uxcell

uxcell B10K Ohm 45mm Straight Slide Potentiometer User Manual

Model: B10K Ohm Dual Channel Linear Fader

1. Product Overview

The uxcell B10K Ohm 45mm Straight Slide Potentiometer is a dual-channel linear fader designed for precise resistance adjustment in electronic circuits. It features a linear taper, meaning the resistance changes proportionally to the physical displacement of the slider. This component is commonly used in audio mixers, electric guitars, and other electronic devices for controlling parameters such as volume, tone, balance, and light intensity.

Figure 1.1: Front view of the uxcell B10K Ohm 45mm Straight Slide Potentiometer with its gray knob.

Figure 1.2: Top view of the potentiometer, showing the slider track and mounting holes.

2. Specifications

Refer to the table below for detailed technical specifications of the potentiometer.

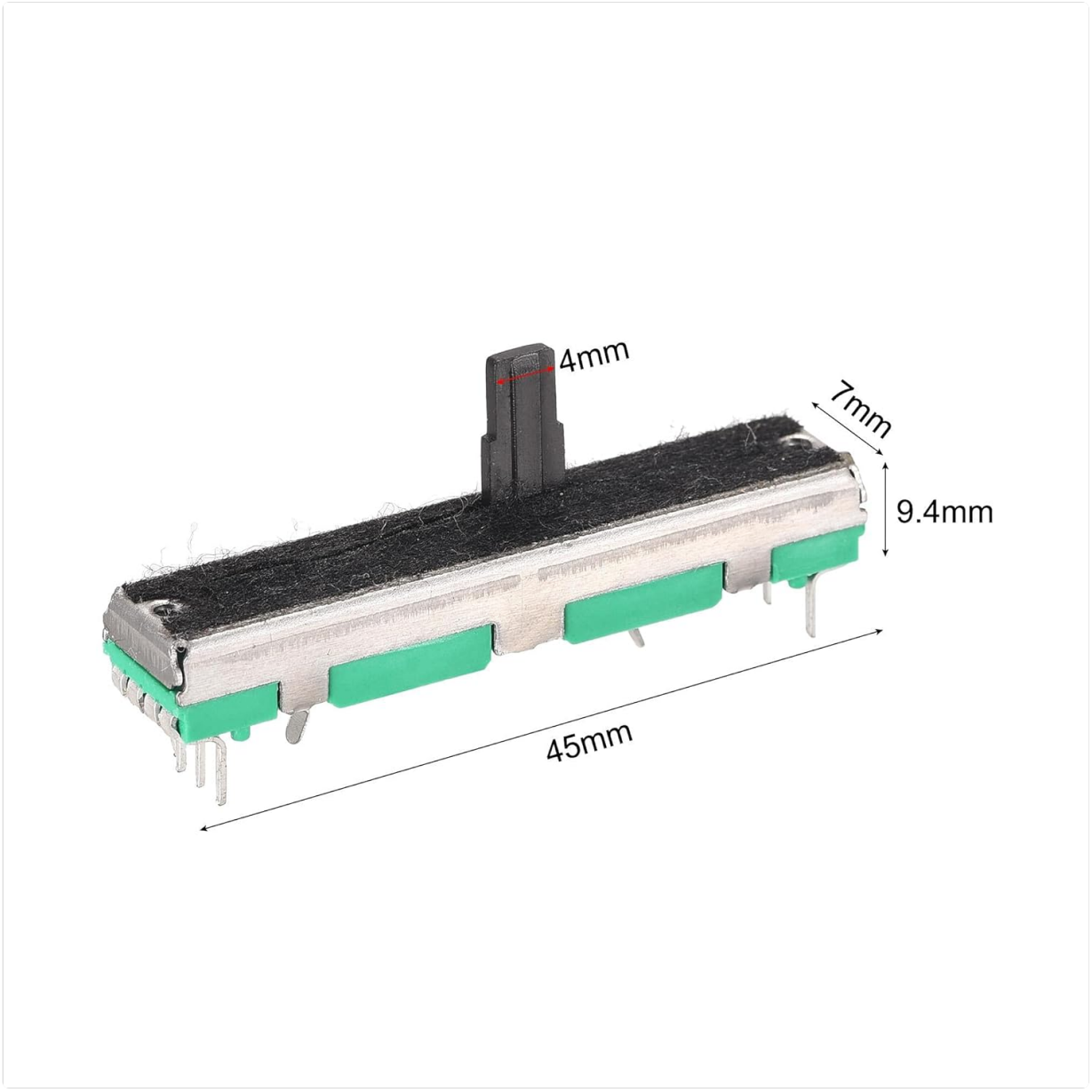

Figure 2.1: Key dimensions of the potentiometer, including body length, width, height, and shaft size.

Feature	Specification
Product Name	Potentiometer with Knob
Model	B Type Linear Potentiometer
Resistance Value	10K Ohm
Resistance Tolerance	+/- 10%
Channel Type	Dual Channel
Terminal Number	6 + 2
Body Size (L*W*H)	45mm x 9.4mm x 7mm (+/- 2mm)
Shaft Size (L*W)	10mm x 4mm
Knob Size (L*W*H)	23.7mm x 11.5mm x 11mm
Knob Color	Gray Black

3. Setup and Installation

This potentiometer is designed for integration into electronic circuits. Proper installation ensures optimal performance and longevity.

3.1 Electrical Connections

The potentiometer features 6 + 2 terminals for dual-channel operation. Ensure correct wiring according to your circuit design. Typically, the outer terminals connect to the power supply and ground, while the center terminal provides the variable output voltage.

Figure 3.1: Underside view of the potentiometer, highlighting the terminal pins for soldering or connection.

3.2 Mounting

The potentiometer can be mounted using the two small holes on either side of the body. Secure it to a panel or PCB using appropriate fasteners to prevent movement during operation.

3.3 Safety Precautions

- Always disconnect power before making or changing electrical connections.
- Ensure proper soldering techniques if attaching wires directly to the terminals.
- Avoid short circuits, which can damage the potentiometer or other circuit components.

- Do not exceed the specified voltage and current ratings for the potentiometer.

4. Operating Instructions

The uxcell slide potentiometer provides a linear change in resistance as the slider is moved. This allows for smooth and precise control over various electronic functions.

4.1 Basic Operation

To adjust a parameter, simply slide the gray knob along the track. Moving the knob from one end to the other will linearly vary the resistance from its minimum to maximum value (or vice versa), thereby adjusting the corresponding electronic function (e.g., increasing or decreasing volume).

4.2 Typical Applications

- **Audio Mixers:** Used as faders for controlling individual channel volumes, master volume, or effects sends/returns.
- **Electric Guitars:** Integrated into effects pedals or guitar electronics for tone or volume control.
- **Lighting Systems:** For dimming or adjusting light intensity in custom setups.
- **General Electronics:** Any application requiring a linear variable resistance for tuning, calibration, or control.

Figure 4.1: Examples of slide potentiometers integrated into audio mixing consoles, demonstrating their common application.

5. Maintenance

Proper maintenance can extend the lifespan and ensure consistent performance of your potentiometer.

5.1 Cleaning

- Keep the potentiometer free from dust, dirt, and debris. Use a soft, dry cloth to wipe the exterior.
- For internal cleaning (if necessary due to erratic behavior), use a specialized electronic contact cleaner. Avoid using water or abrasive cleaners.
- Ensure the unit is powered off and disconnected from any circuit before cleaning.

5.2 Storage

Store the potentiometer in a dry, cool environment, away from direct sunlight and extreme temperatures. Protect it from physical impact and excessive moisture.

6. Troubleshooting

If you experience issues with your potentiometer, consider the following common troubleshooting steps:

6.1 No Response or Erratic Behavior

- **Check Connections:** Verify that all terminals are securely connected and that there are no loose wires or cold solder joints.
- **Inspect for Damage:** Look for any visible physical damage to the potentiometer body, terminals, or slider mechanism.
- **Test Resistance:** Use a multimeter to measure the resistance across the terminals. The resistance between the two outer terminals should be approximately 10K Ohm. The resistance between an outer terminal and the center terminal should vary smoothly as the slider is moved.
- **Clean Contacts:** Dust or oxidation on the internal resistive track can cause erratic readings. Refer to the cleaning instructions in the Maintenance section.

6.2 Stiff or Loose Slider

- **Stiff Slider:** Ensure no foreign objects are obstructing the slider's path. A small amount of dry lubricant (e.g., silicone-based) designed for plastics can be applied sparingly if needed, but avoid oil-based lubricants.
- **Loose Slider:** This may indicate wear. If the potentiometer is excessively loose and affects performance, replacement may be necessary.

7. Warranty and Support

For warranty information or technical support regarding your uxcell B10K Ohm 45mm Straight Slide Potentiometer, please refer to the product packaging or contact uxcell customer service directly. Ensure you have your product model number and purchase details available when seeking support.
For more information, visit the official uxcell store:uxcell Store on Amazon