

Detector Switch Two-way Operation Type

SPVF Series



Highly convenient, compact operable in both vertical and horizontal directions.

Detector

Push

Slide

Rotary

Encoders

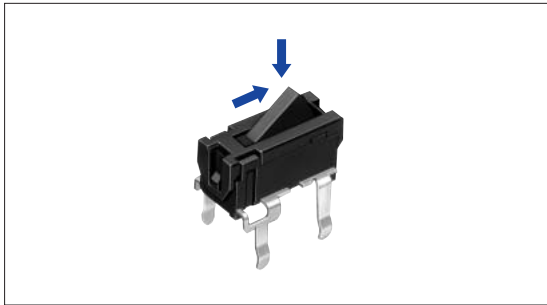
Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products



Features

- A wide variety of operation components is possible based on the application.
- Dip soldering is possible.

Applications

- For detection mechanisms in DVD players, audio players, and VCRs
- For detecting tray sizes of photo copiers

Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		1mA 5V DC/50μA 3V DC
Contact resistance (Initial performance/After lifetime)		500mΩ max./1Ω max.
Operating force		0.3N max.
Operating life	Without load	100,000 cycles
	With load	100,000 cycles (1mA 5V DC)

Products Line

Poles	Positions	Terminal style	Terminal pitch (mm)	Products No.	Drawing No.
1	1	Snap-in	5.2	SPVF110100	1
				SPVF120100	2
				SPVF130100	3
				SPVF140100	4
			6.8	SPVF210200	5
				SPVF220200	6
				SPVF230200	7
				SPVF240200	8
2			—	SPVF350100	9

For other specifications, see P.70

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions
1		<p>Total travel position ON starting position</p>	
2		<p>Total travel position ON starting position</p>	
3		<p>Total travel position ON starting position</p>	
4		<p>ON starting position Total travel position</p>	
5		<p>Total travel position ON starting position</p>	

Detector Switch

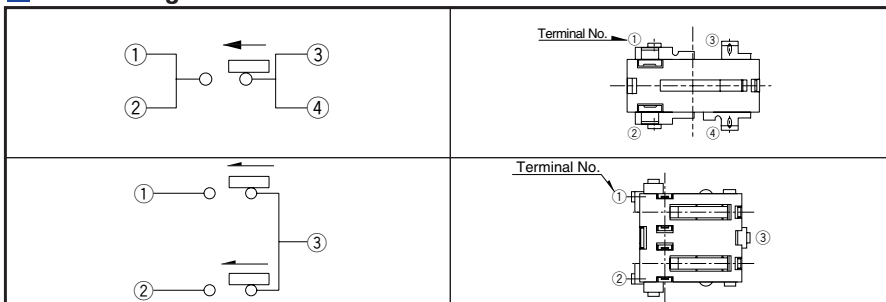
Two-way Operation Type | SPVF Series

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions
6			
7			
8			
9			

Circuit Diagram



Products Specifications

Items		Series										
		SPPB	SPVE	SPPW8	SPVM	SPVR	SPVF	SSCU	SSCT	SSCF	SSCM	
Operating temperature range		-10°C to +60°C										
Rating (max.) (Resistive load)		0.1A 30V DC			1mA 5V DC			0.1A 12V DC			1mA 5V DC	
Electrical performance	Initial contact resistance	1 Ω max.	500mΩ max.	1 Ω max.	2 Ω max.	3 Ω max.	500mΩ max.	70mΩ max.	20mΩ max.	100mΩ max.	2 Ω max.	
	Insulation resistance	100MΩ min. 100V DC					100MΩ min. 250V DC		100MΩ min. 100V DC			
	Voltage proof	100V AC for 1 min.					250V AC for 1 min.		100V AC for 1 min.			
Mechanical performance	Robustness of terminal	3N for 1 min.	0.5N for 1 min.	3N for 1 min.	1N for 1 min.	0.5N for 1 min.	3N for 30 s	3N for 1 min.		5N for 1 min.	0.5N for 1 min.	
	Robustness of actuator	10N	5N	10N	5N	2N	1N	5N	10N		0.5N	
	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										
	Resistance to soldering heat	Manual soldering	300±5°C, 5s max.	350±5°C, 3s max.				300±10°C, 3 ⁺¹ ₋₀ s	350±5°C, 3s max.	350±10°C, 3 ⁺¹ ₋₀ s	350±5°C, 3s max.	
		Dip soldering	260±5°C, 5±1s	—	255±5°C, 5±1s	—		245±5°C, 5±1s max.	—	260±5°C, 5±1s		—
Reflow soldering		Please see P.72					—				Please see P.72	
Durability	Operating life without load	50,000 cycles 2 Ω max.	50,000 cycles 1 Ω max.	100,000 cycles 2 Ω max.	50,000 cycles 5 Ω max.	100,000 cycles 1 Ω max.	10,000 cycles 100mΩ max.	10,000 cycles 40mΩ max.	50,000 cycles 200mΩ max.	50,000 cycles 5 Ω max.		
	Operating life with load	(0.1A 30V DC) 50,000 cycles 2 Ω max.	(0.1A 30V DC) 50,000 cycles 1 Ω max.	(0.1A 30V DC) 100,000 cycles 2 Ω max.	(1mA 5V DC) 50,000 cycles 5 Ω max.	(1mA 5V DC) 100,000 cycles 1 Ω max.	(0.1A 12V DC) 10,000 cycles 150mΩ max.	(0.1A 12V DC) 10,000 cycles 60mΩ max.	(0.1A 12V DC) 50,000 cycles 300mΩ max.	(1mA 5V DC) 50,000 cycles 5 Ω max.		
Environmental performance	Cold	-20±2°C for 96h					-40±2°C for 96h	-20±2°C for 96h				
	Dry heat	85±2°C for 96h										
	Damp heat	40±2°C, 90 to 95%RH for 96h										

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line Package Type

Multi Control Devices

TACT Switch™

Custom-Products