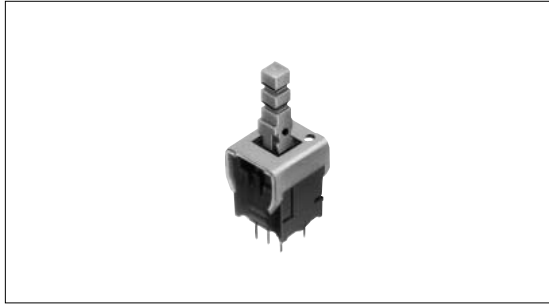


Push Switch 2.5mm-travel Vertical Type

SPEC Series



Vertical type, widely applicable to home and industrial electronic equipment.



Typical Specifications

Items		Specifications
Rating(max.)(min.) (Resistive load)		0.1A 30V DC/50 μ A 3V DC
Contact resistance (Initial / After operating life)		30m max./50m max.
Operating force		2 \pm 1N
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	Operation	Terminal type	Minimum order unit(pcs.)	Product No.
Non shorting	2.5	3.4		PC board	2	Latching	Straight	2,000	SPEC121100
							Snap-in		SPEC121300

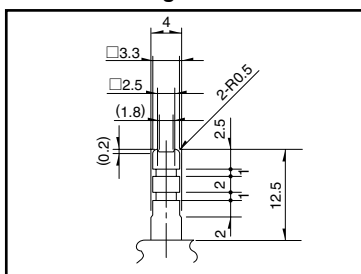
Dimensions

Unit:mm

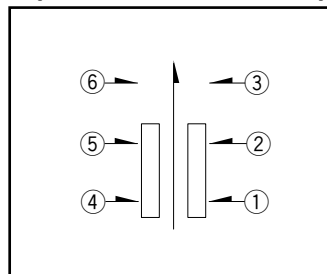
Style	PC board mounting hole dimensions (Viewed from the direction A)	
<p>Dimensions: 12, 12.5, 12.5, 3.5, 0.35, 5, 8.8, 10, 3.75, 2.5, 3.4, 4, Knob face, Terminal No. ①, 0.6, 2.5, 2.5, PC board mounting face.</p>	Straight terminal <p>Dimensions: 5, 2.5, 2.5, $\phi 1$ hole.</p>	Snap-in terminal <p>Dimensions: (5), 4.1\pm0.05, 2.5, 2.5, $\phi 1$ hole, Thickness of PC board t=1.6mm.</p>

Actuator Configuration at Front Edge

Unit:mm



Circuit Diagram (Viewed from Direction A)



Terminal Configuration

Unit:mm










Straight terminal	Snap-in terminal
<p>Dimensions: 0.35, 5, 8.8, (3.5).</p>	<p>Dimensions: R1, 0.35, 3.9, 5, 8.8, 0.8, 1.9, 2.8, (3.5).</p>

Notes

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

Refer to P.107 for knobs.

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 ⁺¹ 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
Page	98	99	101	102	103		105		

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Horizontal
Type

Vertical
Type

Push Switches Attached Parts107
 Push Switches Products Caution109

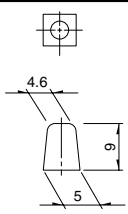
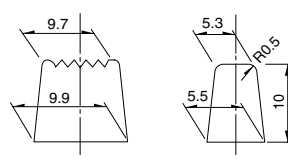
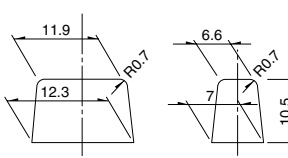
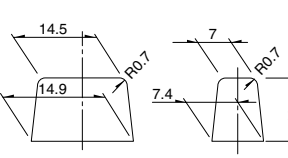
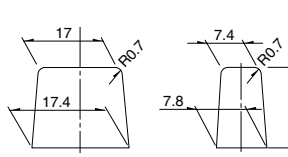
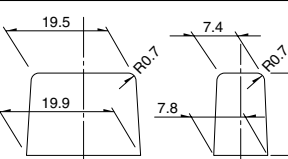
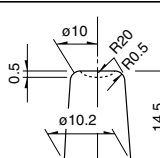
Notes

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

Attached Parts

Please specify required knob.

Unit:mm

Knob outline drawing	Variety		Series
	Color	Model	
	<p>Black Red White</p>	<p>UJ206022 UJ206020 UJ206026</p>	<p>SPPJ3 SPUJ</p>
<p>Key pitch 10mm</p> <p>Square knob</p> 		<p>4093-1 4093-2 4093-3</p>	
<p>Key pitch 12.5mm</p> <p>Square knob</p> 		<p>UE201011 UE201012 UE201013</p>	
<p>Key pitch 15mm</p> <p>Square knob</p> 		<p>UE202011 UE202012 UE202013</p>	<p>SPPJ2 SPUP SPUN SPEC</p>
<p>Key pitch 17.5mm</p> <p>Square knob</p> 		<p>UE203011 UE203012 UE203013</p>	
<p>Key pitch 20mm</p> <p>Square knob</p> 		<p>UE204011 UE204012 UE204013</p>	
<p>Round knob</p> 		<p>UE200011 UE200012 UE200013</p>	

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Horizontal
Type

Vertical
Type

Note

We recommend the use of adhesive to secure the knob when mounting onto switches.

