

Low-profile tilting stick controller with excellent operating feel



■ Typical Specifications



Items	Specifications
Rated power	0.025W
Maximum operating voltage	5V DC
Operating angle	Each direction 15.5° ±3.4°
Operating life	1,000,000 cycles

■ Product Line

Product No.	Knob	Operating force	Lever return mechanism	Center-push	Total resistance (kΩ)	Resistance taper	Minimum order unit (pcs.)		Drawing No.
							Japan	Export	
<b>RKJXY1000006</b>	with	0.43±0.25N (3.33±2.0mN·m)	With	Without	2	B	2,000	2,000	1
<b>RKJXY100000A</b>	without	3.33±2.0mN·m					2,000	2,000	2

■ Packing Specifications

Tray

Number of packages (pcs.)		Export package measurements (mm)
1 case / Japan	1 case / export packing	
2,000	2,000	540×360×230

■ Dimensions









Unit:mm

No.	Photo	Style
1	With knob type	<p>Connector : KYOCERA Connector Products Corporation (04 277 006 001 883+)</p>
2	Without knob type	<p>Connector : KYOCERA Connector Products Corporation (04 277 006 001 883+)</p>

Multi Control Devices  
Variable Resistor Type  
Switch Type

# Multi Control Devices

## List of Varieties

Type		Potentiometer type			
Series		RKJXK	RKJXV	RKJXY	RKJXU
Photo					
Dimensions (typical value) (mm)	W	20.7	17.8	19.6	18.6
	D	25.4	21.3	18.1	24.3
	H	12.9	11.2	4.9	5.2
Number of operating shafts		Single-shaft			
Shaft material		Metal	Resin		
Directional resolution		Continuous			
Directional operating feeling (tactile feeling)		Without			
Lever return mechanism		With / Without	With		
Center-push switch		With / Without		Without	
Encoder		Without			
Operating temperature range		-10°C to +70°C			
Operating life	Directional operation	100,000 cycles	2,000,000 cycles	1,000,000 cycles	2,000,000 cycles
	Center-push	100,000 cycles	500,000 cycles	—	—
Automotive use		—	—	—	—
Life cycle (availability)					
Electrical performance	Insulation resistance	100MΩ min. 250V DC		—	—
	Voltage proof	250V AC for 1 minute		—	—
	Slider noise	300mV p-p max. by JIS method			
Mechanical performance	Directional operating force	8mN·m max. Without Lever return mechanism 6±4mN·m With Lever return mechanism	14±10mN·m	With knob type 0.43±0.25N (3.33±2.0mN·m) Without knob type 3.33±2.0mN·m	0.75±0.3N
	Push operating force	5.2±2.6N	7.4±3N	—	—
	Lever return precision	±5°			±0.1mm
	Actuator strength	Push / pull directions Operating direction	50N min. (Push/Pull)	98N min. (Push), 50N min. (Pull)	100N min. (Push), 49N min. (Pull)
0.3N·m			—	50N	
Environmental performance	Cold	-30°C 96h			
	Dry heat	80°C 96h			
	Damp heat	60°C, 90 to 95%RH 96h			
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# Potentiometer Type / Soldering Conditions

## Reference for Manual Soldering

Series	Tip temperature	Soldering time	No. of solders
<b>RKJXK, RKJXV</b>	350°Cmax.	3s max.	1 time

## Reference for Dip Soldering

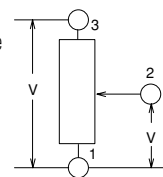
Series	Preheating		Dip soldering		No. of solders
	Soldering surface temperature	Heating time	Soldering temperature	Soldering time	
<b>RKJXK</b>	90 to 100°C	45s max.	255 to 260°C	2 to 3s	1 time
<b>RKJXV</b>	90 to 120°C	60s max.	260°C	5s	1 time

# Potentiometer Type / Cautions

### [Circuit Used for Analog Stick Controller]

We recommend you use the potentiometer type in a voltage divider type as shown in Fig. A.

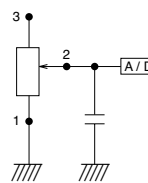
Fig.A.Voltage divider type



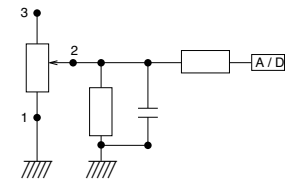
### [Impedance on the Output Side]

Since this pot is designed to use with its output is connected directly to A/D port. Impedance is considered to be mega ohm level. Then contact resistance in the pot is higher. Please refer to Fig-1. So when you use it in the circuit like Fig-2. Please make sure that impedance should be over than 1M-ohm.

[Fig.1]



[Fig.2]

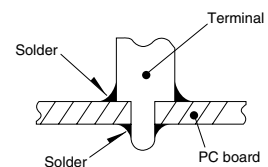


### [Dew Condensation]

Avoid using the product when condensation or drops of water might occur inside the product. Otherwise, insulation deterioration or shorting may occur.

### [Soldering]

Do not employ wiring designs and soldering methods as illustrated in the schematic drawing. Molten solder flowing over the upper surface of PC board can cause imperfect contacts. Solder all metal inserted fixing including terminals & metal lugs into a substrate.



### [Stress Being Applied to the Terminals]

Always be careful not to apply excessive stress on the terminals. Design appropriate soldering conditions.

### [Handling of Variable Resistors Equipped with Switches]

Exercise care when packing or storing. Packaging or storing while load is applied to the shaft may cause a malfunction in performance.

### [Storage]

- ① Store the products as delivered, at a normal temperature and humidity, without direct sunshine and corrosive gas ambient. Use them at an earliest possible timing, not later than six months upon receipt.
- ② After breaking the seal, keep the products in a plastic bag to shut out ambient air, store them in the same environment as above, and use them up as soon as possible.
- ③ Do not stack too many switches.

The above operation notes are quoted from the

"Precaution and Guideline of Potentiometer for Electrical Devices" , a technical report issued by the Japan Electronics and Information Technology Industries Association EIAJ RCR-2191A (in March 2002).

For details, refer to the original technical report.