

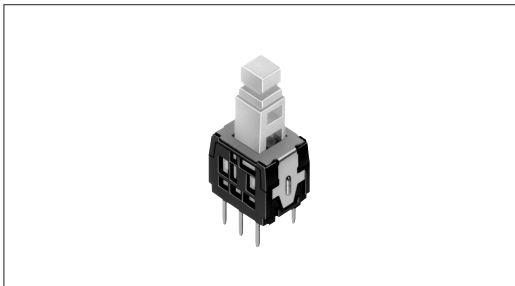
Push Switch 2.2mm-travel Medium-sized Vertical Type

SPPH4 Series



Easy to use mid-size vertical type push switch.

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



Typical Specifications

Items	Specifications
Rating (max.) / (min.) (Resistive load)	0.1A 30V DC/50μA 3V DC
Contact resistance (Initial performance)	100mΩ max.
Operating force	2 ± 1N
Operating life with load	10,000cycles (0.1A 30V DC)

Product Line

Changeover timing	Travel (mm)	Total travel (mm)	Mounting method	Poles	Operation	Terminal type	Location lug	Minimum order unit (pcs.)	Product No.
Non shorting	2.2	3	PC board	2	Latching	Straight	With	6,000	SPPH410100
					Momentary		Without		SPPH410200
					Latching	Snap-in	With		SPPH420100
					Momentary		SPPH430100		
								SPPH430200	

Packing Specifications

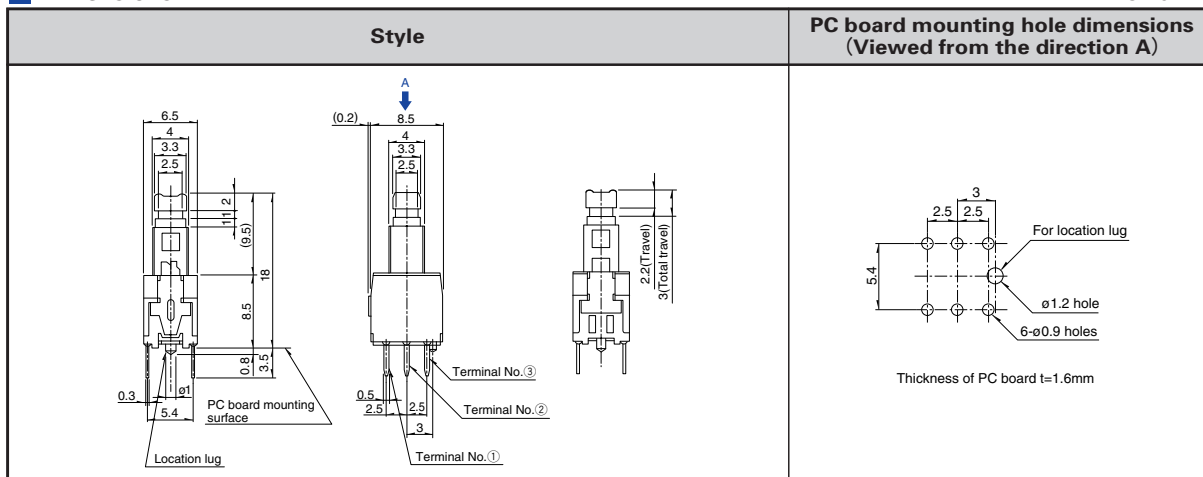
Bulk

	Number of packages (pcs.)		Export package measurements (mm)
	1 case /Japan	1 case /export packing	
Horizontal Type	1,200	6,000	400 × 270 × 290

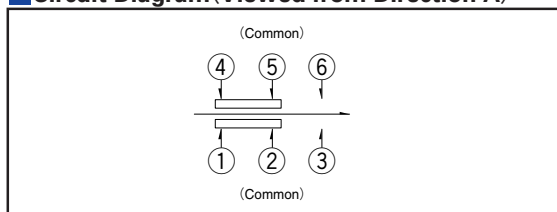
- Horizontal Type
- Vertical Type**

Dimensions

Unit:mm

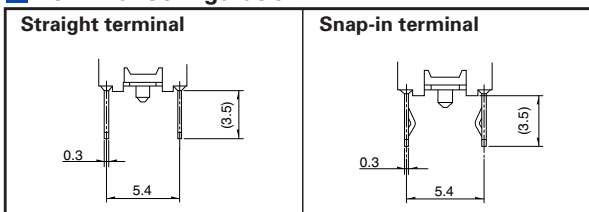


Circuit Diagram (Viewed from Direction A)



Terminal Configuration

Unit:mm













Notes

- Above dimensions indicate "with location lug" version.
- Please place purchase orders per minimum order unit N (integer).
- Products other than those listed in the above chart are also available. Please contact us for details.

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
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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.