

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™

Custom-
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
	Without load	10,000cycles
Operating life	With load	30,000cycles
		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
		3			Flat			SRBM121300	
		4			18-tooth serration			SRBM131300	
		5			Flat	L=20	1,200	SRBM131400	
		6			18-tooth serration	L=15	1,600	SRBM140700	
	1	20 pulses	18±3°	—	Flat	L=20	1,200	SRBM140800	2
					18-tooth serration			SRBM149501	
					Flat			SRBM150500	
					18-tooth serration			SRBM154002	
					Flat	L=15	1,600	SRBM160700	
								SRBM1L0800	
								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

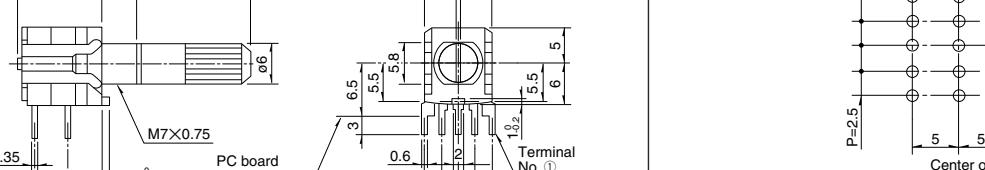
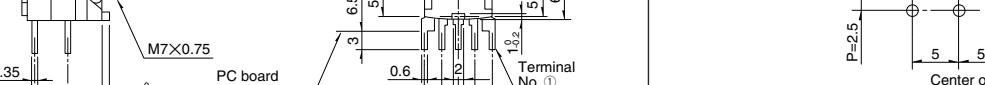
- Products other than those listed in the above chart are also available. Please contact us for details.
- All the axis are die casting shafts.
- Please place purchase orders per minimum order unit N (integer).

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

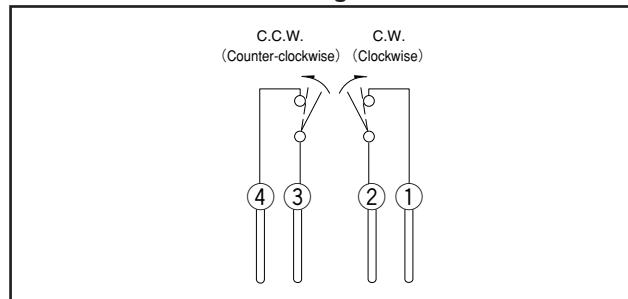
Dimensions

Single-shaft Type

Unit:mm

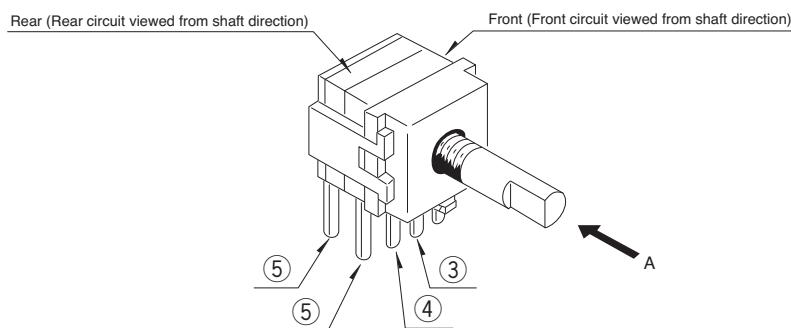
No.	Style	PC board mounting hole dimensions (Viewed from direction A)
1	Rotary switch	
2	Pulse switch	

■ 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)

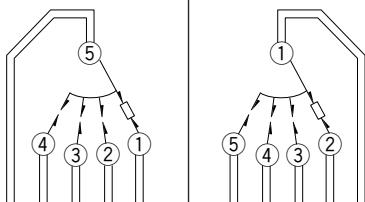
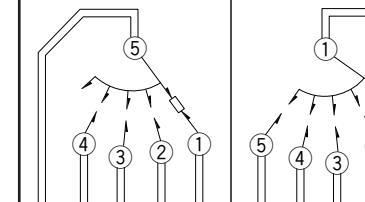
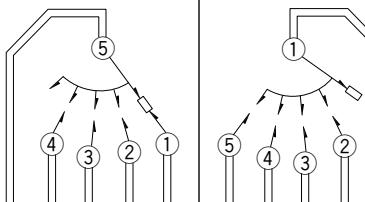
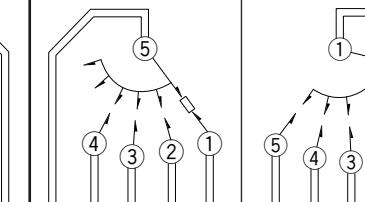
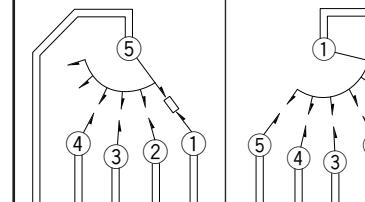


Automotive Use

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2 to 4-positions		5-positions※1		6-positions※2	
Rear	Front	Rear	Front	Rear	Front
					

※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)	—	—	—



Automotive
Use

List of Varieties

Series		SRBD	SRBQ		SRRM	SRBV	SRBM		SRRN					
			Insertion	Reflow type			Rotary	Pulse						
Outline specifications		Photo												
			36°	40±3°	30±3°			18±3°	30±3°					
		Step angle	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°C to +85°C		-10°C to +60°C		-40°C to +85°C		-10°C to +60°C						
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					
			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			
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.			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 ⁺ 1s	350±5°C 3s max.	350±10°C, 3 ⁺ 1s									
	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.193												
Page		179	181	188	186	183	190							

- Rotary Switches Shaft Style 192
- Rotary Switches Soldering Conditions 193
- Rotary Switches Attached Parts 194
- Rotary Switches Cautions 195

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.

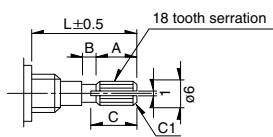
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Shaft Configurations

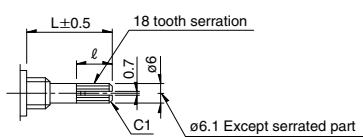
18-tooth Serration Shaft

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

① Cutting Shaft



② Die Casting Shaft



Unit:mm

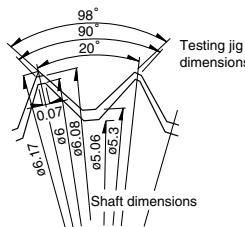
Shaft length L	A	B	C
15	6	1	7
20	10	2	11

Unit:mm

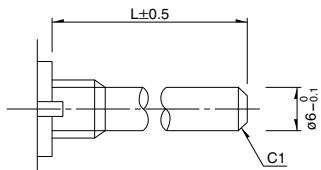
②	Shaft length L	l
15	8	
20	12	

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.

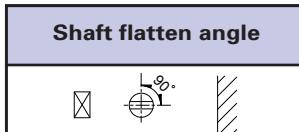
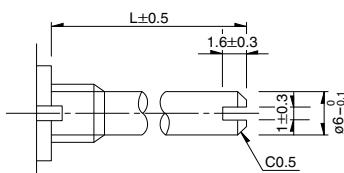


Round Shaft



Round Shaft with Groove

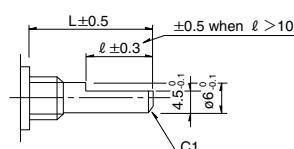
The shaft shows the position in which it is turned fully counterclockwise.



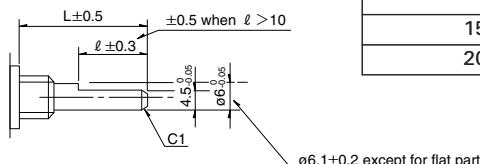
Flat Shaft

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

Cutting Shaft



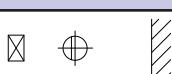
Die Casting Shaft



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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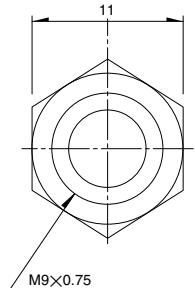
Attached Parts

The following parts are included with the product.

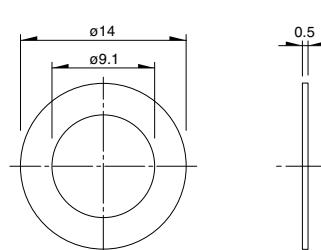
■ SRRM, SRBV

Unit:mm

Hexagonal nut



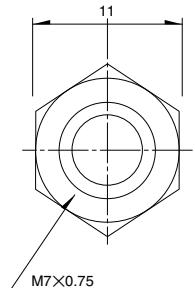
Flat washer



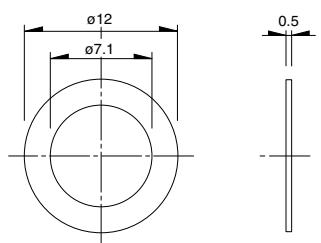
■ SRBM, SRRN

Unit:mm

Hexagonal nut



Flat washer



Detector

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