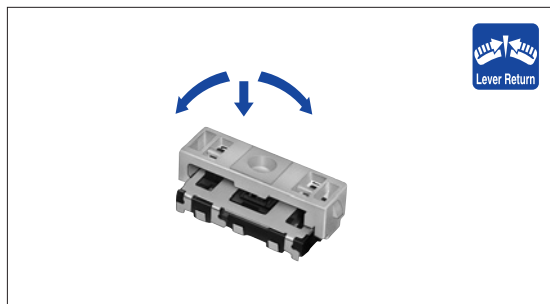




Semicircular lever control and a push operation put together in one knob.



#### Features

- Composite operation with a single knob vertical type device.
- Reflow solderable.

#### Applications

- For selecting menus in personal digital assistants, electronic organizers, notebook PCs and mobile phones
- For selecting menus in remote controllers
- For DVD players/recorders, digital still cameras, digital camcorders, flat panel TVs and portable audio devices

#### Typical Specifications

Items		Specifications
Rating (max.) / (min.) (Resistive load)		10mA 5V DC/50 $\mu$ A 3V DC
Output voltage		1V max. at 1mA 5V DC (Resistive load)
Operating force	Lever portion	1 $\pm$ 0.5N
	Push portion	2.6 $\pm$ 1N
Travel (Push operation)		0.4mm
Operating life	Lever portion	100,000cycles
	Push portion	100,000cycles

#### Product Line

Mounting height (mm)	Operating angle (Lever operation)	Operating force (Push function) (N)	Minimum packing unit (pcs.)	Product No.	Drawing No.
4.2	15°	2.6 $\pm$ 1	900	SLLQ110100	1
3.5	20°	2.6 $\pm$ 1	1,400	SLLQ120100	2

Refer to P.310 for product specifications.  
Refer to P.311 for taping package specifications.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line  
Package TypeMulti Control  
Devices

TACT Switch™

Custom-  
ProductsVariable  
Resistor TypeSwitch  
Type

**Dimensions**

Unit:mm

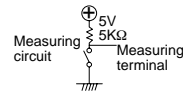
No.	Style	PC board mounting hole and land dimensions (Viewed from switch mounting face)																																			
1	<p><b>Mounting height 4.2mm</b></p> <p><b>Out put code</b></p> <table border="1"> <thead> <tr> <th>Terminal</th> <th>1</th> <th>2</th> <th>C<sub>1</sub></th> <th>C<sub>2</sub></th> <th>T<sub>1</sub></th> <th>T<sub>2</sub></th> </tr> </thead> <tbody> <tr> <td>Direction</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CW</td> <td>○</td> <td></td> <td>○</td> <td></td> <td></td> <td></td> </tr> <tr> <td>CCW</td> <td></td> <td>○</td> <td></td> <td>○</td> <td></td> <td></td> </tr> <tr> <td>PUSH</td> <td></td> <td></td> <td></td> <td></td> <td>○</td> <td>○</td> </tr> </tbody> </table>	Terminal	1	2	C <sub>1</sub>	C <sub>2</sub>	T <sub>1</sub>	T <sub>2</sub>	Direction							CW	○		○				CCW		○		○			PUSH					○	○	
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- Detector
- Push
- Slide
- Rotary
- Encoders
- Power
- Dual-in-line Package Type
- Multi Control Devices**
- TACT Switch™
- Custom-Products

- Variable Resistor Type
- Switch Type**

## Product Specifications

Items	SKQU		SSAF	SRBE	SLLB ※	SLLB5 ※	SLLQ		
	SKQUAA, SKQUBA	SKQUCA, SKQUDB							
Detector	-30°C to +85°C		-10°C to +60°C				-40°C to +85°C		
Push	Rating (max.) (Resistive load)		50mA 12V DC	20mA 5V DC	1mA 5V DC	10mA 5V DC			
Slide	Output voltage		1V max. at 1mA 5V DC (Resistive load)						
Rotary	Directional resolution		4-direction	9-direction	_____				
Encoders	Insulation resistance		100MΩ min. 100V DC	10MΩ min. 100V DC	50MΩ min. 50V DC	100MΩ min. 100V DC			
Power	Voltage proof		250V AC for 1minute	100V AC for 1minute	50V AC for 1minute	100V AC for 1minute			
Dual-in-line Package Type	Directional operating force		1.57 <sup>+0.49</sup> <sub>-0.59N</sub>	1.57 <sup>+0.39</sup> <sub>-0.59N</sub>	8-direction 0.5N <sup>+0.5</sup> <sub>-0.35N</sub>	0.65±0.3N		1±0.5N	
Multi Control Devices	Push operating force		—	3.14±0.59N	2.5 <sup>+0.7</sup> <sub>-0.5N</sub>	3.5±1.5N	2±1N	2.5±1N	1.6±1N 2.6±1N
TACT Switch™	Encoder detent torque		_____		3±2mN·m	_____			
Custom-Products	Terminal strength		29.4N for 1minute	49N for 1minute	_____		3N for 1minute		
Variable Resistor Type	Actuator strength	Pushing direction	50N					30N	
		Operating direction	_____		50N	_____	10N		
Switch Type	Solder heat resistance	Manual soldering	350°C max. 3s max.	350±10°C 4 <sup>+1</sup> <sub>0</sub> s	350±5°C 3s max.				
		Dip soldering	260°C max. 5s max.	_____					
		Reflow soldering	Please see P.311						
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	Directional	_____		_____				
		Center push	50,000 cycles	100,000 cycles	500,000cycles	_____	_____		
		Encoder	_____	_____	_____	100,000cycles	_____		
Operating life without load		_____			100,000cycles	100,000cycles			
Operating life with load (at rated load)		_____			_____				
Environmental test	Cold		-30±2°C for 96h	-40±2°C for 96h		-20±2°C for 96h		-40±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					



### Notes

1. Shall be in accordance with individual specifications.
2. ※ The operating temperature range for automotive applications can be raised upon request. Please contact us for requirements of this kind.

