

Long life recoil type meeting more compact and low-profile needs



Typical Specifications

Items		Specifications
Rating (max.)/(min.) (Resistive load)		10mA 5V DC / 50μA 3V DC
Contact resistance (Initial performance / After lifetime)		200mΩ max. / 500mΩ max.
Operating force		1N (Recoil side) 1.5N (Lock side)
Operating life	Without load	100,000 cycles (Recoil side) 30,000 cycles (Lock side)
	With load	100,000 cycles (Recoil side) 30,000 cycles (Lock side) (10mA 5V DC)

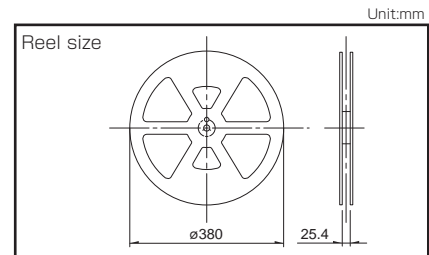
Product Line

Travel (mm)	Operating section directions	Poles	Positions	Changeover timing	Soldering	Operating	Shape of flame leg	Location lug	Minimum order unit (pcs.)		Products No.	Drawing No.		
									Japan	Export				
1.5	Horizontal	1	3	Not specified	Reflow	Left-side recoil	For PC board insert	Without	4,000	16,000		SSAG130100	1	
								With				SSAG130200		
							Flat	Without				SSAG130300	2	
								With				SSAG130400		
							Right-side recoil	For PC board insert				Without	SSAG230100	3
												With	SSAG230200	
						Flat		Without	SSAG230300	4				
								With	SSAG230400					
						Double-side recoil		For PC board insert	Without	SSAG330100	5			
									With	SSAG330200				
							Flat	Without	SSAG330300	6				
								With	SSAG330400					

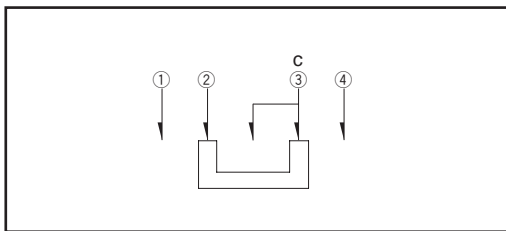
Packing Specifications

Taping

Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
1 reel	1 case /Japan	1 case /export packing		
4,000	8,000	16,000	24	428×413×172



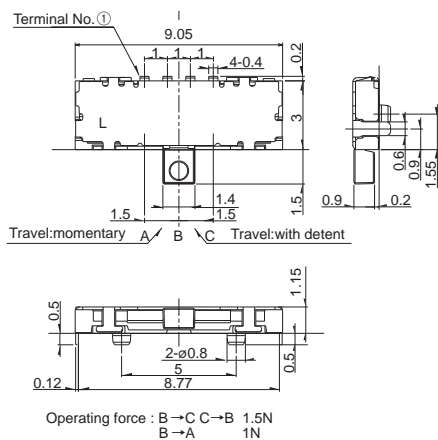
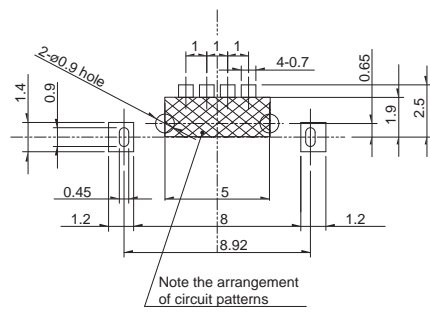
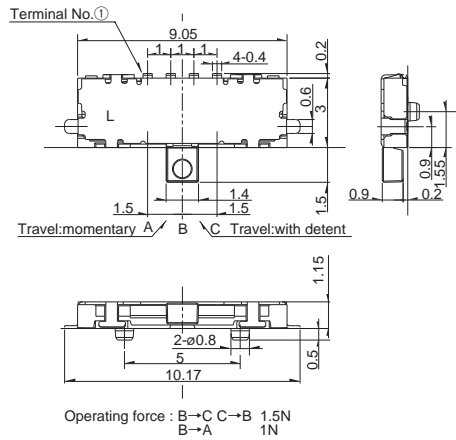
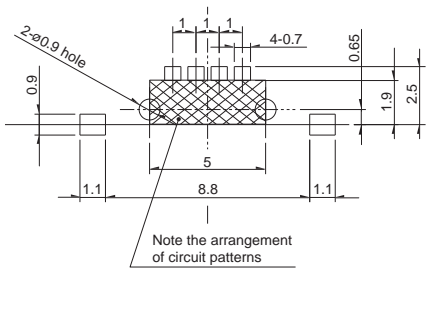
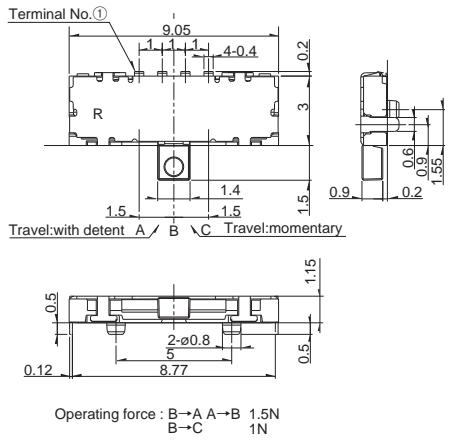
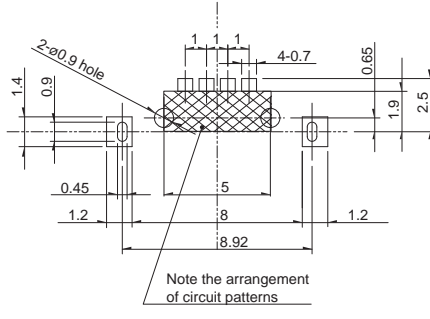
Circuit Diagram (Viewed from Direction A)



Detector
Slide
Push
Rotary
Power
Dual-in-line Package Type
Small size General Use Type
Big size General Use Type

Dimensions

Unit:mm

No.	Style	PC board mounting hole and land dimensions (Viewed from the direction A)
1	<p>With boss</p>  <p>Terminal No.①</p> <p>Travel:momentary A / B \ C Travel:with detent</p> <p>Operating force : B→C C→B 1.5N B→A 1N</p>	 <p>Note the arrangement of circuit patterns</p>
2	<p>With boss</p>  <p>Terminal No.①</p> <p>Travel:momentary A / B \ C Travel:with detent</p> <p>Operating force : B→C C→B 1.5N B→A 1N</p>	 <p>Note the arrangement of circuit patterns</p>
3	<p>With boss</p>  <p>Terminal No.①</p> <p>Travel:with detent A / B \ C Travel:momentary</p> <p>Operating force : B→A A→B 1.5N B→C 1N</p>	 <p>Note the arrangement of circuit patterns</p>

Detector

Slide

Push

Rotary

Power

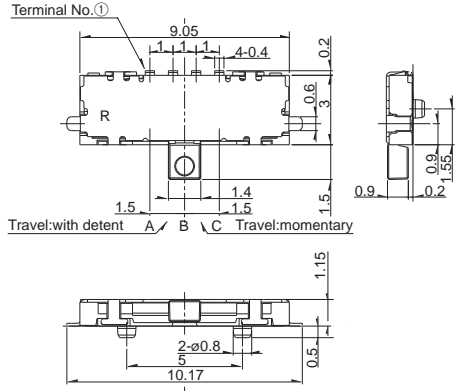
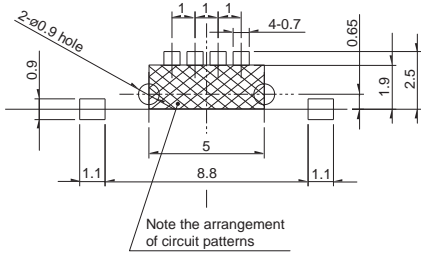
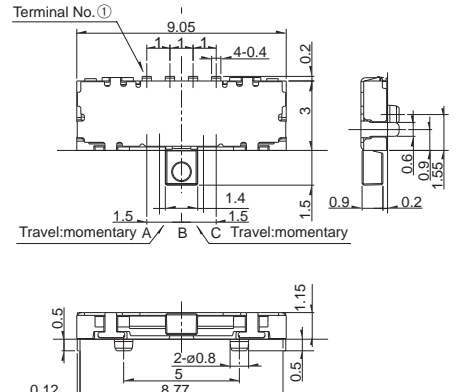
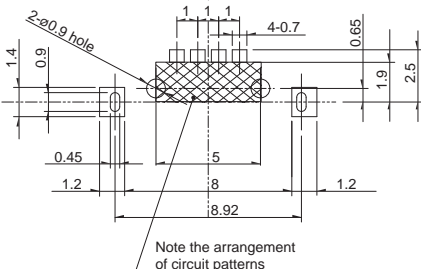
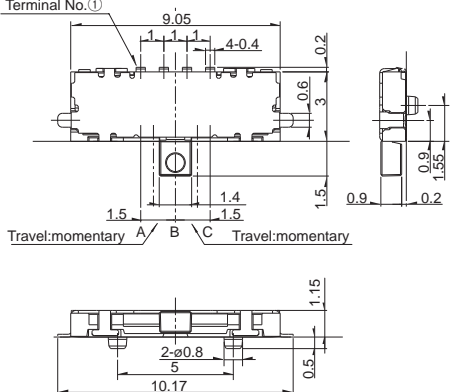
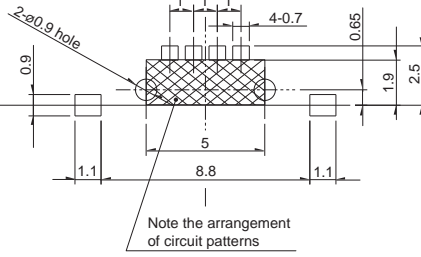
Dual-in-line
Package Type

Small size
General Use Type

Big size
General Use Type

Dimensions

Unit:mm

No.	Style	PC board mounting hole and land dimensions (Viewed from the direction A)
4	<p>With boss</p>  <p>Terminal No. ①</p> <p>9.05</p> <p>4-0.4</p> <p>0.2</p> <p>0.6</p> <p>3</p> <p>1.5</p> <p>1.4</p> <p>1.5</p> <p>1.5</p> <p>1.15</p> <p>2-φ0.8</p> <p>5</p> <p>10.17</p> <p>0.5</p> <p>0.9</p> <p>0.9</p> <p>1.55</p> <p>0.2</p> <p>Travel: with detent A/B/C</p> <p>Travel: momentary</p> <p>Operating force : B→A→B 1.5N B→C 1N</p>	 <p>2-φ0.9 hole</p> <p>0.9</p> <p>1.1</p> <p>5</p> <p>8.8</p> <p>1.1</p> <p>1.9</p> <p>2.5</p> <p>0.65</p> <p>4-0.7</p> <p>Note the arrangement of circuit patterns</p>
5	<p>With boss</p>  <p>Terminal No. ①</p> <p>9.05</p> <p>4-0.4</p> <p>0.2</p> <p>0.6</p> <p>3</p> <p>1.5</p> <p>1.4</p> <p>1.5</p> <p>1.5</p> <p>1.15</p> <p>2-φ0.8</p> <p>5</p> <p>8.77</p> <p>0.5</p> <p>0.12</p> <p>0.9</p> <p>0.9</p> <p>1.55</p> <p>0.2</p> <p>Travel: momentary A/B/C</p> <p>Travel: momentary</p> <p>Operating force : B→A B→C 1N</p>	 <p>2-φ0.9 hole</p> <p>1.4</p> <p>0.9</p> <p>1.2</p> <p>5</p> <p>8.92</p> <p>1.2</p> <p>1.9</p> <p>2.5</p> <p>0.65</p> <p>4-0.7</p> <p>Note the arrangement of circuit patterns</p>
6	<p>With boss</p>  <p>Terminal No. ①</p> <p>9.05</p> <p>4-0.4</p> <p>0.2</p> <p>0.6</p> <p>3</p> <p>1.5</p> <p>1.4</p> <p>1.5</p> <p>1.5</p> <p>1.15</p> <p>2-φ0.8</p> <p>5</p> <p>10.17</p> <p>0.5</p> <p>0.9</p> <p>0.9</p> <p>1.55</p> <p>0.2</p> <p>Travel: momentary A/B/C</p> <p>Travel: momentary</p> <p>Operating force : B→A B→C 1N</p>	 <p>2-φ0.9 hole</p> <p>0.9</p> <p>1.1</p> <p>5</p> <p>8.8</p> <p>1.1</p> <p>1.9</p> <p>2.5</p> <p>0.65</p> <p>4-0.7</p> <p>Note the arrangement of circuit patterns</p>

Note

Dimensions drawing is for type with location lugs.

Detector

Slide

Push

Rotary

Power

Dual-in-line
Packager Type

Small size
General Use Type











Big size
General Use Type

Slide Switches

List of Varieties

Detector
Slide
Push
Rotary
Power
Dual-in-line Package Type

Small size General Use Type
Big size General Use Type

Series		SSAJ	SSSS8	SSAL	SSAG	SSSS7
Photo						
Actuator direction	Horizontal	●	●	●	●	●
	Vertical	—	●	—	—	—
Poles-positions	1-2	●	●	●	—	●
	1-3	—	●	—	●	●
	1-4	—	—	—	—	—
	2-2	—	●	—	—	—
	2-3	—	●	—	—	—
	2-4	—	—	—	—	—
	4-2	—	—	—	—	—
Travel (mm)		1.4	1.5, 2	2	1.5	2
Operating temperature range		-10°C to +60°C	-40°C to +85°C	-10°C to +60°C		-40°C to +85°C
Automotive use		—	—	—	—	—
Life cycle						
Rating (max.) (Resistive load)		10mA 5V DC	0.3A 5V DC	10mA 5V DC		0.3A 4V DC
Rating (min.) (Resistive load)		50μA 3V DC				
Durability	Operating life without load	10,000 cycles 500mΩ max.	10,000 cycles 100mΩ max.	100,000 cycles 10Ω max.	30,000 cycles (Lock side) 100,000 cycles (Recoil side) 500mΩ max.	10,000 cycles 100mΩ max.
	Operating life with load Load: as rating		10,000 cycles 130mΩ max.			10,000 cycles 130mΩ max.
Electrical performance	Initial contact resistance	300mΩ max.	70mΩ max.	10Ω max.	200mΩ max.	70mΩ max.
	Insulation resistance	100MΩ min. 100V DC				100MΩ min. 500V DC
	Voltage proof	100V AC for 1minute				500V AC for 1minute
Mechanical performance	Terminal strength	3N for 1minute				
	Actuator strength	Operating direction	10N			
Pulling direction						
Environmental performance	Cold	-40°C 96h	-40°C 500h	-40°C 96h	-20°C 500h	
	Dry heat	85°C 96h	85°C 500h	85°C 96h	85°C 500h	
	Damp heat	40°C, 90 to 95%RH 96h	60°C, 90 to 95%RH 500h	40°C, 90 to 95%RH 96h	60°C, 90 to 95%RH 500h	
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Note

● Indicates applicability to all products in the series.

Slide Switches / Soldering Conditions

Detector

Slide

Push

Rotary

Power

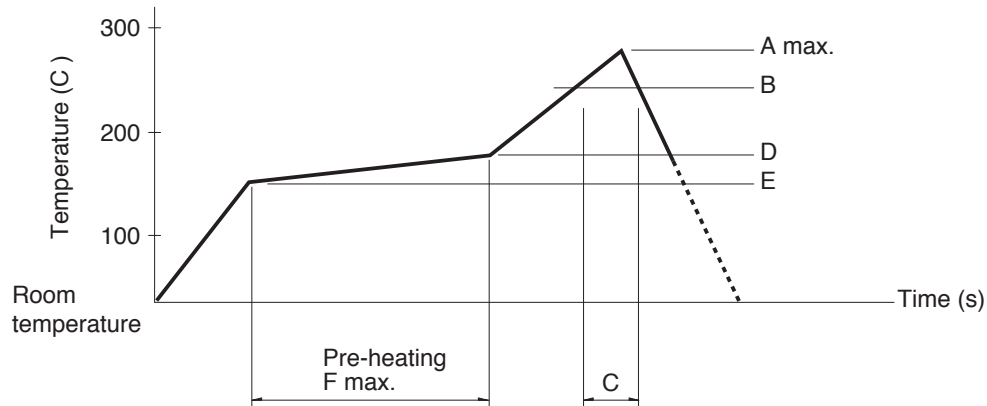
Dual-in-line
Package Type

Small size
General Use Type

Big size
General Use Type

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					
SSAG, SSAJ, SSAL, SSSS8, SSS7		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.
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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