

Push Switch 2mm-travel Horizontal Type

SPUJ Series



Horizontal type suitable for multiple circuits.

Detector

Push

Slide

Rotary

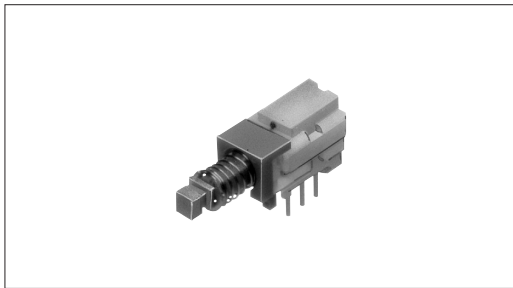
Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products



Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		0.1A 30V DC/50 μ A 3V DC
Contact resistance (Initial / After operating life)		20m Ω max./40m Ω max.
Operating forces	2-poles	1.5 \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)	Mounting method	Poles	Operation	Terminal type	Minimum order unit (pcs.)	Product No.	
Non shorting	2	3	PC board	2	Latching	Straight	3,000	SPUJ190900	
						Snap-in		SPUJ191000	
					Momentary	Straight		SPUJ191500	
				Snap-in		SPUJ191900			
				4	Latching	Straight		2,000	SPUJ193700
						Snap-in			SPUJ193900
Momentary	Straight	SPUJ194500							

Packing Specifications

Bulk

Product No.	Number of packages (pcs.)		Export package measurements (mm)
	1 case /Japan	1 case/export packing	
SPUJ190900,SPUJ191000,SPUJ191500,SPUJ191900	600	3,000	400 × 270 × 290
SPUJ193700,SPUJ193900,SPUJ194500	400	2,000	

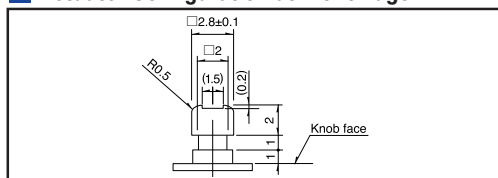
Dimensions

Unit:mm

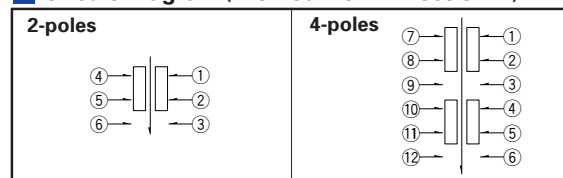
Style	PC board mounting hole dimensions (Viewed from the direction A)	
<p>2-poles, 4-poles</p>	<p>Straight terminal</p>	<p>Snap-in terminal</p>

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 N (integer).
- Please contact us for automotive use.

Refer to P.126 for knobs.

List of Varieties

Series	SPEE	SPPJ3	SPPJ2	SPUJ ※1	SPUP ※1	SPUN	SPUN medium current※1	SPEG	SPEJ
Photo									
Travel (mm)	0.3 0.71	2.5		2	1.5 2	2.5		—	1.7
Total travel (mm)	0.9	3.5		3	2.5 3	3.5		1.1	1.7
Number of poles	1	1 2	2			2 4			2
Dimensions (mm)	W	4	6.6	7.2	7.5		10	7.15	7
	D	5	12		15.2 22.7		24 36	8.35	7
	H	1.22	8.3	9.6	8.8	10.3	13	3.5	8
Operating temperature range	-10°C to +60°C	-40°C to +85°C		-10°C to +60°C				-40°C to +85°C	
Automotive use	—	●	●	—				●	
Rating (max.) (Resistive load)	20mA 5V DC	0.2A 30V DC		0.1A 30V DC			1A 25V DC	50mA 16V DC	0.2A 14V DC
Rating (min.) (Resistive load)	100μA 3V DC	50μA 3V DC				50μA 3V DC		—	
Electrical performance	Initial contact resistance	※2	20mΩ max.					200mΩ max.	150mΩ 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	—
	Actuator strength	Operating direction	50N	30N		50N		50N	49N
		Pulling direction	—		—		—		—
Durability	Operating life without load	100,000 cycles	10,000cycles 40mΩ max.			30,000cycles 40mΩ max.	10,000cycles 40mΩ max.	30,000cycles 500mΩ max.	10,000 cycles
	Operating life without load Load:as rating	100,000 cycles	10,000cycles 40mΩ max.			5,000cycles 40mΩ max.		10,000cycles 0.2A 14V DC	
Environmental performance	Cold	-40±2°C for 96h	-20±2°C for 96h					-40±2°C for 500h	
	Dry heat	85±2°C for 96h							85±2°C for 500h
	Damp heat	40±2°C, 90 to 95%RH for 96h							60±2°C, 90 to 95% RH for 500h
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±10°C 4s max.
	Dip soldering	—	260±5°C 5±1s	260±5°C 10±1s	260±5°C 5±1s		260±5°C 10±1s	—	
	Reflow soldering	Please see P.127	—						Please see P.133
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- Horizontal Type
- Vertical Type**

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Notes

1. ※1. The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
2. ※2. 1V or less, at the present rating of 1mA 5V DC for output voltage.
3. ● marks in "Available for automotive use" indicate that all of the series products can work at the operating temperature range from -40°C to +85°C.

Attached Parts

Please specify required knob.

Unit:mm

Knob outline drawing	Variety		Series
	Color	Model	
		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 	Black Red White	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	

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Note

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

