Dioche Dioche5s31ioyn6v

Dioche Vibration Sensor Module DC 12V Instruction Manual

Model: Dioche5s31ioyn6v

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the Dioche Vibration Sensor Module DC 12V. This module is designed to detect vibrations and activate a relay switch based on adjustable sensitivity and time delay settings. It is suitable for various industrial and security applications requiring vibration detection.

2. Safety Information

- Ensure the power supply is disconnected before making any electrical connections to prevent electric shock.
- The module operates on DC 12V. Connecting it to an incorrect voltage may cause damage.
- Avoid exposing the module to moisture, extreme temperatures, or corrosive environments.
- Handle the module with care to prevent damage to electronic components.
- If you are unsure about any installation steps, consult a qualified electrician or technician.

3. Product Overview

The Dioche Vibration Sensor Module consists of a vibration sensor, a control circuit, two adjustable potentiometers for sensitivity and delay, and a 10A relay. The module is compact and designed for easy integration.

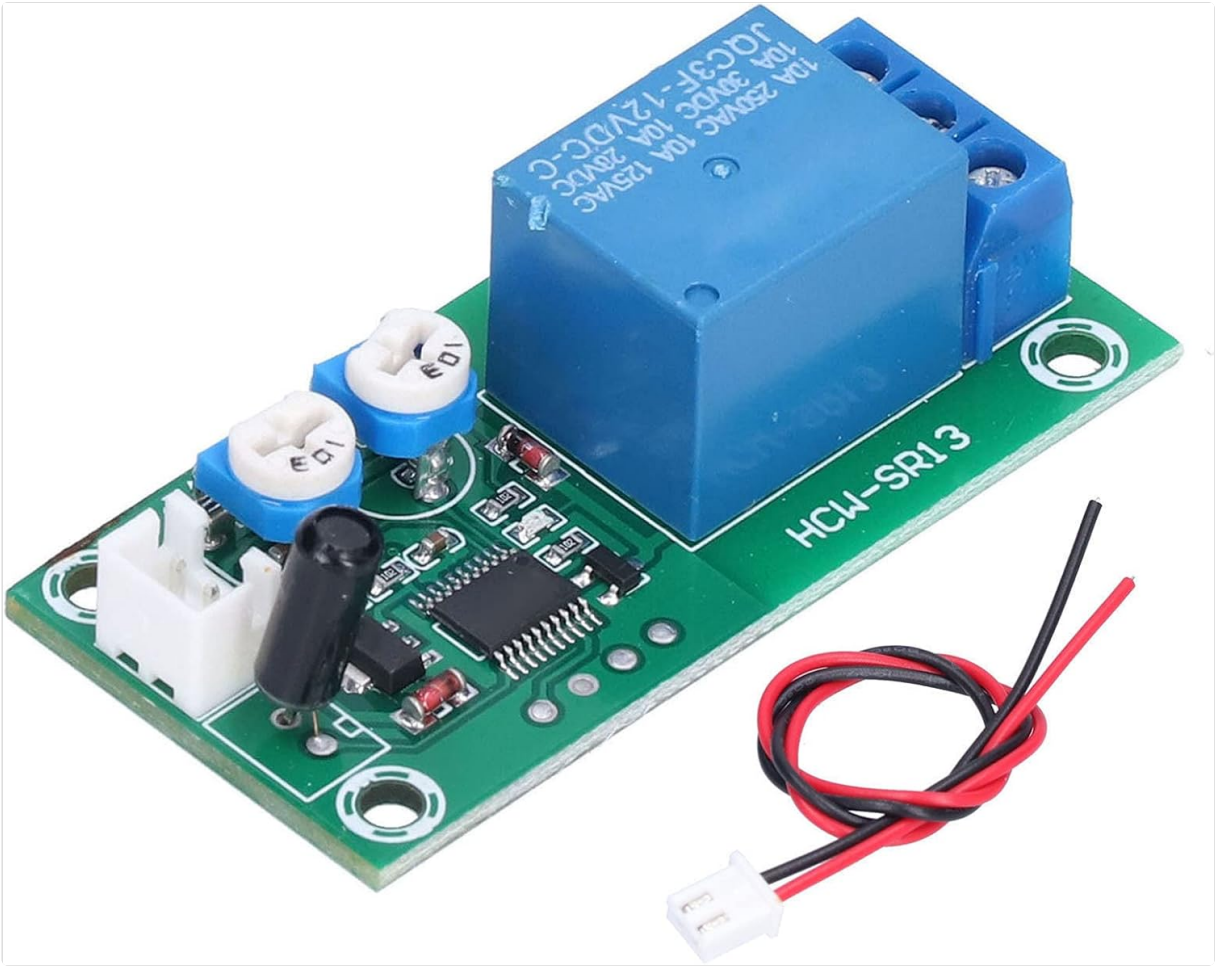

Figure 3.1: Overview of the Dioche Vibration Sensor Module, showing the main components and included connecting wires.

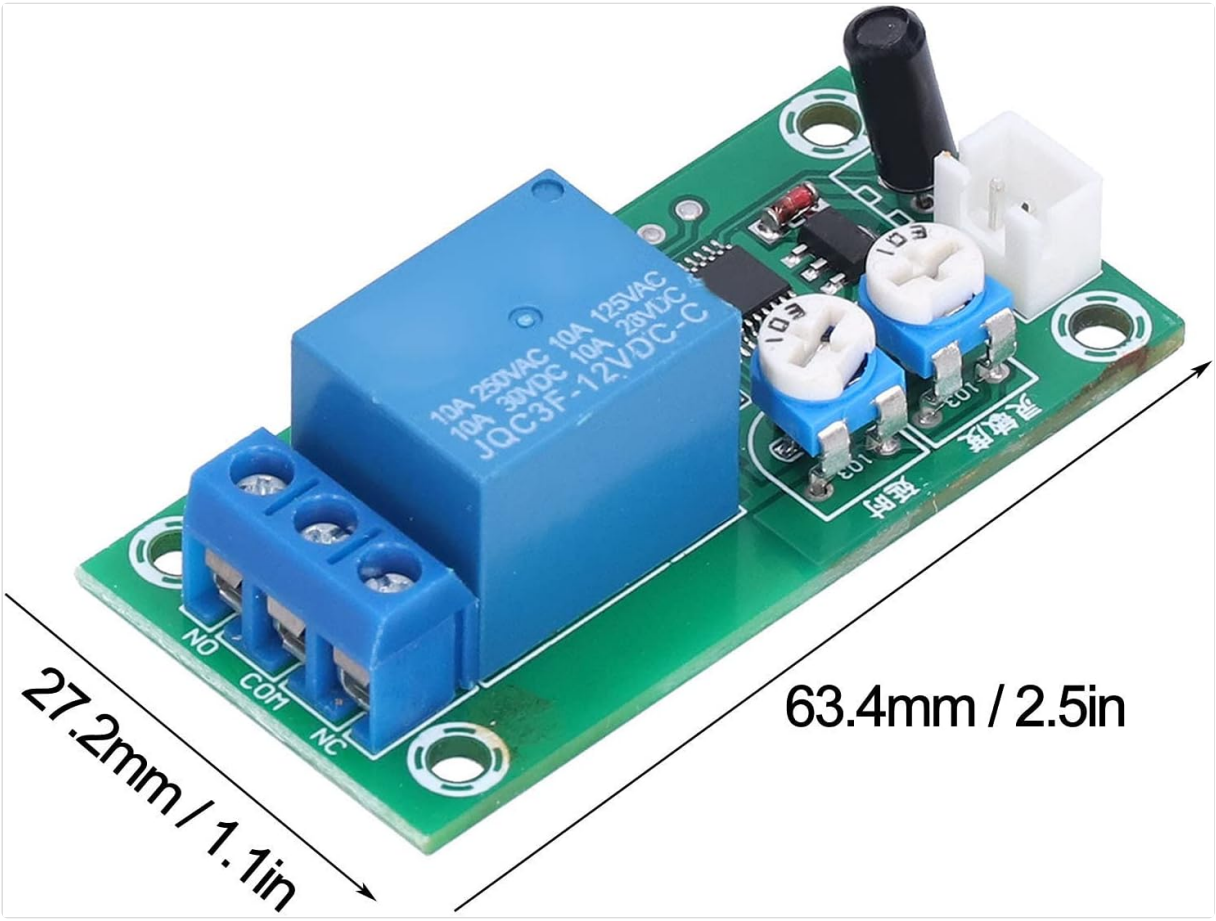

Figure 3.2: The module's physical dimensions are approximately 63.4mm (2.5 inches) in length and 27.2mm (1.1 inches)

in width.

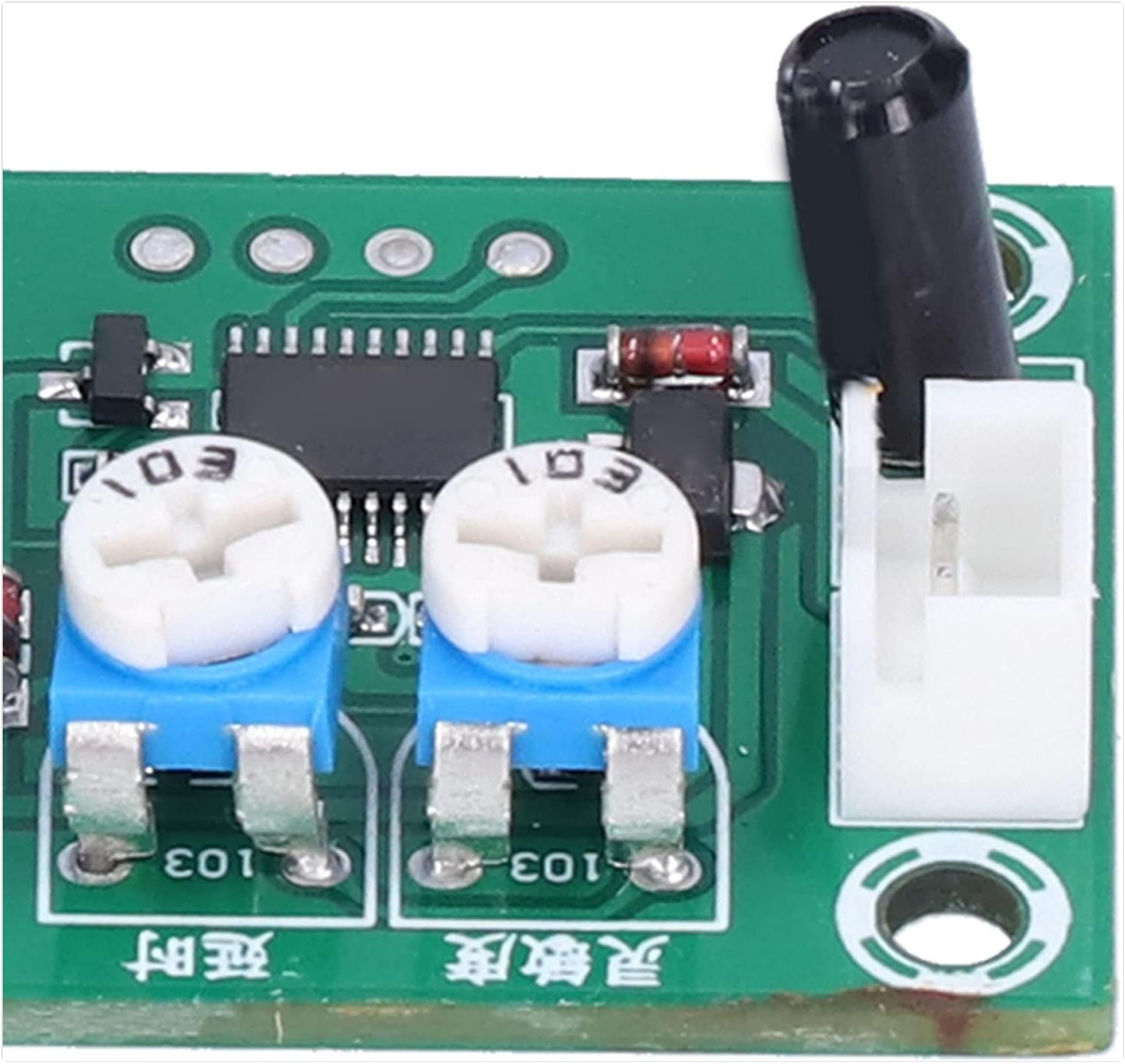

Figure 3.3: Close-up view of the blue relay and the three-pin terminal block labeled NO (Normally Open), COM (Common), and NC (Normally Closed).

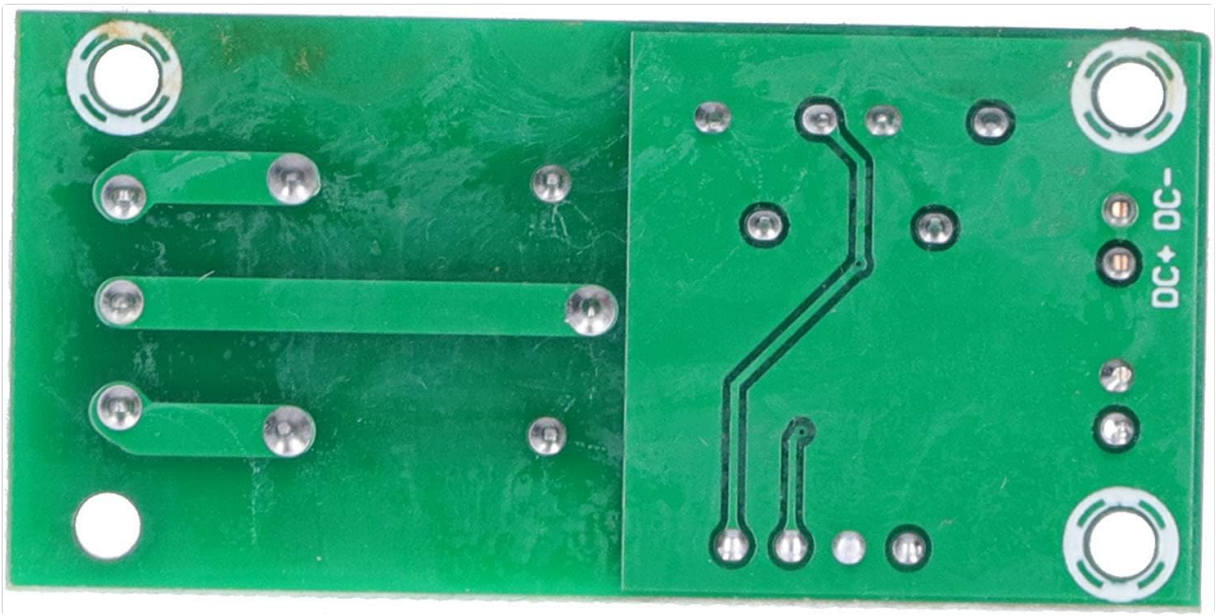

Figure 3.4: Detailed view of the two white potentiometers for adjusting sensitivity and delay, alongside the black vibration sensor component.

4. Setup and Wiring

4.1 Power Connection

- Locate the DC+ and DC- terminals on the module.
- Connect the positive (+) lead of a DC 12V power supply to the DC+ terminal.
- Connect the negative (-) lead of the DC 12V power supply to the DC- terminal.
- Ensure connections are secure and correct polarity is observed.

4.2 Relay Output Connection

The module features a 10A relay with three terminals: NO (Normally Open), COM (Common), and NC (Normally Closed). These terminals act as a switch to control an external device.

- **COM (Common):** This is the common terminal for the relay switch.
- **NO (Normally Open):** This terminal is open (disconnected) from COM when the module is idle and closes (connects) to COM when vibration is detected and the relay activates.
- **NC (Normally Closed):** This terminal is closed (connected) to COM when the module is idle and opens (disconnects) from COM when vibration is detected and the relay activates.

Connect your external device (e.g., alarm, light, motor) to the appropriate relay terminals based on your application's requirements. For example, to turn on a device when vibration is detected, connect one lead of the device to COM and the other to NO, with the device's power source.

5. Operating Instructions

5.1 Initial Power-Up

Once wired correctly, apply DC 12V power. The module will enter a standby state with low power consumption.

5.2 Adjusting Sensitivity

The module has a potentiometer labeled 'Sensitivity' (often marked with a symbol or text indicating sensitivity). Rotate this potentiometer using a small screwdriver:

- **Clockwise:** Increases sensitivity, making the module detect weaker vibrations.
- **Counter-clockwise:** Decreases sensitivity, requiring stronger vibrations for detection.

Adjust the sensitivity to prevent false triggers while ensuring reliable detection of desired vibrations.

5.3 Adjusting Time Delay

The module has another potentiometer labeled 'Delay' (often marked with a symbol or text indicating time). This controls how long the relay remains activated after a vibration is detected.

- **Clockwise:** Increases the delay time (up to 240 seconds).
- **Counter-clockwise:** Decreases the delay time (down to 1 second).

Set the delay according to how long you need the connected device to remain active after a vibration event.

5.4 Operation Logic

When the vibration sensor detects a vibration exceeding the set sensitivity threshold, the relay will activate. The relay will remain activated for the duration set by the delay potentiometer. After the delay period, if no further vibrations are detected, the relay will return to its idle state.

6. Maintenance

- Keep the module clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Regularly check all wiring connections to ensure they are secure.
- Avoid physical impact or excessive force on the module.
- Do not attempt to modify the internal circuitry, as this may void any potential warranty and could damage the module.

7. Troubleshooting

- **Module not powering on:** Check the DC 12V power supply connection and ensure correct polarity. Verify the power source is functional.
- **Relay not activating:**
  - Ensure the sensitivity potentiometer is adjusted correctly. Try increasing sensitivity.
  - Verify that the vibration sensor is not obstructed and is receiving vibrations.
  - Check the relay output wiring to the external device.
- **False triggers:** Decrease the sensitivity by rotating the sensitivity potentiometer counter-clockwise. Ensure the module is mounted on a stable surface if unintended vibrations are causing activation.
- **Relay activates but does not stay on long enough/stays on too long:**Adjust the delay potentiometer to the desired time setting.

8. Specifications

Parameter	Value
Input Working Voltage	DC 12V
Relay Output Terminal	10A (Controlled Switch)
Standby Current (Low Power Mode)	< 1MA
Longest Delay Time	240s
Shortest Delay Time	1s
Dimensions	Approx. 63.4 x 27.2mm (2.5 x 1.1 inches)
Item Weight	0.67 ounces
Model Number	Dioche5s31ioyn6v

9. Warranty and Support

For warranty information or technical support, please refer to the product packaging or contact the manufacturer directly through their official channels. Keep your purchase receipt as proof of purchase.

Documents - Dioche – Dioche5s31ioyn6v

no relevant documents