

# Rotary Switch

## 6-position Horizontal Type

### SRBM Series



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

Detector

Push

Slide

Rotary

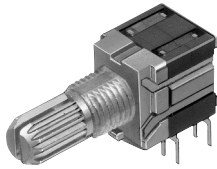
Encoders

Power

Dual-in-line  
Package Type

TACT Switch™

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Products



#### 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	30,000cycles
	With load	10,000cycles (0.1A 16V DC)	

#### 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	
						L=15	1,600	SRBM140700	
		4			Flat	L=20	1,200	SRBM140800	
								SRBM149501	
	1	5	18±3°	—	18-tooth serration	L=15	1,600	SRBM150500	2
					Flat			SRBM154002	
		6			18-tooth serration			SRBM160700	
					Flat			SRBM1L0800	
20 pulses	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	

#### 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.192** for shaft configurations.  
Refer to **P.194** for attached parts.



## Unit:mm

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C.C.W.: ③④ ON during changeover only

Rear (Rear circuit viewed from shaft direction)

Front (Front circuit viewed from shaft direction)

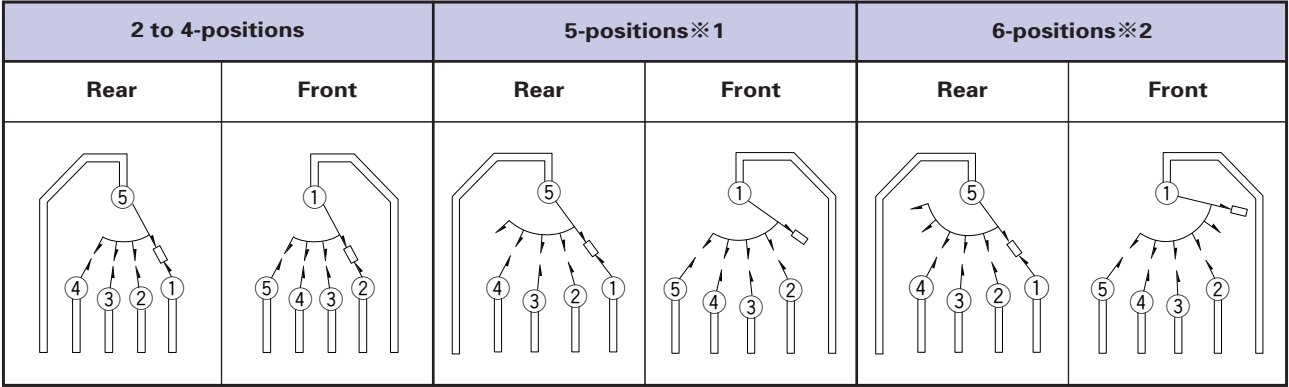
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Automotive  
Use

Rotary Switch  
6-position Horizontal Type | SRBM Series

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※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, 1section 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	_____	_____	_____



## List of Varieties

Series			SRBD	SRBQ		SRRM	SRBV	SRBM		SRRN	
				Insertion	Reflow type			Rotary	Pulse		
Photo											
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			
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				
Operating temperature range			-25℃ to +85℃	-10℃ to +60℃		-40℃ to +85℃		-10℃ to +60℃			
Automotive use			—	—	—			—			
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			
Electrical performance	Insulation resistance		100MΩ min. 100V DC		100MΩ min. 500V DC	100MΩ min. 100V DC		100MΩ min. 500V DC			
	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  (Unit : mm)		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
									10mm	0.17 mm	15 mm
									15mm	0.25 mm	20 mm
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.	30,000 cycles 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℃ 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						
Soldering	Manual soldering		—	350±10℃ 3 <sup>+</sup> ±s	350±5℃ 3s max.	350±10℃, 3 <sup>+</sup> ±s					
	Dip soldering		—	260±5℃ 5±1s	—	260±5℃ 10±1s	260±3℃ 5s max.	260±5℃ 10±1s			
	Reflow soldering		Please see P.193		—						
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## Notes

● 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.

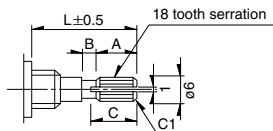
## Shaft Configurations

### 18-tooth Serration Shaft

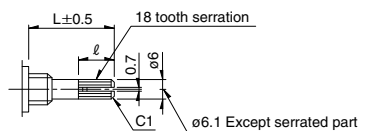
The shaft shows the position in which it is turned fully counterclockwise. ①

Unit:mm

#### ①Cutting Shaft



#### ②Die Casting Shaft



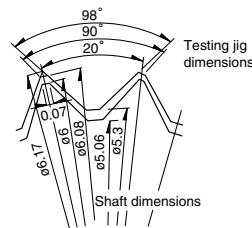
Shaft length L	A	B	C
15	6	1	7
20	10	2	11

Unit:mm

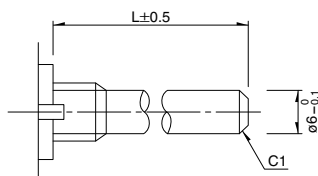
Shaft length L	l
15	8
20	12

### 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.

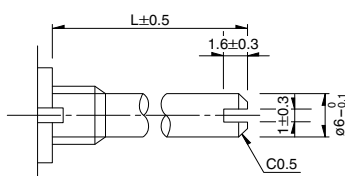


### Round Shaft

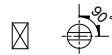


### Round Shaft with Groove

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



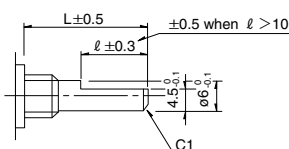
#### Shaft flatten angle



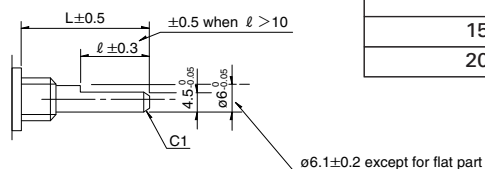
### Flat Shaft

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

#### Cutting Shaft



#### Die Casting Shaft



Unit:mm

Shaft length L	l
15	7
20	12

#### Shaft flatten angle



### Note

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

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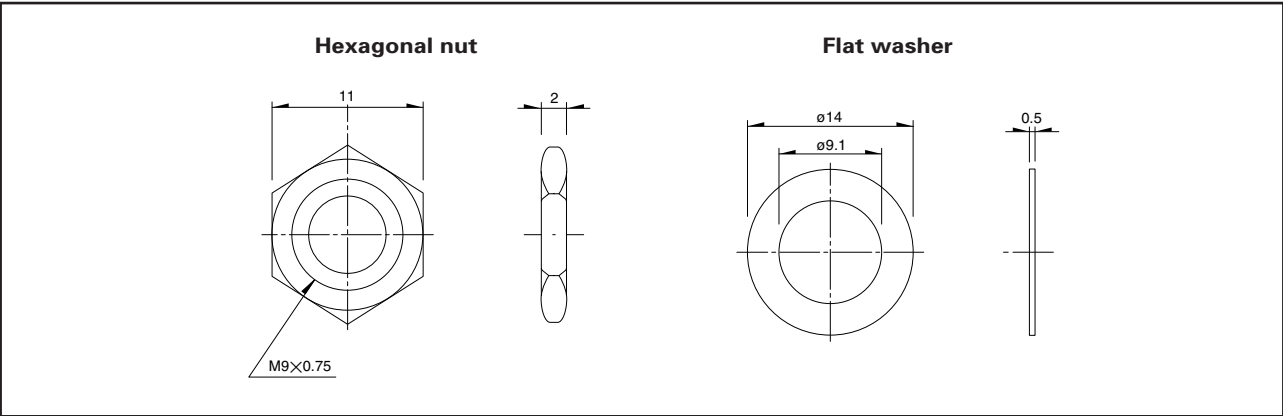
Custom-  
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Attached Parts

The following parts are included with the product.

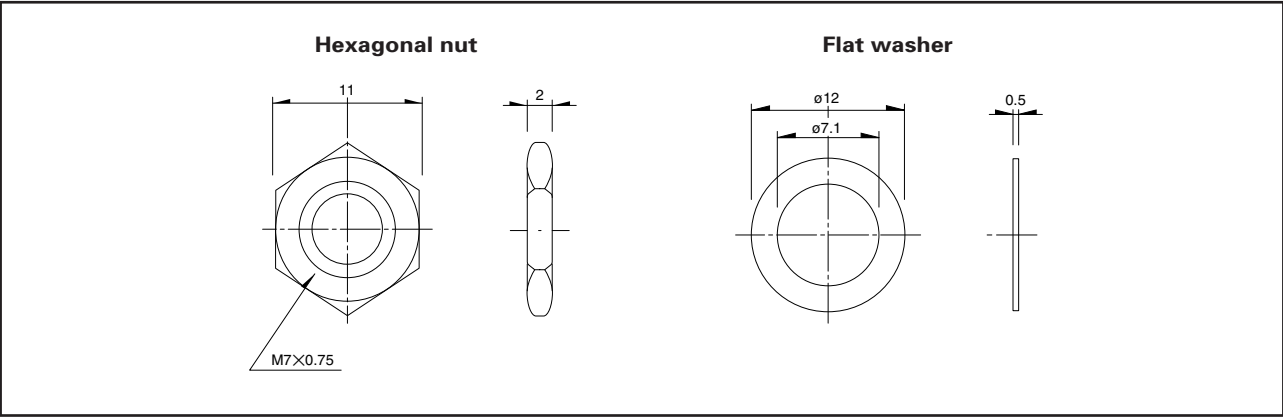
■ SRRM, SRBV

Unit:mm



■ SRBM, SRRN

Unit:mm



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