

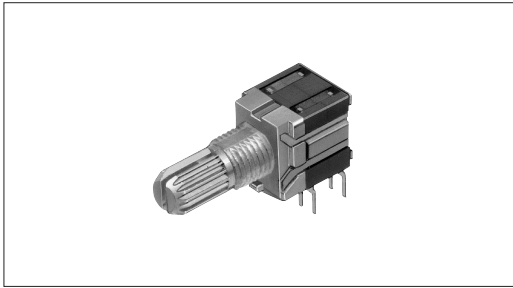
Rotary Switch 6-position Horizontal Type

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/50 μ A 3V DC	
Contact resistance (Initial/After operating life)	50m Ω max./150m Ω max.	
Rotational torque	40 \pm 20 mN·m	15 \pm 7 mN·m
Operating life	Without load	10,000cycles
	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 \pm 3°	Non shorting	18-tooth serration	L=15	1,600	SRBM120700	1		
					Flat			SRBM121300			
		3			18-tooth serration			L=20		1,200	SRBM131300
					18-tooth serration			L=15		1,600	SRBM131400
		4			Flat			L=20		1,200	SRBM140700
					18-tooth serration			L=20		1,200	SRBM140800
	1	5			5	18-tooth serration	L=15	1,600		SRBM149501	
						Flat				SRBM150500	
					6	18-tooth serration				SRBM154002	
						Flat				SRBM160700	
20 pulses	20 pulses	18 \pm 3°	18-tooth serration	L=15	1,600	SRBM1L0800	2				
			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.

Dimensions Single-shaft Type

Unit:mm

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

Detector

Push

Slide

Rotary

Encoders

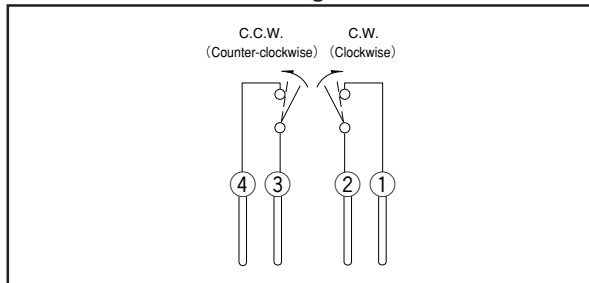
Power

Dual-in-line
Package Type

TACT Switch™

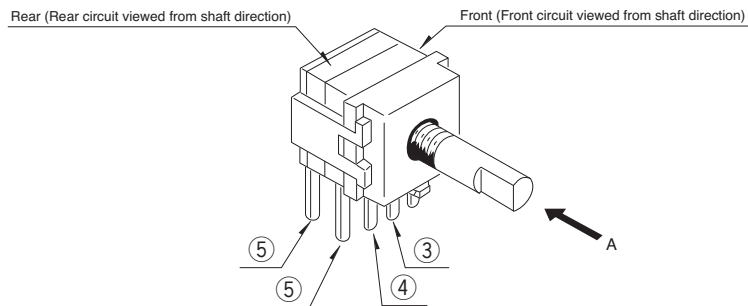
Custom-
Products

Pulse Switch Circuit Diagram



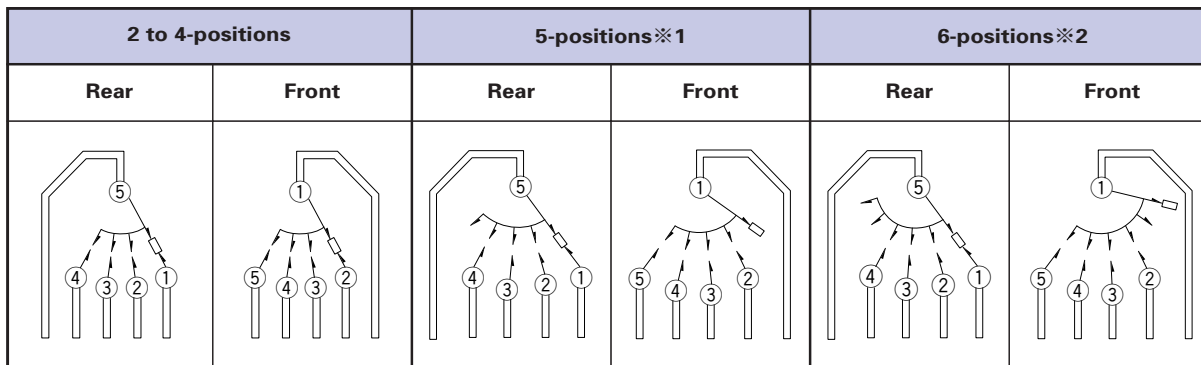
C.W. : ①② ON during changeover only
C.C.W. : ③④ ON during changeover only

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



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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, 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	—	—	—



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	11.4		—	16.2	12.5		—						
		D	10	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		
		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		
		Measuring position from mounting surface	Shaft wobble (max. value)	Applicable mounting dimension	Distance from mounting surface to the tip of shaft	Shaft wobble (max. value)	Measuring position from mounting surface	Shaft wobble (max. value)	Applicable mounting dimension	10mm	0.17 mm	15 mm			
10		0.17	15	below 5	0.5 max.	10	0.2	15	15mm	0.25 mm	20 mm				
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°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 ⁺ ±s		350±5°C 3s max.		350±10°C, 3 ⁺ ±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.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.

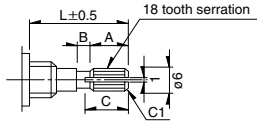
Shaft Configurations

18-tooth Serration Shaft

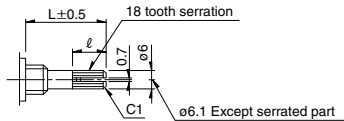
The shaft shows the position in which it is turned fully counterclockwise. ①

Unit:mm

① Cutting Shaft



② Die Casting Shaft



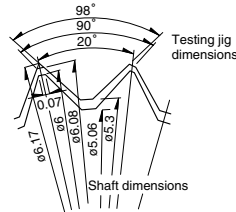
Shaft length L	A	B	C
15	6	1	7
20	10	2	11

Unit:mm

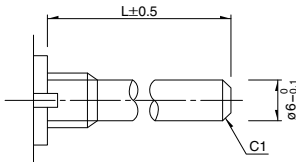
Shaft length L	ℓ
15	8
20	12

Details About Serration

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

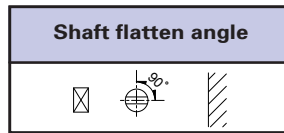
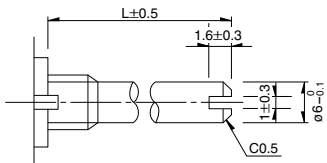


Round Shaft



Round Shaft with Groove

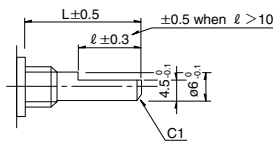
The shaft shows the position in which it is turned fully counterclockwise.



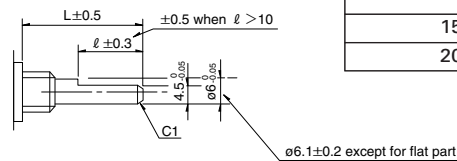
Flat Shaft

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

Cutting Shaft

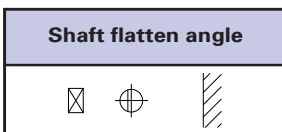


Die Casting Shaft



Unit:mm

Shaft length L	ℓ
15	7
20	12



Note

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

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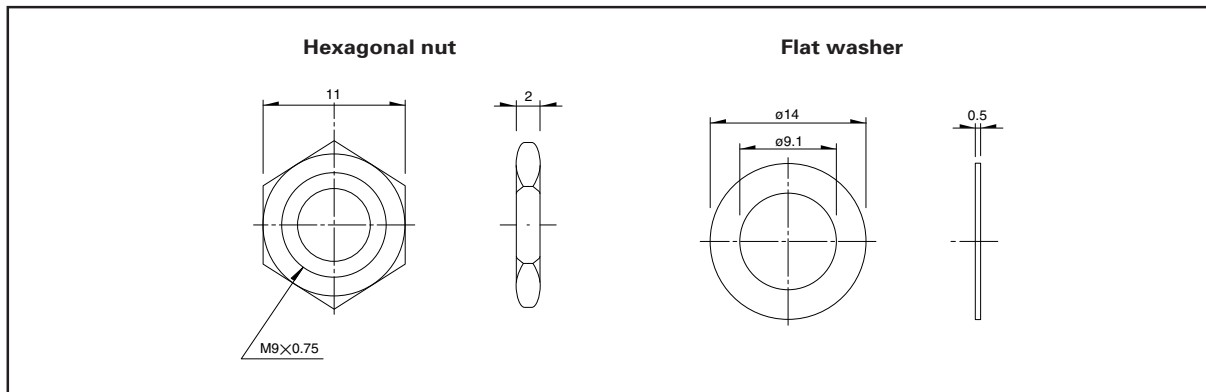
Custom-
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Attached Parts

The following parts are included with the product.

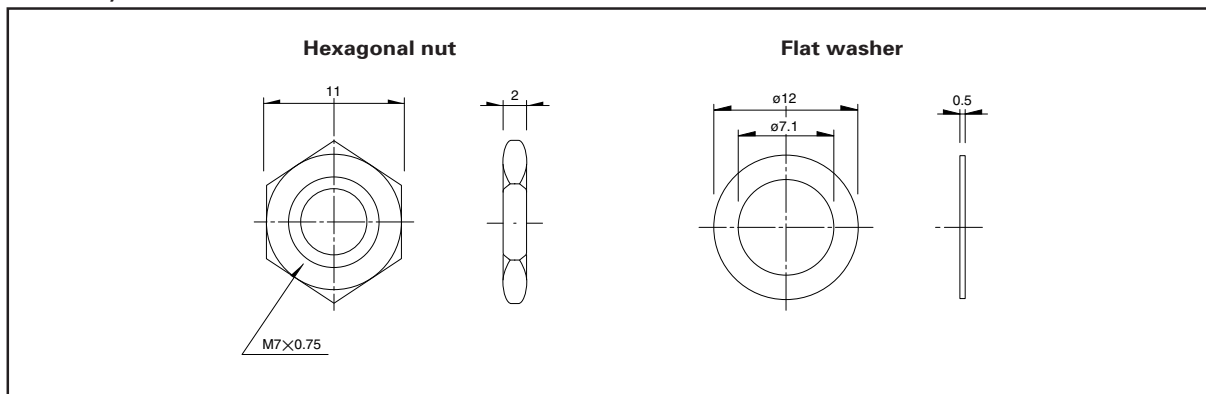
SRRM, SRBV

Unit:mm



SRBM, SRRN

Unit:mm



Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products