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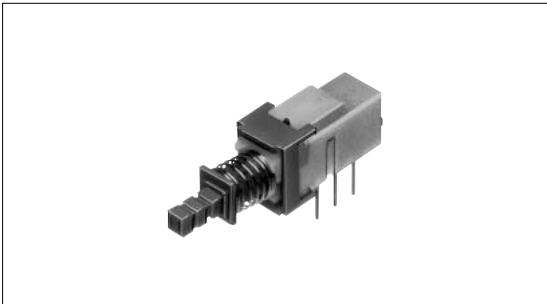
# Push Switch 2.5mm-travel Large-sized Horizontal Type

## SPUN Series



Large horizontal type suitable for multiple circuits.

- Detector
- Push**
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line  
Package Type
- TACT Switch™



### Typical Specifications

Items	Specifications		
	Standard	Medium-current	
Rating (max.) (min.) (Resistive load)	0.1A 30V DC/50μA 3V DC	1A 25V DC	
Contact resistance (Initial /After operating life)	20m max./40m max.		
Operating forces	2-poles	2 ± 1N	3 ± 1.5N
	4-poles	2.5 ± 1N	4 ± 2N
Operating life	Without load	30,000cycles	10,000cycles
	With load	10,000cycles (0.1A 30V DC)	5,000cycles (1A 25V DC)

- Custom-Products
- Horizontal Type**
- Vertical Type

### Product Line

Changeover timing	Travel (mm)	Total travel (mm)	Rating	Mounting method	Poles	Operation	Terminal type	Minimum order unit (pcs.)	Product No.
Non shorting	2.5	3.5	Standard	PC board	2	Latching	Straight	1,250	SPUN191400
							Snap-in		SPUN191600
						Momentary	Straight		SPUN190900
							Snap-in		SPUN191000
			Medium-current		4	Latching	Straight	700	SPUN194700
							Snap-in		SPUN194900
					2	Latching	Straight	1,250	SPUN192600
							Snap-in		SPUN192800
4	Latching	Snap-in	700	SPUN19C400					

### Notes

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

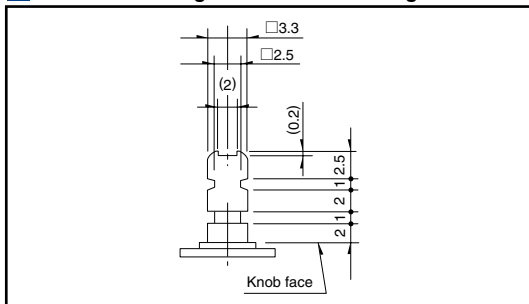
Refer to P.107 for knobs.

**Dimensions**

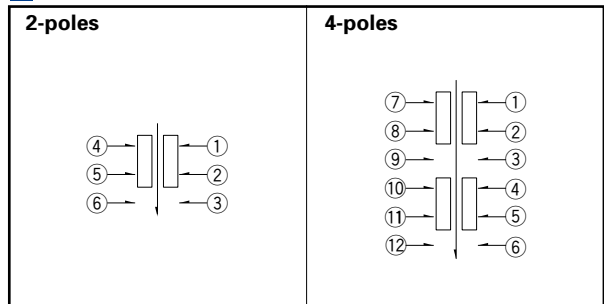
Unit:mm

Style	PC board mounting hole dimensions (Viewed from the direction A)	
	<p><b>Straight terminal</b></p>	<p><b>Snap-in terminal</b></p>

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



**Circuit Diagram ( Viewed from Direction A )**



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 <sub>1</sub>	SPUP <sub>1</sub>	SPUN	SPUN <sub>medium current 1</sub>	SPEG	SPPH2		
Detector	<b>Photo</b>											
Push												
Slide	Travel (mm) 0.3 0.71	1.5	2.5		2	1.5 2	2.5			1		
Rotary	Total travel (mm)	0.9	2.5	3.5		3	2.5 3	3.5		1.2	1.5	
Encoders	Number of poles	1	2	1 2	2	2 4				1	2	
Power	Dimensions (mm)	W	4	9		6.6	7.2	7.5		10	7.15	6.5
Dual-in-line Package Type		D	5	12		15.2 22.7		24 36		8.35	6	
TACT Switch™		H	1.22	4.5	8.3	9.6	8.8	10.3	13		3.5	6.5
Custom-Products	Operating temperature range	- 10°C to + 60°C		- 40°C to + 85°C		- 10°C to + 60°C						
	Rating (max. $\chi$ Resistive load)	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	
	Rating (min. $\chi$ Resistive load)	100 $\mu$ A 3V DC	50 $\mu$ A 3V DC							50 $\mu$ A 3V DC		
Electrical performance	Initial contact resistance	2	20m max.						200m max.	30m max.		
	Insulation resistance	10M min. 100V DC	100M min. 500V DC						3M min. 100V DC	100M 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	5N for 1minute		
		Actuator strength	Operating direction	50N		30N		50N		50N	30N	
Pulling direction	—————		—————		—————							
Vertical Type	Durability	Operating life without load	100,000 cycles	10,000cycles 40m max.			30,000cycles 40m max.	10,000cycles 40m max.	35,000cycles 500m max.	10,000cycles 50m max.		
		Operating life without load Load:as rating	100,000 cycles	10,000cycles 40m max.			5,000cycles 40m max.					
Environmental performance		Cold	-40 $\pm$ 2 for 96h	-20 $\pm$ 2 for 96h					-20 $\pm$ 2 for 96h			
		Dry heat	85 $\pm$ 2 for 96h						85 $\pm$ 2 for 96h			
		Damp heat	40 $\pm$ 2 , 90 to 95%RH for 96h						40 $\pm$ 2 , 90 to 95%RH for 96h			
Soldering		Manual soldering	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.		
		Dip soldering		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		
		Reflow soldering	Please see P.108	—————						Please see P.108		
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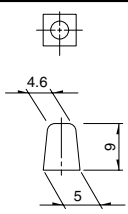
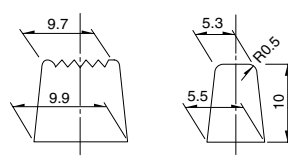
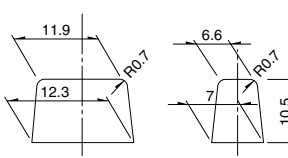
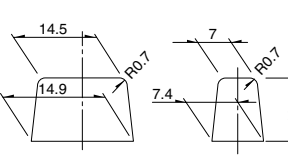
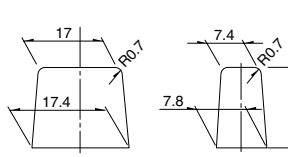
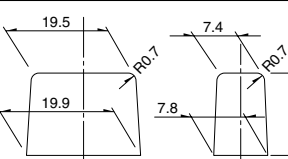
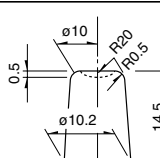
### Notes

- ※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.

