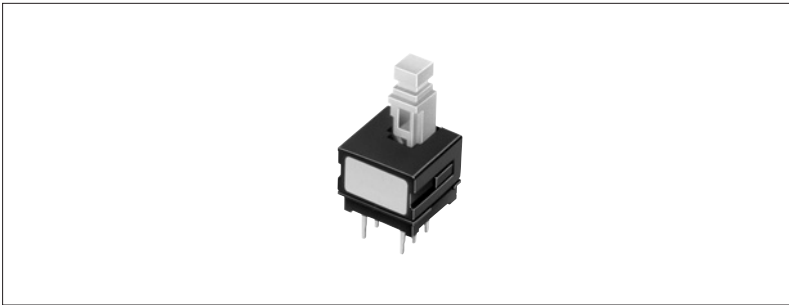


1.5mm-travel Vertical Type Push Switch

SPPH1 Series

Vertical type available with two lever shapes.

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



Car Use

- Jog Shuttle
- Telephone-hook

- Detector
- Vibration Sensors

- Dual-in-line Package Type
- Multi Control Devices

- TACT

- Horizontal Type

- Vertical Type**

Features

- 1.5mm-travel.

Applications

- For switches of in-vehicle units, hazard systems, and rear differential drives
- For various switching for LCD TVs, printers, and audio equipment

Typical Specifications

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

Products Line

Changeover timing	Travel (mm)	Total travel (mm)	Rating	Mounting method	Poles	Operating force	Operating	Terminal style	Minimum packing unit (pcs.)	Products No.	Drawing No.	
Non shorting	1.5	2.5	—	PC board	2	$2^{+1}_{-0.7}$ N	Latching	Straight	100	SPPH110800	1	
							Momentary					SPPH110300
							Latching					SPPH120400
							Momentary					SPPH120100
						Latching	Snap-in	SPPH130400		1		
						Momentary		SPPH130100				
						Latching		SPPH140300			2	
						Momentary		SPPH140100				
$3^{+1}_{-0.7}$ N	Latching	Straight	SPPH110900	1								
	Latching	Snap-in	SPPH130500									
									SPPH140400	2		

Note

Additional switches not included in the above list are also available. Contact us for details.

For other detailed specifications, see P.100

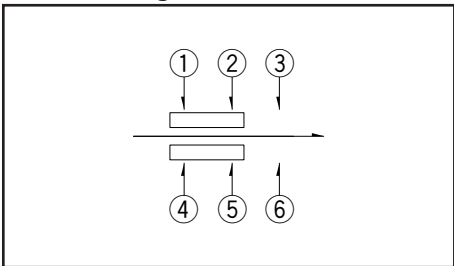
- Power
- Push**
- Slide
- Rotary
- Encoders
- Jog Shuttle
- Telephone-hook
- Detector
- Vibration Sensors
- Dual-in-line Package Type
- Multi Control Devices
- TACT
- Horizontal Type
- Vertical Type**

Dimensions

Unit : mm

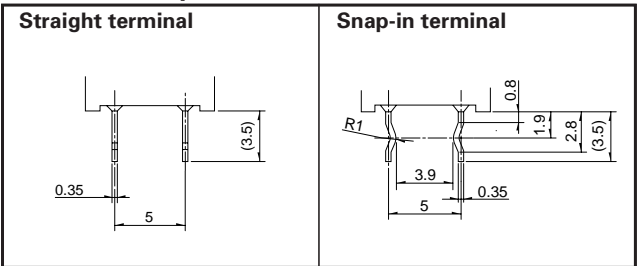
No.	Style	PC board mounting hole dimensions (Viewed from the direction A)	
		Straight terminal	Snap-in terminal
1			
2			

Circuit Diagram (Viewed from the Direction A)



Terminal Style

Unit : mm



Products Specifications

Item	Series																						
	SPPJ6	SPPJ2	SPPJ3	SPUJ SPUP	SPUN	SPUN (medium current)	SPPH2	SPPH4	SPPH1	SPEA	SPEC	SPED1	SPED2	SPED3									
Power	Operating temperature range											-10°C to +60°C		-40°C to +85°C									
Push	Rating (max.) (Resistive load)											0.2A 12V DC	0.2A 30V DC	0.1A 30V DC	1A 25V DC	0.1A 12V DC	0.1A 30V DC			1A 14.5V DC			
Slide	Electrical performance	Initial contact resistance											20mΩ max.			30mΩ max.	100mΩ max.	20mΩ max.	30mΩ max.	100mΩ max.			
Rotary		Insulation resistance											100MΩ min. 500V DC						3MΩ min. 100V DC				
Encoders		Voltage proof											500V AC for 1 min.						100V AC for 1 min.				
Jog Shuttle	Mechanical performance	Robustness of terminal											5N for 1 min.			3N for 1 min.			—				
Telephone -hook		Robustness of actuator	Operating direction		50N	30N	50N	30N	50N														
Detector			Pulling direction		—			50N	—	10N	—	50N	—										
Vibration Sensors		Vibration											10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2 hours respectively										
Dual-in-line Package Type		Solderability											230±5°C、3±0.5s						—	230±5°C 3±0.5s	—		
Multi Control Devices	Resistance to soldering heat	Manual soldering		350±10°C 3 ⁺ ₀ ⁺ s		300±10°C 3 ⁺ ₀ ⁺ s	350±10°C 3 ⁺ ₀ ⁺ s		350°C max. 3s max.	350±10°C 3 ⁺ ₀ ⁺ s			—	350±10°C 3±0.5s	—								
TACT		Dip soldering		260±5°C 5±1s	260±5°C 10±1s	260±5°C 5±1s	260±5°C 10±1s		260±5°C 5±1s	260±5°C 10±1s	260±5°C 5±1s	260°C max. 5s max.	—	260±5°C 10±1s	—								
Horizontal Type	Durability	Operating life without load											10,000 cycles 40mΩ max.		30,000 cycles 40mΩ max.	10,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.	10,000 cycles 100mΩ max.	10,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.	30,000 cycles 1Ω max.		
		Operating life with load Load : As rating											10,000 cycles 40mΩ max.		5,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.	10,000 cycles 100mΩ max.	10,000 cycles 40mΩ max.	10,000 cycles 50mΩ max.	10,000 cycles 1Ω max.			
Vertical Type		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					