

Push Switch

2.5mm-travel Compact-sized Horizontal Type

SPPJ3 Series



Lever height 4.7mm, small sized horizontal type.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

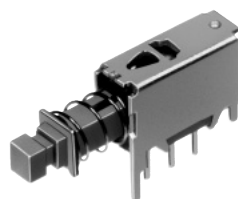
Custom-
Products

Horizontal
Type

Vertical
Type



Automotive
Use



Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		0.2A 30V DC/50μA 3V DC
Contact resistance (Initial /After operating life)		20mΩ max./40mΩ max.
Operating force	1-pole	2.3±1N
	2-poles	3.3±1N
Operating life	Without load	10,000cycles
	With load	10,000cycles (0.2A 30V DC)

Product Line

Changeover timing	Travel (mm)	Total travel (mm)	Mounting method	Poles	Operation	Terminal type	Minimum order unit (pcs.)	Product No.	Drawing No.
Non shorting	2.5	3.5	PC board	1	Latching	For PC board	4,500	SPPJ310500	1
					Momentary			SPPJ311500	
				2	Latching			SPPJ320600	2
					Momentary			SPPJ322300	

Packing Specifications

Bulk

Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case/export packing	
900	4,500	400×270×290

Notes

- Products other than those listed in the above chart are also available. Please contact us for details.
- Please place purchase orders per minimum order unit N (integer).

Refer to P.134 for knobs.

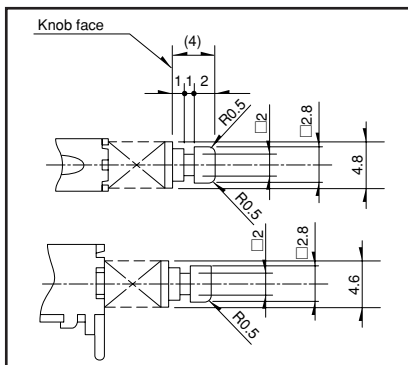
Dimensions

Unit:mm

No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
1	1-pole, 2-positions 	
2	2-poles, 2-positions 	

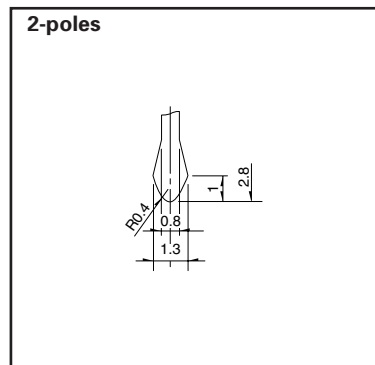
Actuator Configuration at Front Edge

Unit:mm



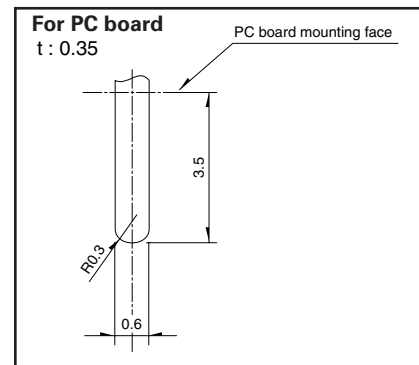
Detail of ①

Unit:mm

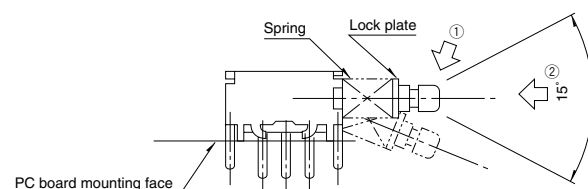
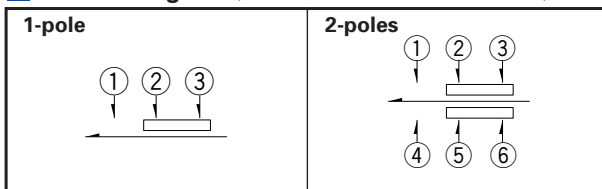


Terminal Configuration

Unit:mm



Circuit Diagram (Viewed from Direction A)



Note

The SPPJ3 series should be operated in arrow ② direction as shown in the following figure and applied within an angle of 15° based from the center.

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Automotive
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Refer to P.132 for knobs.

List of Varieties

	Series		SPEE	SPPJ6	SPPJ3	SPPJ2	SPUJ ※1	SPUP ※1	SPUN	SPUN medium current※1	SPEG	SPEJ
Detector	Photo											
Push	Travel (mm)		0.3 0.71	1.5	2.5		2	1.5 2	2.5		—	1.7
Slide	Total travel (mm)		0.9	2.5	3.5		3	2.5 3	3.5		1.2	1.7
Rotary	Number of poles		1	2	1 2	2	2 4				1	2
Encoders	Dimensions (mm)	W	4	9	6.6	7.2	7.5		10		7.15	7
Power		D	5		12		15.2 22.7		24 36		8.35	7
Dual-in-line Package Type		H	1.22	4.5	8.3	9.6	8.8	10.3	13		3.5	8
TACT Switch™	Operating temperature range		−10°C to +60°C		−40°C to +85°C		−10°C to +60°C					−40°C to +85°C
Custom-Products	Rating (max.) (Resistive load)		20mA 5V DC	0.2A 12V DC	0.2A 30V DC		0.1A 30V DC			1A 25V DC	50mA 16V DC	0.2A 14V DC
	Rating (min.) (Resistive load)		100μA 3V DC	50μA 3V DC							50μA 3V DC	—
	Electrical performance	Initial contact resistance	※2	20mΩ max.							200mΩ max.	150mΩ max.
		Insulation resistance	10MΩ min. 100V DC	100MΩ min. 500V DC							3MΩ min. 100V DC	100MΩ min. 500V DC
		Voltage proof	100V AC for 1minute	500V AC for 1minute							100V AC for 1minute	500V AC for 1minute
Horizontal Type	Mechanical performance	Terminal strength	—	5N for 1minute							0.5N for 1minute	—
Vertical Type		Actuator strength	Operating direction	50N	30N		50N				50N	49N
	Pulling direction		—————			—					—	
	Durability	Operating life without load	100,000 cycles	10,000cycles 40mΩ max.					30,000cycles 40mΩ max.	10,000cycles 40mΩ max.	30,000cycles 500mΩ max.	10,000 cycles
		Operating life without load Load:as rating	100,000 cycles	10,000cycles 40mΩ max.					5,000cycles 40mΩ max.	5,000cycles 40mΩ max.		10,000cycles 14V DC, 0.2A
	Environmental performance	Cold	−40±2°C for 96h	−20±2°C for 96h							−40±2°C for 500h	−40±2°C for 500h
		Dry heat	85±2°C for 96h									85±2°C for 500h
		Damp heat	40±2°C, 90 to 95%RH for 96h									60±2°C, 90 to 95% RH for 500h
Soldering	Manual soldering	350±10°C 4 ⁺¹ ₀ s	350±10°C 3 ⁺¹ ₀ s			300±10°C 3 ⁺¹ ₀ s		350±10°C 3 ⁺¹ ₀ s		350±5°C 3s max.	350±10°C 4s max.	
	Dip soldering	—	260±5°C 5±1s		260±5°C 10±1s	260±5°C 5±1s		260±5°C 10±1s		—	—	
	Reflow soldering	Please see P.133	—————								Please see P.133	
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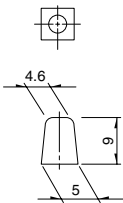
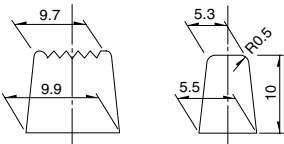
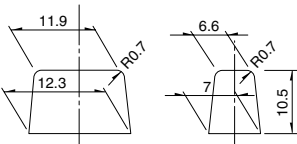
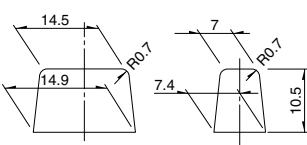
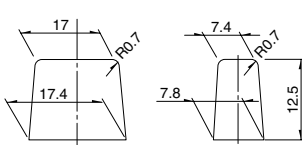
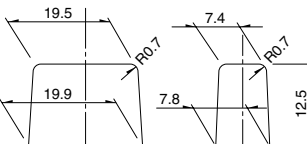
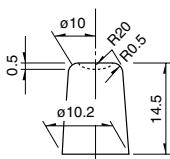
Notes

- ※1. The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
- ※2. 1V or less, at the present rating of 1mA 5V DC for output voltage.

Attached Parts

Please specify required knob.

Unit:mm

Knob outline drawing	Variety		Series
	Color	Model	
	Black Red White	UJ206022 UJ206020 UJ206026	SPPJ3 SPUJ
Key pitch 10mm Square knob 		4093-1 4093-2 4093-3	SPPJ2 SPUP SPUN SPEC
Key pitch 12.5mm Square knob 		UE201011 UE201012 UE201013	
Key pitch 15mm Square knob 		UE202011 UE202012 UE202013	
Key pitch 17.5mm Square knob 		UE203011 UE203012 UE203013	
Key pitch 20mm Square knob 		UE204011 UE204012 UE204013	
Round knob 		UE200011 UE200012 UE200013	

Detector

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Slide

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Note

We recommend the use of adhesive to secure the knob when mounting onto switches.

