

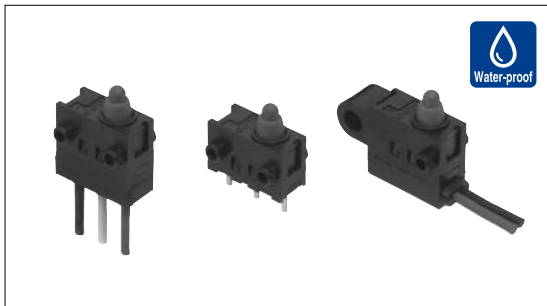
Detector Switch

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
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		SPVQ380900		
					Left angle	Boss - right side		1,600	SPVQ380800	3
						Boss - left side			4	
					With wire (Downwards)	With a screw hole		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	5,200
		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	SPVQ370900							
	Left angle	Boss - right side	1,600				SPVQ370800	3		
		Boss - left side					4			
	With wire (Downwards)	With a screw hole	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※								

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	Actuator B	For PC board	Normal	5,200	SPVQ371300	1			
						Boss - right side		SPVQ371200				
						Boss - left side		SPVQ371100				
						Boss - both sides		SPVQ371000				
					Solder terminal	Boss - right side		SPVQ371600	2			
						Boss - left side		SPVQ371500				
						Boss - both sides		SPVQ371400				
					Right angle	Boss - right side		SPVQ371800	3			
		Left angle			Boss - left side	SPVQ371700	4					
		1			With wire (Downwards)	With a screw hole	1,600	SPVQ351200※	5			
						Boss - right side		SPVQ351300※	6			
						Boss - left side		SPVQ351400※				
						Boss - both sides		SPVQ351500※				
					With wire (Right side)	With a screw hole		SPVQ351600※		7		
						Boss - right side		SPVQ351700※	8			
						Boss - left side		SPVQ351800※				
				Boss - both sides		SPVQ351900※						
		With wire (Left side)		Boss - right side	SPVQ352000※	9						
				Boss - left side	SPVQ352100※							
				Boss - both sides	SPVQ352200※							
				1,200,000 cycles	1		2	Non shorting	Push	For PC board	Normal	5,200
		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									
1	With wire (Downwards)	With a screw hole	1,600			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※										
	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								
1		With wire (Downwards)	With a screw hole	1,600	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※										

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.
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	
						Right angle		Boss - right side	SPVQ331800
		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※	7
						Boss - right side		SPVQ311700※	8
						Boss - left side		SPVQ311800※	
						Boss - both sides		SPVQ311900※	
					With wire (Left side)	Boss - right side		SPVQ312000※	9
						Boss - left side		SPVQ312100※	
						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	Technical drawing of Style 1 detector switch. The front view shows a rectangular body with a circular actuator on top. Dimensions include: overall width 13mm, body width 5mm, terminal spacing 5mm, terminal No. ① to body center 2.3mm, terminal No. ② to body center 2.3mm, terminal No. ③ to body center 0.9mm, body height 4.35mm, actuator diameter ø2.5mm, and various vertical dimensions for terminal positions (6.1, 6.4, 8.4, 8.7, 9.1mm). Labels indicate 'Terminal No. ③-① ON starting point', 'Terminal No. ③-② OFF starting point', 'Free position', 'Operating force measurement position', 'Total travel position', and 'PC board mounting face'. The side view shows a height of 5.8mm and a base width of 0.5mm. Refer to page 71 "Actuator Configurations" for operating part shape. Refer to page 72 "Unit Configurations" for boss positions.
2	Technical drawing of Style 2 detector switch. The front view shows a rectangular body with a circular actuator on top. Dimensions include: overall width 13mm, body width 5mm, terminal spacing 5mm, terminal No. ① to body center 2.2mm, terminal No. ② to body center 2.3mm, terminal No. ③ to body center 4.35mm, body height 4.35mm, actuator diameter ø2.5mm, and various vertical dimensions for terminal positions (6.1, 6.4, 8.4, 8.7, 9.1mm). Labels indicate 'Terminal No. ③-① ON starting point', 'Terminal No. ③-② OFF starting point', 'Free position', 'Operating force measurement position', 'Total travel position', and 'PC board mounting face'. The side view shows a height of 5.8mm and a base width of 0.5mm. 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

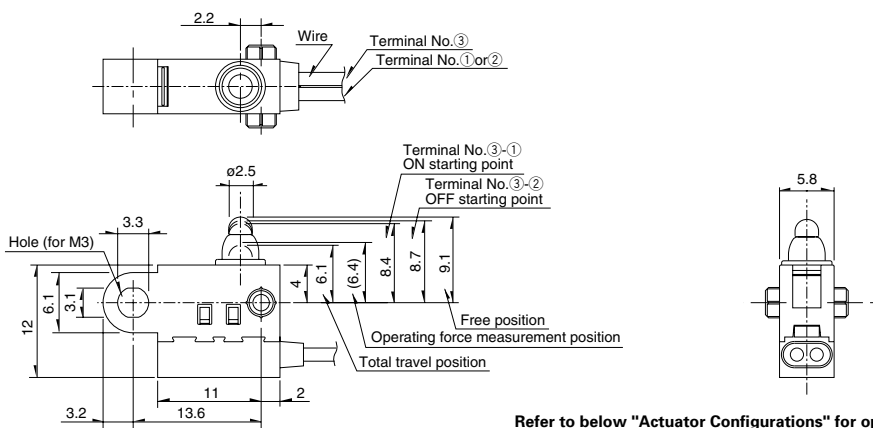
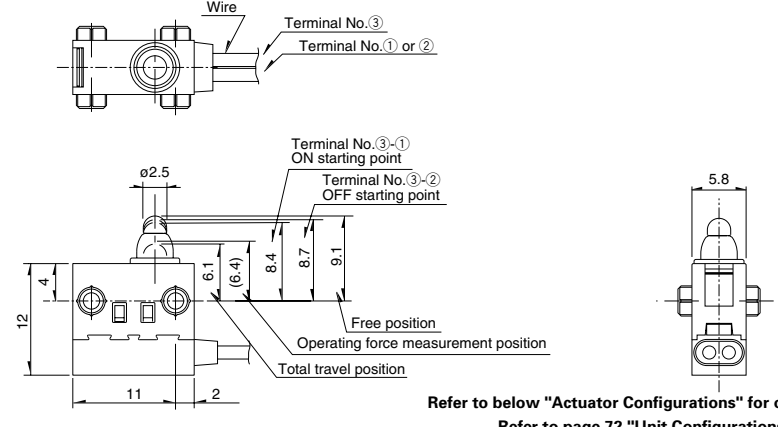
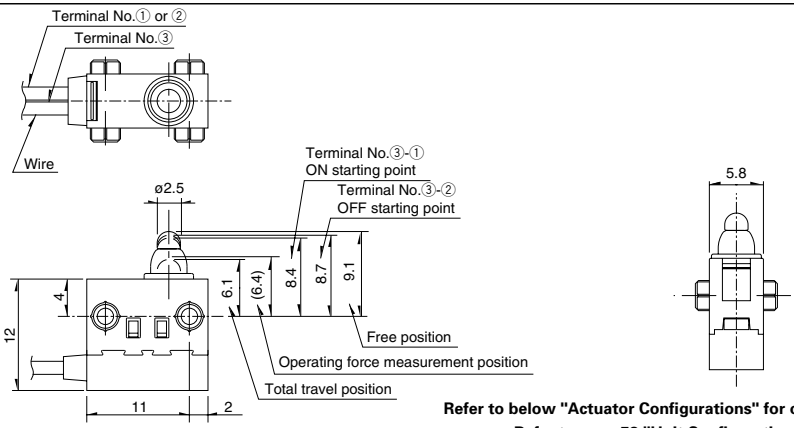
Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Dimensions		Unit:mm
No.	Style	
7		Refer to below "Actuator Configurations" for operating part shape.
8		Refer to below "Actuator Configurations" for operating part shape. Refer to page 72 "Unit Configurations" for boss positions.
9		Refer to below "Actuator Configurations" for operating part shape. Refer to page 72 "Unit Configurations" for boss positions.

Detector

Push

Slide

Rotary

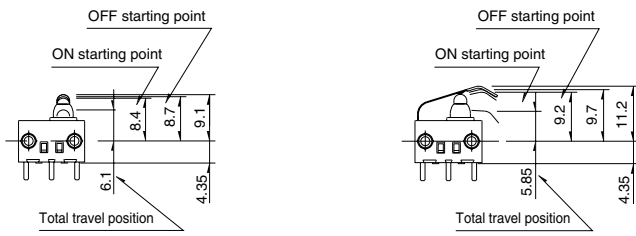
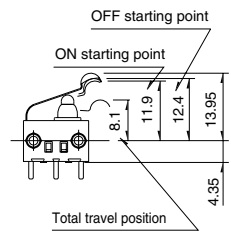
Encoders

Power

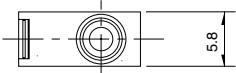
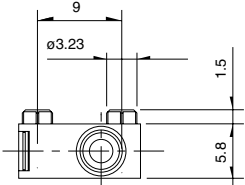
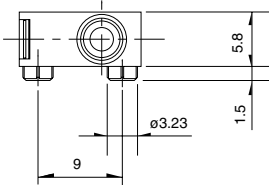
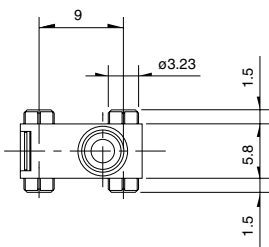
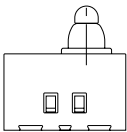
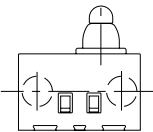
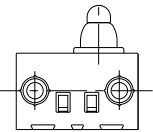
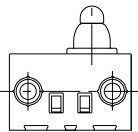
Dual-in-line
Package Type

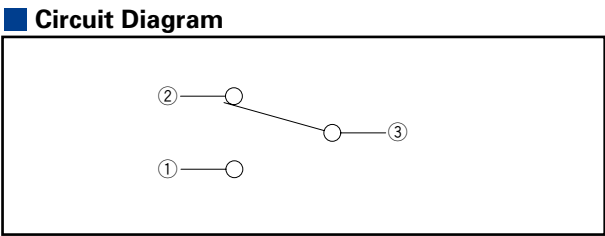
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Actuator Configurations		Unit:mm
Push	Actuator A 	Actuator B 

- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line
Package Type
- TACT Switch™
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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	14.4
		D	11.35		5.8		5.4	5.3	25	28.6
		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.	
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Detector

Push

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**Стандарт
Электрон
Связь**

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

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С нами вы становитесь еще успешнее!

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