

Encoder 9mm Size Metal Shaft Type

RK097 Series



A combination with 9mm metal shaft potentiometer made possible by applying the same size.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

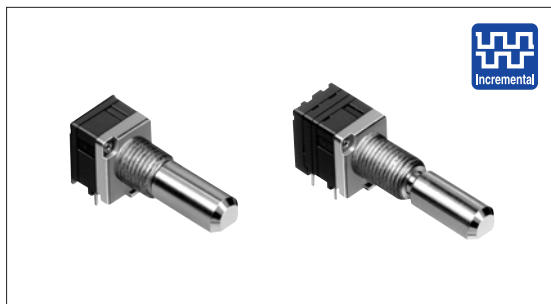
Multi Control
Devices

TACT Switch™

Custom-
Products

Incremental
Type

Absolute
Type



Features

- Combination with 9mm metal shaft potentiometer or attached switch are made possible.
- Applies compact and highly accurate sliding contact structure.
- Incremental type.

Applications

- For various types of controlling in DVD players/recorders, car AV equipment systems and home audio equipment
- For level controlling in transceivers and industrial wireless radios

Typical Specifications

Items	Specifications
Rating	1mA 5V DC
Operating life	30,000cycles

Product Line

Actuator configuration	Actuator length (mm)	Detent torque (mN·m)	Number of detent	Number of pulse	Operating direction	Push-on switch	Travel of push-on switch (mm)	Minimum packing unit (pcs.)	Product No.	Drawing No.
Flat	20	10±8	18	9	Horizontal	Without	—	1,200	RK09710EHC08	1
						With	0.5	700	RK09710ELC09	2
							1.5		RK09710ELC0A	3
			Without	—		1,200	RK09710EHC09	1		
				With		0.5	700	RK09710ELC07	2	
						1.5		RK09710ELC0B	3	
30	15	Horizontal	18	9	Horizontal	Without	—	1,200	RK09710EHC09	1
						With	0.5	700	RK09710ELC07	2
							1.5		RK09710ELC0B	3


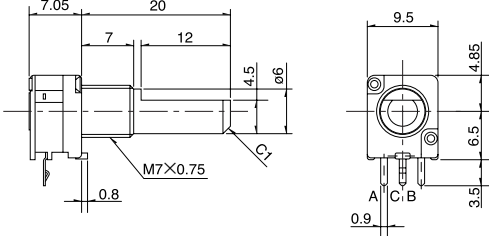
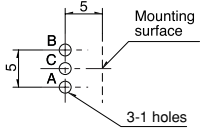

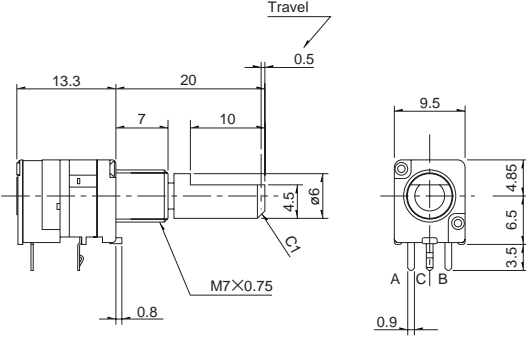
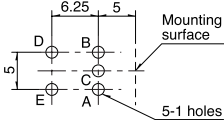
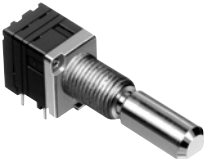
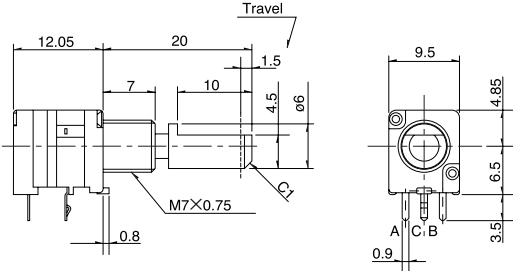
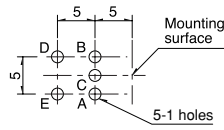
Note

Products other than those listed in the above chart are also available. Please contact us for details.

Refer to **P.184** for product specifications.
Refer to **P.236** for attached parts.

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions (Viewed from mountingside)
1	<p>Single-shaft encoders</p> 		
2	<p>Single-shaft encoders With push-on switch (travel 0.5mm)</p> 		
3	<p>Single-shaft encoders With push-on switch (travel 1.5mm)</p> 		

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Product Specifications

Items	9mm size metal shaft	
	EC09E	RK097
Detector	Operating temperature range	
	-40°C to +85°C	-30°C to +70°C
Push	Maximum operating current (Resistive load)	
	10mA	
Slide	Rating	
	10mA 5V DC	1mA 5V DC
Rotary	Output signal	
	Output of A and B signals, proportionate to phase difference	
Encoders	Output wave	
Power	Sliding noise	
Dual-in-line Package Type	$V_1 = V_2 = 1.5V$ max.	
Multi Control Devices	Measurement condition : Rotation speed 360°/s t : Masking time to avoid chattering	
TACT Switch™	At R = 5 kΩ Chattering : 5ms max. Bounce : 2ms max.	
Custom-Products	At R = 5 kΩ Chattering : 5ms max. Bounce : 5ms max.	
Incremental Type	Insulation resistance	
	100MΩ min. 250V DC	
Absolute Type	Voltage proof	
	300V AC for 1minute	
Mechanical performance	Rotational torque	

	Detent torque	
	8±5mN·m	
	10±8mN·m	
Push-pull strength		
100N		
Resistance to soldering heat	Manual soldering	350°C max. 3s max.
	Dip soldering	260±5°C, 3±1s
	Reflow soldering	_____
Durability	Rotational life	
	15,000cycles	30,000cycles
Environmental performance	Cold	
	-40±3°C for 240h	
	Dry heat	
	85±3°C for 240h	
	Damp heat	
	60±2°C, 90 to 95%RH for 240h	

Push-on Switch Specifications

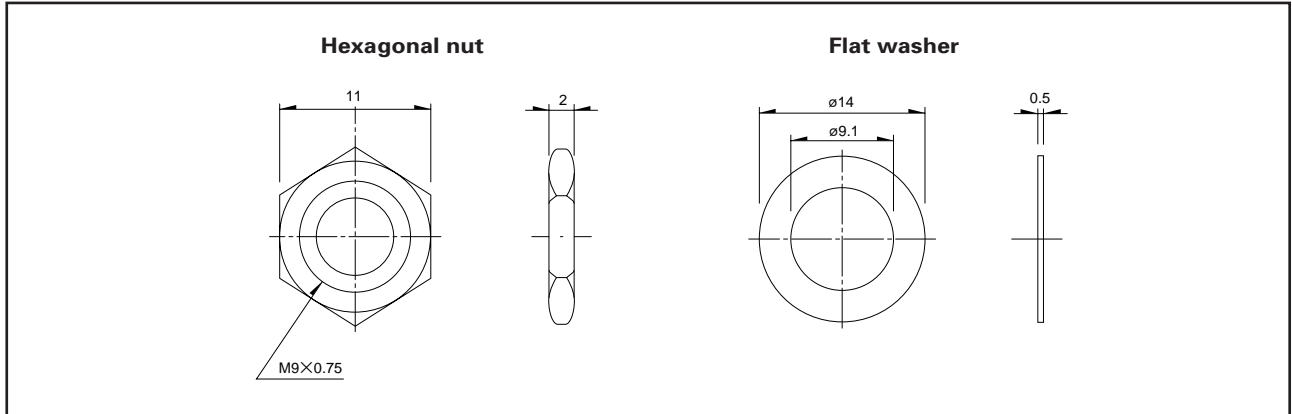
Items	9mm size metal shaft			
	EC09E		RK097	
Circuit · number of contacts	Single pole and single throw (Push-on)			
Travel (mm)	0.5±0.3	1.5±0.5	0.5 ^{+0.7} _{-0.3}	1.5±0.5
Operating force (N)	6 ^{+2.5} ₋₂	4±2	4 ⁺⁴ ₋₂	5±2
Rating	10mA 5V DC		10mA 12V DC	
Contact resistance	100mΩ for initial period; 200mΩ after rotational life.			
Operating life	10,000times min.			20,000times min.

Attached Parts

The following parts are included with the product.

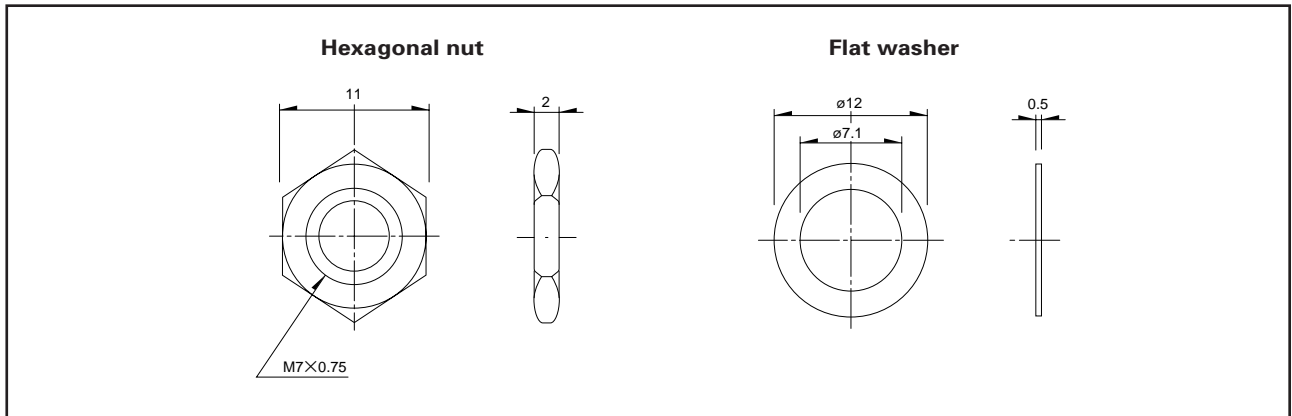
SRGH Series

Unit:mm



RK097, EC11B Series

Unit:mm



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