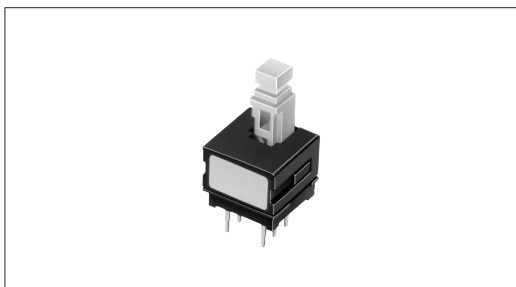


Push Switch 1.5mm-travel Vertical Type

SPPH1 Series



Vertical type available with two lever shapes.



Typical Specifications

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

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Horizontal
Type

Vertical
Type

Product Line

Changeover timing	Travel (mm)	Total travel (mm)	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 ⁻¹ 0.7N	Latching	Straight	4,000	SPPH110800	1
						Momentary			SPPH110300	
						Latching			2	SPPH120400
						Momentary				SPPH120100
						Latching	Snap-in		SPPH130400	1
						Momentary			SPPH130100	
						Latching			2	SPPH140300
						Momentary				SPPH140100
					3 ⁻¹ 0.7N	Latching	Straight	1	SPPH110900	
							Snap-in		SPPH130500	
								SPPH140400	2	

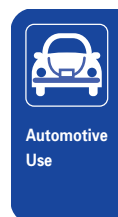
Packing Specifications

Bulk

Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case /export packing	
800	4,000	400 × 270 × 290

Notes

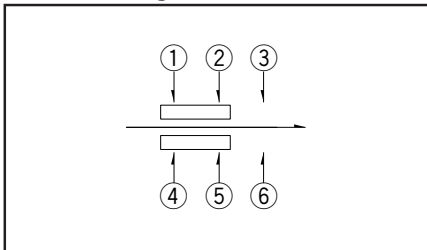
1. Products other than those listed in the above chart are also available. Please contact us for details.
2. Please place purchase orders per minimum order unit N (integer).



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

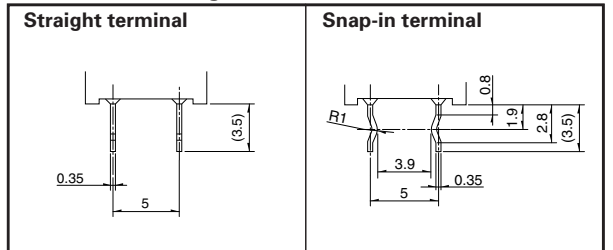
Dimensions		Unit:mm	
No.	Style	PC board mounting hole dimensions (Viewed from the direction A)	
1		<p>Straight terminal</p>	<p>Snap-in terminal</p> <p>Thickness of PC board t=1.6mm</p>
2		<p>Straight terminal</p>	<p>Snap-in terminal</p> <p>Thickness of PC board t=1.6mm</p>

Circuit Diagram (Viewed from Direction A)



Terminal Configuration











Unit:mm



List of Varieties

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

- Horizontal Type
- Vertical Type

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	16.97	20.7	6.9
Operating temperature range	-10°C to +60°C			-40°C to +85°C						
Automotive use	—		●	●	●	●	●	●	●	●
Rating (max.) (Resistive load)	0.1A 12V DC	0.1A 30V DC			1A 14.5V DC					
Rating (min.) (Resistive load)	50μA 3V DC									
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. 100V DC	
	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 ⁺ 1s		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.127
Page	115	117	118	120	121	122			124	

- Push Switches Attached Parts126
- Push Switches Products Caution128

Notes

1. ※3. Applicable to SPED220200(PC board type) only.
2. ※4. Applicable to dip soldering.
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.