GODIYMODULES QF-RD72

User Manual for Dual Time Adjustable Cycle Delay Timing Relay Module

Model: QF-RD72

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the GODIYMODULES Dual Time Adjustable Cycle Delay Timing Relay Module. This module is designed for precise control of repetitive power on and off cycles for various equipment and applications, offering high precision, stable, and reliable performance.

2. Product Overview

The Dual Time Adjustable Cycle Delay Timing Relay Module is an electronic component designed to manage the on/off cycles of electrical devices. It features an infinite loop mode, allowing the relay to operate continuously according to user-defined run and stop times. This makes it ideal for applications requiring reciprocating strokes or repetitive burn-in tests for products.

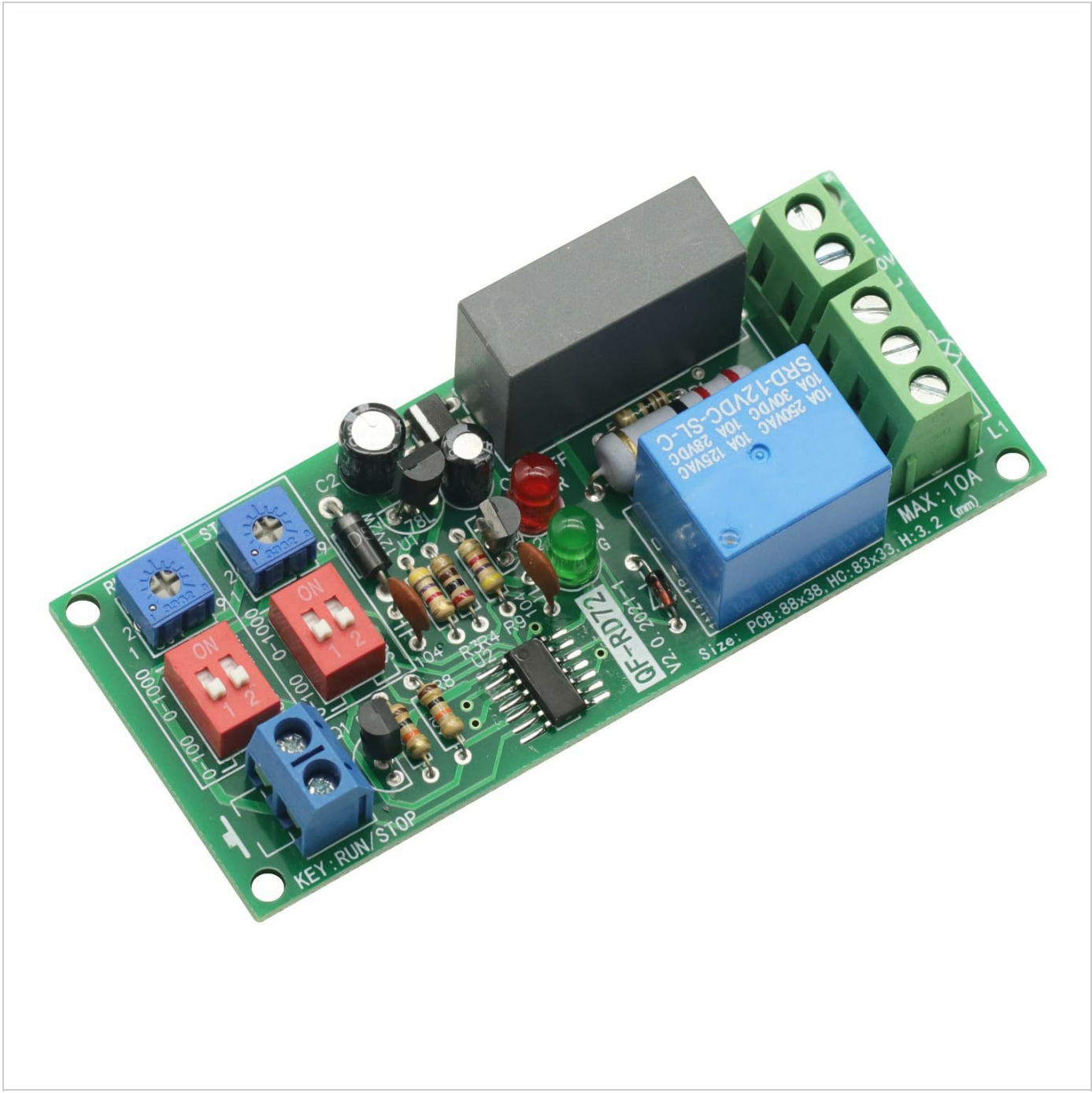

Figure 1: Overview of the Dual Time Adjustable Cycle Delay Timing Relay Module.

The module supports a start/stop function, enabling users to initiate or halt the cycle as needed. It is versatile, suitable for a wide range of voltages from AC 100V to 250V, making it compatible with various power systems including 100V, 110V, 120V, 127V, 220V, 230V, and 240V.

3. Features

- **Infinite Loop Mode:** After initiation, the module enters an infinite loop, with the relay operating according to set run and stop times.
- **High Precision:** Designed for stable and reliable timing performance.
- **Adjustable Time Range:** Both "RUN" time and "STOP" time are widely adjustable, from 0.5 seconds to 1000 minutes.
- **Start/Stop Function:** Allows manual control to start or stop the cycling operation.
- **Wide Voltage Compatibility:** Operates on AC 100V-250V.

- **Active Output:** Output voltage equals input voltage, with a maximum output current of 10A.
- **Passive Switch Input:** Features LED indicators (green for ON, red for OFF) for status.

4. Specifications

Specification	Value
Working Voltage	AC 100V-250V
Power Consumption	<1.0W
Max. Output Current	<10A
Time Range	0.5 seconds - 1000 minutes
Time Accuracy	Max. range value * 0.001 (resolution of 1000)
Life Expectancy	100,000 times
Dimensions	88 x 38 x 22mm (3.46 x 1.49 x 0.86 inches)
Mounting Hole Spacing	83 x 33mm (3.26 x 1.3 inches)
Mounting Hole Diameter	3.2mm (0.12 inches)
Material	PCB

5. Setup and Wiring

Proper wiring is essential for the safe and correct operation of the timer module. Refer to the diagram below for terminal connections.

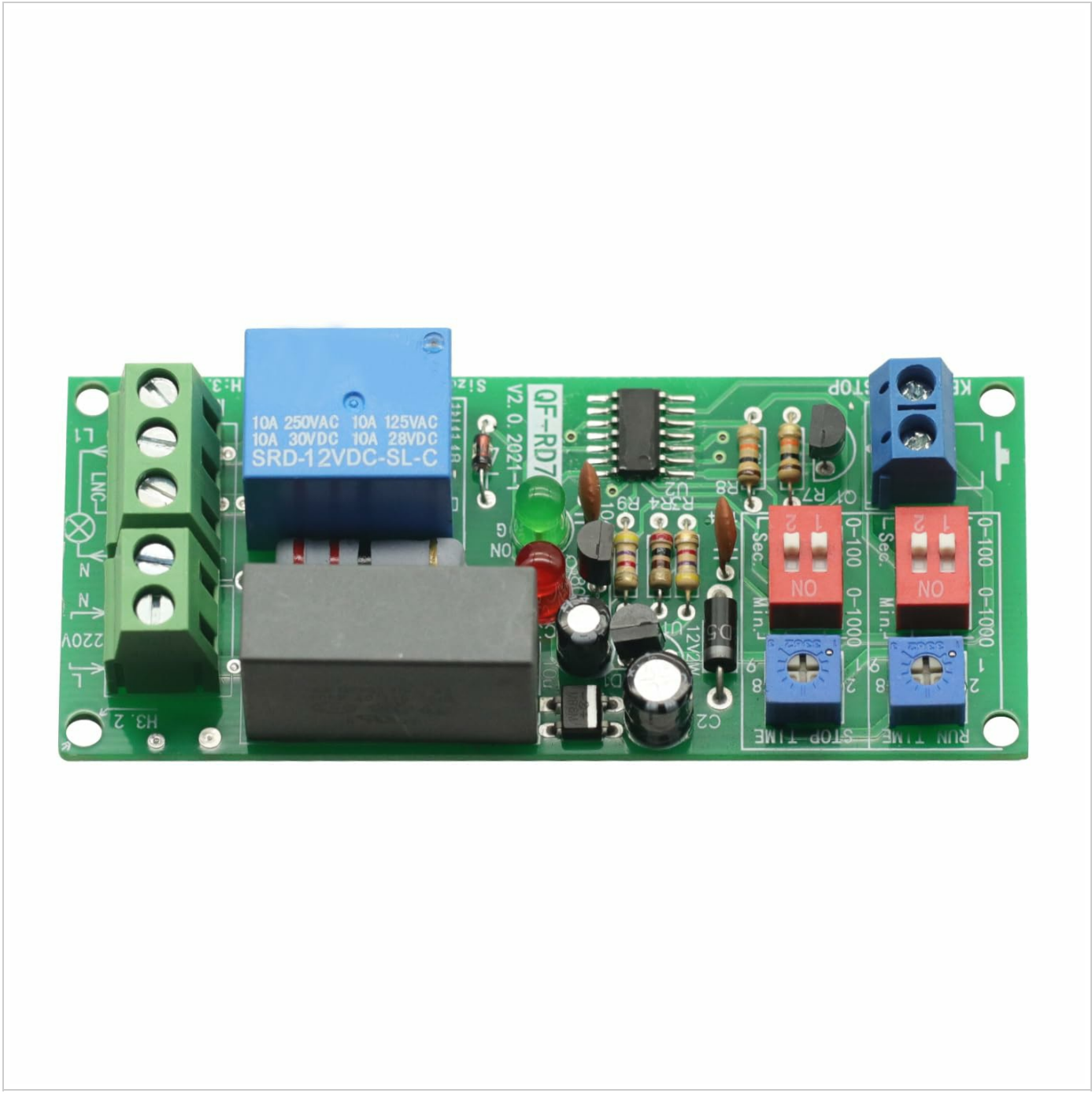

Figure 2: Wiring Diagram and Component Labels.

Terminal Connections:

- **L (Power L line):** Connect to the live (fireWire) input.
- **N (Power N line):** Connect to the neutral (zero line) input.
- **Output N:** Connect to the neutral line of your load.
- **Output L1:** Connect to the live line of your load.
- **LNC (Normally Closed Output):** This terminal provides a normally closed live line output. It is generally not required for standard cycling operations.

Note: For most appliances, it is not strictly necessary to distinguish between the L and N lines for the load connection, but always ensure correct power input polarity.

Start/Stop Button (Optional):

- The module features a passive switch input for a start/stop button (labeled "KEY: RUN/STOP").

- When the module is powered on, the green LED lights up. Pressing the start button initiates the cycle. Pressing it again will stop the operation, and the red LED will light up.
- If a start button is not desired, you can connect the two terminals of the "KEY: RUN/STOP" input with a short wire. This will cause the board to cycle infinitely after power on without requiring a button press.

6. Operating Instructions

The module allows for precise adjustment of both the "RUN" time (on-time) and "STOP" time (off-time) using the onboard potentiometers and dip switches.

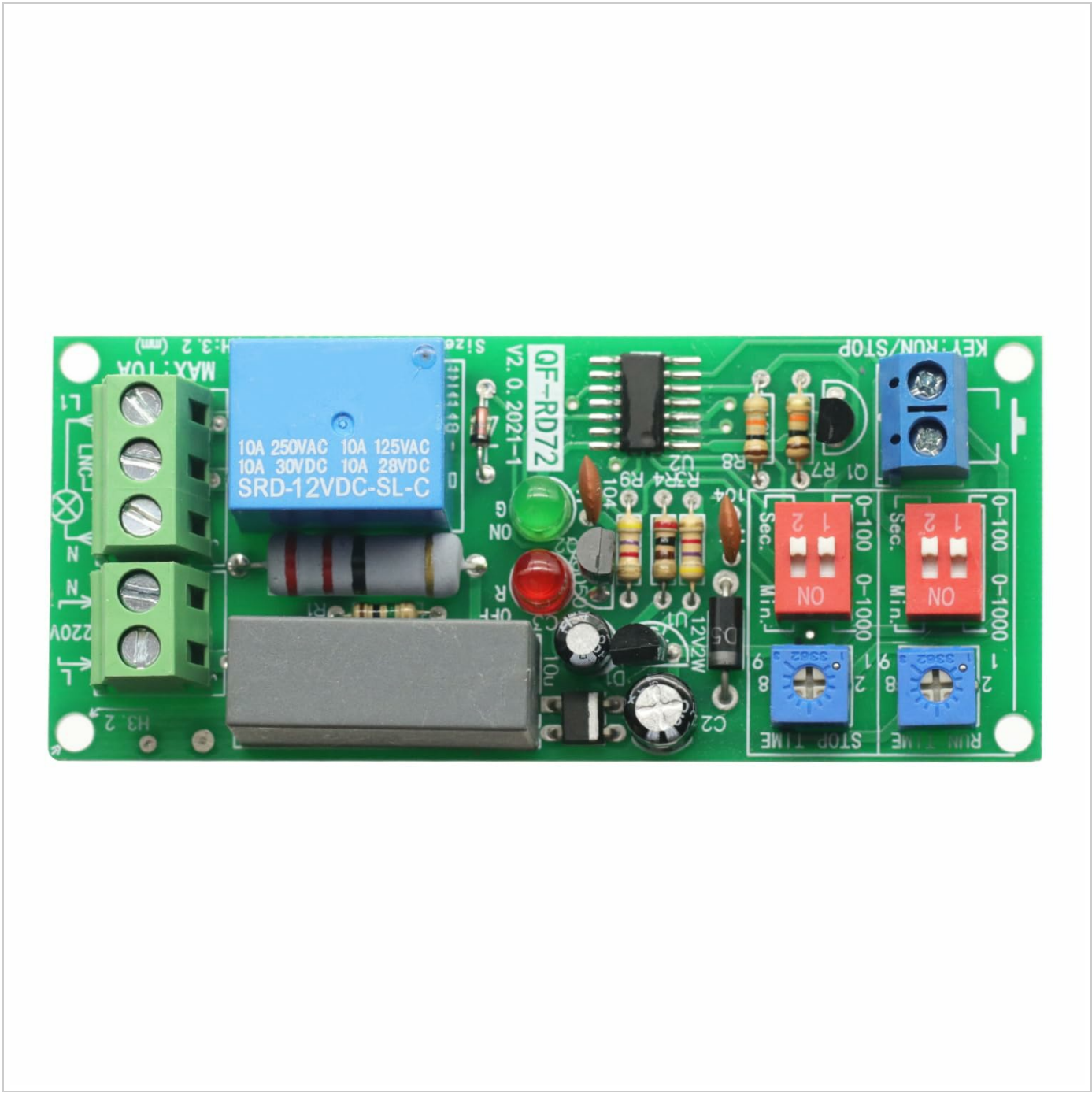

Figure 3: Top view showing time adjustment controls.

Setting Run and Stop Times:

1. **Identify Controls:** Locate the "RUN TIME" and "STOP TIME" sections on the PCB. Each section typically has a potentiometer (blue square component) for fine adjustment and a set of dip switches (red components) for selecting the time unit and range.

2. **Select Time Unit/Range:** Use the dip switches associated with "RUN TIME" and "STOP TIME" to select the desired time unit (e.g., seconds, minutes) and the overall range (e.g., 0-100, 0-1000). Refer to the markings on the PCB next to the dip switches for specific settings (e.g., "Sec.", "Min.", "0-100", "0-1000").
3. **Adjust Time Value:** Rotate the corresponding potentiometer for "RUN TIME" or "STOP TIME" to set the precise duration within the selected range. Turning the potentiometer clockwise typically increases the time, and counter-clockwise decreases it.
4. **Power On:** Once the times are set and wiring is complete, apply power to the module.
5. **Start Cycle:** If using the optional start button, press it to begin the infinite cycle. If the "KEY: RUN/STOP" terminals are shorted, the cycle will begin automatically upon power-up.

The relay will then operate, turning on for the set "RUN TIME" and turning off for the set "STOP TIME", repeating this cycle indefinitely until power is removed or the cycle is stopped via the button.

7. Maintenance

The GODIYMODULES Dual Time Adjustable Cycle Delay Timing Relay Module is designed for long-term, reliable operation with minimal maintenance.

- **Cleaning:** Ensure the module is powered off before cleaning. Use a soft, dry cloth to gently wipe away any dust or debris from the PCB and components. Avoid using liquid cleaners or solvents.
- **Environmental Conditions:** Operate the module within its specified temperature and humidity ranges to prevent damage. Avoid exposure to excessive moisture, dust, or corrosive environments.
- **Connections:** Periodically check all wiring connections to ensure they are secure and free from corrosion. Loose connections can lead to intermittent operation or damage.

8. Troubleshooting

If you encounter issues with your timing relay module, consider the following common troubleshooting steps:

- **Module Not Powering On:**
  - Verify that the input voltage is within the specified AC 100V-250V range.
  - Check all power connections (L and N) for proper contact and polarity.
  - Ensure the power source is active.
- **Relay Not Cycling:**
  - If using a start button, ensure it is correctly wired and functioning. Press the button to initiate the cycle.
  - If not using a start button, confirm that the "KEY: RUN/STOP" terminals are properly shorted.
  - Check the "RUN TIME" and "STOP TIME" settings. Ensure they are not set to zero or an extremely short duration that might be unnoticeable.
  - Verify the load is correctly connected to the Output N and Output L1 terminals.
- **Incorrect Timing:**
  - Recheck the dip switch settings for the time unit and range.
  - Carefully adjust the potentiometers for "RUN TIME" and "STOP TIME" to the desired values.
  - Ensure the time accuracy specification is understood (Max. range value * 0.001).
- **LED Indicators Not Functioning:**
  - Green LED should light up when power is applied. If not, check power input.

- Red LED should light up when the cycle is stopped (if using the button). If not, check button wiring.

If these steps do not resolve the issue, contact customer support for further assistance.

9. Warranty and Support

Information regarding product warranty and specific customer support contacts was not provided in the available product data. For warranty details or technical assistance, please refer to the product packaging or contact the manufacturer, GODIYMODULES, directly through their official channels.