

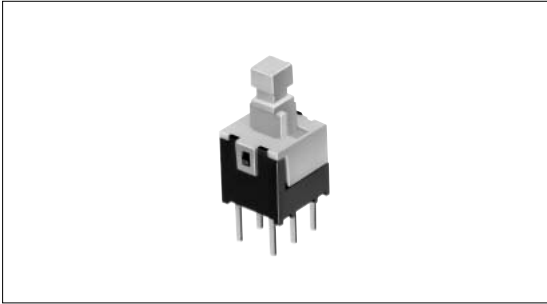
Push Switch 1mm-travel Compact-sized Vertical Type

SPPH2 Series



1mm short travel.

- Detector
- Push**
- Slide
- Rotary
- Encoders
- Power



Typical Specifications

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

- Dual-in-line
Package Type
- TACT Switch™
- Custom-
Products
- Horizontal
Type
- Vertical
Type**

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				
							Latching	Snap-in		SPPH260100	2
							Momentary			SPPH230500	1
						Short	Latching	SPPH240100		3	
							Momentary	SPPH240300			

Notes

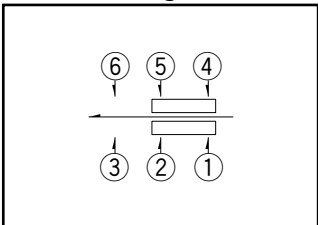
1. Products other than those listed in the above chart are also available. Please contact us for details.
2. Please place purchase orders per minimum order unit (integer).

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

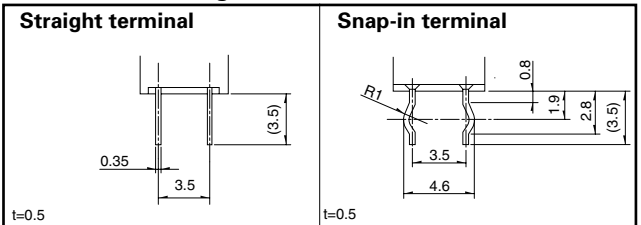
Horizontal
 Type
**Vertical
 Type**

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

Circuit Diagram (Viewed from Direction A)



Terminal Configuration



List of Varieties

Series		SPEE	SPPJ6	SPPJ3	SPPJ2	SPUJ ※1	SPUP ※1	SPUN	SPUN medium current※1	SPEG	SPPH2	
Detector	Photo											
Push	Travel (mm)	0.3 0.71	1.5	2.5		2	1.5 2	2.5		—	1	
Slide	Total travel (mm)	0.9	2.5	3.5		3	2.5 3	3.5		1.2	1.5	
Rotary	Number of poles	1	2	1 2	2	2 4				1	2	
Encoders	Dimensions (mm)	W	4	9	6.6	7.2	7.5		10		7.15	6.5
Power		D	5		12		15.2 22.7		24 36		8.35	6
Dual-in-line Package Type		H	1.22	4.5	8.3	9.6	8.8	10.3	13		3.5	6.5
TACT Switch™	Operating temperature range	- 10°C to +60°C		- 40°C to +85°C		- 10°C to +60°C						
Custom-Products	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		
Horizontal Type	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	—		—		—		—	—				
Vertical Type	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 10±1s		—	260±5°C 5±1s
		Reflow soldering	Please see P.108		—						Please see P.108	
	Page	84	85	86	88	90	91	92		94	96	

- Push Switches Attached Parts 107
- Soldering Conditions 108
- Push Switches Products Caution 109

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.