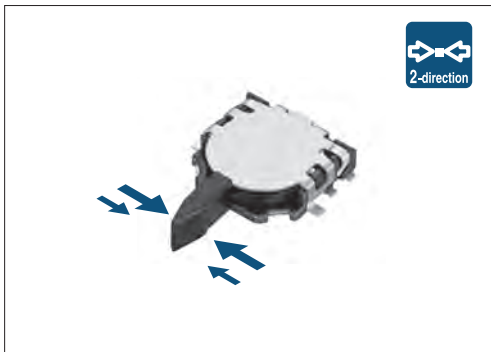


Industry's smallest two-step detector switch takes up 30% less space than existing products



Typical Specifications

Items		Specifications
Rating (max.)/(min.) (Resistive load)		1mA 5V DC / 50μA 3V DC
Contact resistance (Initial / After operating life)		2Ω max. / 5Ω max.
Operating force		0.35N max.
Operating life	Without load	50,000cycles
	With load	50,000cycles (1mA 5V DC)

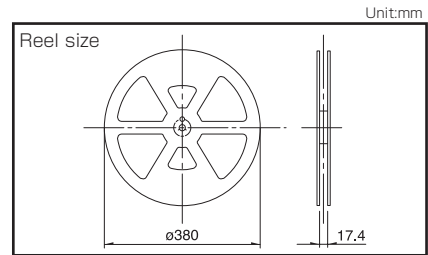
Product Line

Poles	Positions	Terminal type	Total travel (mm)	Location lug	Minimum order unit (pcs.)		Product No.
					Japan	Export	
1	Two-direction type : 2-position each side	For PC board (Reflow)	3.73	With	4,000	16,000	SSCQ110100
				Without			SSCQ120102

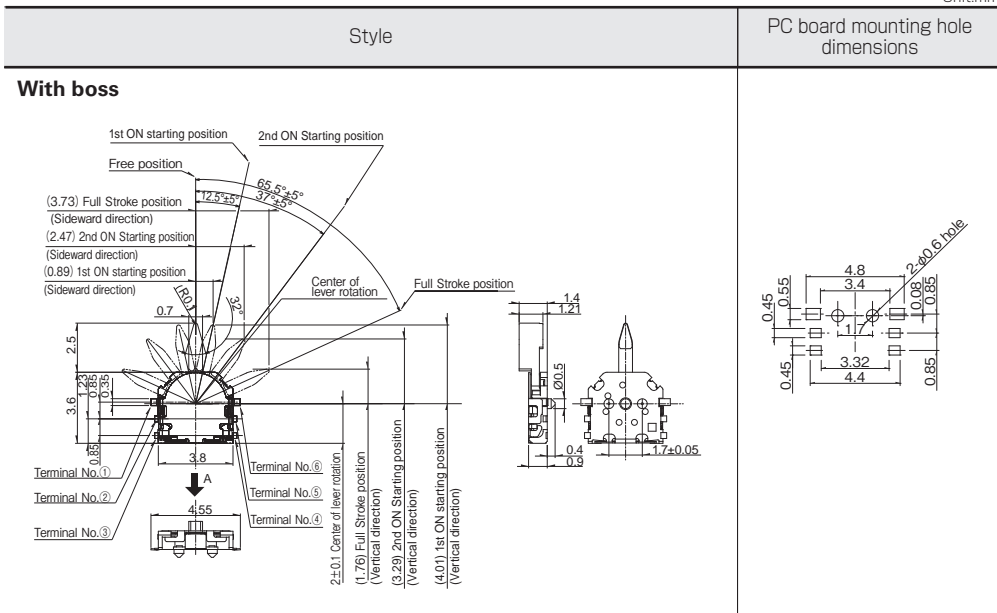
Packing Specifications

Taping

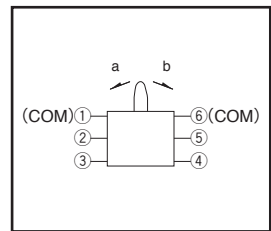
Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
1 reel	1 case /Japan	1 case /export packing		
4,000	8,000	16,000	16	417×409×139



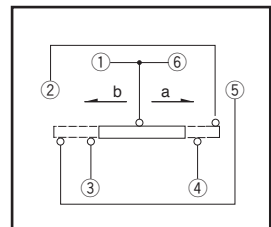
Dimensions



Terminal Layout



Circuit Diagram


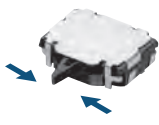
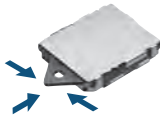







Note

Dimensions drawing is for type with location lugs.

Detector Switches

List of Varieties

Series		General-purpose Type			
		SSCQ	SSCM	SPVL	SPPB
Photo					
Operation type		Two-way Two-direction type	Two-way	Three-way	One-way Two-way
Dimensions (mm)	W	3.8	5	5.55	6.3
	D	3.6	4	6.6	3
	H	0.9	1.5	1	4.9
Operating temperature range		-10°C to +60°C		-40°C to +85°C	
Automotive use		—	—	●	●
Life cycle (availability)					
Poles / Positions		1 / Two-direction type: 2-position each side	1/2	1/1	
Rating (max.) (Resistive load)		1mA 5V DC			0.1A 30V DC
Rating (min.) (Resistive load)		50μA 3V DC			
Durability	Operating life without load	50,000cycles 5Ω max.			50,000cycles 2Ω max.
	Operating life with load Rating (max.) (Resistive load)	50,000cycles 5Ω max			50,000cycles 2Ω max.
Electrical performance	Initial contact resistance	2Ω max.			1Ω max.
	Insulation resistance	100MΩ min. 100V DC			
	Voltage proof	100V AC for 1 minute			
Mechanical performance	Terminal strength	0.5N for 1minute		1N for 1minute	3N for 1minute
	Actuator strength	1N	2N	5N	10N
Environmental performance	Cold	-20°C 96h		-40°C 500h	
	Dry heat	85°C 96h		85°C 500h	
	Damp heat	40°C, 90 to 95%RH 96h		60°C, 90 to 95%RH 500h	
Operation force		0.35N max.			
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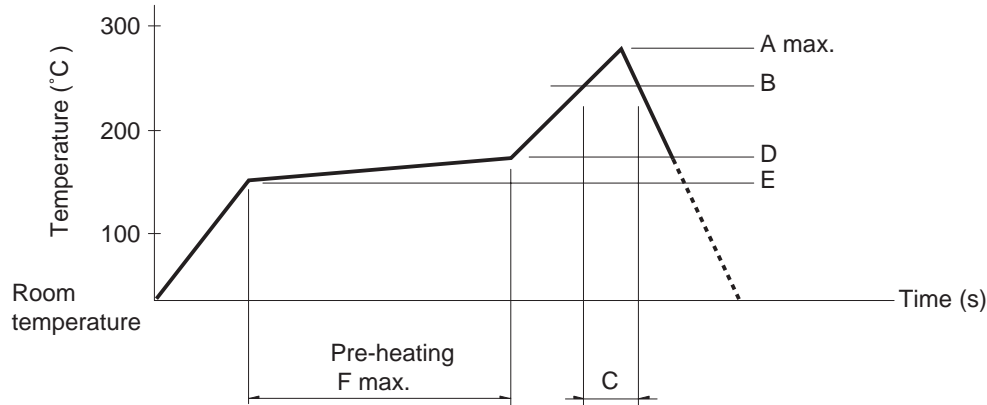
Detector Switches Soldering Conditions	68
Detector Switches Cautions	69

Note

- Indicates applicability to all products in the series.

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	230	40	180	150	120
SPVE						
SPVL						
SPVM						
SPVN						
SPVR	260	230	40	180	150	120
SPVS						
SPVT						
SSCM	250	230	40	180	150	120
SSCQ						
SPVQC	250	230	40	180	150	120

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±5°C	3s max.
SPVQ3, SPVQ6, SPVQ7, SPVQ8, SPVQ9, SSCN, SPVQA	300±10°C	3 + 1 / 0s
SPPB (Reflow)	300±5°C	5s max.
SSCF, SPPB (For Lead, Dip)	350±10°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, SPVQ3, SPVQ6, SPVQ7, SPVQ8, SPVQ9, SPVQA	100±10°C	60s max.	260±5°C	5±1s
SPPW8, SPPB	100°C max.	60s max.	255±5°C	5±1s
SSCF	—		260±5°C	5±1s