

Large-size general purpose type well established in various fields.

Detector

Slide

Push

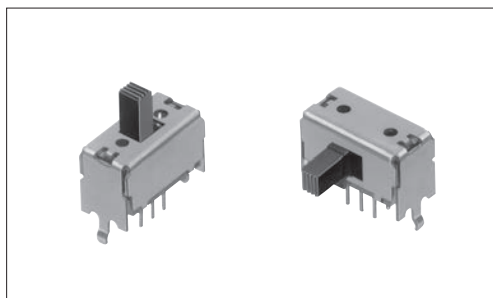
Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™



Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		0.1A 30V DC / 10 μ A 1V DC
Contact resistance (Initial performance / After lifetime)		25m Ω max. / 65m Ω max.
Operating force		Refer to the dimensions.
Operating life	Without load	10,000cycles
	With load	10,000cycles (0.1A 30V 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	6	1	2	Snap-in (t1.6)	Non shorting	Manual, Dip	100	4,000	SSSF011700	1			
		9		SSSF012100										
		6		SSSF014800						2				
		9	SSSF021500	3										
		6	SSSF021900	4										
		9	SSSF024800	5										
	Horizontal	1	6	2						3,000		SSSF111800	6	
			9	3						4,000		SSSF112500	7	
			6	2						2		3,000	SSSF114900	8
			9							3		4,000	SSSF115300	
			6						2	3,000	SSSF121900			
			9						3	4,000	SSSF122400			
		6	2						3,000	SSSF125300				
		9	3						4,000	SSSF125800				
		4	2	6					2	4,000	SSSF141000	10		
				9					3	4,000	SSSF141300			

Notes

1. Other varieties are also available. Please inquire.
2. Please contact us for automotive use products.

Packing Specifications

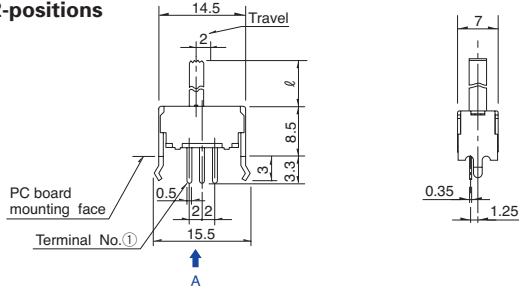
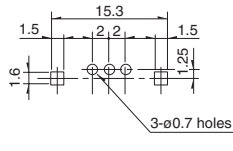
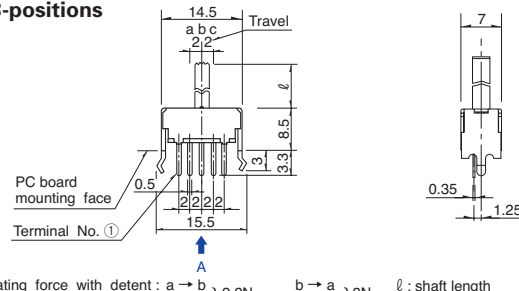
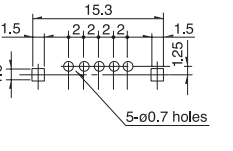
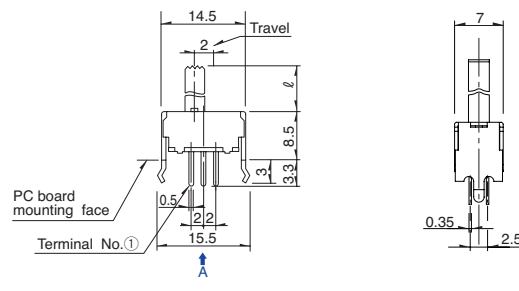
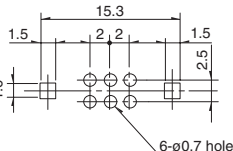
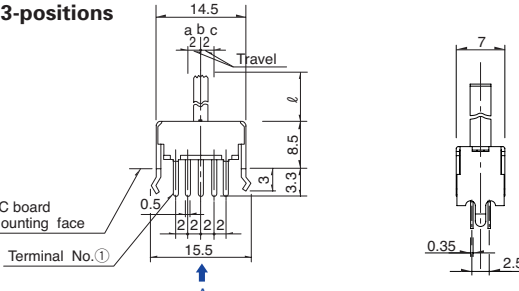
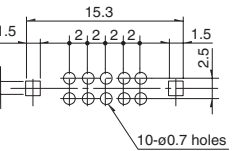
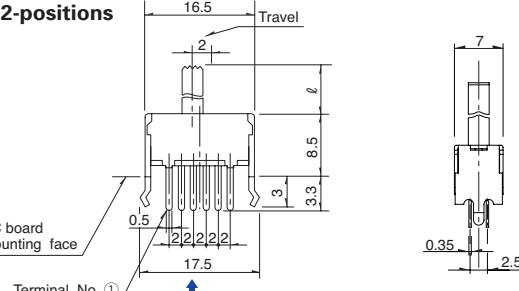
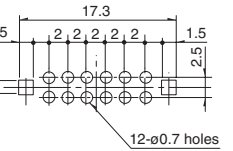
Bulk

Products No.	Number of packages (pcs.)		Export package measurements (mm)
	1 case / Japan	1 case / export packing	
SSSF011700, SSSF012100 SSSF014800, SSSF021500 SSSF021900, SSSF024800 SSSF025100, SSSF040800 SSSF112500, SSSF115300 SSSF122400, SSSF125800 SSSF141000, SSSF141300	800	4,000	400 × 270 × 290
SSSF111800, SSSF114900 SSSF121900, SSSF125300	600	3,000	

Dimensions

Vertical Actuator Type

Unit:mm

No.	Style	PC board mounting hole dimensions (Viewed from direction A)
1	<p>1-pole, 2-positions</p>  <p>Operating force with detent : 2.5N l : shaft length</p>	 <p>3-ϕ0.7 holes</p>
2	<p>1-pole, 3-positions</p>  <p>Operating force with detent : $a \rightarrow b$ } 2.2N $b \rightarrow a$ } 3N $c \rightarrow b$ } 2.2N $b \rightarrow c$ } 3N l : shaft length</p>	 <p>5-ϕ0.7 holes</p>
3	<p>2-poles, 2-positions</p>  <p>Operating force with detent : 2.5N l : shaft length</p>	 <p>6-ϕ0.7 holes</p>
4	<p>2-poles, 3-positions</p>  <p>Operating force with detent : $a \rightarrow b$ } 2.2N $b \rightarrow a$ } 3N $c \rightarrow b$ } 2.2N $b \rightarrow c$ } 3N l : shaft length</p>	 <p>10-ϕ0.7 holes</p>
5	<p>4-poles, 2-positions</p>  <p>Operating force with detent : 2.5N l : shaft length</p>	 <p>12-ϕ0.7 holes</p>

Detector

Slide

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Rotary

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Power

Dual-in-line
Package Type

TACT Switch™

Small size
General Use type

Big size
General Use type

Dimensions

Horizontal Actuator Type

Unit:mm

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Package Type

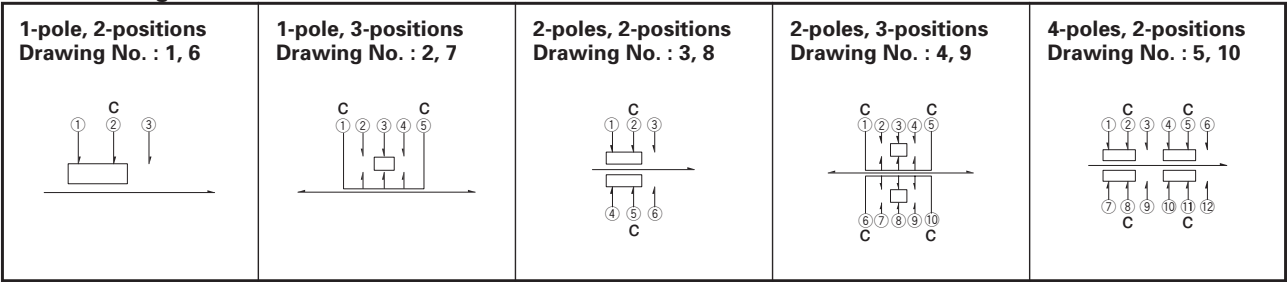
TACT Switch™

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General Use type

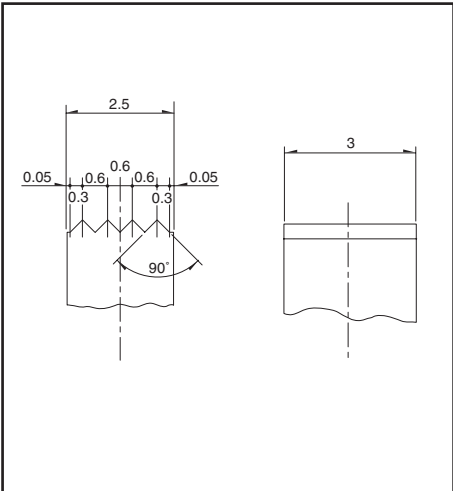
Big size
General Use type

No.	Style	PC board mounting hole dimensions (Viewed from direction A)
6	<p>1-pole, 2-positions</p> <p>Operating force with detent : 2.5N l : shaft length</p>	<p>3-ϕ0.7 holes</p>
7	<p>1-pole, 3-positions</p> <p>Operating force with detent : a \rightarrow b } 2N b \rightarrow a } 3N c \rightarrow b } 2N b \rightarrow c } 3N l : shaft length</p>	<p>5-ϕ0.7 holes</p>
8	<p>2-poles, 2-positions</p> <p>Operating force with detent : 2.5N l : shaft length</p>	<p>6-ϕ0.7 holes</p>
9	<p>2-poles, 3-positions</p> <p>Operating force with detent : a \rightarrow b } 2.2N b \rightarrow a } 3N c \rightarrow b } 2.2N b \rightarrow c } 3N l : shaft length</p>	<p>10-ϕ0.7 holes</p>
10	<p>4-poles, 2-positions</p> <p>Operating force with detent : 2.5N l : shaft length</p>	<p>12-ϕ0.7 holes</p>

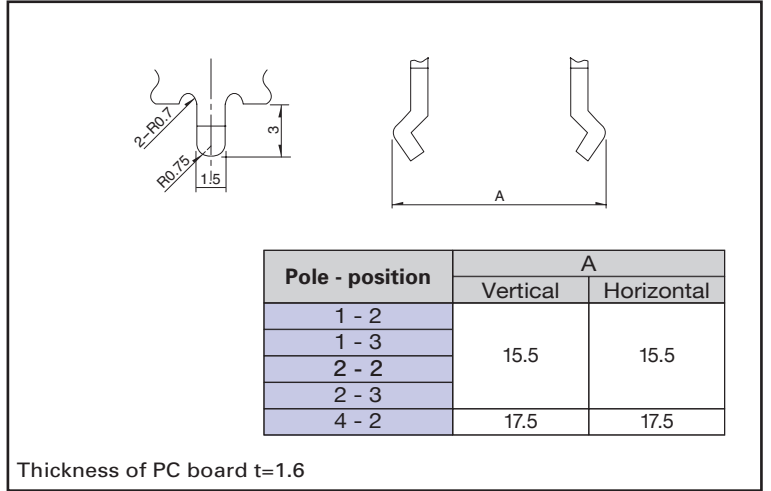
Circuit Diagram (Viewed from Direction A)



Actuator Configuration Unit:mm



Shape of Frame Leg Unit:mm



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






Dual-in-line
Package Type

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Small size
General Use type

Big size
General Use type

List of Varieties

Series		SSSS9	SSAC	SSAA※	SSSF※	SSSU※	SSSB	
Photo								
Actuator direction	Horizontal	●	●	●	●	●	—	
	Vertical	●	—	—	●	●	●	
Dimensions (mm)	W	14	9.5	12.4	16.5	24.5	29	
	D	4.7	5.5	6	7		9	
	H	5	5.2	5	8.5		12	
Poles-positions	1-2	●	—	●	●	●	—	
	1-3	●	—	●	●	●	—	
	1-4	—	—	—	—	—	—	
	2-2	●	●	●	●	●	●	
	2-3	●	●	●	●	●	●	
	2-4	—	—	—	—	—	—	
4-2	—	—	—	●	●	●		
Travel (mm)		2	1.5	2		3	4	
Operating temperature range		-40°C to +85°C	-10°C to +60°C	-40°C to +85°C				
Automotive use		—	—	—	—	—	—	
Life cycle								
Rating (max.) (Resistive load)		0.1A 12V DC	1mA 5V DC	0.1A 30V DC			0.3A 30V DC	
Rating (min.) (Resistive load)		1mA 5V DC	—	—	10μA 1V DC			
Durability	Operating life without load	10,000cycles 60mΩ max.	10,000cycles 200mΩ max.	10,000cycles 45mΩ max.			10,000cycles 40mΩ max.	
	Operating life without load Load:as rating	10,000cycles 80mΩ max.		10,000cycles 65mΩ max.			5,000cycles 60mΩ max.	
Electrical performance	Initial contact resistance	30mΩ max.	100mΩ max.	25mΩ max.			20mΩ 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	30N	5N	10N	30N		50N
		Pulling direction	10N			30N Static force		
Environmental performance	Cold	-40±2°C for 500h	-20±2°C for 96h	-40±2°C for 500h				
	Dry heat	85±2°C for 500h	85±2°C for 96h	85±2°C for 500h				
	Damp heat	60±2°C, 90 to 95%RH for 500h	40±2°C, 90 to 95%RH for 96h	40±2°C, 90 to 95%RH for 500h	60±2°C, 90 to 95%RH for 500h			
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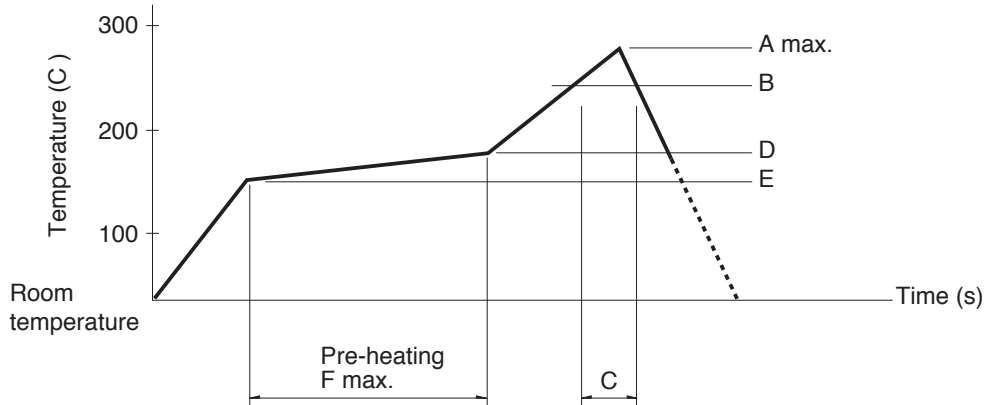
Note

1. ※ The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
2. ● indicates applicability to all products in the series.

Slide Switches Soldering Conditions

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2 φ 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-positions	250	230	40	180	150	120
	Horizontal	1-pole, 2-positions 1-pole, 3-positions 2-poles, 3-positions	260					
	Vertical	1-pole, 2-positions	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, SSSB, SSAA	350±10°C	3+1 / 0s
SSSS2	350±10°C	4s max.
SSSS9	350±10°C	3s max.
SSAH, SSAG, SSAJ, SSAL, SSSS8, SSSS7	350±5°C	3s max.
SSAC	300±5°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 (2times)
SSAA	100°C max.	60s max.	260±5°C	10±1s
SSSF, SSSU, SSSB	—		260±5°C	10±1s
SSAC	—		260±5°C	5±1s

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