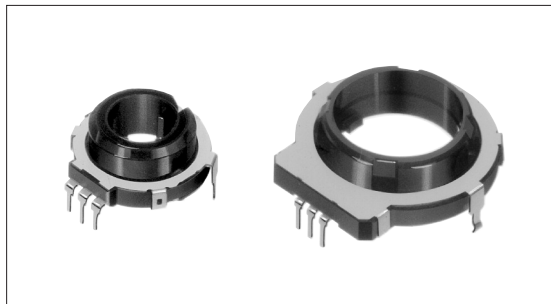


Ring Type Device Ring Encoder

SRGP Series



Ring encoder enabling various combinations.



Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		10mA 5V DC/50μA 3V DC
Output voltage		1V max. at 1mA 5V DC (Resistive load)
Operating life	Without load	50,000cycles
	With load	50,000cycles

Product Line

Detent torque (mN·m)	Number of detent	Number of pulse	Minimum order unit (pcs.)	Product No.	Drawing No.
7±3	20	10	1,000	SRGP200200	1
13±4	16	16	600	SRGPWJ0500	2
6.5±4	32			SRGPWJ0200	

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). For export packing, please consult us.

Packing Specifications

Bulk

Products No.	Number of packages (pcs.)		Export package measurements (mm)
	1 case /Japan	1 case /export packing	
SRGP200200	200	1,000	383×288×280
SRGPWJ0200 SRGPWJ0500		600	536×381×170

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Metal
Shaft

Insulated
Shaft

Hollow
Shaft

Ring
Type



Automotive
Use

Dimensions

Unit:mm

No.	Style	PC board mounting hole dimensions (Viewed from the Direction A)
<p>1</p>	<p>Phase difference of code portion</p> <p>Clockwise Counter-clockwise</p> <p>(36°) (18°)</p> <p>Detent position</p> <p>① ON OFF ② ON OFF</p> <p>T1 T2 T3 T4</p> <p>$T1, T3 = 1/4T \pm 1/8T$</p> <p>T2, T4=Phase difference shall not be reversed</p>	<p>2-ø1.5 holes</p> <p>2.05</p> <p>2.30°</p> <p>0.205</p> <p>0.21</p> <p>13</p> <p>6</p> <p>17</p> <p>3-ø1 holes</p>
<p>2</p>	<p>Phase difference of code portion</p> <p>Clockwise Counter-clockwise</p> <p>(22.5°) (22.5°)</p> <p>Detent position</p> <p>① ON OFF ② ON OFF</p> <p>T1 T2 T3 T4</p> <p>$T1, T3 = 1/4T \pm 1/8T$</p> <p>T2, T4=Phase difference shall not be reversed (SRGPWJ0500)</p> <p>Clockwise Counter-clockwise</p> <p>(22.5°) (11.25°)</p> <p>Detent position</p> <p>① ON OFF ② ON OFF</p> <p>T1 T2 T3 T4</p> <p>$T1, T3 = 1/4T \pm 1/8T$</p> <p>T2, T4=Phase difference shall not be reversed (SRGPWJ0200)</p>	<p>1.6</p> <p>2.5</p> <p>18</p> <p>5</p> <p>23</p> <p>31.8</p> <p>3-ø1 holes</p> <p>2-ø2.55 holes</p>

Note

PC board thickness in above diagram is based on 1.6mm.

- Detector
- Push
- Slide
- Rotary
- Encoders**
- Power
- Dual-in-line Package Type
- TACT Switch™
- Custom-Products

- Metal Shaft
- Insulated Shaft
- Hollow Shaft
- Ring Type**



List of Varieties

Type	Ring Type					
	17mm size		22mm size	30mm size		
Series	SRGP30	SRGP40	SRGP20	SRGPWJ		
Detector						
Push						
Slide						
Output	Incremental					
Rotary Encoders	Outline specifications	Number of pulse/ Number of detent	9/18	12/24	10/20	16/16 16/32
		Changeover angle	20°	15°	18°	22.5°
Power	Dimensions (mm)	W	17.5		23.6	31.8
Dual-in-line Package Type		D	18.5	18.25	23	32
TACT Switch™		H	2.3	1.55	4.5	
Custom-Products	Soldering	Manual soldering	350±5°C, 3s max.		350±10°C, 3 ⁺ 0s	
		Dip soldering	—————		260±5°C, 5±1s	
		Reflow soldering	Please see P.234			
Operating temperature range		-40°C ~ 85°C	-10°C ~ +60°C	-40°C ~ +85°C		
Automotive use		●	—————	●		
Electrical performance	Output voltage	1V max. at 1mA 5V DC (Resistive load)				
		Insulation resistance	100MΩ min. 100V DC			
	Voltage proof	100V AC for 1minute				
Mechanical performance	Defent torque	5±2.5mN·m	2±1mN·m	7±3mN·m	13±4mN·m	
			3.5±1mN·m		6.5±4mN·m	
	Rotational torque	5N for 1minute				
	Actuator strength	Pushing direction	20N		40N	
	Pulling 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	-40±2°C for 96h				
	Dry heat	85±2°C for 96h				
	Damp heat	40±2°C, 90 ~ 95%RH for 96h				
Page		230	231	232		

● Ring Type Device Cautions244, 245

Notes

- ※ The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
- 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.