

Encoder Metal Shaft Type

SRGH Series



Shaft vertical type facilitates mounting and provides high versatility.

Detector

Push

Slide

Rotary

Encoders

Power

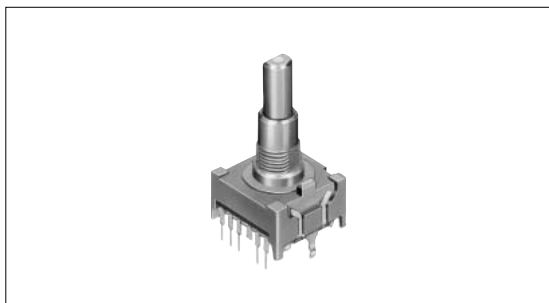
Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Incremental
Type

Absolute
Type



Typical Specifications

Items		Specifications
Rating(max.)(min.) (Resistive load)		0.1A 12V DC/50μA 3V DC
Contact resistance (Initial/After operating life)		1Ω max./1Ω max.
Operating life	Without load	10,000cycles
	With load	10,000cycles(0.1A 12V DC)

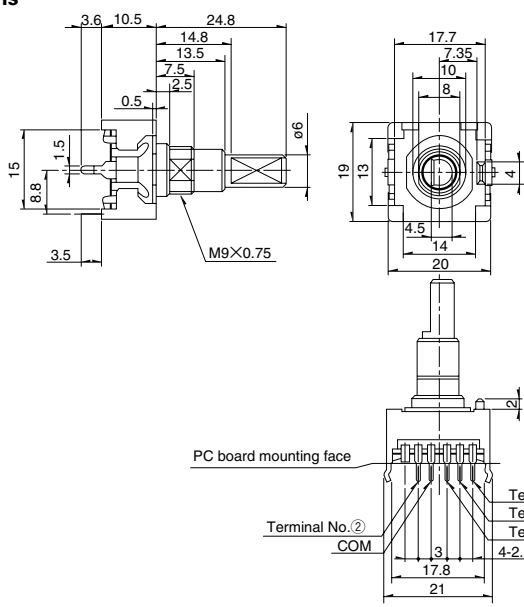
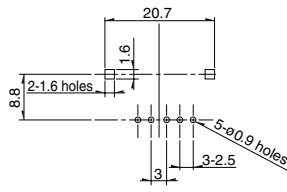
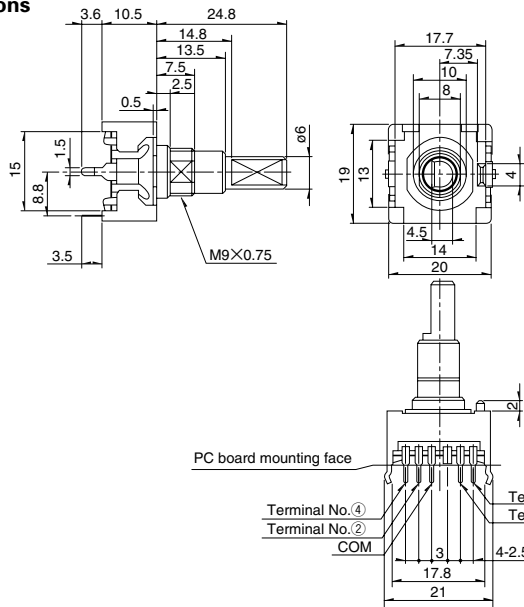
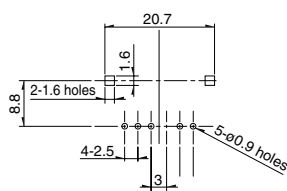
Product Line

Torque(mN・m)				Operating direction	Positions	Changeover angel	Minimum order unit (pcs.)	Product No.	Drawing No.
6-positions	15-positions								
	Between 1-position, 2-positions	Between 2-positions, 14-positions	Between 14-positions, 15-positions						
37.3 ± 20.5	37.3 ± 20.5	21.6 ± 11.8	37.3 ± 20.5	Vertical	6	40 °	400	SRGH160100	1
					15	12.8 °		SRGH1F0100	2

Notes

1. Products other than those listed in the above chart are also available. Please contact us for details.
2. Please place purchase orders per minimum order unit (integer).

Refer to P.201 for attached parts.

Dimensions		Unit:mm
No.	Style	PC board mounting hole dimensions
1	6-positions 	
2	15-positions 	

Standard Codes																	
Number of positions																	
		6						15									
Code	Terminal	Position	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Gray	1		●	●			●	●			●	●			●	●	
	2			●	●	●	●					●	●	●	●		
	3					●	●	●		●	●	●	●				
	4									●	●	●	●	●	●	●	●

The ● marks shows the ON position.

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List of Varieties

Type			Absolute type				
			With Knob	Metal shaft	Hollow shaft	Jog-shuttle	
Series			SRRQ	SRGH	SRGA	SRGPHJ	
Photo							
Output			Absolute type				
Outline specifications	Shaft types		With knob	Single-shaft	Hollow shaft	Single-shaft/ Dual-shaft	
	Operating direction		Vertical/Horizontal	Vertical			
	Number of pulse/ Number of detent						
	Push switch (Travel mm)		Without				
	Optional functions						
	Changeover angle		22.5°, 36°	40°, 12.8°	15°, 24°, 30°, 45°	Shuttle part:All angles rotation 160° Jog part:All angles rotation 360°	
Dimensions (mm)	W		14.4	20	18	35	
	D		15.6	19		43.7	
	H		7.5	10.5	8	8.6	
Soldering	Manual soldering		300 ± 10 , 3 ⁺¹ / ₀ s		350 ± 10 , 3 ⁺¹ / ₀ s		300 ± 10 , 3 ⁺¹ / ₀ s
	Dip soldering		260 ± 5 , 10 ± 1s				260 ± 5 , 5 ± 1s
	Reflow soldering					Please see P.209	
Operating temperature range			-10 to +60	-40 to +85	-10 to +60		
Electrical performance	Initial contact resistance		1Ω max.				
	Output voltage	Shuttle part					4V min. at 1mA 5V DC (resistive load) 
		Jog part					
	Insulation resistance		100MΩ min. 100V DC				
Mechanical performance	Voltage proof		100V AC for 1minute				
	Rotational torque		Shall be in accordance with individual specifications.				
	Terminal strength		5N for 1minute				
	Resistance to soldering heat	Rotational direction					0.6 N・m
		Push direction					
	Vibration		10 to 55 to 10Hz/min., the amplitude is 1.5mm for all the frequencies, in the 3 direction of X, Y and Z for 2 hours respectively				
Environmental performance	Cold		-20 ± 2 for 96h				
	Dry heat		85 ± 2 for 96h				
	Damp heat		40 ± 2 , 90 to 95%RH for 96h				
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Note

The operating temperature range for automotive applications can be raised upon request. Please contact us for requirements of this kind.

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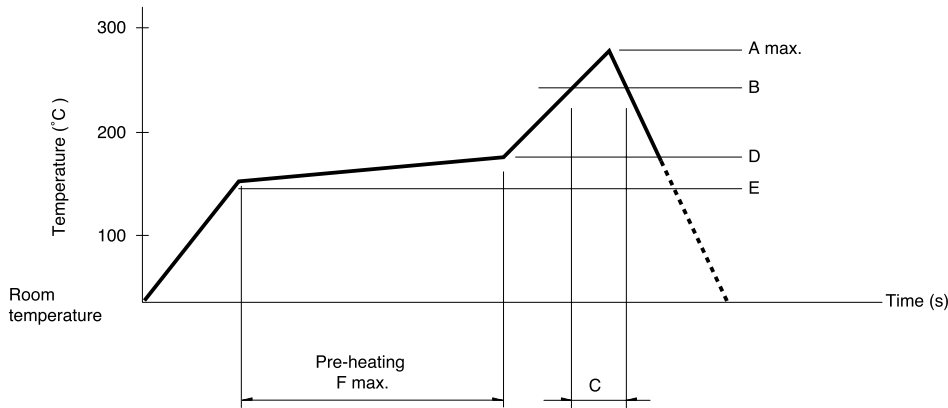
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Soldering Conditions

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2 φ CA(K)or CC(T)at soldering portion(copper foil surface). A heat resisting tape should be used for fixed measurement.
3. Temperature profile



Series(Reflow type)	A() max.	B()	C(s)	D()	E()	R(s)
SRGP30	240	230	20	150	150	120
SRGP30	260		40	180		
SRGAR10100	240	220	30	160		

Notes

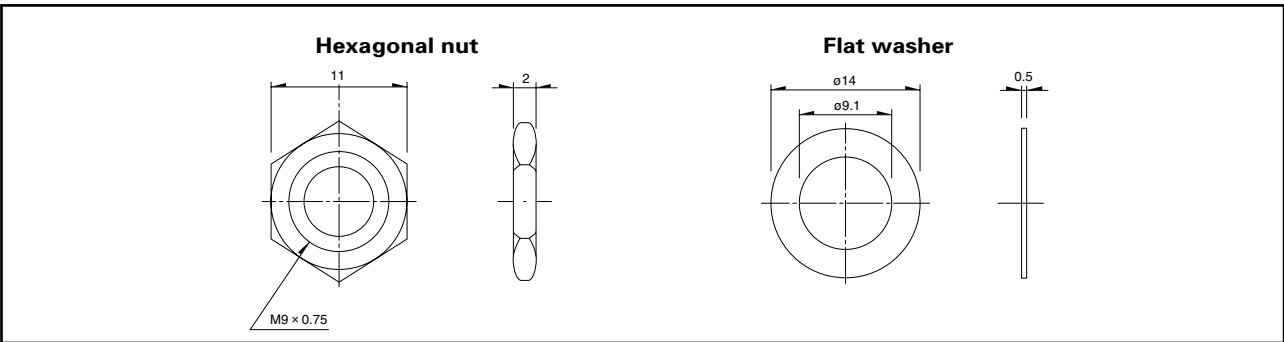
1. The condition mentioned above is the temperature on the mounting surface of a PC board. There are cases where the PC board's temperature greatly differs from that of the switch, depending on the PC board's material, size, thickness, etc. The above-stated conditions shall also apply to switch surface temperatures.
2. Soldering conditions differ depending on reflow soldering machines. Prior verification of soldering condition is highly recommended.

Attached Parts

The following parts are included with the product.

SRGH Series

Unit:mm



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