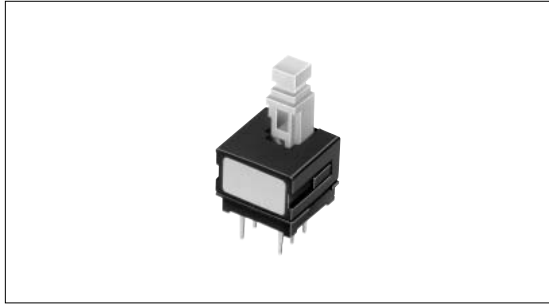


# Push Switch 1.5mm-travel Vertical Type

SPPH1 Series



Vertical type available with two lever shapes.



## Typical Specifications

Items		Specifications
Rating (max.) (min.) (Resistive load)		0.1A 30V DC/50 $\mu$ A 3V DC
Contact resistance (Initial / After operating life)		20m max./40m max.
Operating force		Refer to the products line
Operating life	Without load	10,000cycles
	With load	10,000cycles( 0.1A 30V DC )

## Product Line

Changeover timing	Travel (mm)	Total travel (mm)	Rating	Mounting method	Poles	Operating force	Operation	Terminal type	Minimum order unit ( pcs. )	Product No.	Drawing No.		
Non shorting	1.5	2.5		PC board	2	2 $\frac{1}{2}$ N	Latching	Straight	4,000	SPPH110800	1		
							Momentary					SPPH110300	
							Latching						2
							Momentary						
							Latching	SPPH120100					
							Momentary			1			
							Latching				SPPH130400		
							Momentary					SPPH130100	
						Latching	2						
						Momentary		SPPH140300					
						Latching			SPPH140100				
						Momentary				1			
3 $\frac{1}{2}$ N	Latching	Straight	SPPH110900	1									
		Snap-in			SPPH130500								
					SPPH140400								
					SPPH140400	2							

## 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

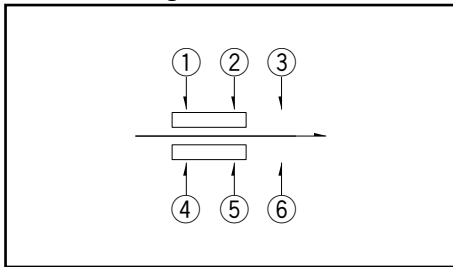
Vertical  
Type

**Dimensions**

Unit:mm

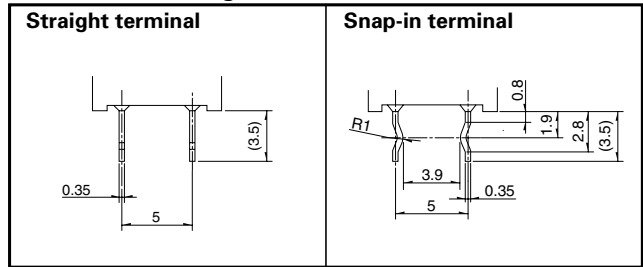
No.	Style	PC board mounting hole dimensions (Viewed from the direction A)	
1		<b>Straight terminal</b> 	<b>Snap-in terminal</b> 
		<b>Straight terminal</b> 	<b>Snap-in terminal</b> 
2		<b>Straight terminal</b> 	<b>Snap-in terminal</b> 
		<b>Straight terminal</b> 	<b>Snap-in terminal</b> 

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












**Terminal Configuration**

Unit:mm



## List of Varieties

Series	SPPH4	SPPH1	SPEC	SPED2	SPED3	SPED4	SPED5	SPEF		
Photo										
Travel (mm)	2.2	1.5	2.5					1.5		
Total travel (mm)	3	2.5	3.4	4.5	3.8		2.7			
Number of poles	2				1					
Dimensions (mm)	W	8.5	10	12	14		13.5	9.4		
	D	6.5	10		16.8	18		18.2	9	
	H	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 30V DC			1A 14.5V DC						
Rating (min. ) (Resistive load)	50μA 3V DC									
Electrical performance	Initial contact resistance	100m max.	20m max.	30m max.	100m max.					
	Insulation resistance	100M min. 500V DC			3M min. 500V DC			3M 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 100m max.	10,000cycles 40m max.	10,000cycles 50m max.	30,000cycles 100m max.					
	Operating life without load Load:as rating									
Environmental performance	Cold	-20 ± 2 for 96h			-40 ± 2 for 96h					
	Dry heat	85 ± 2 for 96h								
	Damp heat	40 ± 2 , 90 to 95%RH for 96h								
Soldering	Manual soldering	350 ± 10 3 <sup>+1</sup> 0s			350 ± 10 3 ± 0.5s	3	350 ± 10 3 ± 0.5s	350 ± 5 3s max.		
	Dip soldering	260 ± 5 5 ± 1s	260 ± 5 10 ± 1s	260 max. 5s max.	260 ± 5 10 ± 1s	3	260 ± 5 10 ± 1s	260 ± 5 10 ± 1s 4		
	Reflow soldering								Please see P.108	
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Detector

Push

Slide

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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 only.