

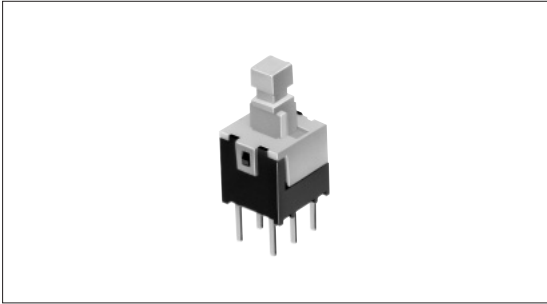
# Push Switch 1mm-travel Compact-sized Vertical Type

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 $\mu$ A 3V DC
Contact resistance (Initial /After operating life)		30m $\Omega$ max./50m $\Omega$ 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			

## Packing Specifications

### Bulk

Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case /export packing	
2,000	10,000	400 $\times$ 270 $\times$ 290

## 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 N (integer).

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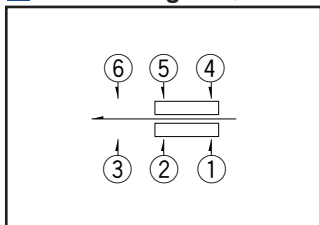
Horizontal  
 Type  
**Vertical  
 Type**

**Dimensions**

Unit:mm

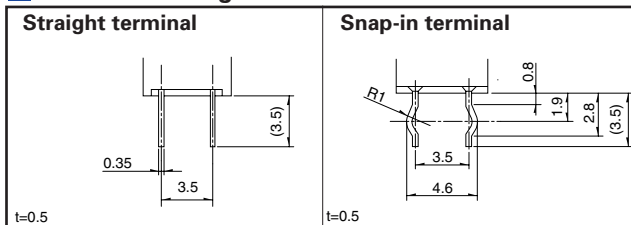
No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
1		<p><b>Straight terminal</b></p> <p><b>Snap-in terminal</b></p>
2		<p><b>Snap-in terminal</b></p>
3		<p><b>Snap-in terminal</b></p>

**Circuit Diagram (Viewed from Direction A)**













**Terminal Configuration**

Unit:mm



## List of Varieties

Series		SPPH2	SPPH4	SPPH1	SPEC	SPED2	SPED3	SPED4	SPED5	SPEF		
Photo												
Travel (mm)		1	2.2	1.5	2.5	—				1.5		
Total travel (mm)		1.5	3	2.5	3.4	4.5	3.8			2.7		
Number of poles		2					1					
Dimensions (mm)	W	6.5	8.5	10	12	14			13.5	9.4		
	D	6	6.5	10		16.8	18		18.2	9		
	H	6.5	8.5		12.5	26.7	20.7			6.9		
Operating temperature range		-10°C to +60°C			-40°C to +85°C							
Rating (max.) (Resistive load)		0.1A 12V DC	0.1A 30V DC			1A 14.5V DC						
Rating (min.) (Resistive load)		50μA 3V DC					100mΩ max.					
Electrical performance	Initial contact resistance	30mΩ max.	100mΩ max.	20mΩ max.	30mΩ max.	100mΩ max.						
	Insulation resistance	100MΩ min. 500V DC				3MΩ min. 500V DC			3MΩ min. 100VDC			
	Voltage proof	500V AC for 1minute				100V AC for 1minute						
Mechanical performance	Terminal strength	5N for 1minute			3N for 1minute	—						
	Actuator strength	Operating direction	30N		50N				90N			
		Pulling direction	—	10N	—	50N	—			30N		
Durability	Operating life without load	10,000cycles	10,000cycles	10,000cycles	10,000cycles	30,000cycles 100mΩ max.						
	Operating life without load Load:as rating	50mΩ max.	100mΩ max.	40mΩ max.	50mΩ max.	—						
Environmental performance	Cold	-20±2°C for 96h				-40±2°C for 96h						
	Dry heat	85±2°C for 96h										
	Damp heat	40±2°C, 90 to 95%RH for 96h										
Soldering	Manual soldering	350°C max. 3s max.	350±10°C 3 <sup>+1</sup> s			350±10°C 3±0.5s ※3	—	350±10°C 3±0.5s	—	350±5°C 3s max.		
	Dip soldering	260±5°C 5±1s		260±5°C 10±1s	260°C max. 5s max.	260±5°C 10±1s ※3	—	260±5°C 10±1s	—	260±5°C 10±1s ※4		
	Reflow soldering	—									Please see P.135	
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Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line Package Type

TACT Switch™

Custom-Products

Horizontal Type

Vertical Type

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### Notes

- ※3. Applicable to SPED220200 (PC board type) only.
- ※4. Applicable to SPEF110100 SPEF110200.