

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



8-direction center push type switch in 2.3mm low-profile design.



Variable

**Switch** Туре



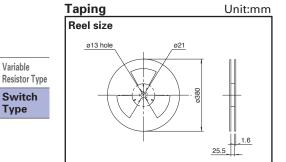
### Typical Specifications

Ite	ms	Specifications				
Rating (max.) (R	esistive load)	10mA 5V DC				
Switch ON posit	ion (8-direction)	Each direction 7° max.				
Travel(Center-pu	ısh)	0.3±0.2mm				
On austin a life	8-direction	Each direction 500,000 cycles				
Operating life	Center-push	500,000 cycles				

### Product Line

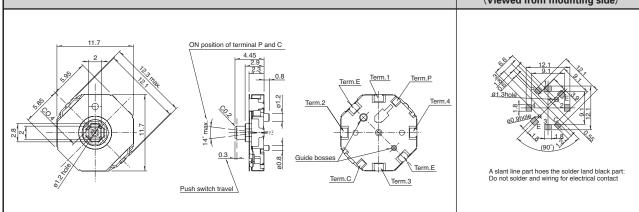
Maximum resolution	Operating	force (N)	Minimum ord	er unit (pcs.)	Product No.
waxiiiiuiii resolutioii	Direction	Center-push Japan		Export	Product No.
8-direction	0.8 ± 0.5	2.5 ± 1.5	3,800	3,800	RKJXS1004001

## ■ Packing Specifications



Numbe	er of packages	Tape width	Export package measurements			
1 reel	1 reel 1 case / 1 case / 2 sport packing			(mm)		
950	3,800	3,800	24	405 × 405 × 162		

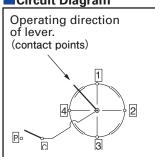
#### Dimensions Unit:mm PC board mounting hole dimensions Style (Viewed from mounting side)



## Output Relation Chart between Lever Position and ON Position.

The direction of the operation	1	2	3	4	С	Р	Е	(a) (h) / k (b)
а	$\triangle$	$\triangle$	•	$\triangle$	•	•	0	
b	$\triangle$	$\triangle$	•	•	•	•	0	
С	$\triangle$	$\triangle$	$\triangle$	•	•	•	0	<b>9</b> ←{- <b>6</b> -}c
d	•	$\triangle$	$\triangle$	•	•	•	0	
е	•	$\triangle$	$\triangle$	$\triangle$	•	•	0	(f) \ (d)
f	•	•	$\triangle$		•	•	0	●:0N • • • • • • • • • • • • • • • • • • •
g	$\triangle$	•	$\triangle$	$\triangle$	•	•	0	△:0FF
h	Δ	•	•	$\triangle$	•	•	0	■: Not specified
Center Push	Δ	$\triangle$	$\triangle$	$\triangle$	•	•	0	* Term. Operating direction
Free	0	0	0	0	0	$\triangle$	0	E: Ground terminal of lever.
								0110001.

### Circuit Diagram



# **Multi Control Devices**

### ■ List of Varieties

Multi Control Devices

Variable Resistor Type Switch Type

	Туре	Switch type											
		DK IVT4E	DIC IVA	DIV IVI	DK IVO	OKDV	SKF	RH					
	Series	RKJXT1F	RKJXM	RKJXL	RKJXS	SKRV	SKRHAA, SKRHAB	SKRHAC, SKRHAD					
Photo			***	**	***	×	×						
	W					6.45	7.35 /	7.45					
Dimensior (typical valu		17	11 / 19.5	13	11.7	6.4	7.5	5					
(mm)	Н	10.5	6.6 / 5.45	6.4	2.3	4	5						
Number of	operating shafts	Single-shaft	Single-shaft / Dual-shaft		Single	-shaft							
Sha	ft material	Metal	The inner shaft: Metal The outer shaft: Resin	Metal		Resin							
Direction	nal resolution	4-direction		8-direction		4-dire	ection						
Directional opera	ting feeling (tactle feelimg)	W	ith	Without		With							
Lever ret	urn mechanism			W	ith								
Center	-push switch			W	ith								
E	ncoder	With	Without / With		With	nout	1						
Operating t	emperature range	–40°C to	+85℃	–30°C to +70°C	–20°C to	+70°C	-40°C to						
Operating	Directional operation  Operating			8-direction ) cycles	500,000 cycles for each direction	200,000 cycles for each direction	cycles for each	1,000,000 cycles for each direction					
life	Center-push	50,000 cycles	100,000	) cycles	cycles 500,000 cycles								
	Encoder	15,000	cycles					_					
Autor	notive use	•	•	•		<del>-</del> -		_					
Life cycl	le (availability)	<b>*</b> 2	<b>*</b> 2	<b>*</b> 2	<b>*</b> 2	<b>*</b> 2		2					
Rating (max	k.) (Resistive load)		10mA 5V DC			50mA	12V DC						
Electrical	Output voltage		_   _		Measuring 5KΩ circuit Measuring terminal TV max. at 1mA 5V DC (Resistive load)			_					
performance	Encoder resolution	15pulse	s / 360°										
	Insulation resistance	10	00MΩ min. 250V D	OC	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								
	Directional operating	40±25mN⋅m	Direction A、B、C、D 30±20mN⋅m	10±7mN∙m	0.8±0.5N	1.2±0.6N	1.23	1.2					
	force		Direction AB、BC、CD、DA 25±20mN·m		0.0 = 0.0.1		±0.69N	±0.69N					
Mechanical	Push operating force	5±2N	3±1.5N	4.5±1N	2.5±1.5N	2.4±0.69N	2.35±0	D.69N					
performance	Encoder detent torque	15±8mN⋅m	12±8mN⋅m										
	Terminal strength	5N for 1min.						_					
	Actuator Push / pull directions	100N (Push / Pull)	100N (Push)		30N (Push) 、10N (Pull)		<u> </u>						
	strength Operating direction	0.4N·m	0.3N·m	100N	20N		29.4N						
Environmental	Cold	-	-40±2°C for 500h		-40±2°C for 96h								
performance	Dry heat	22 : -0	85±2°C for 500h	5001	85±2°C for 96h   80±2°C for 96h   90±2°C for 96h								
	Damp heat Page	60±2°	C, 90 to 95%RH fo	or 500h 419	60±2 420	.°C,90 to 95%RH fo 421	or 96h 422	2					
Page		I		-									

Switch Type Multi Control Devices Soldering Conditions
 Switch Type Multi Control Devices Cautions
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Note indicates applicability to all products in the series.



# **Switch Type Multi Control Devices / Soldering Conditions**

### Reference for Hand 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 <sup>+1</sup> <sub>-0</sub> s	2 time max.		

Multi Control Devices

### Reference for Dip Soldering

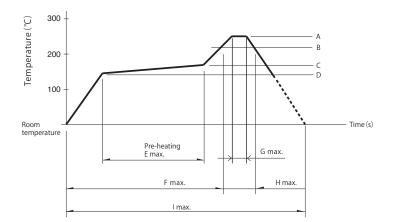
Series	Prehe	ating	Dip sol	No. of solders	
	Soldering surface temperature	Heating time	Soldering temperature	Soldering time	ivo. Oi solders
RKJXT1F, RKJXM	100°C max.	2 min. max.	260±5℃	5±1s	2 time max.
RKJXL	120°C max.	70s max.	260°C max.	6s max.	2 time max.

### ■ Example of Reflow Soldering Condition

- 1. Heating method: Double heating method with infrared heater.
- 2. Temperature measurement: Thermocouple 0.1 to 0.2  $\phi$  CA (K) or CC (T) at solder joints (copper foil surface) .

A heat resistive tape should be used to fix thermocouple.

3. Temperature profile



Variable Resistor Type

Switch Type

Series	Α	В	C	D	Е	F	G	Н	I	No. of reflows
RKJXS	260°C	230°C	150°C	150°C	2 min.	_	10s	40s	4 min.	1 time
SLLB5	250°C	230°C	150°C	150°C	_	2 min.	_	30s	_	1 time
SKRV, SKRH,SLLB, SRBE	260°C	230℃	180°C	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.