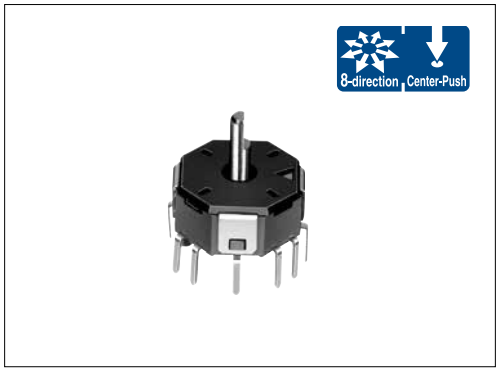
RKJXL 8-directional Stick Switch (with Center-push Function)

Low-profile 6.4mm height contributes to flexibility in set design



Typical Specifications

Items		Specifications
Rating (max.) (Resistive load)		10mA 5V DC
Contact resistance	8-direction	500mΩ max.
	Center-push	
Operating angle (8-direction)		Each direction 12° ±3°
Travel (Center-push)		0.2±0.1mm
Operating life	Total with 8-direction	100,000 cycles
	Center-push	100,000 cycles

Product Line

Product No.	Maximum resolution	Operating force		Minimum order unit (pcs.)	
		Direction (mN · m)	Center-push (N)	Japan	Export
RKJXL100401V	8-direction	10±7	4.5±1	800	1,600

Packing Specifications

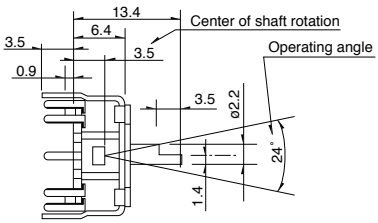
Tray

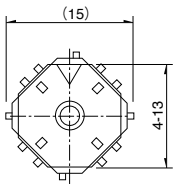
Number of packages (pcs.)		Export package measurements (mm)
1 case / Japan	1 case / export packing	
800	1,600	532×379×167

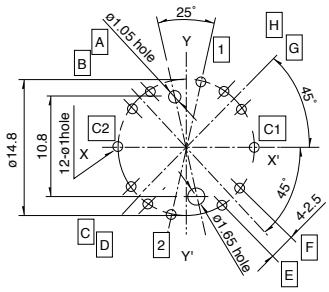
Dimensions

Unit:mm

Style	PC board mounting hole dimensions (Viewed from mounting side)

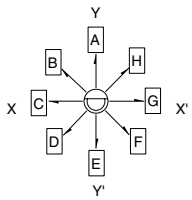






Output Relation Chart Between Lever Position and ON Position.

Terminal / The direction of the operation	A	B	C	D	E	F	G	H	C1	C2	1	2
A	ON								ON			
B		ON							ON			
C			ON						ON			
D				ON					ON			
E					ON					ON		
F						ON				ON		
G							ON			ON		
H								ON		ON		
Center Push											ON	ON

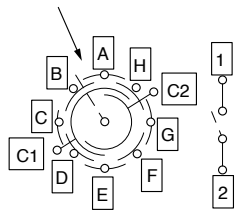


Operating direction of lever.

※ Shorting areas exist between adjacent terminals
※ Between H and A, and D and E, both C1 and C2 are connected

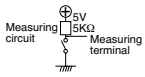
Circuit Diagram

Operating direction of lever. (contact points)



Refer to P.451 for soldering conditions.

List of Varieties

Type			Switch type			
Series			RKJXL	RKJXS	SKRH	
					SKRHAA/AB	SKRHAC/AD
Photo						
Dimensions (typical value) (mm)	W		13	11.7	7.35/7.45	
	D				7.5	
	H		6.4	2.3	5	
Number of operating shafts			Single-shaft			
Shaft material			Metal	Resin		
Directional resolution			8-direction		4-direction	
Directional operating feeling (tactile feeling)			Without	With		
Lever return mechanism			With			
Center-push switch			With			
Encoder			Without			
Operating temperature range			−30℃ to +70℃	−20℃ to +70℃	−40℃ to +85℃	
Operating life	Directional operation		total with 8-direction 100,000 cycles	500,000 cycles for each direction	200,000 cycles for each direction	1,000,000 cycles for each direction
	Center-push		100,000 cycles	500,000 cycles	200,000 cycles	1,000,000 cycles
	Encoder		—	—	—	
Automotive use			●	—	—	
Life cycle (availability)			★2	★2	★2	
Rating (max.) (Resistive load)			10mA 5V DC		50mA 12V DC	
Electrical performance	Output voltage		—	 1V max. at 1mA 5V DC (Resistive load)	—		
	Encoder resolution		—	—	—	
	Insulation resistance		100MΩ min. 250V DC	50MΩ min. 50V DC	100MΩ min. 100V DC	
	Voltage proof		300V AC for 1min. or 360V AC for 2s	50V AC for 1min. or 60V AC for 2s	100V AC for 1min.	
Mechanical performance	Directional operating force		10±7mN·m	0.8±0.5N	1.23±0.69N	1.2±0.69N
	Push operating force		4.5±1N	2.5±1.5N	2.35±0.69N	
	Encoder detent torque		—	—	—	
	Terminal strength		—	—	—	
	Actuator strength	Push / pull directions	100N (Push), 50N (Pull)	30N (Push), 10N (Pull)	—	
		Operating direction	100N	20N	29.4N	
Environmental performance	Cold		−40℃ 500h	−40℃ 96h		
	Dry heat		85℃ 500h	85℃ 96h	90℃ 96h	
	Damp heat		60℃, 90 to 95%RH 500h	60℃, 90 to 95%RH 96h		
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Switch Type Multi Control Devices Soldering Conditions · · ·

Reference for Manual Soldering

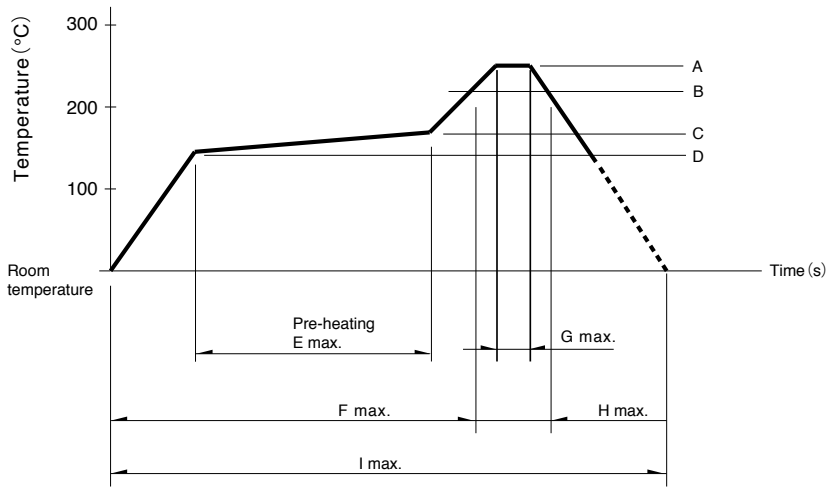
Series	Tip temperature	Soldering time	No. of solders
RKJXT1F, RKJXM, RKJXL, SLLB, SLLB5, SRBE, SKRH	350±5℃	3s max.	1 time
RKJXS	350±10℃	3^{+1}_{-0} s	2 time max.

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 ϕ0.1 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.

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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.

Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.