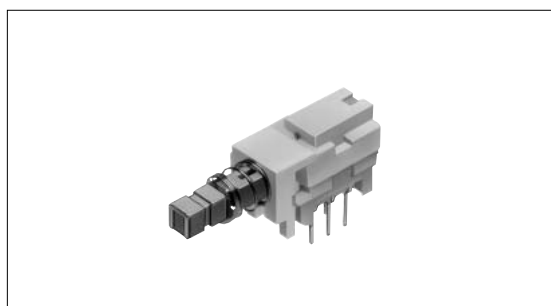


Push Switch 1.5/2mm-travel Medium-sized Horizontal Type SPUP Series



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 Ω max./40m Ω 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

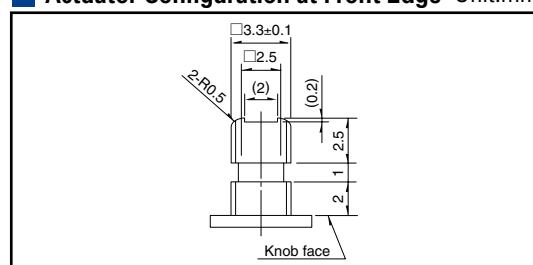
Product Line									
Changeover timing	Travel (mm)	Total Travel (mm)	Rating	Mounting method	Poles	Operation	Terminal type	Minimum order unit (pcs.)	Product No.
Non shorting	1.5	2.5	—	PC board	2	Latching	Straight	2,500	SPUP190700
							Snap-in		SPUP192900
						Momentary	Straight		SPUP192300
						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

Dimensions

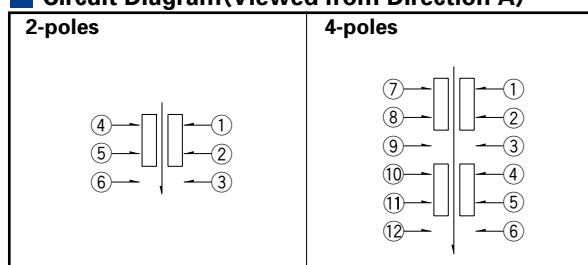
Unit:mm

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

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.

List of Varieties

Series		SPEE	SPPJ6	SPPJ3	SPPJ2	SPUJ ※1	SPUP ※1	SPUN	SPUN medium curent※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.) (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.) (Resistive load)		100μA 3V DC	50μA 3V DC							50μA 3V DC	
Electrical performance	Initial contact resistance	※2	20mΩ max.							200mΩ max.	30mΩ 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
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 40mΩ max.					30,000cycles 40mΩ max.	10,000cycles 40mΩ max.	35,000cycles 500mΩ max.	10,000cycles 50mΩ max.
	Operating life without load Load:as rating	100,000 cycles	10,000cycles 40mΩ max.					5,000cycles 40mΩ max.			
Environmental performance	Cold	−40±2°C for 96h	−20±2°C for 96h							−20±2°C for 96h	
	Dry heat		85±2°C for 96h							85±2°C for 96h	
	Damp heat		40±2°C, 90 to 95%RH for 96h							40±2°C, 90 to 95%RH for 96h	
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°C max. 3s max.
	Dip soldering	—	260±5°C 5±1s		260±5°C 10±1s	260±5°C 5±1s		260±5°C 10±1s		—	260±5°C 5±1s
	Reflow soldering	Please see P.108	—————								Please see P.108
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- Push Switches Products Caution109

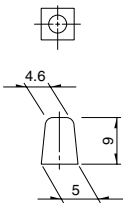
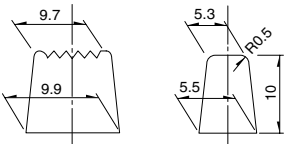
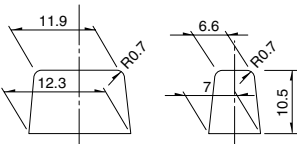
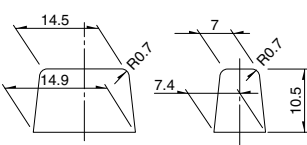
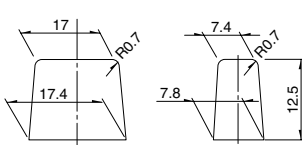
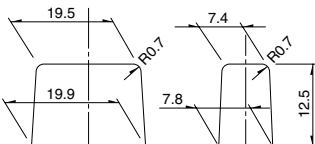
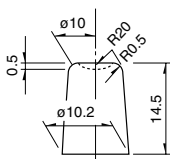
Notes

- ※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	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

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
ProductsHorizontal
TypeVertical
Type

Note

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

