

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

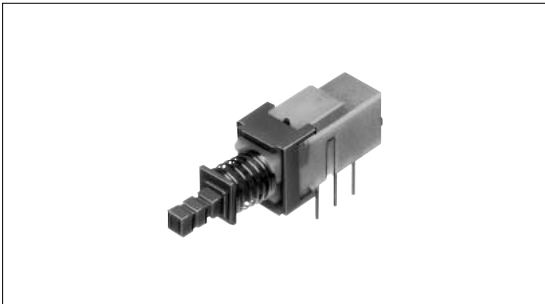
## SPUN Series

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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.

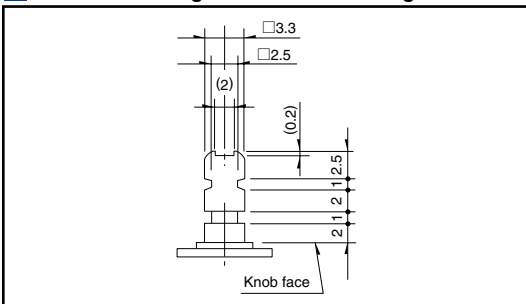
**Dimensions**

Unit:mm

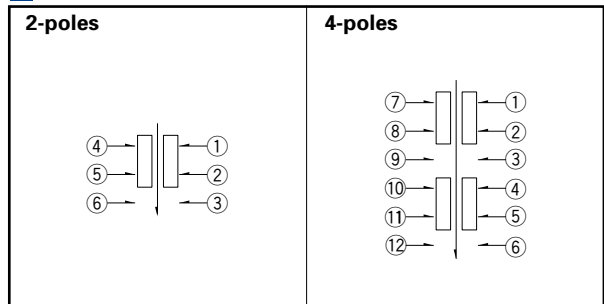
Style	PC board mounting hole dimensions (Viewed from the direction A)	
	<p><b>Straight terminal</b></p>	<p><b>Snap-in terminal</b></p>

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- TACT Switch™
- Custom-  
Products

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



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



- Horizontal  
Type
- Vertical  
Type

# List of Varieties

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

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>	W	4	9		6.6		7.2	7.5	10	7.15	6.5
	D	5	12		15.2 22.7			24 36	8.35	6	
	H	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		
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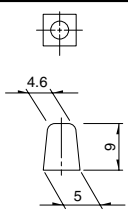
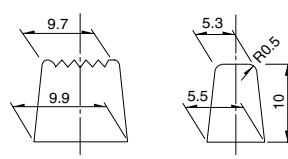
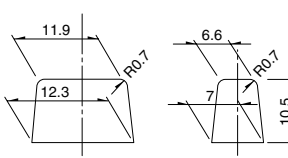
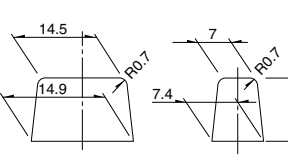
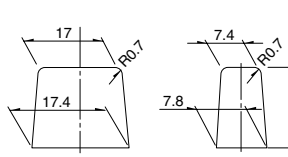
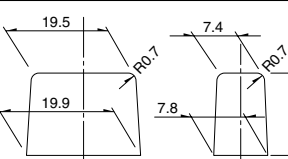
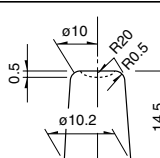
**Notes**

1. ※1. The operating temperature range for automotive applications can be raised upon request. Please contact us for requirements of this kind.
2. ※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>SPPJ2 SPUP SPUN SPEC</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><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

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Package Type

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Horizontal  
Type

Vertical  
Type

**Note**

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

