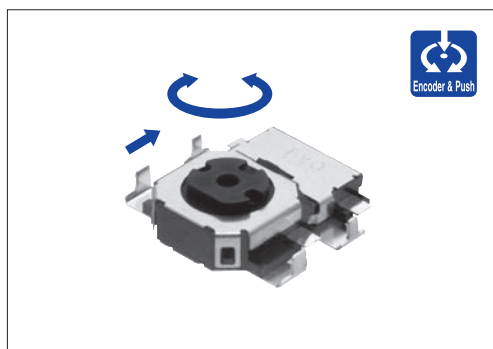


A compact multifunctional operating device that can be utilized on the side of the set device



■ 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	

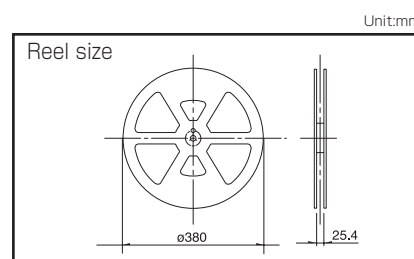
■ Product Line

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		

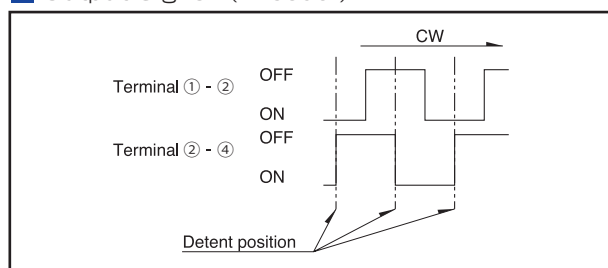


■ Dimensions

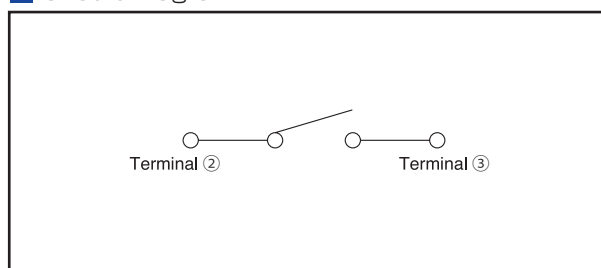
Unit:mm

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

■ Output Signal (Encoder)

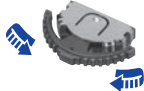
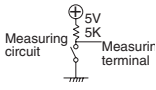


■ Circuit Diagram



Multi Control Devices

List of Varieties

Type		Switch type		
Series		SRBE	SLLB	SLLB5 Small type
Photo				
Dimensions (typical value) (mm)	W	—	11.8	9.5
	D	—	8.7	5.5
	H	—	3	2.2
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	With/Without	With
Encoder		With	Without	
Operating temperature range		−10℃ to +60℃	−40℃ to +85℃	−10℃ to +60℃
Operating life	Operating life without load	100,000 cycles	100,000 cycles	100,000 cycles
	Operating life with load (at max. rated load)	—	100,000 cycles	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±1N	2.5±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	−40℃ 96h	−20℃ 96h
	Dry heat	85℃ 96h		
	Damp heat	40℃, 90 to 95%RH 96h		
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 Switch Type Multi Control Devices Cautions 462

Switch Type / Soldering Conditions

Reference for Manual Soldering

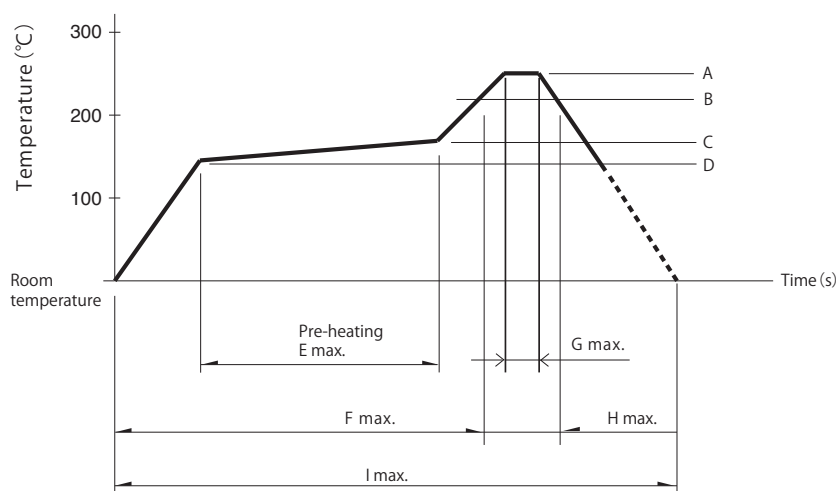
Series	Tip temperature	Soldering time	No. of solders
RKJXT1F, RKJXM, RKJXL, SLLB, SLLB5, SRBE, SKRV, SKRH	350±5℃	3s max.	1 time
RKJXS	350±10℃	3 ⁺¹ ₋₀ s	2 time max.

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

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
SKRV, 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.