

Detector Switch 0.1A 48V DC Qualified Telephone-hook

SPPY1 Series



A wide variety of applications and high reliability contribute to set design.

Detector

Push

Slide

Rotary

Encoders

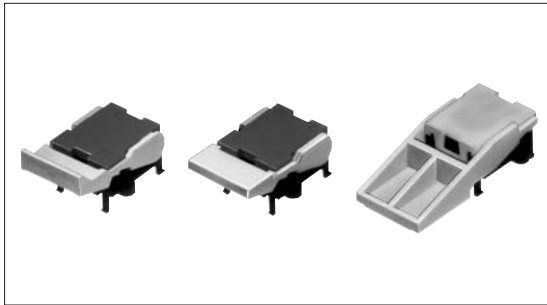
Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products



Features

- Low-profile with thickness of 8mm.
- Using sliding contacts enhances reliability even for very low current.

Applications

- Switches for hooks of home-use FAX machines and cordless telephones

Typical Specifications

Items		Specifications
Rating (max.)/(min.) (Resistive load)		0.1A 48V DC/0.1mA 3V DC
Contact resistance (Initial performance/After lifetime)		50mΩ max./1Ω max.
Operating force		0.8N max.
Operating life	Without load	300,000 cycles
	With load Load : as rating	300,000 cycles

Products Line

Poles	Positions	Operation	Lever type	Products No.	Drawing No.
1	2	Normal-operation	Flat	SPPY110600	1
		Reverse-operation	Reverse	SPPY110100	2
2		Normal-operation	Flat	SPPY121500	3
			Projected	SPPY120600	4

Notes

1. Additional switches not included in the above list are also available. Contact us for details.
2. Contact us for a high load type.

For other specifications, see P.71

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No.	Style	PC board mounting hole dimensions (Viewed from direction A)												
1	<p>1-pole flat lever type</p>	<p>Timing lag diagram</p> <table border="1"> <tr> <td>① ③</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>② ③</td> <td>OFF</td> <td>ON</td> </tr> </table> <p>6.85 max. 2.65 min. Travel position (X)</p>	① ③	ON	OFF	② ③	OFF	ON						
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2	<p>1-pole reverse-operation lever type</p>	<p>Timing lag diagram</p> <table border="1"> <tr> <td>① ③</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>② ③</td> <td>OFF</td> <td>ON</td> </tr> </table> <p>1.5 min. 5.9 max. Travel position (X)</p>	① ③	ON	OFF	② ③	OFF	ON						
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3	<p>2-poles flat lever type</p>	<p>Timing lag diagram</p> <table border="1"> <tr> <td>① ③</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>② ③</td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>④ ⑥</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>⑤ ⑥</td> <td>OFF</td> <td>ON</td> </tr> </table> <p>6.85 max. 2.65 min. Travel position (X)</p>	① ③	ON	OFF	② ③	OFF	ON	④ ⑥	ON	OFF	⑤ ⑥	OFF	ON
① ③	ON	OFF												
② ③	OFF	ON												
④ ⑥	ON	OFF												
⑤ ⑥	OFF	ON												

Detector Switch

0.1A 48V DC Qualified Telephone-hook | SPPY1 Series

Dimensions

Unit:mm

Detector

Push

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No.	Style	PC board mounting hole dimensions (Viewed from direction A)																
4	2-poles with projected lever type																	
		Timing lag diagram <table border="1"> <tr> <td>①</td> <td>③</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>②</td> <td>③</td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>④</td> <td>⑥</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>⑤</td> <td>⑥</td> <td>OFF</td> <td>ON</td> </tr> </table> <p>9.35 max. 5.15 min. Travel position (X)</p>	①	③	ON	OFF	②	③	OFF	ON	④	⑥	ON	OFF	⑤	⑥	OFF	ON
①	③	ON	OFF															
②	③	OFF	ON															
④	⑥	ON	OFF															
⑤	⑥	OFF	ON															

Circuit Diagram (Viewed from the Direction A)

1-pole	2-poles
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Products Specifications

Series		SPPY1	SPPY5	
Items				
Operating temperature range		-10°C to +60°C		
Rating (Resistive load)		0.1mA 3V DC min. 0.1A 48V DC max.	0.1mA 3V DC min. 50mA 60V DC max.	
Electrical performance	Initial contact resistance	50mΩ max.	100mΩ max.	
	Insulation resistance	100MΩ min. 500V DC		
	Voltage proof	500V AC for 1 min.		
Mechanical performance	Robustness of terminal	5N for 1 min.		
	Robustness of actuator	10N	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	350±10°C, 3 ⁺ 1s	350±5°C, 3s max.
		Dip soldering	260±5°C, 5±1s	—————
Reflow soldering		—————	Please see P.72	
Durability	Operating life without load	300,000 cycles, 1Ω max.		
	Operating life with load	0.1mA 3V DC 300,000 cycles, 1Ω max.		
		0.1A 48V DC 300,000 cycles, 1Ω max.	50mA 60V DC 100,000 cycles, 1Ω max.	
Environmental performance	Cold	-20±2°C for 96h		
	Dry heat	85±2°C for 96h		
	Damp heat	40±2°C, 90 to 95%RH for 96h		

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