

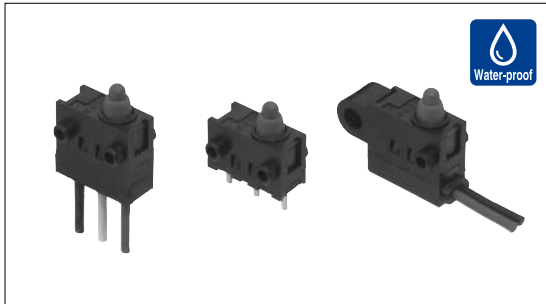
Detector Switch

Water-proof Type

SPVQ3 Series



Long travel type applicable to operation without an actuator.



Typical Specifications

Items		Specifications	
Rating (max.) / (min.) (Resistive load)		0.1A 12V DC/50μA 5V DC	0.1A 12V DC/1mA 5V DC
		0.2V max./0.3V max.	
Voltage drop (Initial/After operating life)		0.2V max./0.3V max.	
Operating force		Push type	Actuator type
		1 ± 0.5N	3N max.
Operating life		Normal type	Long life type
	Without load	300,000cycles	1,200,000cycles
	With load	300,000cycles (0.1A 12V DC)	1,200,000cycles (0.1A 12V DC)

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Product Line

Operating life	Poles	Positions	Changeover timing	Operating mode	Terminal type	Main body form	Minimum order unit (pcs)	Product No.	Drawing No.	
300,000 cycles	1	2	Non shorting	Push	For PC board	Normal	5,200	SPVQ380400	1	
						Boss - right side		SPVQ380300		
						Boss - left side		SPVQ380201		
						Boss - both sides		SPVQ380100		
					Solder terminal	Boss - right side		SPVQ380700	2	
						Boss - left side		SPVQ380600		
						Boss - both sides		SPVQ380500		
						Right angle		Boss - right side		SPVQ380900
					Left angle	Boss - left side		SPVQ380800	4	
					With wire (Downwards)	With a screw hole		1,600	SPVQ361000※	5
						Boss - right side			SPVQ361100※	6
						Boss - left side			SPVQ361200※	
		Boss - both sides		SPVQ361300※						
		With wire (Right side)		With a screw hole	SPVQ361400※	7				
				Boss - right side	SPVQ361500※	8				
				Boss - left side	SPVQ361600※					
				Boss - both sides	SPVQ361700※					
		With wire (Left side)		Boss - right side	SPVQ361800※		9			
				Boss - left side	SPVQ361900※					
				Boss - both sides	SPVQ362000※					
				1	2	Actuator A			For PC board	Normal
		Boss - right side					SPVQ370300			
		Boss - left side					SPVQ370200			
		Boss - both sides					SPVQ370100			
	Solder terminal	Boss - right side	SPVQ370700				2			
		Boss - left side	SPVQ370600							
		Boss - both sides	SPVQ370500							
		Right angle	Boss - right side					SPVQ370900	3	
	Left angle	Boss - left side	SPVQ370800				4			
	With wire (Downwards)	With a screw hole	1,600				SPVQ350100※	5		
		Boss - right side					SPVQ350200※	6		
		Boss - left side					SPVQ350300※			
		Boss - both sides		SPVQ350400※						
	With wire (Right side)	With a screw hole		SPVQ350500※	7					
		Boss - right side		SPVQ350600※	8					
		Boss - left side		SPVQ350700※						
Boss - both sides		SPVQ350800※								
With wire (Left side)	Boss - right side	SPVQ350900※		9						
	Boss - left side	SPVQ351000※								
	Boss - both sides	SPVQ351100※								
	Normal	SPVQ351200※								

Product Line

	Product Line												
	Operating life	Poles	Positions	Changeover timing	Operating mode	Terminal type	Main body form	Minimum order unit (pcs)	Product No.	Drawing No.			
Detector	300,000 cycles		2	Non shorting	Actuator B	For PC board	Normal	5,200	SPVQ371300	1			
Push							Boss - right side		SPVQ371200				
									Boss - left side		SPVQ371100		
Boss - both sides							SPVQ371000						
Slide						Solder terminal	Boss - right side		SPVQ371600	2			
							Boss - left side		SPVQ371500				
Rotary						Boss - both sides	SPVQ371400						
							Right angle		Boss - right side	SPVQ371800	3		
Encoders			Left angle			Boss - left side	SPVQ371700	4					
						With wire (Downwards)	With a screw hole	SPVQ351200※	5				
Boss - right side			SPVQ351300※				6						
Boss - left side			SPVQ351400※										
Boss - both sides			SPVQ351500※										
Power			With wire (Right side)			With a screw hole	SPVQ351600※	7					
						Boss - right side	SPVQ351700※	8					
						Boss - left side	SPVQ351800※						
	Boss - both sides	SPVQ351900※											
Dual-in-line Package Type	With wire (Left side)	Boss - right side	SPVQ352000※	9									
		Boss - left side	SPVQ352100※										
		Boss - both sides	SPVQ352200※										
		TACT Switch™											
Custom-Products	1,200,000 cycles	1	2	Non shorting	Push	For PC board	Normal	5,200	SPVQ340400	1			
Boss - right side							SPVQ340300						
							Boss - left side		SPVQ340200				
Boss - both sides							SPVQ340100						
Solder terminal						Boss - right side	SPVQ340700		2				
						Boss - left side	SPVQ340600						
Boss - both sides						SPVQ340500							
Right angle						Boss - right side	SPVQ340900		3				
Left angle			Boss - left side			SPVQ340800	4						
With wire (Downwards)			With a screw hole			SPVQ320100※	5						
			Boss - right side			SPVQ320200※	6						
			Boss - left side			SPVQ320300※							
			Boss - both sides			SPVQ320400※							
With wire (Right side)			With a screw hole			SPVQ320500※	7						
			Boss - right side			SPVQ320600※	8						
			Boss - left side			SPVQ320700※							
			Boss - both sides			SPVQ320800※							
With wire (Left side)			Boss - right side			SPVQ320900※	9						
			Boss - left side			SPVQ321000※							
			Boss - both sides			SPVQ321100※							
						2	Non shorting	Push	For PC board	Normal	5,200	SPVQ330400	1
										Boss - right side		SPVQ330300	
										Boss - left side		SPVQ330200	
										Boss - both sides		SPVQ330100	
									Solder terminal	Boss - right side		SPVQ330700	2
										Boss - left side		SPVQ330600	
									Boss - both sides	SPVQ330500			
									Right angle	Boss - right side		SPVQ330900	3
						Left angle			Boss - left side	SPVQ330800	4		
						With wire (Downwards)			With a screw hole	SPVQ310100※	5		
									Boss - right side	SPVQ310200※	6		
									Boss - left side	SPVQ310300※			
									Boss - both sides	SPVQ310400※			
						With wire (Right side)			With a screw hole	SPVQ310500※	7		
									Boss - right side	SPVQ310600※	8		
									Boss - left side	SPVQ310700※			
									Boss - both sides	SPVQ310800※			
						With wire (Left side)			Boss - right side	SPVQ310900※	9		
									Boss - left side	SPVQ311000※			
	Boss - both sides	SPVQ311100※											

Product Line

Operating life	Poles	Positions	Changeover timing	Operating mode	Terminal type	Main body form	Minimum order unit (pcs)	Product No.	Drawing No.
1,200,000 cycles	1	2	Non shorting	Actuator B	For PC board	Normal	5,200	SPVQ331300	1
						Boss - right side		SPVQ331200	
						Boss - left side		SPVQ331100	
						Boss - both sides		SPVQ331000	
					Solder terminal	Boss - right side		SPVQ331600	2
						Boss - left side		SPVQ331500	
						Boss - both sides		SPVQ331400	
						Boss - right side		SPVQ331800	
		Right angle			Boss - right side	SPVQ331700	3		
		Left angle			Boss - left side	SPVQ331700	4		
		1			With wire (Downwards)	With a screw hole	1,600	SPVQ311200※	5
						Boss - right side		SPVQ311300※	6
						Boss - left side		SPVQ311400※	
						Boss - both sides		SPVQ311500※	
					With wire (Right side)	With a screw hole		SPVQ311600※	
						Boss - right side		SPVQ311700※	8
						Boss - left side		SPVQ311800※	
						Boss - both sides		SPVQ311900※	
					With wire (Left side)	Boss - right side		SPVQ312000※	
						Boss - left side		SPVQ312100※	
Boss - both sides	SPVQ312200※								
Boss - both sides	SPVQ312200※								

Note

- 1.This unit cannot be used in water.
- 2.※Unless specified, the length of the lead wire is 250mm. Color is either red, black or yellow. For length modification, please consult us.
- 3.※Unless circuit is specified, wired (downward) types will apply three wires.
- 4.※Please specify circuits (N.O. or N.C.) for wired (side) types. Unless specified, the circuit will apply N.O.
- 5.Please place purchase orders per minimum order unit (integer).

Dimensions

Unit:mm

No.	Style
1	※Refer to page 71 "Actuator Configurations" for operating part shape. ※Refer to page 72 "Unit Configurations" for boss positions.
2	※Refer to page 71 "Actuator Configurations" for operating part shape. ※Refer to page 72 "Unit Configurations" for boss positions.

Dimensions

Unit:mm

No.	Style
3	※Refer to page 71 "Actuator Configurations" for operating part shape.
4	※Refer to page 71 "Actuator Configurations" for operating part shape.
5	※Refer to page 71 "Actuator Configurations" for operating part shape.
6	※Refer to page 71 "Actuator Configurations" for operating part shape. ※Refer to page 72 "Unit Configurations" for boss positions.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Dimensions		Unit:mm
No.	Style	
7		
8		
9		

Detector

Push

Slide

Rotary

Encoders

Power

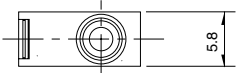
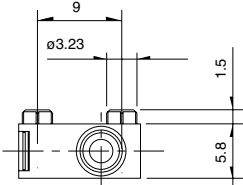
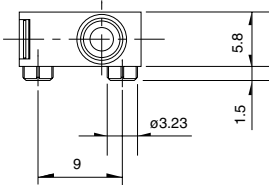
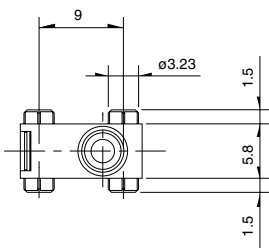
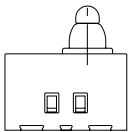
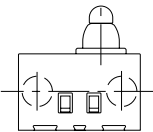
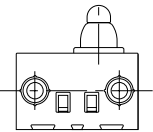
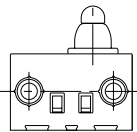
Dual-in-line
Package Type

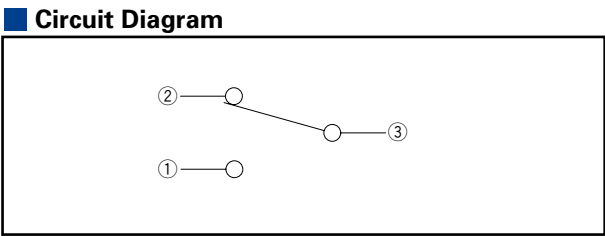
TACT Switch™

Custom-
Products

Actuator Configurations		Unit:mm
Push	Actuator A Actuator B	

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

Unit Configurations				Unit:mm
Normal	Boss - right side	Boss - left side	Boss - both sides	
				
				



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

Series		General-purpose Type		Water-proof Type					Telephone-hook Type
		SSCW	SPVQ5	SPVQ1	SPVQ3	SPVQ4	SPVQ6	SSCN	SPPY5
Photo									
Operation type				 	 				
Operating temperature range		-40℃ to +85℃							-10℃ to +60℃
Rating (max.) (Resistive load)		0.1A 20V DC	0.1A 12V DC						0.1mA 3V DC min. 50mA 48V DC max.
Rating (min.) (Resistive load)		100μA 3V DC	50μA 3V DC	50μA 3V DC or 1mA 5V DC	50μA 3V DC	50μA 5V DC	100μA 3V DC	0.1mA 3V DC	
Electrical performance	Initial contact resistance	500mΩ max.							100mΩ max.
	Insulation resistance	100MΩ min. 250V DC	100MΩ min. 500V DC						
	Voltage proof	250V AC for 1 minute	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	100,000cycles 1Ω max.	300,000cycles 1Ω max.	300,000cycles or 1,200,000cycles 1Ω max.	300,000cycles 1Ω max.		100,000cycles 1Ω max.	300,000cycles 1Ω max.	
	Operating life with Load	(0.1mA 12V DC) 100,000cycles 1Ω max.	(0.1A 12V DC) 300,000cycles 1Ω max.	(0.1A 12V DC) 300,000cycles or 1,200,000 1Ω max.	(0.1A 12V DC) 300,000cycles 1Ω max.		(0.1A 12V DC) 100,000cycles 1Ω max.	(1mA 3V DC) 300,000cycles 1Ω max. or (50mA 60V DC) 100,000cycles 1Ω max.	
Environmental performance	Cold	-40±2℃ for 500h							-20±2℃ for 96h
	Dry heat	85±2℃ for 500h							85±2℃ for 96h
	Damp heat	60±2℃, 90 to 95%RH for 500h							40±2℃, 90 to 95%RH for 96h
Dimensions (mm)		W	13.1	13.8	13.3	13	14.7	13.3	13
		D	11.35		5.8		5.4	5.3	25
		H	5.3	5.8	8	8.35	7.6	7	5
Soldering	Manual soldering	—————		300±10℃, 3 ⁺¹ ₀ s					350±5℃, 3s max.
	Dip soldering			260±5℃, 5±1s				—————	
	Reflow soldering								Please see P.79
Number of poles		1							2
Operation force		1N max.	2N max.	2N max. 5.9N max.	1±0.5N	1±0.3N	1±0.5N	2N max.	0.8N max.
Page		61	62	63	67	73	74	76	77

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