

## ■ 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 force	Lever portion	0.65±0.3N
	Push portion	2±1N
Travel (Push operation)		Refer to the dimensions.
Operating life	Without load	100,000 cycles
	With load	100,000 cycles (10mA 5V DC)

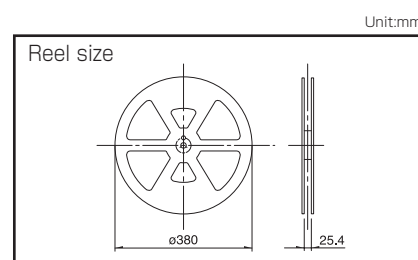
## ■ Product Line

Product No.	Actuator configuration	Push-on switch	Actuator color	Location lug	Minimum order unit (pcs.)	
					Japan	Export
SLLB120100	Standard type Mounting knob	With	Black	With	1,350	5,400
SLLB120200	Standard type Mounting knob integrated		Gray			
SLLB120300			Black			

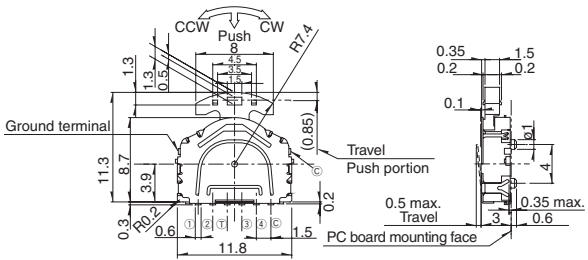
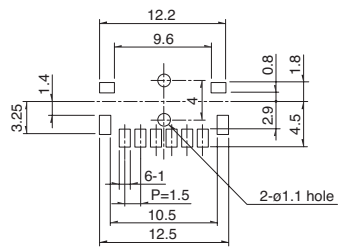
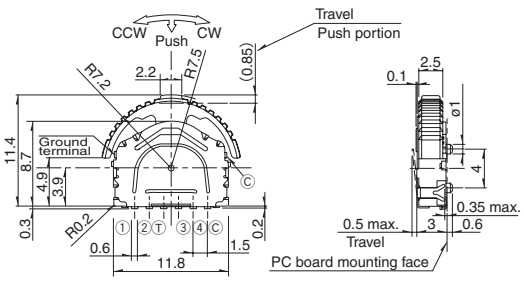
## ■ Packing Specifications

## Taping

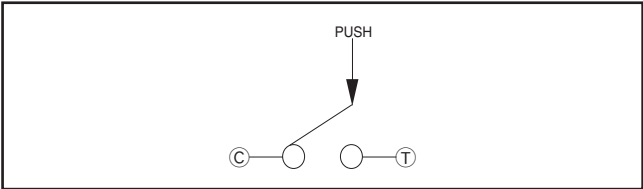
Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
1 reel	1 case / Japan	1 case / export packing		
1,350	2,700	5,400	24	428×413×172



■ Dimensions

Style		Unit:mm
PC board mounting hole and land dimensions (Viewed from switch mounting face)		
Mounting knob with push-on switch		
Mounting knob integrated with push-on switch		

■ Circuit Diagram (Push Portion)



■ Code Table

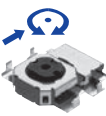
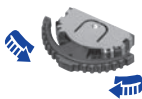




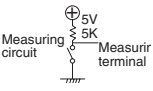
Code Table (■ = ON)

Standard type

Angle		25°		0°		25°
Terminal		(21.5°)	(11°)		(11°)	(21.5°)
Lever circuit	①					
	②					
	③					
	④					
	⑤					
		CCW		←	→	CW

# Multi Control Devices

## List of Varieties

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	
Environmental performance	Cold	-30℃ 96h	-20℃ 96h	-40℃ 96h
	Dry heat	85℃ 96h		
	Damp heat	40℃, 90 to 95%RH 96h		
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## Switch Type / Soldering Conditions

### Reference for Manual Soldering

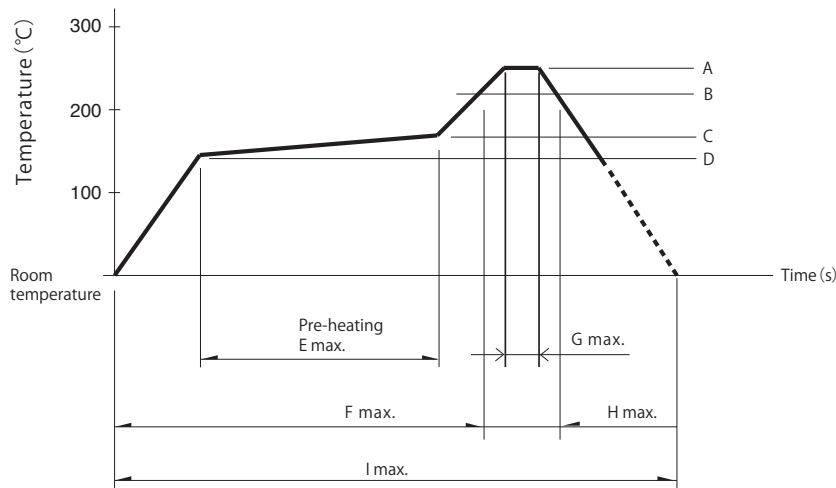
Series	Tip temperature	Soldering time	No. of solders
<b>RKJXT1F, RKJXM, RKJXL, SLLB, SLLB5, SRBE, SKRH</b>	350±5℃	3s max.	1 time
<b>RKJXS</b>	350±10℃	3 <sup>+1</sup> <sub>-0</sub> s	2 time max.

### Reference for Dip Soldering

Series	Preheating		Dip soldering		No. of solders
	Soldering surface temperature	Heating time	Soldering temperature	Soldering time	
<b>RKJXT1F, RKJXM</b>	100℃ max.	2 min. max.	260±5℃	5±1s	2 time max.
<b>RKJXL</b>	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  $\phi 0.1$  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
<b>RKJXS</b>	260℃	230℃	150℃	150℃	2 min.	—	10s	40s	4 min.	1 time
<b>SLLB5</b>	250℃	230℃	150℃	150℃	—	2 min.	—	30s	—	1 time
<b>SKRH, SLLB, SRBE</b>	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.

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