSSS91B900	10			
						Not specified				SSSS926400	12			
			2	2	Standard	Non shorting		800	4,000	SSSS928500	14			
				3		Not specified				SSSS916400	8			
		4												

Packing Specifications

Bulk

Products No.	Number of packages (pcs.)		Export package measurements (mm)
	1 case / Japan	1 case / export packing	
SSSS921800, SSSS923200, SSSS920600, SSSS928500, SSSS928200, SSSS925701	800	4,000	400×270×290
SSSS912000, SSSS910800, SSSS926400, SSSS910400, SSSS919800, SSSS916400, SSSS919500, SSSS918700, SSSS914503, SSSS918500, SSSS922500, SSSS91B600, SSSS922000, SSSS916900, SSSS91A601, SSSS912500, SSSS915001, SSSS925800, SSSS91B900, SSSS923802	1,000	5,000	

Dimensions

Vertical Actuator Type

Unit:mm

No.	Style	PC board mounting hole dimensions (Viewed from direction A)
1	1-pole, 2-position Standard type	
2	1-pole, 2-position Snap-in type	
3	1-pole, 3-position Standard type	

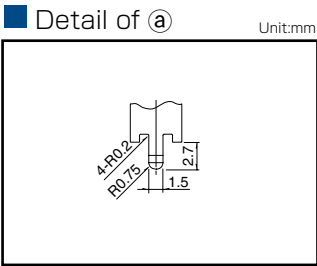
SSSS9 5(H)mm, 2mm-travel Type

■ Dimensions

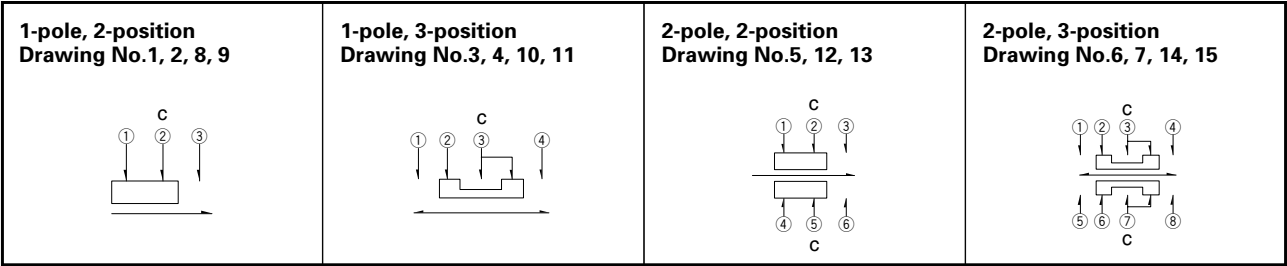
Horizontal Actuator Type

Unit:mm

No.	Style	PC board mounting hole dimensions (Viewed from direction A)
12	2-pole, 2-position Standard type	
13	2-pole, 2-position Snap-in type	
14	2-pole, 3-position Standard type	
15	2-pole, 3-position Snap-in type	



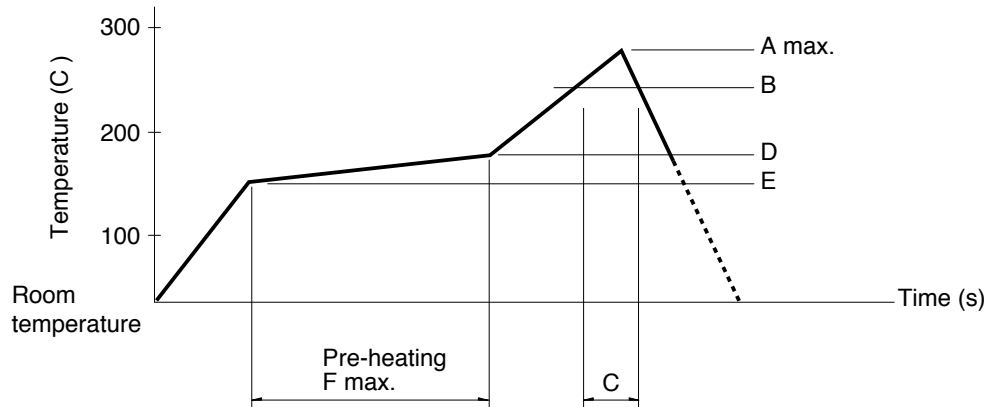
■ Circuit Diagram (Viewed from Direction A)



Series			SSSS2※	SSSS9	SSAC	SSSF	SSSU
Photo							
Actuator direction	Horizontal		●	●	●	●	●
	Vertical		●	●	—	●	●
Poles-positions	1-2		●	●	—	●	●
	1-3		●	●	—	●	●
	1-4		●	—	—	—	—
	2-2		●	●	●	●	●
	2-3		●	●	●	●	●
	2-4		●	—	—	—	—
	4-2		—	—	—	●	●
Travel (mm)			2	2	1.5	2	3
Operating temperature range			-40℃ to +85℃		-10℃ to +60℃	-40℃ to +85℃	
Automotive use			—	—	—	—	—
Life cycle							
Rating (max.) (Resistive load)			0.3A 6V DC	0.1A 12V DC	1mA 5V DC	0.1A 30V DC	
Rating (min.) (Resistive load)			50μA 3V DC	1mA 5V DC	50μA 3V DC		
Durability	Operating life without load		10,000 cycles 100mΩ max.※	10,000 cycles 60mΩ max.	10,000 cycles 200mΩ max.	10,000 cycles 45mΩ max.	
	Operating life with load Load: as rating		10,000 cycles 130mΩ max.※	10,000 cycles 80mΩ max.		10,000 cycles 65mΩ max.	
Electrical performance	Initial contact resistance		70mΩ max.	30mΩ max.	100mΩ max.	25mΩ max.	
	Insulation resistance		100MΩ min. 500V DC		100MΩ min. 100V DC	100MΩ min. 500V DC	
	Voltage proof		500V AC for 1minute		100V AC for 1minute	500V AC for 1minute	
Mechanical performance	Terminal strength		3N for 1minute		5N for 1minute		
	Actuator strength	Operating direction	20N	30N	5N	30N	
		Pulling direction	10N				
Environmental performance	Cold		-20℃ 500h	-40℃ 500h	-20℃ 96h	-40℃ 500h	
	Dry heat		85℃ 500h		85℃ 96h	85℃ 500h	
	Damp heat						

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple ϕ 0.1 to 0.2 CA (K) or CC (T) at soldering portion (copper foil surface).
A heat resisting tape should be used for fixed measurement.
3. Temperature profile



Series (Reflow type)			A (°C) 3s max.	B (°C)	C (s)	D (°C)	E (°C)	F (s)
SSSS2	Vertical	1-pole, 3-position	260	230	40	180	150	120
	Horizontal	1-pole, 2-position 1-pole, 3-position 2-pole, 3-position						
	Vertical	1-pole, 2-position	250					
SSSS7			260					
SSAH, SSAG, SSAJ, SSAL, SSSS8			260					

Notes

1. The condition mentioned above is the temperature on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the PC board's material, size, thickness, etc.
The above-stated conditions shall also apply to switch surface temperatures.
2. Soldering conditions differ depending on reflow soldering machines. Prior verification of soldering condition is highly recommended.

Reference for Hand Soldering

Series	Soldering temperature	Soldering time
SSSF, SSSU	350±10°C	3+1/0s
SSSS2	350±10°C	4s max.
SSSS9	350±10°C	3s max.
SSAH, SSAG, SSAJ, SSAL	350±5°C	3s max.
SSSS8	330±5°C	3s max.
SSSS7	320±5°C	3s max.
SSAC	300±10°C	2s max.

Reference for Dip Soldering

(For PC board terminal types)

Series	Items		Dip soldering	
	Preheating temperature	Preheating time	Soldering temperature	Duration of immersion
SSSS2	100°C max.	60s max.	260±5°C	3±1s
SSSS9	120°C max.	60s max.	260±5°C	5+0/-1s (2 times)
SSSF, SSSU	100°C max.	60s max.	260±5°C	10±1s/5±1s
SSAC	100°C max.	60s max.	260±5°C	5±1s

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ALPS:

<u>SSSS920600</u>	<u>SSSS910800</u>	<u>SSSS918500</u>	<u>SSSS910400</u>	<u>SSSS918700</u>	<u>SSSS922500</u>	<u>SSSS922000</u>	<u>SSSS926400</u>
<u>SSSS912500</u>	<u>SSSS919800</u>	<u>SSSS921800</u>	<u>SSSS925800</u>	<u>SSSS916900</u>	<u>SSSS912000</u>	<u>SSSS928500</u>	<u>SSSS923200</u>
<u>SSSS91B900</u>	<u>SSSS916400</u>	<u>SSSS919500</u>	<u>SSSS91B600</u>	<u>SSSS928200</u>	<u>SSSS91A601</u>	<u>SSSS923802</u>	<u>SSSS925701</u>
<u>SSSS915001</u>	<u>SSSS914503</u>						