Low-profile type with thickness of 1mm







■ Typical Specifications

Ite	ms	Specifications		
Rating (max.)/(min.) (Resistive load)		1mA 5V DC / 50 μ A 3V DC		
Contact resistand (Initial / After ope	-	2Ω max. / 5Ω max.		
Operating force		0.35N max.		
Operating life	Without load	50,000cycles		
Operating life	With load	50,000cycles (1mA 5V DC)		

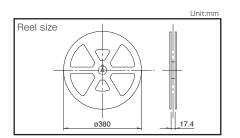
Product Line

Poles	Positions	Terminal type	Lever length	Operating direction	Location lug	Minimumord Japan	er unit (pcs) Export	Product No.	Drawing No.
				Di alat	With			SPVN110101	1
			Standard	Right	Without			SPVN120101	
	1 1 For PC board (Reflow)		Standard	Left	With		5,000 20,000	SPVN210101	2
1					Without			SPVN220101	
ı					Right	With	5,000	3,000 20,000	SPVN310100
		1		Without			SPVN320100	3	
			Long		With			SPVN410100	4
			Left -				SPVN420100	4	

Packing Specifications

Taping

Nun	nber of packages (p	Tape width	Export package measurements	
1 reel	1 case /Japan 1 case /export packing		(mm)	(mm)
5,000	10,000 20,000		16	417×409×139



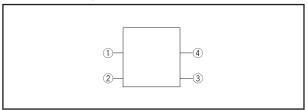
■ Dim	nensions		Unit:mm_
No.	Photo	Style	PC board mounting hole and land dimensions (Viewed from direction A)
1	Right operation type with boss	ON starting position (horizontal direction), operating force standard measurement posi	1.6 2.00 75 hole 1.6 2.00 75 hole 1.6 0 0 3.1 4.7

Dimensions PC board mounting hole and land dimensions (Viewed from direction A) No. Photo Style Left operation type with boss ON starting position (horizontal direction) 2 ON starting position (Vertical direction) Right operation type with boss 2-00.75 hole 3 Left operation type with boss 4

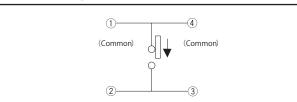
Note

Dimensions drawing is for type with location lugs.

■ Terminal Layout (Viewed from Direction A)



Circuit Diagram



List of Varieties

	2			General-pu	rpose Type			
	Series	SPVS	SPVN	SPVT	SPVM	SPVR	SPVE	
I	Photo							
Oper	ation type		1	Two-way		I	One-way	
	W	3.5	3.8	5.6	2.8	3.6	3.4	
Dimensio (mm)	ons D	3.3	3.6	4.7	3.5	4.2	3	
	Н		1	1.9	1.5	1.2	2.3	
Operating to	emperature range			-40°C to +85°C			-10℃ to +60℃	
Autor	motive use	•	•	•	•	•	_	
Life cycl	e (availability)	*3	★3	*3	*3	*3	*3	
Poles	/ Positions			1,	/1			
Rating (max.) (Resistive load)		lmA !	5V DC	50mA 20V DC	1mA 5V DC		0.1A 30V DC	
Rating (min.) (Resistive load)		50μA	3V DC	100μA 3V DC	50μA 3V DC	100μA 3V DC	50μA 3V DC	
Operating life without load		$50,\!000$ cycles 5Ω max.		100,000cycles 1Ω max.	$50,000$ cycles 5Ω max.		50,000 cycles 1Ω max.	
Durability	Operating life with load Rating (max.) (Resistive load)	50,000cycles 5Ω max.		100,000cycles 1Ω max.	50,000cycles 5Ω max.		50,000cycles 1Ω max.	
	Initial contact resistance	20	max.	500mΩ max.	2Ω max.	3Ω max.	500mΩ max.	
Electrical performance	Insulation resistance	100MΩ min. 100V DC						
	Voltage proof		100V AC for 1 minute					
Mechanical	Terminal strength		0.5N for 1minute		1N for 1minute	0.5N foi	r Iminute	
performance	Actuator strength	5	5N	10N	5N	2N	5N	
	Cold		-40°C 96h				-20°C 96h	
Environmental performance	Dry heat			85°C	96h			
	Damp heat			40℃, 90 to 9	95%RH 96h			
Opera	ation force	0.351	N max.	0.4N	max.	0.35N max.	0.3N max.	
	Page	16	19	21	24	26	27	

Note

Slide

Push

Rotar

er Packa

Generalpurpose Type

> Vater-proof Type

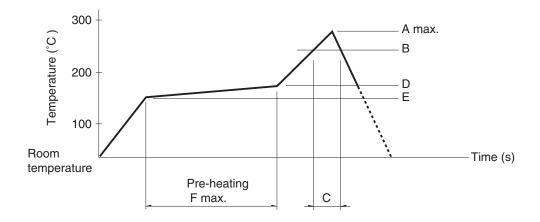
Indicates applicability to all products in the series.

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.

Detector Switches Soldering Conditions

3. Temperature profile



Series (Reflow type)	A (℃) 3s max.	В (℃)	C (s)	D (°C)	E (℃)	F(s)
SPPB	350		40			
SPPW8	250		35			120
SPVE				180		
SPVL					150	
SPVM			40			
SPVN	- 260	230				
SPVR						
SPVS						
SPVT						
SSCM						
SSCQ						
SPVQC	250					

- 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, SPPW8,SSCQ, SSCM, SPVL, SSCT, SPVQC	350±5℃	3s max.	
SPVQ1, SPVQ3, SPVQ6, SPVQ7, SPVQ8, SPVQ9, SSCN, SPVQA	300±10℃	3+1/0s	
SPPB (Reflow)	300±5℃	5s max.	
SSCF, SPPB (For Lead, Dip)	350±10℃	3+1/0s	

■ Reference for Dip Soldering (For PC board terminal types)

	Ite	ms	Dip soldering		
Series	Preheating temperature	Preheating time	Soldering temperature	Duration of immersion	
SSCT, SPVQ1, SPVQ3, SPVQ6, SPVQ7, SPVQ8, SPVQ9, SPVQA	100±10℃	60s max.	260±5℃	5±1s	
SPPW8, SPPB	100 ℃ max.	60s max.	255±5℃	5±1s	
SSCF	_		260±5℃	5±1s	

