



Potentiometer Type

List of Varieties

Series		RKJXV	RKJX2
Photo			
Dimensions (mm)		17.8×21.3×11.2 18.2×21.7×11.2	13.7×14.6×7.8 (Not including FPC)
Directional resolution		Continuous	
Lever return mechanism		With	
Operating temperature range		-10℃ to +70℃	-10℃ to +50℃
Operating life (cycles)	Directions	2,000,000	
	Center push	500,000	
Potentiometer part	Maximum operating voltage	5V DC 50V AC, 5V DC	5V DC
	Operating angle	Each direction 23° max.	
	Resistance taper	B	
	Total resistance	10kΩ	5kΩ
Center push part	Center push	With Without	With
	Ratings (max.)	50mA 12V DC	1mA 5V DC
	Travel (mm)	0.4(+0.5, -0.3)	0.35(+0.5, -0.25)
Electrical performance	Insulation resistance	100MΩ min. 250V DC	
	Voltage proof	250V AC for 1 minute	
	Rated power	0.0125W	
	Slider noise	300mV p-p max. by JIS method	
Mechanical performance	Directional operating force	14±10mN·m	7(+5, -3)mN·m
	Push operating force	7.4±3N	6.0±2.5N
	Lever return precision	±5°	
	Actuator strength Push/pull directions	98N min. (Push), 50N min. (Pull)	
Environmental performance	Cold	-30℃ 96h	
	Dry heat	80℃ 96h	
	Damp heat	60℃, 90 to 95%RH 96h	
Automotive		—	—

ThumbPointer™ (Stick Controller) RKJXV Series

Standard variable resistor device with a body height of 11.2mm, featuring a lever return mechanism.



- Directional resolution: Continuous
- Rated power: 0.0125W
- Operating temperature range: -10°C to +70°C

Applications:Energy_Industrial:Robots, drones,Industrial equipment
Game:Home handheld consoles,Virtual/augmented reality

■ Product List

Products No.	Lever return mechanism	Potentiometer part				Center push part			Dimensions (W×D×H) (mm)	Automotive	Drawing No.
		Maximum operating voltage	Operating angle	Resistance taper	Total resistance	Center push	Ratings (max.)	Travel (mm)			
RKJXV122400R	With	5V DC	Each direction 23° max.	B	10kΩ	With	50mA 12V DC	0.4(+0.5, -0.3)	18.2×21.7×11.2	—	1
RKJXV1220001	With	50V AC, 5V DC	Each direction 23° max.	B	10kΩ	Without	—	—	17.8×21.3×11.2	—	2



1. This catalog shows only outline specifications. When using the products, please obtain formal specifications for supply.
2. Please place purchase orders per minimum order unit (integer).

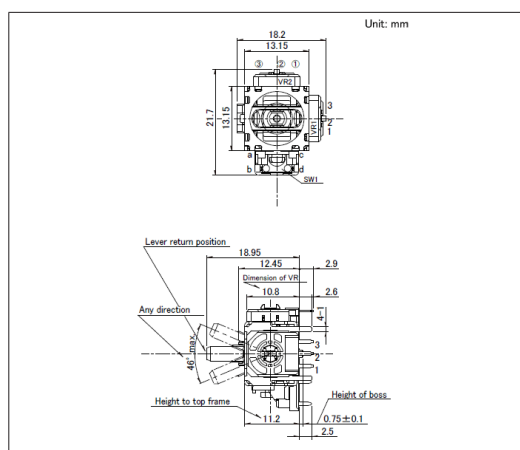
■ Packing Specifications

Tray

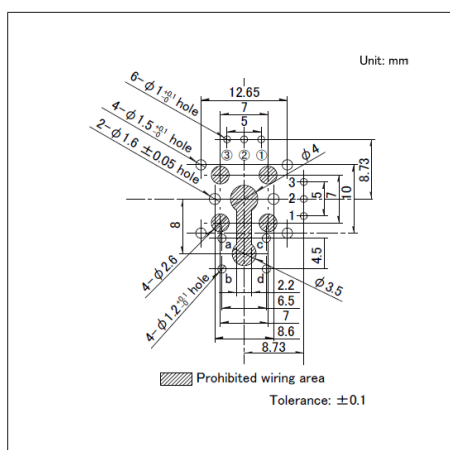
Number of packages(pcs.)		Export package measurements (mm)
1 case / Japan	1 case / export packing	
1,420	1,420	544×364×178

Drawing No.1

■ Dimensions



■ Mounting Hole Dimensions

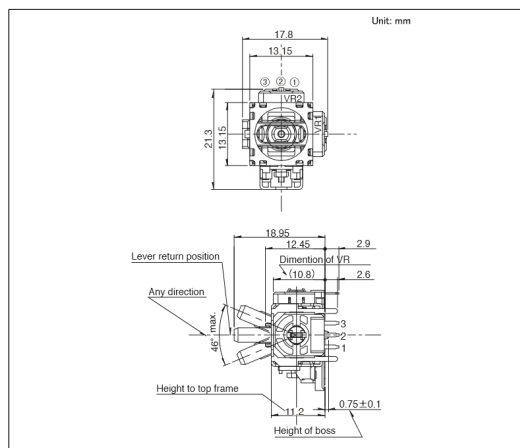


Viewed from mounting side.

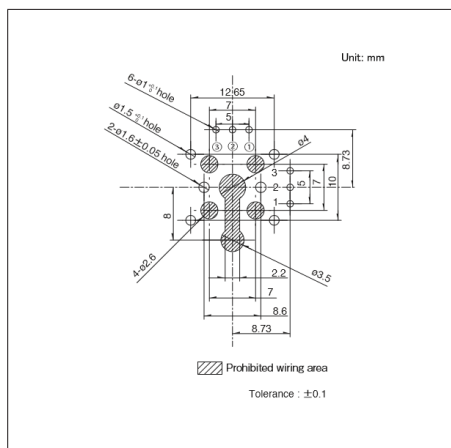
ThumbPointer™ (Stick Controller) RKJXV Series

Drawing No.2

■ Dimensions



■ Mounting Hole Dimensions



Viewed from mounting side.

ThumbPointer™ (Stick Controller) RKJX2 Series

Compact, thin-profile variable resistor device with a body height of 7.8mm, featuring a lever return mechanism.



- Directional resolution: Continuous
- Rated power: 0.0125W
- Operating temperature range: -10°C to +50°C

Applications:Energy_Industrial:Robots, drones,Industrial equipment
Game:Home handheld consoles,Virtual/augmented reality

■ Product List

Products No.	Lever return mechanism	Potentiometer part				Center push part			Dimensions (W×D×H) (mm)	Automotive	Drawing No.
		Maximum operating voltage	Operating angle	Resistance taper	Total resistance	Center push	Ratings (max.)	Travel (mm)			
RKJX21224001	With	5V DC	Each direction 23° max.	B	5kΩ	With	1mA 5V DC	0.35(+0.5, -0.25)	13.7×14.6×7.8 (Not including FPC)	—	1

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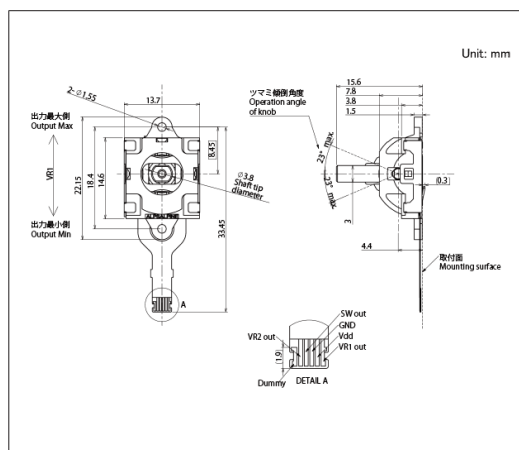
■ Packing Specifications

Tray

Number of packages(pcs.)		Export package measurements (mm)
1 case / Japan	1 case / export packing	
1,484	1,484	544×364×178

Drawing No.1

■ Dimensions



Potentiometer Type Multi Control Devices / Soldering Conditions

■ Reference for Manual Soldering

Series	Tip temperature	Soldering time	No. of solders
RKJXV	350°C max.	3s max.	1 time

■ Reference for Dip Soldering

Series	Preheating		Dip soldering		No. of solders
	Soldering surface temperature	Heating time	Soldering temperature	Soldering time	
RKJXV	90 ~ 120°C	60s max.	260°C	5s	1 time

Potentiometer Type Multi Control Devices / Cautions

Circuit Used for Analog Stick Controller

Please use in the voltage adjustment circuit (Fig. A).

Impedance on the Output Side

Since this product 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 product 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.

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

To avoid potential contact issues, please do not solder wires to the top surface of the printed circuit board as shown in the diagram.

Solder all metal lugs into a substrate before use.

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.

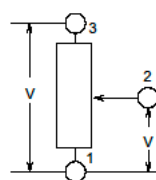
Storage

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.

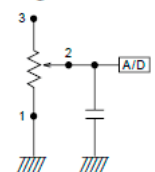
The above operation notes are quoted from the "Precaution and Guideline of Potentiometer for Electrical Devices", which is a technical report issued by the Japan Electronics and Information Technology Industries Association EIAJ RCR-2191A (in March 2002).

For details, see the above technical report.

A.Voltage divider type



[Fig.1]



[Fig.2]

