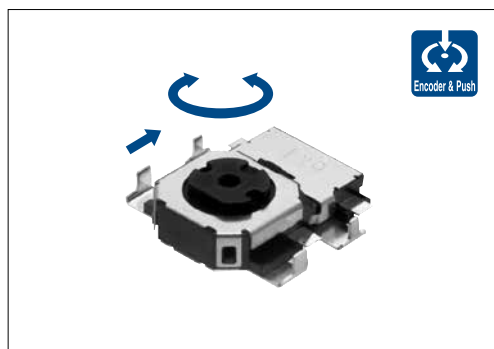


A compact multifunctional operating device that can be utilized on the side of the set device



■ Typical Specifications



Items		Specifications
Ratings (max.)/(min.) (Resistive load)		1mA 5V DC/50μA 3V DC
Output voltage	Jog portion	1V max. at 1mA 5V DC (Resistive load)
	Push portion	
Operating force (Push portion)		3.5±1.5N
Travel (Push operation)		0.2mm
Operating life	Jog portion	100,000 cycles
	Push portion	

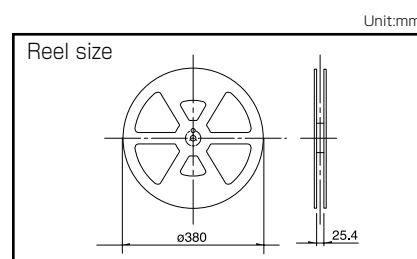
■ Product Line

Product No.	Number of detent	Number of pulse	Operating direction	Mounting method	Rotational torque (Jog portion)	Minimum order unit (pcs.)		Drawing No.
						Japan	Export	
SRBE110301	12	6	Horizontal	Standard	3±2mN·m	1,500	6,000	1
SRBE210200				Low-profile		1,300	5,200	2

■ Packing Specifications

Taping

Product No.	Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
	1 reel	1 case / Japan	1 case / export packing		
SRBE110301	1,500	3,000	6,000	24	428×413×172
SRBE210200	1,300	2,600	5,200		

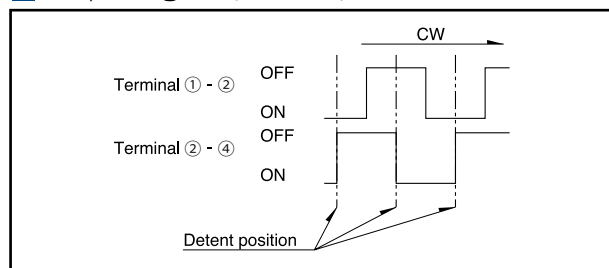


■ Dimensions

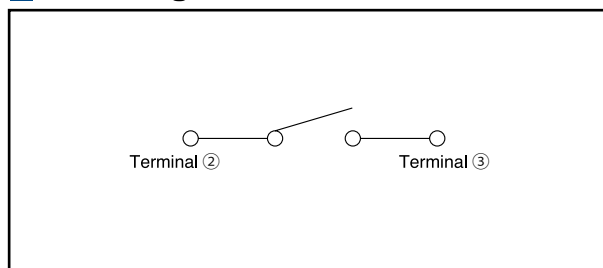
Unit:mm

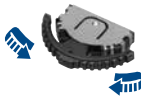
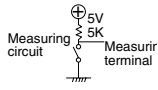
No.	Style	PC board mounting hole dimensions (Viewed from direction A)
1		
2		

■ Output Signal (Encoder)



■ Circuit Diagram



Type		Switch type		
Series		SRBE	SLLB5 Small type	SLLB
Photo				
Dimensions (typical value) (mm)	W	—	9.5	11.8
	D	—	8.8	11.4
	H	—	2.2	3
Number of operating shafts		Single-shaft		
Shaft material		Resin		
Directional resolution		—	2-direction	
Directional operating feeling (tactile feeling)		With	Without	
Lever return mechanism		Without	With	
Center-push switch		With		
Encoder		With	Without	
Operating temperature range		−10℃ to +60℃		−40℃ to +85℃
Operating life	Operating life without load	100,000 cycles		
	Operating life with load (at max. rated load)	—	100,000 cycles	
Automotive use		—	—	—
Life cycle (availability)				
Rating (max.) (Resistive load)		1mA 5V DC	10mA 5V DC	
Electrical performance	Output voltage	1V max. at 1mA 5V DC (Resistive load)	—	1V max. at 1mA 5V DC (Resistive load) 
	Encoder resolution	6 pluses/360°	—	
	Insulation resistance	10MΩ min. 50V DC	100MΩ min. 100V DC	
	Voltage proof	50V AC for 1min.	100V AC for 1min.	
Mechanical performance	Push operating force	—	0.65±0.3N	
	Encoder detent torque	3.5±1.5N	2.5±1N	2±1N
	Terminal strength	3±2mN·m	—	—
	Terminal strength	—	3N for 1min.	
	Actuator strength	Push / pull directions Operating direction	50N	
—			10N	
Environmental performance	Cold	−30℃ 96h	−20℃ 96h	−40℃ 96h
	Dry heat	85℃ 96h		
	Damp heat	40℃, 90 to 95%RH 96h		
Page		445	447	449

Switch Type Multi Control Devices Soldering Conditions 451
 Switch Type Multi Control Devices Cautions 452

Switch Type / Soldering Conditions

Reference for Manual Soldering

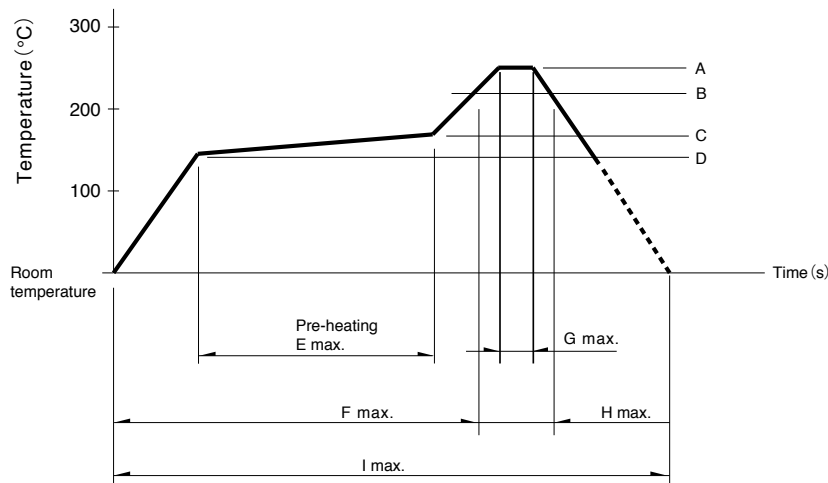
Series	Tip temperature	Soldering time	No. of solders
RKJXT1F, RKJXM, RKJXL, SLLB, SLLB5, SRBE, SKRH	350±5℃	3s max.	1 time
RKJXS	350±10℃	3 ⁺¹ ₋₀ s	2 time max.

Reference for Dip Soldering

Series	Preheating		Dip soldering		No. of solders
	Soldering surface temperature	Heating time	Soldering temperature	Soldering time	
RKJXT1F, RKJXM	100℃ max.	2 min. max.	260±5℃	5±1s	2 time max.
RKJXL	120℃ max.	70s max.	260℃ max.	6s max.	2 time max.

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple ϕ 0.1 to 0.2 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	A	B	C	D	E	F	G	H	I	No. of reflows
RKJXS	260℃	230℃	150℃	150℃	2 min.	—	10s	40s	4 min.	1 time
SLLB5	250℃	230℃	150℃	150℃	—	2 min.	—	30s	—	1 time
SKRH, SLLB, SRBE	260℃	230℃	180℃	150℃	2 min.	—	—	40s	—	1 time

Notes

1. The above temperature shall be measured 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 material, size thickness of PC boards and others. 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.