

Detector Switch Water-proof Type

SPVQ7 Series



Slim type with body height of 6.7mm.

Detector

Push

Slide

Rotary

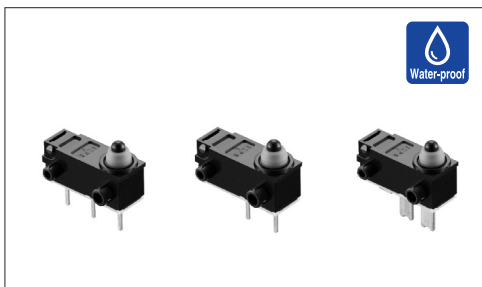
Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products



Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		0.1A 12V DC/50 μ A 5VDC
Contact resistance (Initial/After operating life)		500m Ω /1 Ω max.
Operating force		1 \pm 0.5N
Operating life	Without load	300,000cycles
	With load	300,000cycles (0.1A 12V DC)

Product Line

Poles	Positions	Change over timing	Operating part shape	Terminal type	Main body form	Minimum order unit (pcs)	Product No.	Drawing No.
1	2	Non shorting	Push	For PC board	Boss - left side	5,400	SPVQ710100	1
					Boss - right side		SPVQ710200	2
	1				Boss - left side		SPVQ710300	3
					Boss - right side		SPVQ710400	4
					Boss - left side		SPVQ740300	5
					Boss - right side		SPVQ740400	6
				Solder terminal				

Packing Specifications

Bulk

Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case /export packing	
1,350	5,400	540 \times 360 \times 270

Notes

1. This unit cannot be used in water.
2. Please place purchase orders per minimum order unit N (integer).

Dimensions

Unit:mm

No.	Style
1	
2	



Automotive
Use

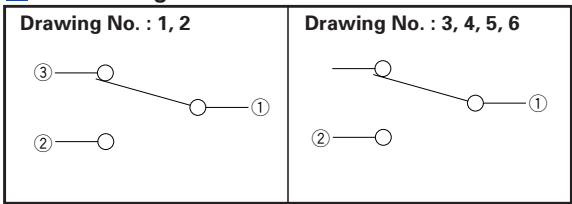
Dimensions

Unit:mm















No.	Style
3	<p>Technical drawing of detector switch style 3. Dimensions include: 12.2, 5.4, 9.53, 12.13, 2.27, 14.7, 2-0.6, 5.08, 5.08, 7.73, 4.63, 6.7, 3.6, 4.25 max., 2.6, 2.2, 1.7, 0.4, 2.7, 3.1, 6.55, 7.45 max., 5.1, 2.6, 4.25 max., 3.6, 6.7, 2.27, 5.08, 7.73, 4.63, 14.7, 2-0.6, 5.08, 5.08. Labels include: Terminal No.①-② ON starting point, Free position, Total travel position, Terminal No.①, Terminal No.②.</p>
4	<p>Technical drawing of detector switch style 4. Dimensions include: 12.2, 5.4, 9.53, 12.13, 2.27, 14.7, 2-0.6, 5.08, 5.08, 7.73, 4.63, 6.7, 3.6, 4.25 max., 2.6, 2.2, 1.7, 0.4, 2.7, 3.1, 6.55, 7.45 max., 5.1, 2.6, 4.25 max., 3.6, 6.7, 2.27, 5.08, 7.73, 4.63, 14.7, 2-0.6, 5.08, 5.08. Labels include: Terminal No.①-② ON starting point, Free position, Total travel position, Terminal No.①, Terminal No.②.</p>
5	<p>Technical drawing of detector switch style 5. Dimensions include: 12.2, 5.4, 9.53, 12.13, 2.27, 14.7, 2-2.5, 7.73, 4.63, 6.7, 3.6, 4.95 max., 2.6, 2.2, 1.7, 0.4, 2.7, 3.1, 6.55, 7.45 max., 5.1, 2.6, 4.95 max., 3.6, 6.7, 3.22, 4.13, 4.13, 14.7, 2-2.5, 7.73, 4.63, 14.7, 2-2.5, 7.73, 4.63. Labels include: Terminal No.①-② ON starting point, Free position, Total travel position, Terminal No.①, Terminal No.②.</p>
6	<p>Technical drawing of detector switch style 6. Dimensions include: 12.2, 5.4, 9.53, 12.13, 2.27, 14.7, 2-2.5, 7.73, 4.63, 6.7, 3.6, 4.95 max., 2.6, 2.2, 1.7, 0.4, 2.7, 3.1, 6.55, 7.45 max., 5.1, 2.6, 4.95 max., 3.6, 6.7, 3.22, 4.13, 4.13, 14.7, 2-2.5, 7.73, 4.63, 14.7, 2-2.5, 7.73, 4.63. Labels include: Terminal No.①-② ON starting point, Free position, Total travel position, Terminal No.①, Terminal No.②.</p>

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

Circuit Diagram



List of Varieties (Water-proof Type / Telephone-hook Type)

Series	Water-proof Type						Telephone-hook Type		
	SPVQ6	SPVQ7	SPVQ8	SPVQ9	SPVQA	SSCN	SPPY5		
Photo									
Operation type									
Operating temperature range	-40°C to +85°C						-10°C to +60°C		
Automotive use	●	●	●	●	●	●	—		
Rating (max.) (Resistive load)	0.1A 12V DC			50mA 26V DC		0.1A 12V DC		50mA 48V DC max.	
Rating (min.) (Resistive load)	50μA 5V DC					100μA 5V DC		100μA 3V DC	
Electrical performance	Initial contact resistance			500mΩ max.		75mΩ		500mΩ max.	
	Insulation resistance			100MΩ min. 500V DC					
	Voltage proof			500V AC for 1 minute					
Mechanical performance	Terminal strength						3N for 1 minute	5N for 1 minute	
	Actuator strength						20N	10N	5N
Durability	Operating life without Load			300,000cycles 1Ω max.		300,000cycles 200mΩ max.		300,000cycles 1Ω max.	
	Operating life with Load			(0.1A 12V DC) 300,000cycles 1Ω max.		(50mA 26V DC) 300,000cycles 200mΩ max.		(0.1A 12V DC) 300,000cycles 1Ω max.	
Environmental performance	Cold						-40±2°C for 500h		-20±2°C for 96h
	Dry heat						85±2°C for 500h		85±2°C for 96h
	Damp heat						60±2°C, 90 to 95%RH for 500h		40±2°C, 90 to 95%RH for 96h
Dimensions (mm)	W	13.3	14.7	8.3	15.4	15.2	13	14.4	
	D	5.3	5.4	5.3	8.4	6.4	5	28.6	
	H	7	6.7	6.5	7.5	7.95	25	7.15	
Soldering	Manual soldering				300±10°C, 3 ⁺¹ s		—		300±10°C, 3 ⁺¹ s
	Dip soldering				260±5°C, 5±1s		—		—
	Reflow soldering				—		—		Please see P.97
Number of poles		1			2		1		2
Operation force		1±0.5N 3N max.		1±0.5N			2N max.		0.8N max.
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Note

●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.