

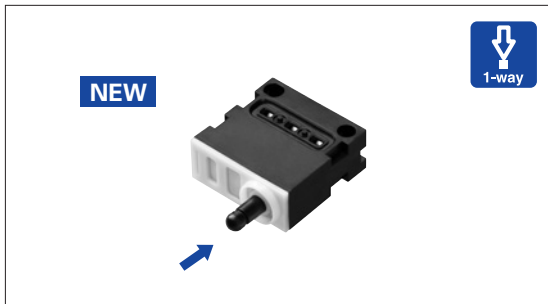
Detector Switch

Micro Switch Type Detector Switch with Female Connector Terminal

SPVQ5 Series



A connector type detector switch eliminates the need for solder.



Features

- Connection through a female connector terminal eliminates the need for solder.
- Mountable from either the front or back of the switch.
- Two-sided sliding-contact point structure for high-contact reliability.
- Complies to direct operation from an oblique angle without an actuator.
- Free from mechanical operating noise, thus ensuring superb silent operation.

Applications

- For detecting drive mechanisms in door locks, car AV equipment
- For detecting mechanisms in printers and facsimile machines

Typical Specifications

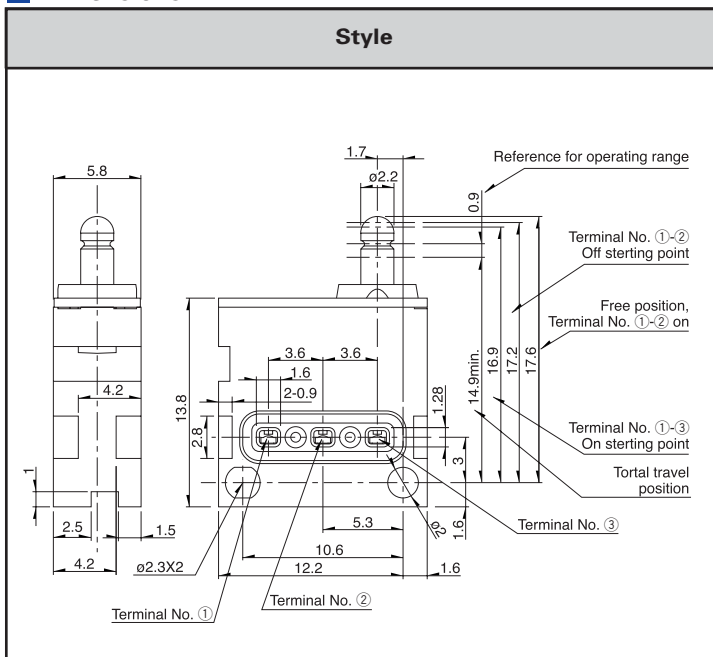
Items		Specifications
Rating (max.)/(min.) (Resistive load)		0.1A 12V DC/50 μ A 5V DC
Contact resistance (Initial/After operating life)		500m Ω max./1 Ω max.
Operating force		2N max.
Operating life	Without load	300,000cycles
	With load	300,000cycles (0.1A 12V DC)

Product Line

Poles	Positions	Terminal type	Product No.
1	2	Female connector type	SPVQ510101

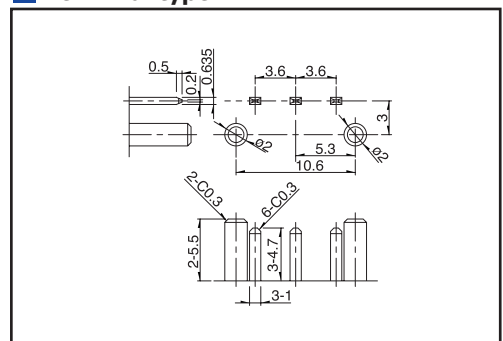
Dimensions

Unit:mm

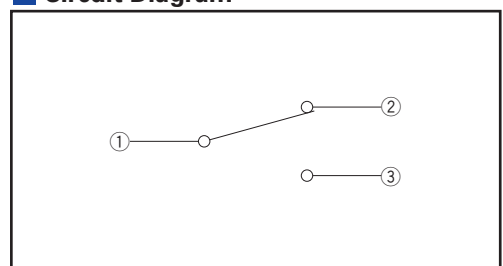


Terminal type

Unit:mm



Circuit Diagram



Refer to P.68 for product specifications.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line Package Type

Multi Control Devices

TACT Switch™

Custom-Products

Product Specifications

Series		SPVP	SPVC1	SPVN	SPVS	SPVG	SSCW	SPVQ5	SPVL	SPVQ1	SPVQ3	SPVQ4	SPVQ6	SSCN
Detector	Operating temperature range	-40°C to +85°C												
	Rating (max.) (Resistive load)	1mA 5V DC	10mA 16V DC	1mA 5V DC	50mA 20V DC	0.1A 12V DC			1mA 5V DC	0.1A 12V DC				
Push	Electrical performance	Initial contact resistance	5 Ω max.	1 Ω max.	2 Ω max.	500mΩ max.			2 Ω max.	500mΩ max.				
Slide		Insulation resistance	100MΩ min. 100V DC				100MΩ min. 250V DC	100MΩ min. 500V DC	100MΩ min. 100V DC	100MΩ min. 500V DC				
Rotary		Voltage proof	100V AC for 1minute				250V AC for 1minute	500V AC for 1minute	100V AC for 1minute	500V AC for 1minute				
Encoders	Mechanical performance	Terminal strength	0.5N for 1minute	3N for 1minute	0.5N for 1minute			1N for 1minute			3N for 1minute			
Power		Actuator strength	5N	10N	5N	10N	20N		5N	20N			10N	
Dual-in-line Package Type		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											
Multi Control Devices	Resistance to soldering heat	Manual soldering	350±5°C, 3s max.	300±10°C, 3 ⁺¹ ₋₀ s	350±5°C, 3s max.			350±5°C, 3s max.		300±10°C, 3 ⁺¹ ₋₀ s				
TACT Switch™		Dip soldering		260±5°C, 3s max.						260±5°C, 5±1s				
Custom-Products		Reflow soldering	Please see P.70	—	Please see P.70			—		Please see P.70				
Durability	Operating life without load	50,000 cycles 10 Ω max.	25,000 cycles 2 Ω max.	50,000 cycles 5 Ω max.	100,000 cycles 1 Ω max.	300,000 cycles 1 Ω max.	50,000 cycles 5 Ω max.	300,000 cycles 1 Ω max.	300,000 cycles or 1,200,000 cycles 1 Ω max.	300,000 cycles 1 Ω max.	300,000 cycles or 1,200,000 cycles 1 Ω max.	300,000 cycles 1 Ω max.	100,000 cycles 1 Ω max.	
	Operating life with load	(1mA 5V DC) 50,000cycles 10 Ω max.	(10mA 16V DC) 25,000cycles 2 Ω max.	(1mA 5V DC) 50,000cycles 5 Ω max.	(50mA 20V DC) 100,000cycles 1 Ω max.	(0.1A 12V DC) 100,000cycles 1 Ω max.	(0.1A 12V DC) 300,000cycles 1 Ω max.	(1mA 5V DC) 50,000cycles 5 Ω max.	(0.1A 12V DC) 300,000cycles 1 Ω max.	(0.1A 12V DC) 300,000cycles or 1,200,000cycles 1 Ω max.	(0.1A 12V DC) 300,000cycles 1 Ω max.	(0.1A 12V DC) 300,000cycles 1 Ω max.	(0.1A 12V DC) 100,000cycles 1 Ω max.	
Environmental performance	Cold	-20±2°C for 96h			-40±2°C for 96h	-40±2°C for 500h		-20±2°C for 96h	-40±2°C for 500h					
	Dry heat	85±2°C for 96h				85±2°C for 500h			85±2°C for 96h	85±2°C for 500h				
	Damp heat	40±2°C, 90 to 95%RH for 96h				60±2°C, 90 to 95%RH for 500h			40±2°C, 90 to 95%RH for 96h	60±2°C, 90 to 95%RH for 500h				