

# Detector Switch Water-proof Type

SPVQA Series



Fork terminals allow connection without solder.



## Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		0.1A 12V DC/50 $\mu$ A 5V DC
Contact resistance (Initial/After operating life)		500m $\Omega$ /1 $\Omega$ max.
Operating force		1 $\pm$ 0.5N
Operating life	Without load	300,000cycles
	With load	300,000cycles (0.1A 12V DC)

## Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line  
Package Type

TACT Switch™

Custom-  
Products

## Product Line

Poles	Positions	Change over timing	Operating part shape	Terminal type	Main body form	Minimum order unit (pcs)	Product No.	Drawing No.
1	1	Non shorting	Push	Press fit	Without boss L type	4,800	SPVQA10101	1
	1				Without boss R type		SPVQA10201	2
					Without boss L type		SPVQA10300	3
	2				Without boss R type		SPVQA10400	4
					Without boss L type		SPVQA10500	5
	1			Without boss R type	SPVQA10600	6		
		For PC board	Without boss	SPVQA20101	7			

## Packing Specifications

### Bulk

Number of packages (pcs.)		Export package measurements (mm)
1 case /Japan	1 case /export packing	
1,200	4,800	540 × 360 × 270

## Notes

1. This unit cannot be used in water.
2. Please place purchase orders per minimum order unit N (integer).

## Dimensions

Unit:mm

No.	Style
1	
2	
3	
4	

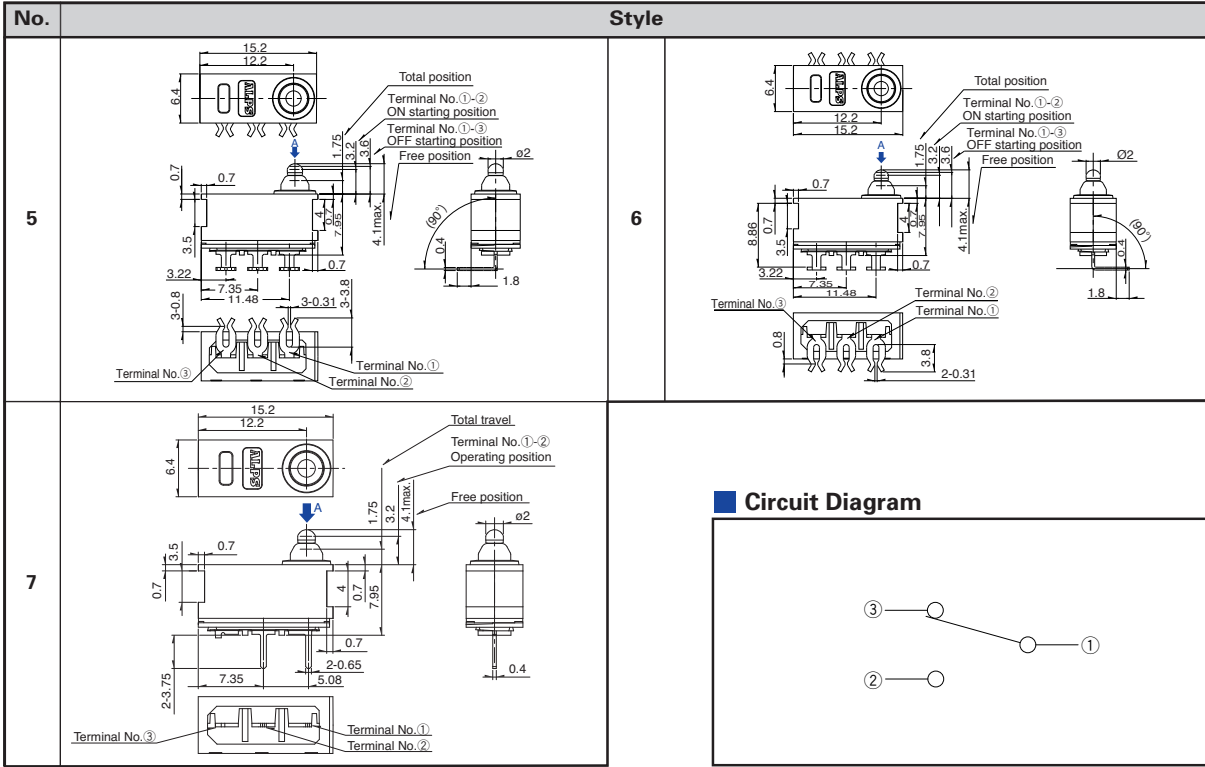


Automotive  
Use

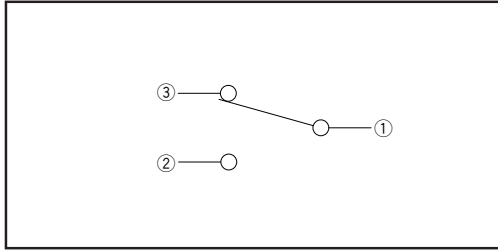
- Detector**
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**Dimensions**

Unit:mm

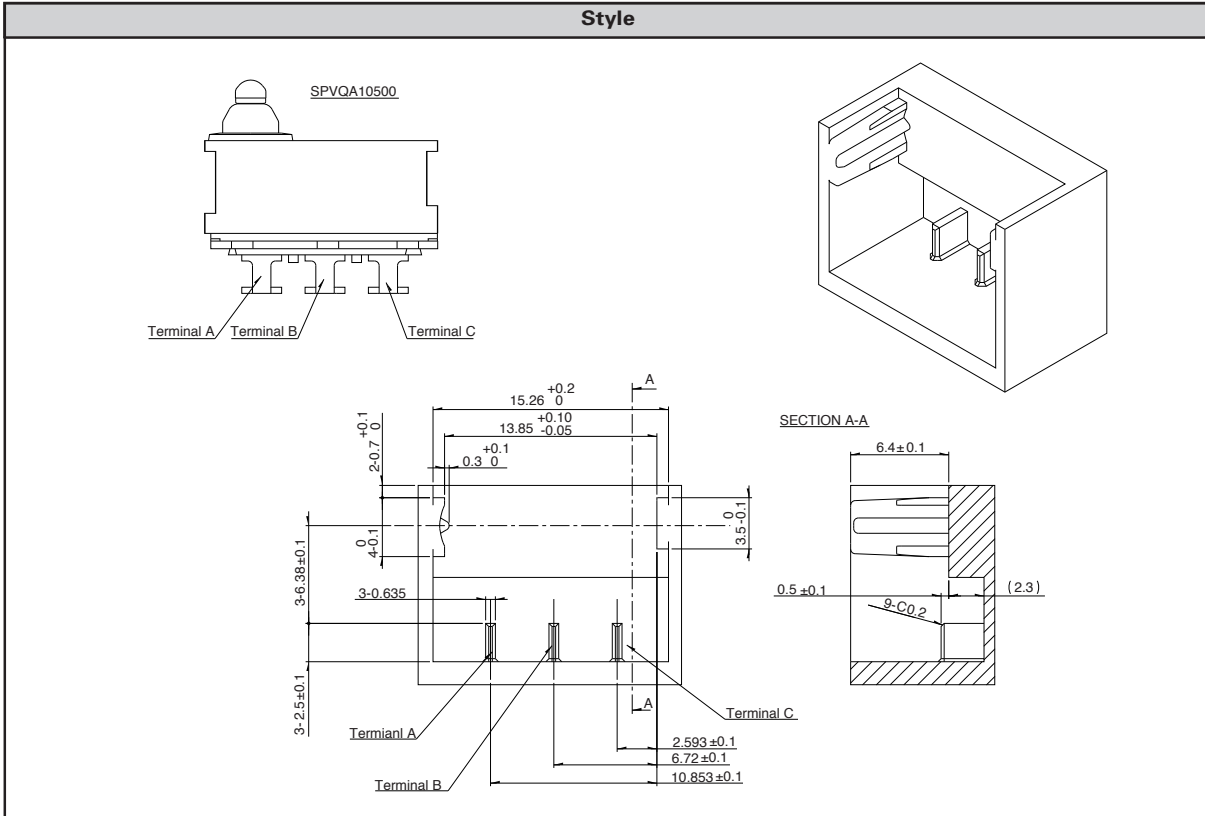


**Circuit Diagram**

















**Reference Drawing for Unit Terminals**

Unit:mm



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

Series	Water-proof Type						Telephone-hook Type	
	SPVQ6	SPVQ7	SPVQ8	SPVQ9	SPVQA	SSCN	SPPY5	
Photo								
Operation type								
Operating temperature range	-40°C to +85°C						-10°C to +60°C	
Automotive use	●	●	●	●	●	●	—	
Rating (max.) (Resistive load)	0.1A 12V DC			50mA 26V DC		0.1A 12V DC		50mA 48V DC max.
Rating (min.) (Resistive load)	50μA 5V DC					100μA 5V DC		100μA 3V DC
Electrical performance	Initial contact resistance			500mΩ max.		75mΩ		500mΩ max.
	Insulation resistance			100MΩ min. 500V DC				
	Voltage proof			500V AC for 1 minute				
Mechanical performance	Terminal strength			3N for 1 minute			5N for 1 minute	
	Actuator strength			20N			10N	
Durability	Operating life without Load			300,000cycles 1Ω max.		300,000cycles 200mΩ max.		300,000cycles 1Ω max.
	Operating life with Load			(0.1A 12V DC) 300,000cycles 1Ω max.		(50mA 26V DC) 300,000cycles 200mΩ max.		(0.1A 12V DC) 300,000cycles 1Ω max.
Environmental performance	Cold			-40±2°C for 500h			-20±2°C for 96h	
	Dry heat			85±2°C for 500h			85±2°C for 96h	
	Damp heat			60±2°C, 90 to 95%RH for 500h			40±2°C, 90 to 95%RH for 96h	
Dimensions (mm)	W	13.3	14.7	8.3	15.4	15.2	13	14.4
	D	5.3	5.4	5.3	8.4	6.4	5	28.6
	H	7	6.7	6.5	7.5	7.95	25	7.15
Soldering	Manual soldering			300±10°C, 3 <sup>+1</sup> s		—		300±10°C, 3 <sup>+1</sup> s
	Dip soldering			260±5°C, 5±1s		—		350±5°C, 3s max.
	Reflow soldering			—		—		Please see P.97
Number of poles		1		2		1		2
Operation force		1±0.5N 3N max.		1±0.5N		2N max.		0.8N max.
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**Note**

● marks in "Available for automotive use" indicate that all of the series products can work at the operating temperature range from -40°C to +85°C.