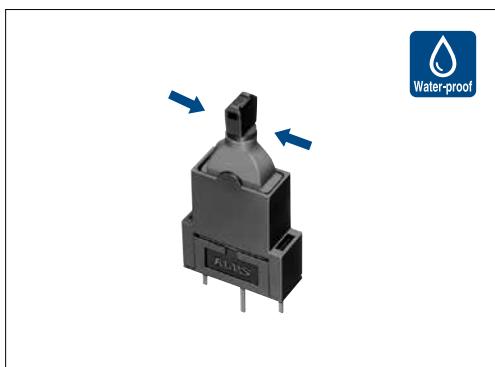


Water-proof two-way detection type lever switch
with 40° total travel in both directions



■ Typical Specifications



Items	Specifications	
Rating (max.)/(min.) (Resistive load)	0.1A 12V DC / 100μA 5V DC	
Contact resistance (Initial / After operating life)	500mΩ max. / 1Ω max.	
Operating force	2N max.	
Lever devoted angle	40°	
Operating life	Without load	100,000cycles
	With load	100,000cycles (0.1A 12V DC)

■ Product Line

Poles	Positions	Changeover timing	Terminal type	Minimum order unit (pcs)		Product No.
				Japan	Export	
1	2	Non shorting	For PC board	600	2,400	SSCN110101

Note

This unit cannot be used in water (IP67 rating, except for terminal).

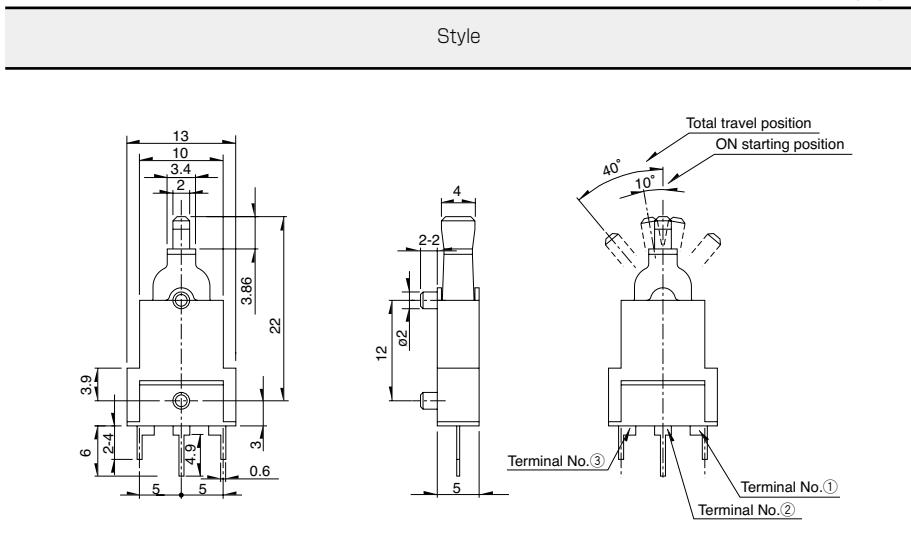
■ Packing Specifications

Tray

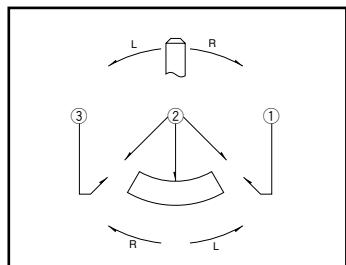
Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case /export packing	
600	2,400	540×360×270

■ Dimensions

Unit:mm



■ Circuit Diagram



Series		Water-proof Type			Fast Switching Type			
		SPVQ8	SPVQA	SSCN	SPVQ9	SPVQC		
Photo								
Operation type		Two-way						
Dimensions (mm)	W	8.3	15.2	13	15.4	15.4		
	D	5.3	6.4	5	8.4	7.4		
	H	6.5	7.95	15	7.5			
Operating temperature range		-40°C to +85°C						
Automotive use		●	●	●	●	●		
Life cycle (availability)		 3	 3	 3	 3	 3		
Poles / Positions		1/1	1/1 1/2	1/2	2/2			
Rating (max.) (Resistive load)		0.1A 12V DC			50mA 26V DC	50mA 18V DC		
Rating (min.) (Resistive load)		50µA 5V DC		100µA 5V DC	50µA 5V DC			
Durability	Operating life without load	300,000cycles 1Ω max. or 1,000,000cycles 3Ω max.	300,000cycles 1Ω max.	100,000cycles 1Ω max.	300,000cycles 200mΩ max.	—		
	Operating life with load Rating (max.) (Resistive load)	300,000cycles 1Ω max. or 1,000,000cycles 3Ω max.	300,000cycles 1Ω max.	100,000cycles 1Ω max.	300,000cycles 200mΩ max.			
Electrical performance	Initial contact resistance	500mΩ max.			75mΩ max.			
	Insulation resistance	100MΩ min. 500V DC				100MΩ min. 250V DC		
	Voltage proof	500V AC for 1minute				250V AC for 1minute		
Mechanical performance	Terminal strength	3N for 1minute (with terminal) Wire strength 30N for 1minute (with wire)	3N for 1minute					
	Actuator strength	20N		10N	20N			
Environmental performance	Cold	-40°C 500h						
	Dry heat	85°C 500h						
	Damp heat	60°C, 90 to 95% RH 500h						
Operation force		1±0.5N		2N max.	1±0.5N			
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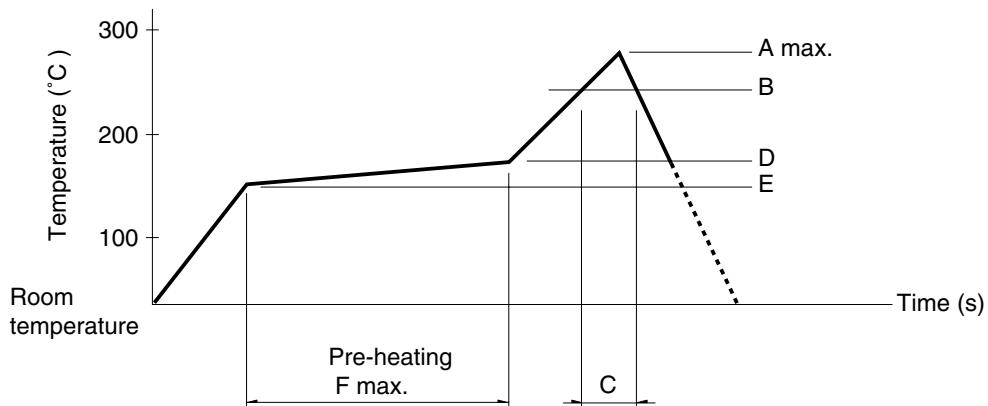
Note

- Indicates applicability to all products in the series.

Detector Switches / Soldering Conditions

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple $\phi 0.1$ to 0.2 CA (K) or CC (T) at soldering portion (copper foil surface).
A heat resisting tape should be used for fixed measurement.
3. Temperature profile



Series (Reflow type)	A (°C) 3s max.	B (°C)	C (s)	D (°C)	E (°C)	F (s)
SPPB	250		40			
SPVE						
SPVL						
SPVM						
SPVN						
SPVR	260	230	40	180	150	120
SPVS						
SPVT						
SSCM						
SSCQ						
SPVQC	250					

Notes

1. The condition mentioned above is the temperature on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, surface depending on the PC board's material, size, thickness, etc.
The above-stated conditions shall also apply to switch surface temperatures.
2. Soldering conditions differ depending on reflow soldering machines.
Prior verification of soldering condition is highly recommended.

■ Reference for Hand Soldering

Series	Soldering temperature	Soldering time
SPVS, SPVN, SPVT, SPVM, SPVR, SPVE, SSCQ, SSCM, SPVL, SSCT, SPVQC	$350 \pm 5^\circ\text{C}$	3s max.
SPVQ1, SPVQ3, SPVQ6, SPVQ7, SPVQ8, SPVQ9, SSCN, SPVQA	$300 \pm 10^\circ\text{C}$	3 + 1 / 0s
SPPB (Reflow)	$300 \pm 5^\circ\text{C}$	5s max.
SSCF, SPPB (For Lead, Dip)	$350 \pm 10^\circ\text{C}$	3 + 1 / 0s

■ Reference for Dip Soldering

(For PC board terminal types)

Series	Items		Dip soldering	
	Preheating temperature	Preheating time	Soldering temperature	Duration of immersion
SSCT, SPVQ1, SPVQ3, SPVQ6, SPVQ7, SPVQ8, SPVQ9, SPVQA	$100 \pm 10^\circ\text{C}$	60s max.	$260 \pm 5^\circ\text{C}$	$5 \pm 1\text{s}$
SPPW8, SPPB	100°C max.	60s max.	$255 \pm 5^\circ\text{C}$	$5 \pm 1\text{s}$
SSCF	—	—	$260 \pm 5^\circ\text{C}$	$5 \pm 1\text{s}$

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