

Push Switch

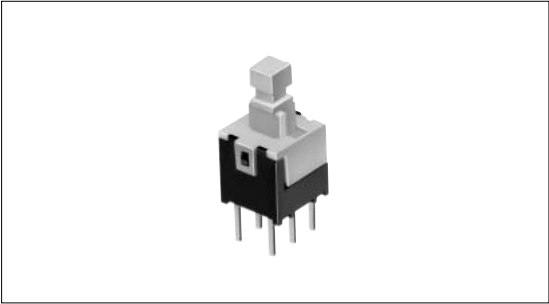
1mm-travel Compact-sized Vertical Type

SPPH2 Series

RoHS

compliant

1mm short travel.



Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		0.1A 12V DC/50μA 3V DC
Contact resistance (Initial /After operating life)		30mΩ max./50mΩ max.
Operating force		2±1N
Operating life	Without load	10,000cycles
	With load	10,000cycles (0.1A 12V DC)

Product Line

Changeover timing	Travel (mm)	Total travel (mm)	Rating	Mounting method	Poles	Knob style	Operation	Terminal type	Minimum order unit (pcs.)	Product No.	Drawing No.
Non shorting	1	1.5	—	PC board	2	Standard	Latching	Straight	10,000	SPPH210100	1
							Momentary			SPPH210500	
						Short	Latching	Snap-in		SPPH260100	2
							Momentary			SPPH230500	1
						Latching	SPPH240100			3	
						Momentary	SPPH240300				

Notes

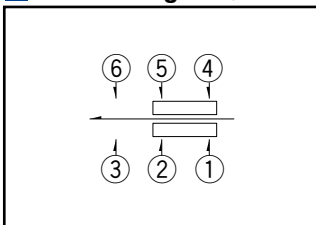
- Products other than those listed in the above chart are also available. Please contact us for details.
- Please place purchase orders per minimum order unit (integer).

■ Dimensions

Unit:mm

No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
1		Straight terminal Snap-in terminal
2		Snap-in terminal
3		Snap-in terminal

■ Circuit Diagram(Viewed from Direction A)



■ Terminal Configuration

Unit:mm

Straight terminal	Snap-in terminal

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 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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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.