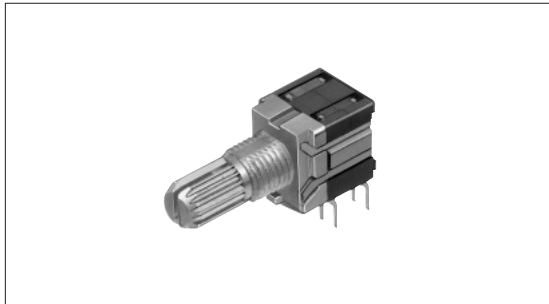


# Rotary Switch 6-position Horizontal Type

SRBM Series



Pulse switching (20 pulses) model available in same figure.



## Typical Specifications

Items	Specifications	
	Rotary switch	Pulse switch
Rating (max.) / (min.) (Resistive load)	0.1A 16V DC/50μA 3V DC	
Contact resistance (Initial/After operating life)	50mΩ max./150mΩ max.	
Rotational torque	40±20 mN·m	15±7 mN·m
Operating life	Without load	10,000cycles
	With load	30,000cycles
	10,000cycles (0.1A 16V DC)	

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line  
Package Type

TACT Switch™

Custom-  
Products

## Product Line

Number of wafers	Poles	Positions	Changeover angle	Changeover timing	Actuator configuration	Actuator length (mm)	Minimum order unit (pcs.)	Product No.	Drawing No.				
1	2	2	30±3°	Non shorting	18-tooth serration	L=15	1,600	SRBM120700	1				
					Flat			SRBM121300					
		3			18-tooth serration			L=20		1,200	SRBM131300		
					4			18-tooth serration		L=15	1,600	SRBM131400	
								Flat		L=20	1,200	SRBM140700	
	1	5			6	18-tooth serration	L=15	1,600		SRBM140800			
						Flat				SRBM149501			
		20 pulses			18±3°	-				18-tooth serration	L=15	1,600	SRBM150500
										Flat			SRBM154002
										18-tooth serration			SRBM160700
Flat	SRBM1L0800												
Flat	SRBM1L1400												

## Packing Specifications

### Bulk

Product No.	Number of packages (pcs.)		Export package measurements (mm)
	1 case /Japan	1 case /export packing	
SRBM120700 SRBM121300 SRBM131300 SRBM140700 SRBM150500 SRBM154002 SRBM160700 SRBM1L0800	200	1,600	400×270×290
SRBM131400 SRBM140800 SRBM149501 SRBM1L1400	150	1,200	



Automotive  
Use

## Notes

- Products other than those listed in the above chart are also available. Please contact us for details.
- All the axis are die casting shafts.
- Please place purchase orders per minimum order unit N (integer).

Refer to **P.199** for shaft configurations.  
Refer to **P.201** for attached parts.

# Rotary Switch 6-position Horizontal Type | SRBM Series

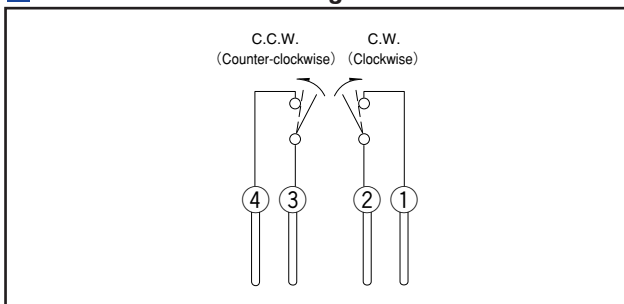
## Dimensions

Single-shaft Type

Unit:mm

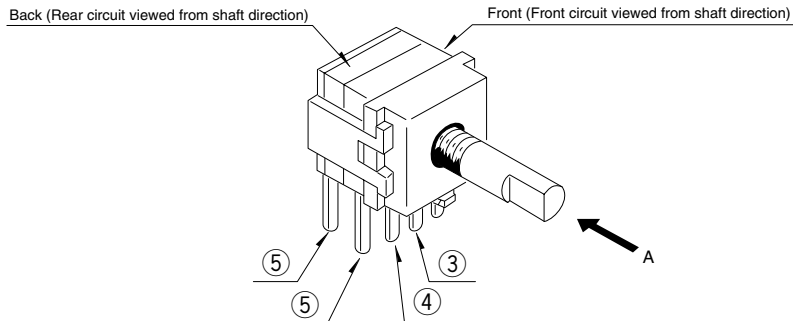
No.	Style	PC board mounting hole dimensions (Viewed from the direction A)
1	<b>Rotary switch</b> 	
2	<b>Pulse switch</b> 	

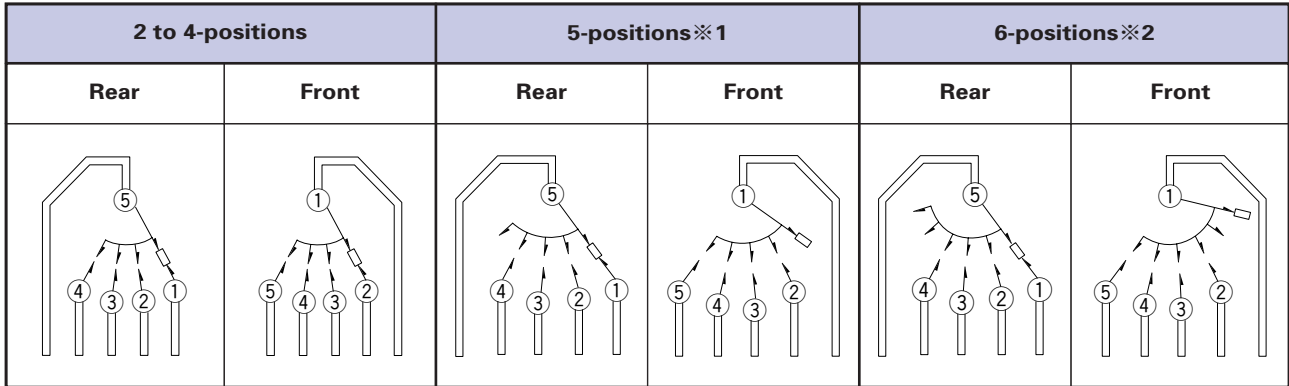
## Pulse Switch Circuit Diagram



C.W. : ①② ON during changeover only  
 C.C.W. : ③④ ON during changeover only

## Rotary Switch Circuit Diagram (Viewed from Direction A of Below Diagram)





※1: Circuit steps are positions 2 to 5 at front and positions 1 to 4 at rear.  
 ※2: Circuit steps are positions 3 to 6 at front and positions 1 to 4 at rear.  
 For above ※1 and ※2: External wiring to common terminal is required.

**Notes**

1. For positions 2 to 4, 1 section consists of 2-poles.
2. For positions 5 and 6, 1 section consists of 1-pole.

**Dummy Terminals**

Number of positions	2	3	4	5	6
Front	④ ⑤	⑤	—	—	—
Rear	③ ④	④	—	—	—

Detector

Push

Slide

**Rotary**

Encoders

Power

Dual-in-line  
Package Type








TACT Switch™

Custom-  
Products



Automotive  
Use

## List of Varieties

Series	SRBD	SRBQ		SRRM	SRBV	SRBM		SRRN				
		Insertion	Reflow type			Rotary	Pulse					
Detector												
Push												
Slide												
Rotary	Outline specifications	Step angle	36°	40±3°	30±3°		18±3°	30±3°				
		Number of poles	1		1 2 3 4	1	1 2	2 3 4				
Encoders	Dimensions (mm)	W	10	11.4	—	16.2	12.5	—				
		D		12.4		18.5	10					
		H	1.7	3.5		7.5	11.5					
Power	Operating temperature range	-25°C to +85°C	-10°C to +60°C		-40°C to +85°C		-10°C to +60°C					
Dual-in-line Package Type	Rating(max.)/(min.) (Resistive load)	1mA 5V DC 50μA 3V DC	0.1A 16V DC 50μA 3V DC	0.25A 30V DC 50μA 3V DC	0.3A 16V DC 50μA 3V DC	0.1A 16V DC 50μA 3V DC	0.15A 12V DC 50μA 3V DC					
TACT Switch™	Electrical performance	Insulation resistance	100MΩ min. 100V DC		100MΩ min. 500V DC	100MΩ min. 100V DC		100MΩ min. 500V DC				
Custom-Products		Voltage proof	100V AC for 1minute		500V AC for 1minute	100V AC for 1minute		500V AC for 1minute				
		Terminal strength	3N for 1minute	5N for 1minute	10N for 1minute	5N for 1minute						
Mechanical performance	Actuator strength	Rotational direction	—		1N·m	0.6N·m	0.5N·m	—	1N·m			
		Push direction	50N	20N	100N							
	Wobble of actuator	Load at the tip of shaft SRRM : 5N SRBV, SRBQ : 1N		The below table shows for SRBQ (Unit : mm)			The below table shows for SRBV (Unit : mm)			Measuring position from mounting surface	Shaft wobble (max. value)	Applicable mounting dimension
		(Unit : mm)		Distance from mounting surface to the tip of shaft	Shaft wobble (max. value)	(Unit : mm)			10mm	0.17 mm	15 mm	
Measuring position from mounting surface		Shaft wobble (max. value)	Applicable mounting dimension	below 5	0.5 max.	Measuring position from mounting surface	Shaft wobble (max. value)	Applicable mounting dimension	15mm	0.25 mm	20 mm	
			10	0.17	15	above 5 and below 10	0.9 max.	10	0.2	15		
			15	0.25	20	above 10 and below 15	1.2 max.	15	0.3	20		
			Load at the tip of shaft : 5N									
Durability	Operating life without load	10,000cycles 250mΩ max.	10,000cycles 100mΩ max.	10,000cycles 40mΩ max.	10,000cycles 100mΩ max.		10,000cycles 70mΩ max.					
	Operating life with load Load : (at rated load)	10,000cycles 250mΩ max.	10,000cycles 100mΩ max.	10,000cycles 60mΩ max.	10,000cycles 150mΩ max.		10,000cycles 100mΩ 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									
Soldering	Manual soldering	—	350±10°C 3 <sup>+1</sup> s	350±5°C 3s max.	350±10°C, 3 <sup>+1</sup> s							
	Dip soldering	—	260±5°C 5±1s	—	260±5°C 10±1s		260±3°C 5s max.	260±5°C 10±1s				
	Reflow soldering	Please see P.200										
	Page	186	188	195	193	190	197					

- Rotary Switches Shaft Style .....199
- Rotary Switches Soldering Conditions .....200
- Rotary Switches Attached Parts .....201
- Rotary Switches Cautions .....202

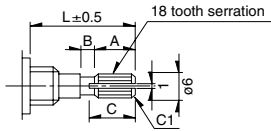
## Shaft Configurations

### 18-tooth Serration Shaft

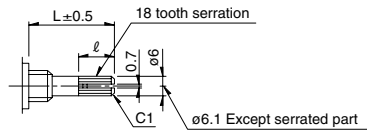
The shaft shows the position in which it is turned fully counterclockwise.

Unit:mm

#### ①Cutting Shaft



#### ②Die Casting Shaft



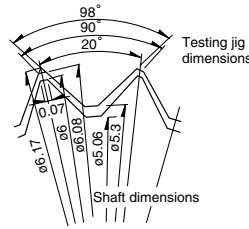
Shaft length L	A	B	C
15	6	1	7
20	10	2	11

Unit:mm

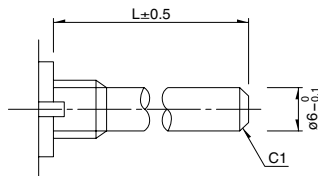
Shaft length L	l
15	8
20	12

### Details About Serration

- (1) The mold dimensions of standard serration and the dimensions of test jigs are as shown in the figure at left.
- (2) Position of the serration bottom  
When the shaft is turned fully counterclockwise, the position of the serration bottom is on the AA line.
- (3) Slitting angle  
The slitting angle (position) is not specified.

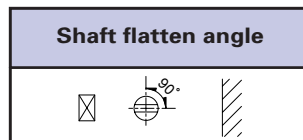
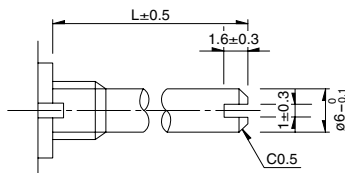


### Round Shaft



### Round Shaft with Groove

The shaft shows the position in which it is turned fully counterclockwise.

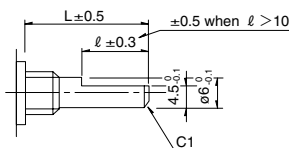


### Flat Shaft

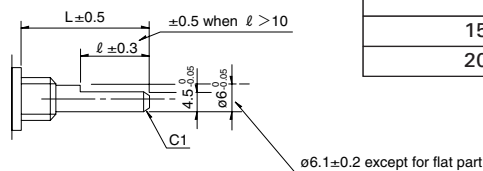
The shaft shows the position in which it is turned fully counterclockwise.

Unit:mm

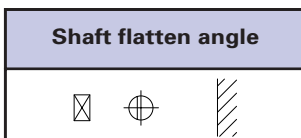
#### Cutting Shaft



#### Die Casting Shaft



Shaft length L	l
15	7
20	12



### Note

SRBM Series are based on (printed terminal direction). SRRM, SRRN, SRBV Series are based on (panel lug).

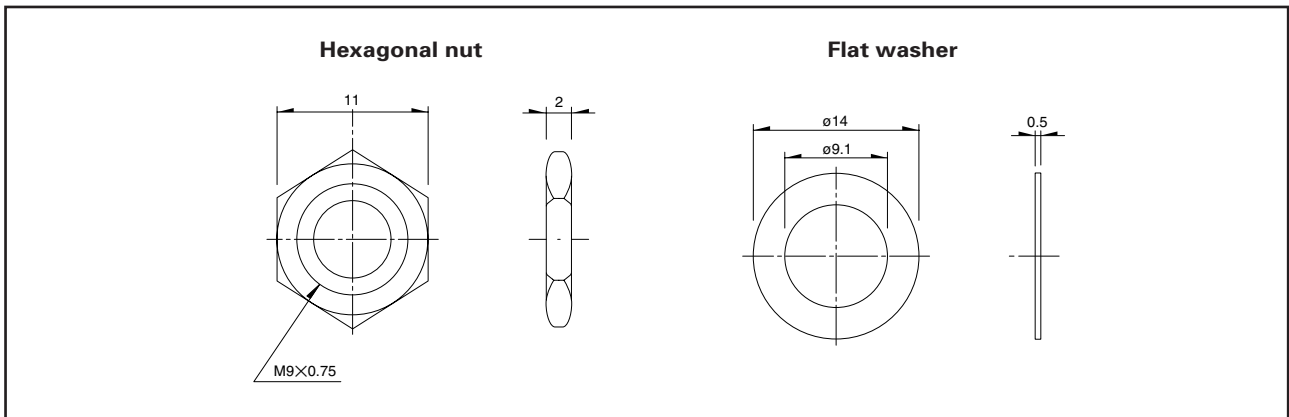
- Detector
- Push
- Slide
- Rotary**
- Encoders
- Power
- Dual-in-line Package Type
- TACT Switch™
- Custom-Products

## Attached Parts

The following parts are included with the product.

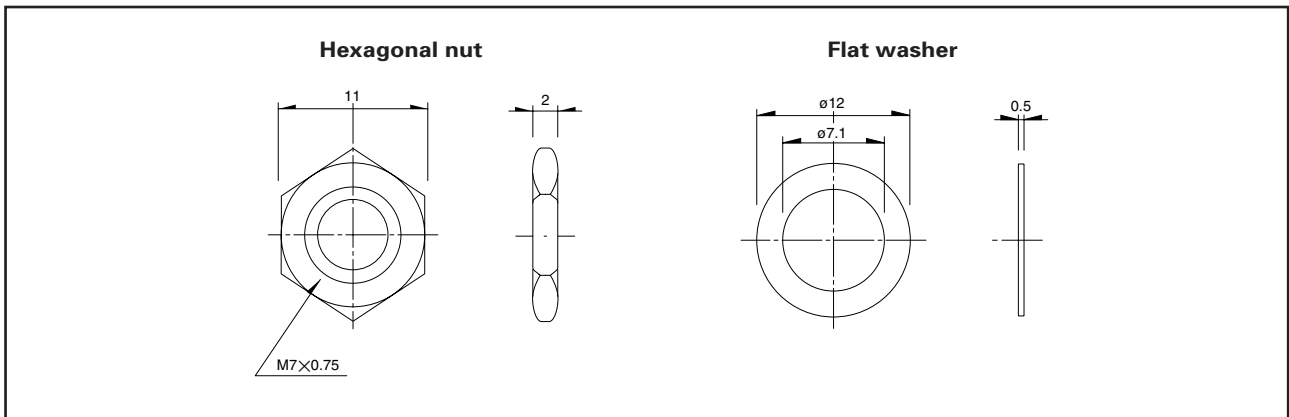
### ■ SRRM, SRBV

Unit:mm



### ■ SRBM, SRRN

Unit:mm



Detector

Push

Slide

**Rotary**

Encoders

Power

Dual-in-line  
Package Type

TACT Switch™

Custom-  
Products