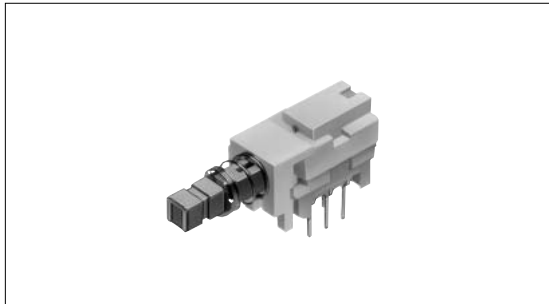


Push Switch 1.5/2mm-travel Medium-sized Horizontal Type

SPUP Series



Mid size horizontal type switch suitable for multiple circuits.



Typical Specifications

Items		Specifications
Rating(max.)(min.) (Resistive load)		0.1A 30V DC/50 μ A 3V DC
Contact resistance (Initial /After operating life)		20m max./40m max.
Operating force	2-poles	1.7 \pm 1N
	4-poles	2.3 \pm 1N
Operating life	Without load	10,000cycles
	With load	10,000cycles(0.1A 30V DC)

Product Line

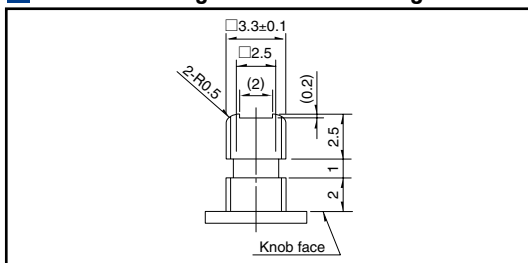
Changeover timing	Travel (mm)	Total Travel (mm)	Rating	Mounting method	Poles	Operation	Terminal type	Minimum order unit(pcs.)	Product No.
Non shorting	1.5	2.5		PC board	2	Latching	Straight	2,500	SPUP190700
							Snap-in		SPUP192900
						Momentary	Straight		SPUP192300
	2	3			Latching	Snap-in	SPUP192700		
						Momentary	Straight		SPUP192000
					Latching	Snap-in	2,000		SPUP191000 SPUP193100

Dimensions

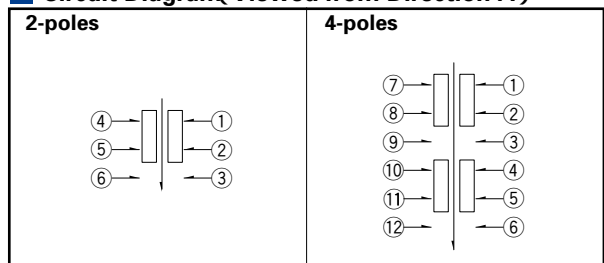
Unit:mm

Style	PC board mounting hole dimensions (Viewed from the direction A)	
<p>2-poles, 4-poles</p>	<p>Straight terminal</p>	<p>Snap-in terminal</p>

Actuator Configuration at Front Edge Unit:mm



Circuit Diagram (Viewed from Direction A)



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).
- Please contact us for automotive use.

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	
Photo											
Travel (mm)	0.3 0.71	1.5	2.5		2	1.5 2	2.5			1	
Total travel (mm)	0.9	2.5	3.5		3	2.5 3	3.5		1.2	1.5	
Number of poles	1	2	1 2	2	2 4				1	2	
Dimensions (mm)	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	
Operating temperature range	- 10°C to + 60°C		- 40°C to + 85°C		- 10°C to + 60°C						
Rating (max. χ 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. χ Resistive load)	100 μ A 3V DC	50 μ A 3V DC							50 μ 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	
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											
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 ⁺¹ ₀ s	350 \pm 10 3 ⁺¹ ₀ s		300 \pm 10 3 ⁺¹ ₀ s		350 \pm 10 3 ⁺¹ ₀ 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 10 \pm 1s			260 \pm 5 5 \pm 1s	
	Reflow soldering	Please see P.108							Please see P.108		
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Push Switches Attached Parts	107
Soldering Conditions	108
Push Switches Products Caution	109

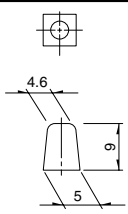
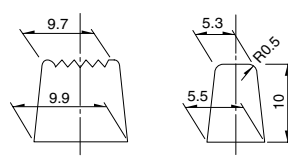
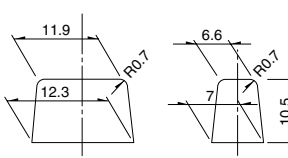
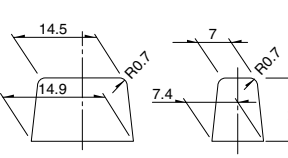
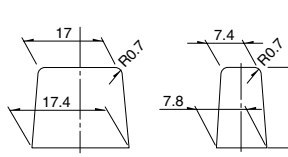
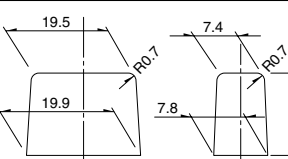
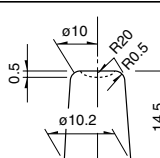
Notes

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

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.

