

Multi Control Devices

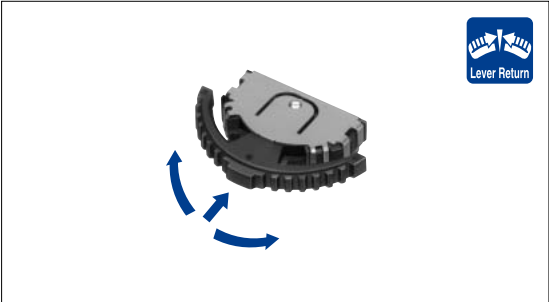
Lever and Push Operation Type Switch

SLLB5 Series



Compact two-way input device approximately 50% smaller than our conventional models.

Multi Control
Devices



Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		10mA 5V DC/50μA 3V DC
Contact resistance		1Ω max.
Operating force	Lever portion	0.65±0.3N
	Push portion	2.5±1N
Travel (Push operation)		0.7mm
Operating life		100,000cycles

Product Line

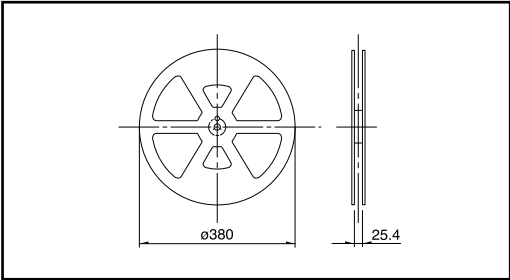
Actuator configuration	Push-on switch	Location lug	Minimum order unit (pcs.)	Product No.	Drawing No.
Mounting knob integrated	With	With	6,000	SLLB510100	1
		Without		SLLB510200	
Mounting knob		With		SLLB520100	2
		Without		SLLB520200	

Variable
Resistor Type

Switch
Type

Taping Specification (Taping Packaging)

Reel Size Unit:mm



Number of packages (pcs.)			Tape width (mm)
1 reel	1 case/ Japan	1 case/export packing	
1,500	3,000	6,000	24

Notes

- Products other than those listed in the above chart are also available. Please contact us for details.
- Please contact us for automotive use products.
- Please place purchase orders per minimum order unit (integer).

Dimensions

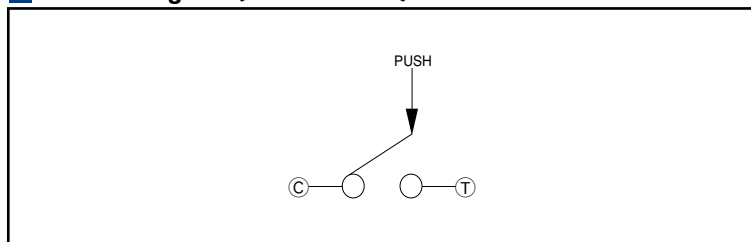
Unit:mm

No.	Style	PC board mounting hole and land dimensions
1	Mounting knob integrated	
2	Mounting knob	

Note

Above dimensions indicate locator pin configurations only.

Circuit Diagram (Push Portion)



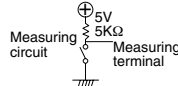
Code Table

Code table (= ON)

		20°	0°	20°
Angle		(15°)		(15°)
Lever circuit	Terminal ①	 		
	Terminal ②	 		
	Terminal ③	 		
		CCW		CW

List of Varieties

Multi Control
DevicesVariable
Resistor TypeSwitch
Type

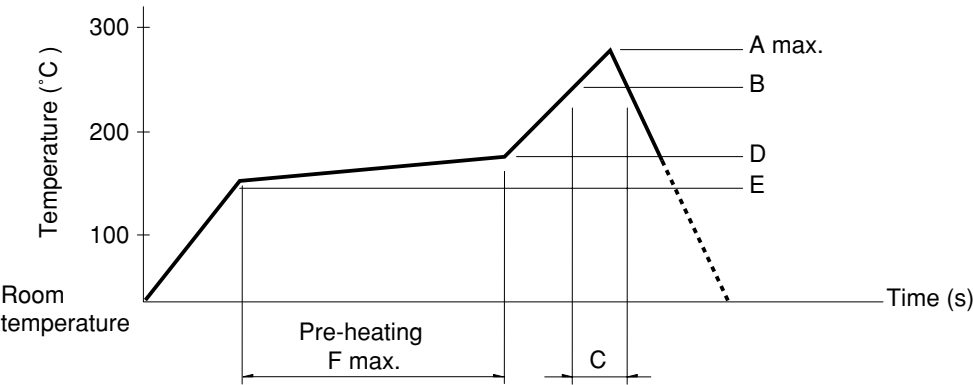
Series		Switch type							
		SKQU			SSAF	SRBE	SLLB	SLLB5 Small type	
Items	SKQUAA/SKQUBA	SKQUCA	SKQUDB						
Photo									
Function									
Dimensions (typical value) (mm)	W	10			10.85	12	11.8	9.5	
	D					11	11.4	8.8	
	H	7.1	10	8.6	3	3.8	3	2.2	
Outlined specifications	Number of operating shafts		Single-shaft						
	Shaft material		Resin						
	Directional resolution		4-direction			8-direction	—	2-direction	
	Directional operating feeling		With			Without	With	Without	
	Lever return mechanism		With				Without	With	
	Center-push switch		With/Without			With		With/ Without	With
	Encoder		Without			With		Without	
Operating temperature range		-30°C to +85°C			-10°C to +60°C				
Rating (max.) (Resistive load)		50mA 12V DC			20mA 5V DC	1mA 5V DC	10mA 5V DC		
Electrical performance	Output voltage	_____			1V max. at 1mA 5V DC (Resistive load)				
	Directional resolution	4-direction			8-direction	—	2-direction		
	Insulation resistance	100MΩ min. 100V DC			10MΩ min. 100V DC	50MΩ min. 50V DC	100MΩ min. 100V DC		
	Voltage proof	250V AC for 1min.			100V AC for 1min.	50V AC for 1min.	100V AC for 1min.		
	Directional operating force	1.57 ^{+0.49} / _{-0.59} N	1.57 ^{+0.39} / _{-0.69} N		0.5N ^{+0.5} / _{-0.35} N	—	0.65±0.3N		
Mechanical performance	Push operating force	_____	3.14±0.59N		2.5 ^{+0.7} / _{-0.5} N	3.5±1.5N	2±1N	2.5±1N	
	Encoder detent torque	_____				3±2mN•m	_____		
	Terminal strength	_____				3N for 1min.			
	Actuator strength	Pushing direction	_____			50N			
		Operating direction	_____			50N	—	10N	
Endurance	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							
	Operating life without load	_____					100,000cycles		
	Operating life with load (at rated load)								
Environmental performance	Cold	-30±2°C for 96h			-40±2°C for 96h		-20±2°C for 96h		
	Dry heat	80±2°C for 96h			85±2°C for 96h				
	Damp heat	60±2°C, 90 to 95%RH for 96h			40±2°C, 90 to 95%RH for 96h				
Soldering	Manual soldering	350°C max. 3s max.			350±10°C 4 ⁺¹ / ₀ s	350±5°C 3s max.			
	Dip soldering	260°C max. 5s max. (SKQUAA,CA)							
	Reflow soldering	Please see P.492 (SKQUBA,DB)			Please see P.492				
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Soldering Conditions

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2ϕ CA (K) or CC (T) at solder joints copper foil surface). A heat resistive tape should be used to fix thermocouple.
3. Temperature profile



Series(Reflow type)	A (°C) 3s max.	B (°C)	C (s)	D (°C)	E (°C)	F (s)
RKJXS	260	230	40	150	150	120
SLLB, SLLB5	240		20			
SKRV/SKRH/SKQUBA,DB/SSAF/SRBE	260		40	180		

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.