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THE ONLINE DISTRIBUTOR OF ELECTRONIC COMPONENTS

RoHS compliant

TACT Switch™ adaptable ring center adds flexibility for multifunction sets.
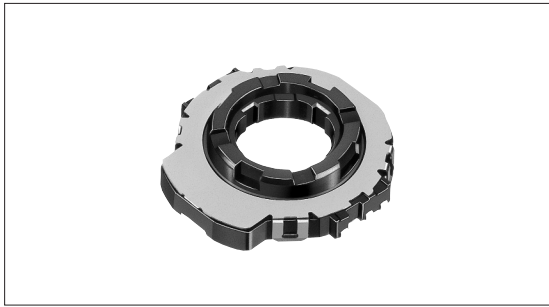
■ **Typical Specifications**

| 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 resistor	50,000cycles min.
	With resistor	50,000cycles min.

■ **Product Line**

Detent torque (mN・m)	Number of detent	Number of pulse	Soldering	Minimum order unit (pcs.)	Product No.
5±2.5	18	9	Reflow	1,600	SRGP300100

■ **Packing Specifications**

Taping   Unit:mm

Reel size

ø380   33.4
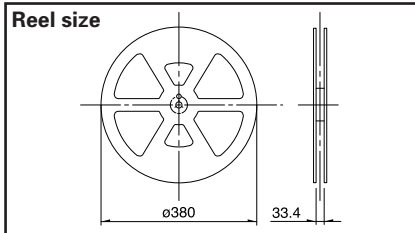
Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
1 reel	1 case/Japan	1 case/export packing		
400	800	1,600	32	368 × 363 × 194

■ **Dimensions**   Unit:mm

Style	PC board mounting hole and land dimensions

Phase difference of code portion

Clockwise
Counter-clockwise
(40°)
(20°)
Detent positon

① ON OFF
② ON OFF
T1 T2 T3 T4
T

T1, T3=1/4T±1/8T
T2, T4=Phase difference shall not be reversed

Ground
19.1
14.4
12
ø1.6

Notes
1. Please contact us for automotive use products.
2. Order products in N minimum order units (1 reel or 1 case).

Detector
Push
Slide
Rotary
Encoders
Power
Dual-in-line Package Type
TACT Switch™
Custom-Products
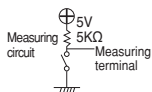
Metal Shaft
Insulated Shaft
Hollow Shaft
Ring Type

Automotive Use

ALPS

List of Varieties

Type		Ring Type		
		17mm size		22mm size	30mm size
Series		SRGP30	SRGP40	SRGP20	SRGPWJ
Photo					
Output		Incremental			
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°
Dimensions (mm)	W	17.5		23.6	31.8
	D	18.5	18.25	23	32
	H	2.3	1.55	4.5	
Soldering	Manual soldering	350±5℃, 3s max.	350±10℃, 3 $^{+1}_{0}$s		
	Dip soldering	———		260±5℃, 5±1s	
	Reflow soldering	Please see P.234		———	
Operating temperature range		−40℃ ～ 85℃	−10℃ ～ +60℃	−40℃ ～ +85℃	
Automotive use		●	———	●	
Electrical performance	Output voltage	1V max. at 1mA 5V DC （Resistive load） Measuring circuit 5V 5KΩ Measuring terminal			
	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 Pulling direction	20N		40N	
	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℃ for 96h			
	Dry heat	85±2℃ for 96h			
	Damp heat	40±2℃, 90 ～ 95%RH for 96h			
Page		230	231	232	

● Ring Type Device Cautions ···244, 245
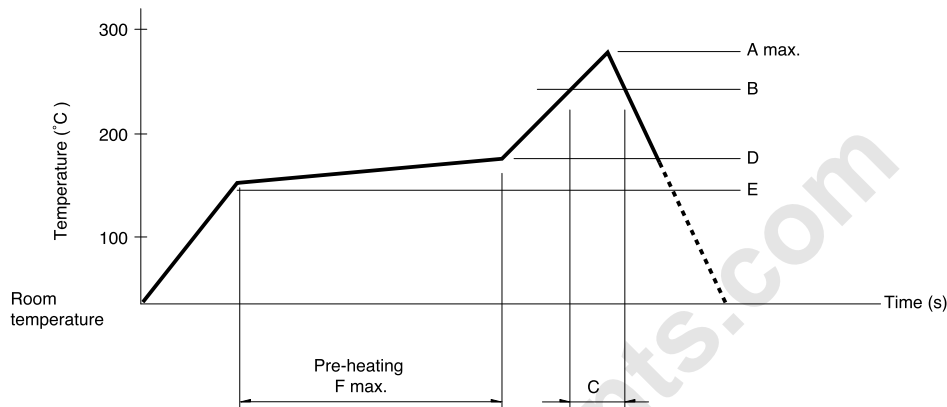
Notes

1. ※ The operating temperature range for automotive applications can be raised upon request. Please contact us for details.
2. ●marks in "Available for automotive use" indicate that all of the series products can work at the operating temperature range from -40℃ to +85℃.

ALPS

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

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

TACT Switch™

Custom-
Products

Metal
Shaft

Insulated
Shaft

Hollow
Shaft

**Ring
Type**

Series（Reflow type）	A（℃）Max	B（℃）	C（s）	D（℃）	E（℃）	F（s）
SRGP30	240	230	20	150	150	120
SRGP40	260		40	180		

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. You are requested to verify the soldering conditions thoroughly beforehand.