

Rotary Switch
12-position General-purpose Vertical Type
SRRM Series



General-purpose type switch applicable to a wide range of electronic devices.



■ Typical Specifications

Items		Specifications
Rating(max.)(min.) (Resistive load)		0.25A 30V DC/50μA 3V DC
Contact resistance (Initial/After operating life)		20mΩ max./60mΩ max.
Rotational torque	Shorting	80 ± 30mN·m
	Non-shorting	70 ± 30mN·m
Operating life	Without load	10,000cycles
	With load	10,000cycles(0.25A 30V DC)

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

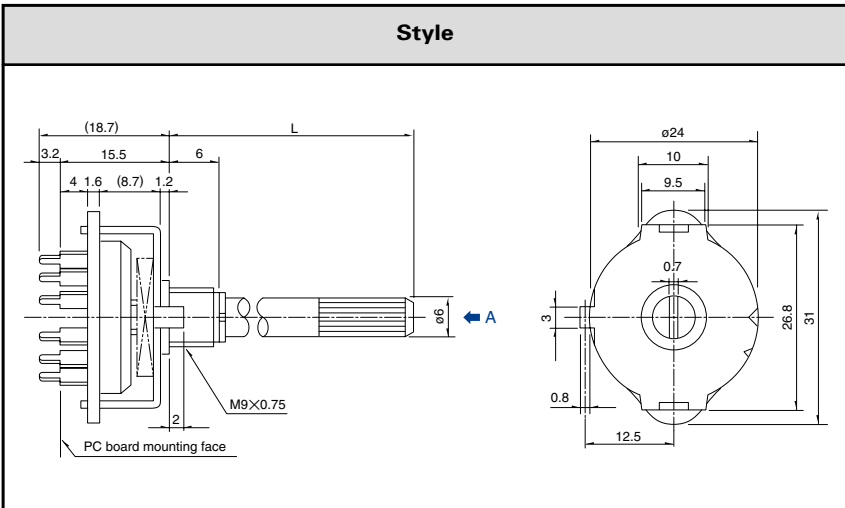
Custom-
Products

■ Product Line

Poles	Positions	Changeover angle	Changeover timing	Actuator configuration	Actuator length (mm)	Minimum order unit(pcs.)	Product No.
1	12 Endless	30 ± 3 °	Shorting	Round shaft with groove	15	600	SRRM1C6200
			Non shorting	Flat	20		SRRM1C5400
Shorting	Round shaft with groove			15	SRRM1C7800		
	Flat		20	SRRM254700			
				SRRM262400			
	Round shaft with groove			SRRM264300			
	3			4	SRRM342800		
	4			3	SRRM433700		

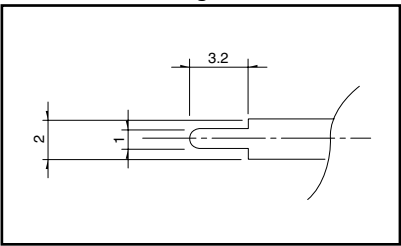
■ Dimensions

Unit:mm



■ Terminal Configuration

Unit:mm



Notes

1. Products other than those listed in the above chart are also available. Please contact us for details.
2. Non-shorting type requires external wiring of common terminals.
3. All the axis are die casting shafts.
4. Please place purchase orders per minimum order unit(integer).
5. Round-shaft with groove(shaft length 20mm) type are 8mm length.

Refer to P.171 for shaft configurations.
Refer to P.173 for attached parts.

Standard Circuit Diagram

Shorting Circuit Diagram

Unit:mm

	1-pole, 12-positions	2-poles, 5-positions	2-poles, 6-positions	3-poles, 4-positions	4-poles, 3-positions
Circuit diagram					
PC board mounting hole dimensions (Viewed from the direction A)					

Non Shorting Circuit Diagram

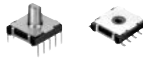
Unit:mm

	1-pole, 12-positions	2-poles, 6-positions
Circuit diagram		
PC board mounting hole dimensions (Viewed from the direction A)		

Notes

1. The  mark in the above table indicate a stopper with the shaft turned fully counterclockwise when viewed from direction A of the diagrams.
2. Note that the location of C terminal differs depending on the number of positions.
3. External wiring is required if specified in the above diagrams.

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						
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	Initial contact resistance		100MΩ min. 100V DC		100MΩ min. 500V DC	100MΩ min. 100V DC			100MΩ min. 500V DC						
	Insulation resistance		100V AC for 1minute		500V AC for 1minute	100V AC for 1minute			500V AC for 1minute						
	Voltage proof		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			
			10	0.17	15	above 5 and below 10		0.9 max.	10	0.2	15		Load at the tip of shaft : 5N		
15			0.25	20	above 10 and below 15		1.2 max.	15	0.3	20					
Durability	Operating life without load		10,000cycles 250mΩ max.		10,000cycles 100mΩ max.	10,000cycles 40mΩ max.	10,000cycles 100mΩ max.		30,000cycles 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 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 ⁺ 1s	350 ± 5 3s max.	350 ± 10 , 3 ⁺ 1s								
	Dip soldering		—		260 ± 5 5 ± 1s	—	260 ± 5 10 ± 1s		260 ± 3 5s max.	260 ± 5 10 ± 1s					
	Reflow soldering		Please see P.172		—										
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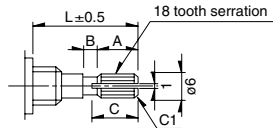
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Shaft Configurations

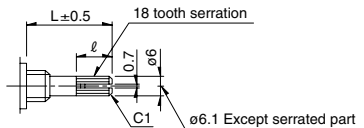
18-tooth Serration Shaft

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

Cutting Shaft



Die Casting Shaft



Unit:mm

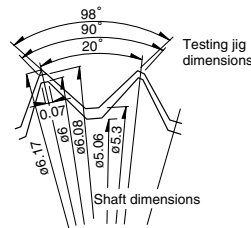
Shaft length L	A	B	C
15	6	1	7
20	10	2	11

Unit:mm

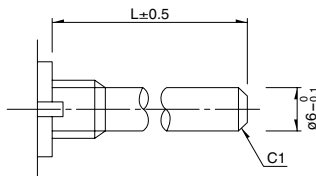
Shaft length L	ℓ
15	8
20	12

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.

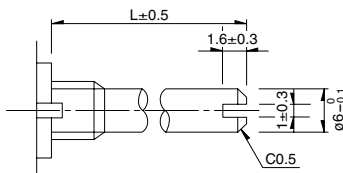


Round Shaft

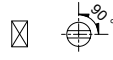


Round Shaft with Groove

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



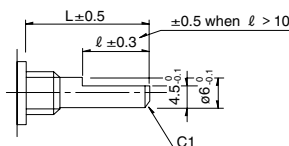
Shaft flatten angle



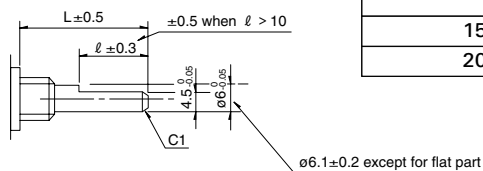
Flat Shaft

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

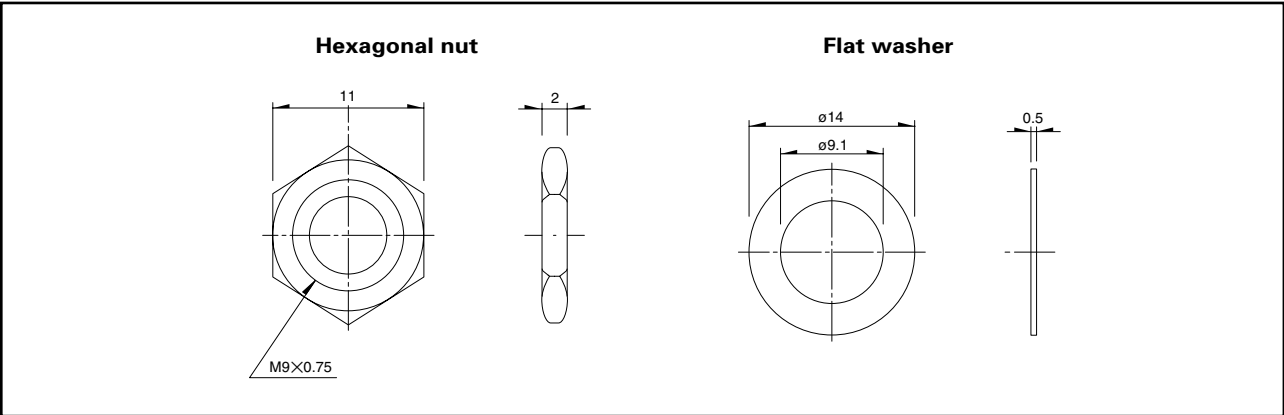
SRBM Series are based on  (printed terminal direction). SRRM, SRRN, SRBV Series are based on  (panel lug).

Attached Parts

The following parts are included with the product.

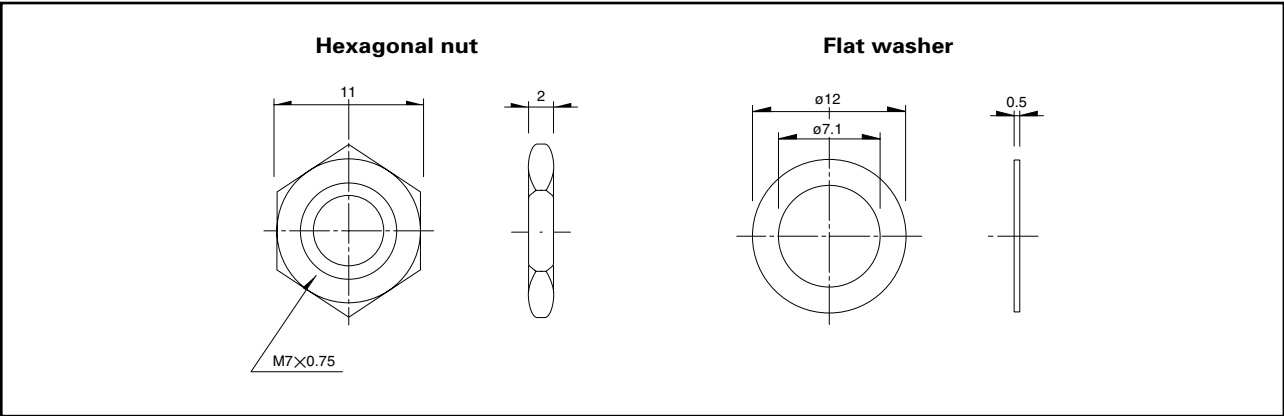
■ SRRM, SRBV

Unit:mm



■ SRBM, SRRN

Unit:mm



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