

List of Varieties

Multi Control Devices

Variable Resistor Type

Switch Type

Series	Switch type							
	RKJXT1F	RKJXM	RKJXL	RKJXS	SKRV	SKRH SKRHAA, SKRHAB SKRHAC, SKRHAD		
Photo								
Function								
Dimensions (typical value) (mm)	W	17	20.5	13	11.7	6.45	7.35/7.45	
	D					6.4	7.5	
	H	10.5	5.45	6.4	2.3	4	5	
Outlined specifications	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 +70°C	-20°C to +70°C		-30°C to +85°C		
Automotive use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					
Rating (max.) (Resistive load)	10mA 5V DC				50mA 12V DC			
Electrical performance	Output voltage	_____			 1V max. at 1mA 5V DC (Resistive load)			
	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 Direction AB, 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), in the 3 direction of X, Y and Z for 2 hours respectively				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.495						
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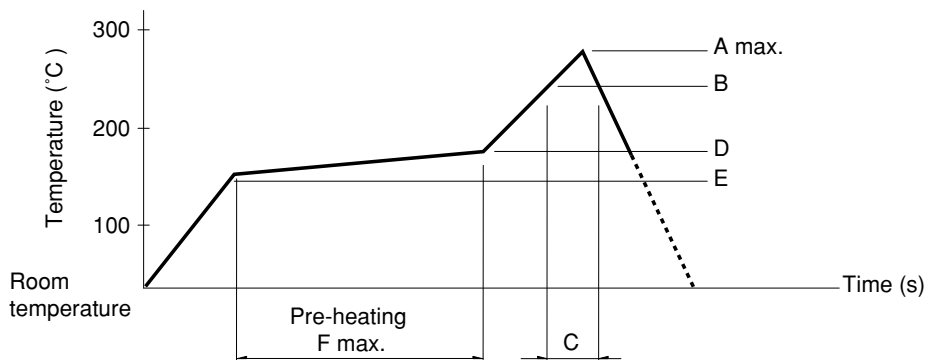
Note

○marks in "Available for automotive use" indicate that some of the series products can work at the operating temperature range from -40°C to +85°C.

Soldering Conditions

Example of Reflow Soldering Condition

1. Heating method: Double heating method with infrared heater.
2. Temperature measurement: Thermocouple 0.1 to 0.2 ϕ 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		

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Switch Type

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.