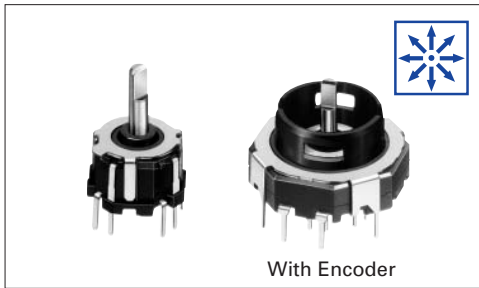


Multi Control Devices 8-way Stick Switch (Center-Push Function)

RKJXM Series



Single and dual shaft structured device contributes to simple operation and space saving.



Features

- Excellent operability is achieved as tactile feeling is attached to an 8-directional stick switch.
- Provides different operating angles and force for each operating direction (four "+" directions and four "x" directions) for improved blind-touch operation.
- The two axis structural type allows a stick switch (inside axis) and an encoder (outside axis) to be placed into one unit in an external size of 20 mm.
- The encoder achieves a smooth rotation feeling by an original click structure.

Applications

- For a volume or a mode change of car audio, car navigation, and for a cursor control
- For various other level controlling applications
- For remote controllers of the above products

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products

Typical Specifications (Inner-shaft Stick Switches)

Items		Specifications
Rating (max.) (Resistive load)		10mA 5V DC
Contact resistance	Lever operation	1 Ω max.
	Push operation	
Operating force		A·B·C·D direction : 30±20mN·m AB·BC·CD·DA direction : 25±20mN·m
Operating angle (lever operation)		A·B·C·D direction : 10° max. AB·BC·CD·DA direction : 12° max.
Travel (Push operation)		0.3±0.2mm
Operating life	8-direction	100,000 cycles
	Center push	

Variable
Resistor Type

Switch
Type

Typical Specifications (Outer-shaft Encoders)

Items		Specifications
Rating (max.) (Resistive load)		10mA 5V DC
Detent torque		12±8mN·m
Operating life		15,000 cycles

Products Line

Shaft	Maximum resolution		Products No.	Minimum packing unit (pcs.)	Drawing No.
	Direction	Encoder			
1	8	—	RKJXM1015001	1,000	1
2		15-pulses/15-detents	RKJXM2E13001		2


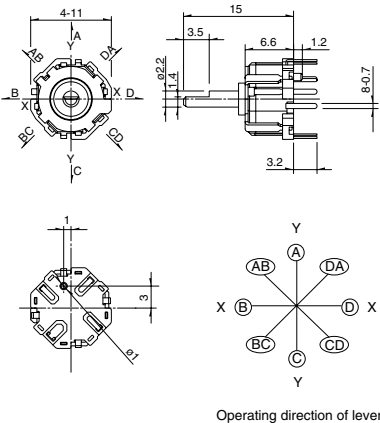
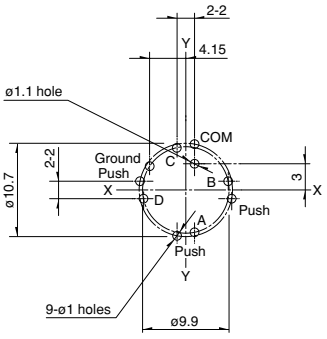

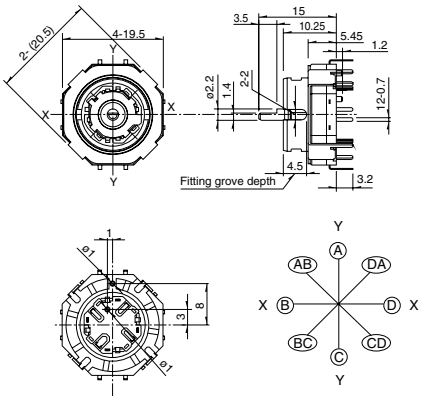
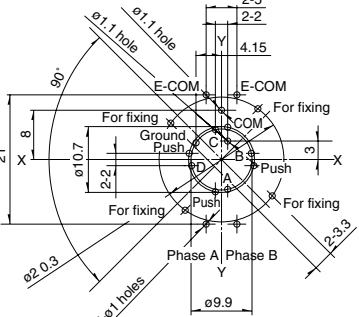
For other specifications, see P.303

Multi Control Devices

8-way Stick Switch (Center-Push Function) | RKJXM Series

Dimensions

Unit:mm

No.	Photo	Style	PC board mounting hole dimensions
1		 <p>Operating direction of lever.</p>	
2		 <p>Operating direction of lever.</p>	

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

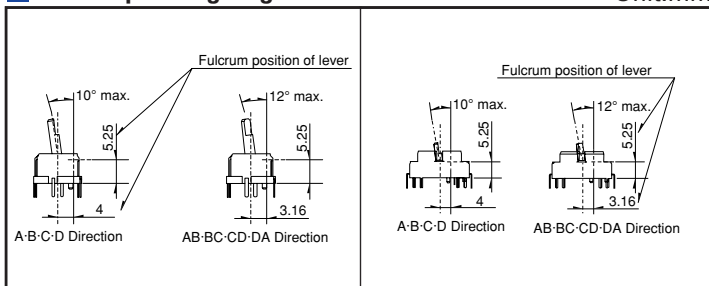
Custom-
Products

Variable
Resistor Type

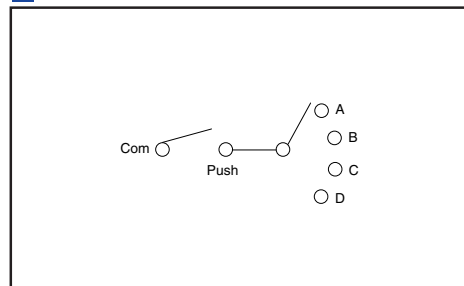
Switch
Type

Lever Operating Angle

Unit:mm

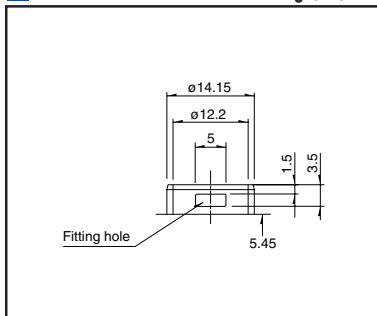


Switch Circuit

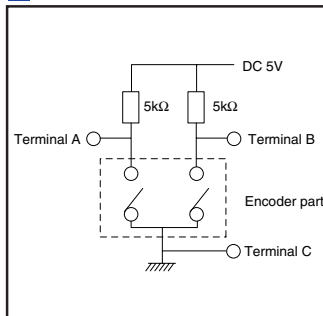


Detail Dimension for Knob Fitting

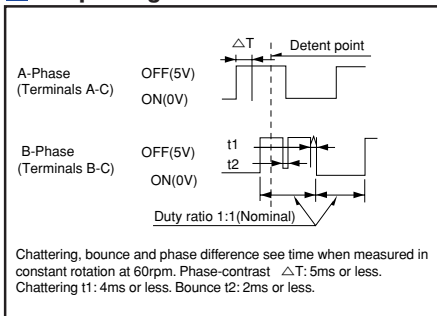
Unit:mm



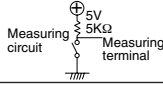
Test Circuit



Output Signal



Products Specifications

Items		RKJXT1F	RKJXM	RKJXL	RKJXS	SRBE	SLLB	
Operating temperature range		-40°C to +85°C	-30°C to +70°C		-20°C to +70°C	-10°C to +60°C		
Rating (max.) (Resistive load)		—	10mA 5V DC			1mA 5V DC	10mA 5V DC	
Electrical performance	Output voltage	—			1V max. at 1mA 5V DC (Resistive load)			
	Directional resolution	4-direction	8-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 2sec.	300V AC for 1min.		50V AC for 1min.	100V AC for 1 min.		
Mechanical characteristics	Direction application 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	—	0.65±0.3N
	Push application force		5±2N	3±1.5N	4.5±1N	2.5±1.5N	3.5±1.5N	2±1N
	Encoders Detent torque		15±8mN·m	12±8mN·m	—		3±2mN·m	—
	Robustness of terminal		5N for 1min.	—			3N for 1 min.	
	Robustness of actuator	Pushing direction	100N	—		30N	50N	
		Operating direction	0.4N.m	—		20N	—	10N
	Solder heat resistance	Manual soldering	350±5°C 3s max.	350°C max. 3s max.		350±10°C 3 ⁺ s	350±5°C 3s max.	
		Dip soldering	260±5°C, 5±1s			—		
		Reflow soldering	—			Please see P.305		
	Endurance	Vibration		8.3±1 to 200±4 to 8.3±1Hz, 4.4G fixed (for 15 minutes/1 cycle), 3 angles each 2 hours	8.3 to 200 to 8.3Hz, 4.4G fixed (for 15 minutes/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		Directions	50,000 cycles		100,000 cycles	500,000 cycles	—	
		Center detent	—		—		100,000 cycles	—
		Encoder	15,000 cycles		—		100,000 cycles	—
Operating life without load		—					100,000 cycles	
Operating life with load (Load : As rating)		—					—	
Environmental test	Cold		-40±2°C for 500±10h	-40±2°C for 500h		-40±2°C for 96h		
	Long-term heat resistance		85±2°C for 500±10h	85±2°C for 500h		85±2°C for 96h		
	Moisture resistance		60±2°C, 90 to 95%RH for 500±10h	60±2°C, 90 to 95%RH for 500h		60±2°C, 90 to 95%RH for 96h	40±2°C, 90 to 95%RH for 96h	

Note

Shall be in accordance with individual specifications.

Detector

Push

Slide

Rotary

Encoders

Power

Dual-in-line
Package Type

Multi Control
Devices

TACT Switch™

Custom-
Products

Variable
Resistor Type

Switch
Type