

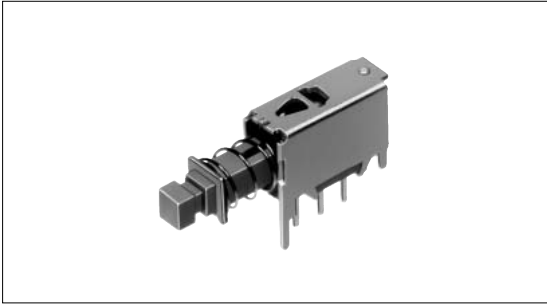
# Push Switch 2.5mm-travel Compact-sized Horizontal Type

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



## Typical Specifications

Items		Specifications
Rating (max.)/(min.) (Resistive load)		0.2A 30V DC/50μA 3V DC
Contact resistance (Initial /After operating life)		20m max./40m 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)	Rating	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	

- Horizontal Type**
- Vertical Type

## Dimensions

Unit:mm

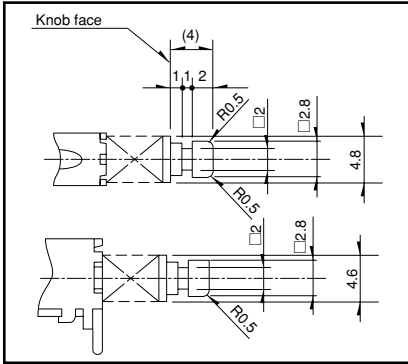
No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
1	<p><b>1-pole, 2-positions</b></p>	
2	<p><b>2-poles, 2-positions</b></p>	

## Notes

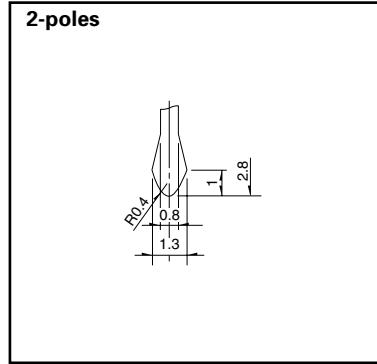
- Products other than those listed in the above chart are also available. Please contact us for details.
- Please place purchase orders per minimum order unit (integer).

Refer to P.107 for knobs.

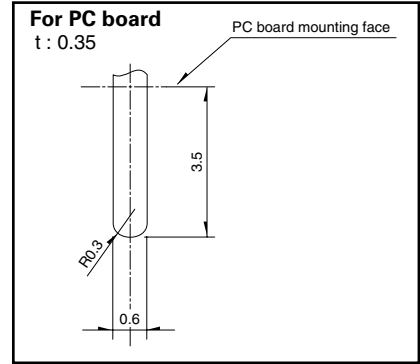
**Actuator Configuration at Front Edge**  
 Unit:mm



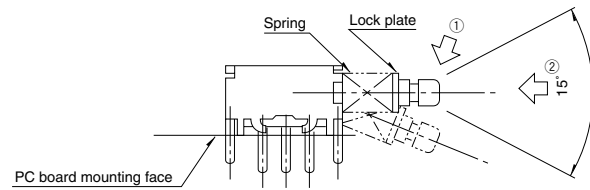
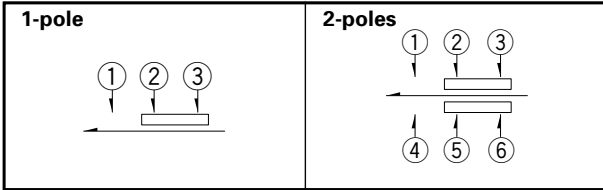
**Detail of (a)**  
 Unit:mm



**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 to the center. If excessive force is applied to the lever from arrow ① direction, it may fall down as illustrated and cause malfunctions.

Detector

**Push**

Slide

Rotary

Encoders

Power

Dual-in-line

Package Type

TACT Switch™

Custom-

Products

**Horizontal**  
 Type

Vertical  
 Type

## List of Varieties

Series	SPEE	SPPJ6	SPPJ3	SPPJ2	SPUJ 1	SPUP 1	SPUN	SPUN medium current 1	SPEG	SPPH2	
<b>Photo</b>											
<b>Travel (mm)</b>	0.3 0.71	1.5	2.5		2	1.5 2	2.5			1	
<b>Total travel (mm)</b>	0.9	2.5	3.5		3	2.5 3	3.5		1.2	1.5	
<b>Number of poles</b>	1	2	1 2	2	2 4				1	2	
<b>Dimensions (mm)</b>	<b>W</b>	4	9		6.6		7.2	7.5	10	7.15	6.5
	<b>D</b>	5	12		15.2 22.7			24 36		8.35	6
	<b>H</b>	1.22	4.5	8.3	9.6	8.8	10.3	13	3.5	6.5	
<b>Operating temperature range</b>	- 10°C to + 60°C		- 40°C to + 85°C		- 10°C to + 60°C						
<b>Rating (max. <math>\chi</math> Resistive load)</b>	20mA 5V DC	0.2mA 5V DC	0.2mA 30V DC		0.1mA 30V DC			1A 25V DC	50mA 16V DC	0.1A 12V DC	
<b>Rating (min. <math>\chi</math> Resistive load)</b>	100 $\mu$ A 3V DC	50 $\mu$ A 3V DC							50 $\mu$ A 3V DC		
<b>Electrical performance</b>	<b>Initial contact resistance</b>	2	20m max.						200m max.	30m max.	
	<b>Insulation resistance</b>	10M min. 100V DC	100M min. 500V DC						3M min. 100V DC	100M min. 500V DC	
	<b>Voltage proof</b>	100V AC for 1minute	500V AC for 1minute						100V AC for 1minute	500V AC for 1minute	
<b>Mechanical performance</b>	<b>Terminal strength</b>	5N for 1minute								0.5N for 1minute	5N for 1minute
	<b>Actuator strength</b>	Operating direction 50N		30N		50N			50N	30N	
<b>Durability</b>	<b>Operating life without load</b>	100,000 cycles	10,000cycles 40m max.				30,000cycles 40m max.	10,000cycles 40m max.	35,000cycles 500m max.	10,000cycles 50m max.	
	<b>Operating life without load Load:as rating</b>	100,000 cycles	10,000cycles 40m max.					5,000cycles 40m max.			
<b>Environmental performance</b>	<b>Cold</b>	-40 $\pm$ 2 for 96h	-20 $\pm$ 2 for 96h						-20 $\pm$ 2 for 96h		
	<b>Dry heat</b>	85 $\pm$ 2 for 96h							85 $\pm$ 2 for 96h		
	<b>Damp heat</b>	40 $\pm$ 2 , 90 to 95%RH for 96h							40 $\pm$ 2 , 90 to 95%RH for 96h		
<b>Soldering</b>	<b>Manual soldering</b>	350 $\pm$ 10 4 <sup>+1</sup> <sub>0</sub> s	350 $\pm$ 10 3 <sup>+1</sup> <sub>0</sub> s		300 $\pm$ 10 3 <sup>+1</sup> <sub>0</sub> s		350 $\pm$ 10 3 <sup>+1</sup> <sub>0</sub> s		350 $\pm$ 5 3s max.	350 max. 3s max.	
	<b>Dip soldering</b>		260 $\pm$ 5 5 $\pm$ 1s	260 $\pm$ 5 10 $\pm$ 1s	260 $\pm$ 5 5 $\pm$ 1s		260 $\pm$ 5 10 $\pm$ 1s			260 $\pm$ 5 5 $\pm$ 1s	
	<b>Reflow soldering</b>	Please see P.108							Please see P.108		
<b>Page</b>	84	85	86	88	90	91	92		94	96	

Push Switches Attached Parts .....	107
Soldering Conditions .....	108
Push Switches Products Caution .....	109

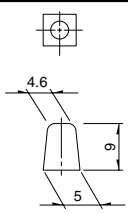
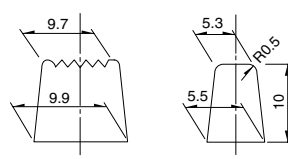
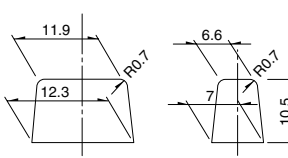
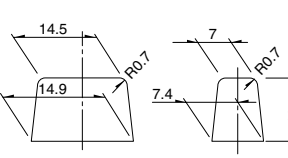
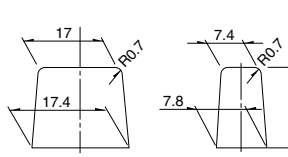
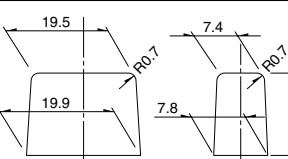
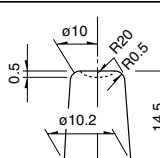
### Notes

- ※1. The operating temperature range for automotive applications can be raised upon request. Please contact us for requirements of this kind.
- ※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	
	<p><b>Black</b> <b>Red</b> <b>White</b></p>	<p>UJ206022 UJ206020 UJ206026</p>	<p>SPPJ3 SPUJ</p>
<p><b>Key pitch 10mm</b></p> <p><b>Square knob</b></p> 		<p>4093-1 4093-2 4093-3</p>	
<p><b>Key pitch 12.5mm</b></p> <p><b>Square knob</b></p> 		<p>UE201011 UE201012 UE201013</p>	
<p><b>Key pitch 15mm</b></p> <p><b>Square knob</b></p> 		<p>UE202011 UE202012 UE202013</p>	<p>SPPJ2 SPUP SPUN SPEC</p>
<p><b>Key pitch 17.5mm</b></p> <p><b>Square knob</b></p> 		<p>UE203011 UE203012 UE203013</p>	
<p><b>Key pitch 20mm</b></p> <p><b>Square knob</b></p> 		<p>UE204011 UE204012 UE204013</p>	
<p><b>Round knob</b></p> 		<p>UE200011 UE200012 UE200013</p>	

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line  
Package Type

TACT Switch™

Custom-  
Products

Horizontal  
Type

Vertical  
Type

### Note

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

