uxcell RV24YN20S B203

uxcell RV24YN20S B203 20K Ohm Carbon Film Potentiometer User Manual

Model: RV24YN20S B203

1. INTRODUCTION

This manual provides essential information for the proper installation, operation, and maintenance of the uxcell RV24YN20S B203 20K Ohm Carbon Film Potentiometer. Please read this manual thoroughly before using the product to ensure safe and efficient operation.

2. PRODUCT OVERVIEW

The uxcell RV24YN20S B203 is a single-turn rotary carbon film potentiometer designed for various electronic applications. It features a 20K Ohm resistance value and a knurled shaft with a split design, suitable for push-on knobs. This component is commonly used for controlling electrical devices, such as volume controls in audio equipment.

Key Features:

- **Model:** RV24YN 20S/B203
- **Resistance Value:** 20K Ohm
- **Tolerance:** +/-10%
- **Power Rating:** 2W
- **Turn Number:** Single Turn
- **Terminals:** 3
- **Shaft Type:** Round, knurled with split design
- **Material:** Carbon film and metal construction for durability.

Components:

The product package includes one carbon film potentiometer and one rotary knob.

Figure 2.1: The uxcell RV24YN20S B203 20K Ohm Carbon Film Potentiometer with its included rotary knob. This image displays the overall assembly, highlighting the knurled shaft and the three terminals at the base.

20K Ohm

Figure 2.2: A close-up view of the potentiometer, clearly indicating its 20K Ohm resistance value. This perspective emphasizes the top adjustment type and the robust construction.

Figure 2.3: The underside of the potentiometer, displaying the model number 'RV24YN 20S B203' and the three connection terminals. This view is crucial for proper wiring and identification.

3. SPECIFICATIONS

Specification	Value
Product Name	Carbon Film Potentiometer
Model	RV24YN 20S/B203
Material	Carbon film, Metal
Resistance Value	20K Ohm
Power Rating	2W
Tolerance	+/-10%
Turn Number	Single Turn
Terminals Number	3

Specification	Value
Features	Round Shaft, Knurled Shaft with Split Design
Total Size (H * D)	33.4mm x 24.4mm / 1.31 x 0.96 inch
Screw Thread Diameter	8.7mm / 0.34 inch
Shaft Diameter	6mm / 0.24 inch
Shaft Length (excluding thread)	10mm / 0.4 inch
Shaft Total Length	20.5mm / 0.8 inch
Rotary Knob Size	15x23mm / 0.6 x 0.9 inch
Color	Black, Silver Tone
Item Model Number	a18072600ux0036
Product Dimensions	5.51 x 3.94 x 1.57 inches; 3.99 ounces

4. SETUP AND INSTALLATION

Proper installation is crucial for the correct function of the potentiometer. Follow these general guidelines:

1. **Mounting:** Insert the potentiometer shaft through the desired mounting hole on your device panel. Secure it using the provided nut and washer. Ensure it is tightened sufficiently to prevent rotation.

2. **Wiring:** The potentiometer has three terminals. These typically correspond to:

   - **Terminal 1 (Input/Ground):** Connect to the input signal or ground.
   - **Terminal 2 (Wiper/Output):** This is the variable output terminal.
   - **Terminal 3 (Output/Voltage Supply):** Connect to the voltage supply or the other end of the input signal.

   Refer to your specific circuit diagram for correct wiring configuration. Ensure all connections are secure and properly insulated.

3. **Knob Attachment:** Once the potentiometer is mounted, align the rotary knob with the knurled shaft and push it firmly into place. The split shaft design ensures a secure fit for standard push-on knobs.

5. OPERATING INSTRUCTIONS

The uxcell RV24YN20S B203 potentiometer is designed for simple and intuitive operation:

1. **Rotation:** Rotate the attached knob clockwise or counter-clockwise to adjust the resistance value.

2. **Function:** As a variable resistor, it controls parameters such as volume, brightness, or other electrical signals depending on its application within a circuit.

3. **Range:** The single-turn design allows for a full sweep of the resistance range (0 to 20K Ohm) within one rotation.

6. MAINTENANCE

The uxcell RV24YN20S B203 potentiometer is a durable component requiring minimal maintenance:

- **Cleaning:** Keep the potentiometer free from dust and debris. Use a soft, dry cloth for external cleaning. Avoid using liquid cleaners directly on the component.
- **Inspection:** Periodically check for loose connections or physical damage. Ensure the knob is securely attached to the shaft.
- **Storage:** Store in a dry, cool environment away from direct sunlight and corrosive substances.

7. TROUBLESHOOTING

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

- **No Response/Intermittent Operation:** Check all wiring connections for looseness or corrosion. Ensure the potentiometer is correctly integrated into the circuit.
- **Scratchy Sound (in audio applications):** This can indicate a dirty or worn carbon track. While not typically user-serviceable, a small amount of contact cleaner designed for potentiometers might temporarily alleviate the issue.
- **Incorrect Resistance Reading:** Verify the potentiometer's resistance value with a multimeter. Ensure it matches the expected 20K Ohm. If significantly off, the component may be faulty.
- **Knob Slipping:** Re-seat the knob firmly onto the shaft. If the shaft or knob is damaged, replacement may be necessary.

If problems persist, consult a qualified technician or refer to the specific circuit's documentation.

8. SAFETY INFORMATION

When working with electronic components, always observe general safety precautions:

- **Electrical Safety:** Disconnect power from the circuit before installing, wiring, or performing maintenance on the potentiometer.
- **Proper Tools:** Use appropriate tools for installation to avoid damage to the component or injury.
- **Environmental:** Avoid exposing the potentiometer to excessive moisture, extreme temperatures, or corrosive environments.
- **Proposition 65 Warning:** This product may contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Wash hands after handling.

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the uxcell official website or contact your retailer. Keep your purchase receipt for warranty claims.