

4-directional Stick Switch (with Encoder/Center-push Function)

RKJXT1F Series



A space-saving device with single shaft 4-directions/push/encoder.



■ Typical Specifications (Stick Switches)

Items		Specifications
Ratings (max.) (Resistive load)		10mA 5V DC
Contact resistance	Lever operation	1Ω max.
	Push operation	
Operating force		40±25mN•m
Operating angle (lever operation)		9° max.
Travel (Push operation)		0.3±0.2mm
Operating life	4 direction	total with 4-direction 50,000cycles
	Center push	50,000cycles

■ Typical Specifications (Encoders)

Items	Specifications
Ratings (max.) (Resistive load)	10mA 5V DC
Number of pulse	15
Number of detent	30
Detent torque	15±8mN•m
Operating life	15,000cycles

Products Line

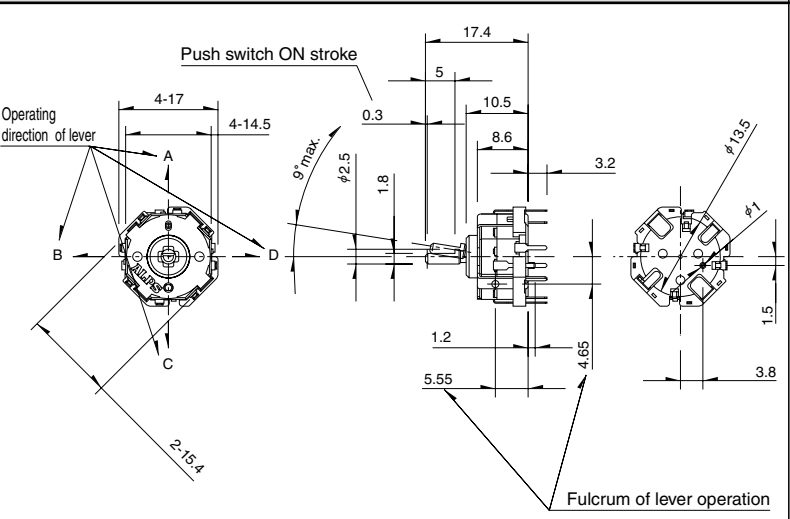
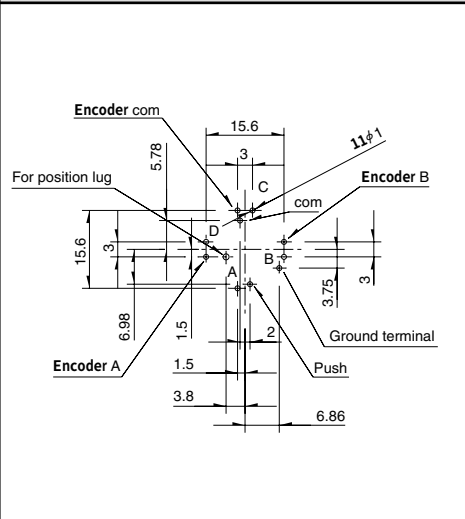
Maximum resolution		Minimum order unit (pcs.)	Products No.
Direction	Encoder		
4	15-pulses/30-detents	1,320	RKJXT1F42001

Variable
Resistor Type

Switch Type

Dimensions

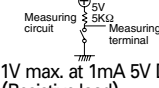
Unit:mm

Style	PC board mounting hole dimensions (Viewed from mounting side)
 Technical drawing of the push switch assembly. The top view shows an octagonal base with a lever arm. Dimensions include: 4-17 (width), 4-14.5 (width), 0.3 (gap), 17.4 (total length), 5 (width), 10.5 (width), 8.6 (width), 3.2 (width), 9 max. (arc radius), $\phi 2.5$ (hole diameter), 1.8 (width), 1.2 (width), 5.55 (width), 4.65 (width), 2-15.4 (diagonal), $\phi 13.5$ (hole diameter), and $\phi 7$ (hole diameter). The side view shows the lever arm and the push button. The bottom view shows the base with mounting holes. Labels include: "Push switch ON stroke", "Operating direction of lever", "Fulcrum of lever operation", and "Encoder A".	 Technical drawing showing the PC board mounting hole dimensions for Encoder A and Encoder B. The drawing includes dimensions for the mounting holes and the encoder body. Labels include: "Encoder com", "Encoder B", "Encoder A", "com", "Ground terminal", "Push", "For position lug", and "11±1". Dimensions include: 15.6, 3, 5.78, 15.6, 3, 6.98, 1.5, 3.8, 1.5, 3.8, 6.86, 3.75, 3, and 11±1.

Output Relation Chart between Lever Position and ON Position.

Terminal	Operation procedure				
	A	B	C	D	Enter push
Push-A	ON				
Push-B		ON			
Push-C			ON		
Push-D				ON	
Push-Com	ON	ON	ON	ON	ON

List of Varieties

Series		Switch type							
		RKJXT1F	RKJXM	RKJXL	RKJXS	SKRV	SKRH		
Items							SKRHAA, SKRHAB	SKRHAC, SKRHAD	
Photo									
Function									
Dimensions (typical value) (mm)	W	17	20.5	13	11.7	6.45	7.35/7.45		
	D				12.3	6.4	7.5		
	H	10.5	5.45	6.4	2.3	4	5		
Outlined specifica-tions	Number of operating shafts	Single-shaft	Single-shaft/Dual-shaft	Single-shaft					
	Shaft material	Metal				Resin			
	Directional resolution	4-direction	8-direction			4-direction			
	Directional operating feeling (tactile feeling)	With		Without	With				
	Lever return mechanism	With							
	Center-push switch	With							
	Encoder	With	Without/With	Without					
Operating temperature range		-40°C to +85°C	-30°C to +80°C	-30°C to +70°C	-20°C to +70°C		-30°C to +85°C		
Rating (max.) (Resistive load)		10mA 5V DC				50mA 12V DC			
Electrical performance	Output voltage								
	Directional resolution	4-direction	8-direction			4-direction			
	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.	100V AC for 1min.			
	Directional operating force	40±25mN・m	Direction A, B, C, D 30±20mN・m DirectionAB, BC, CD, DA 25±20mN・m	10±7mN・m	0.8±0.5N	1.2±0.6N	1.23±0.69N	1.2±0.69N	
Mechanical performance	Push operating force	5±2N	3±1.5N	4.5±1N	2.5±1.5N	2.4±0.69N	2.35±0.69N		
	Encoder detent torque	15±8mN・m	12±8mN・m						
	Terminal strength	5N for 1min.							
	Actuator strength	Pushing direction	100N			30N			
		Operating direction	0.4N・m	0.3N・m	0.15N・m	20N			
Endurance	Vibration	8.3±1 to 200±4 to 8.3±1Hz, 4.4G fixed (for 15 min./1 cycle),3 angles each 2 hours				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								
	Operating life with load (at rated load)								
Environmental performance	Cold	-40±2°C for 500h			-40±2°C for 96h	-30±2°C for 96h			
	Dry heat	85±2°C for 500h			85±2°C for 96h	80±2°C for 96h			
	Damp heat	60±2°C, 90 to 95%RH for 500h			60±2°C,90 to 95%RH for 96h				
Soldering	Manual soldering	350±5°C 3s max.			350±10°C 3 ¹ / ₂ s	350°C max. 3s max.			
	Dip soldering	260±5°C, 5±1s		260°C max. 6s max.					
	Reflow soldering				Please see P.492				
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