Yosoo Yosoo-1322

Yosoo 12V DC Delay Relay Module (Model Yosoo-1322) Instruction Manual

1. Introduction

This manual provides instructions for the Yosoo 12V DC Delay Relay Module, model Yosoo-1322. This module is designed to provide timed delay functions for various electrical circuits, offering both delay-on and delay-off capabilities. It features a wide range of adjustable delay times and a robust relay for controlling loads.

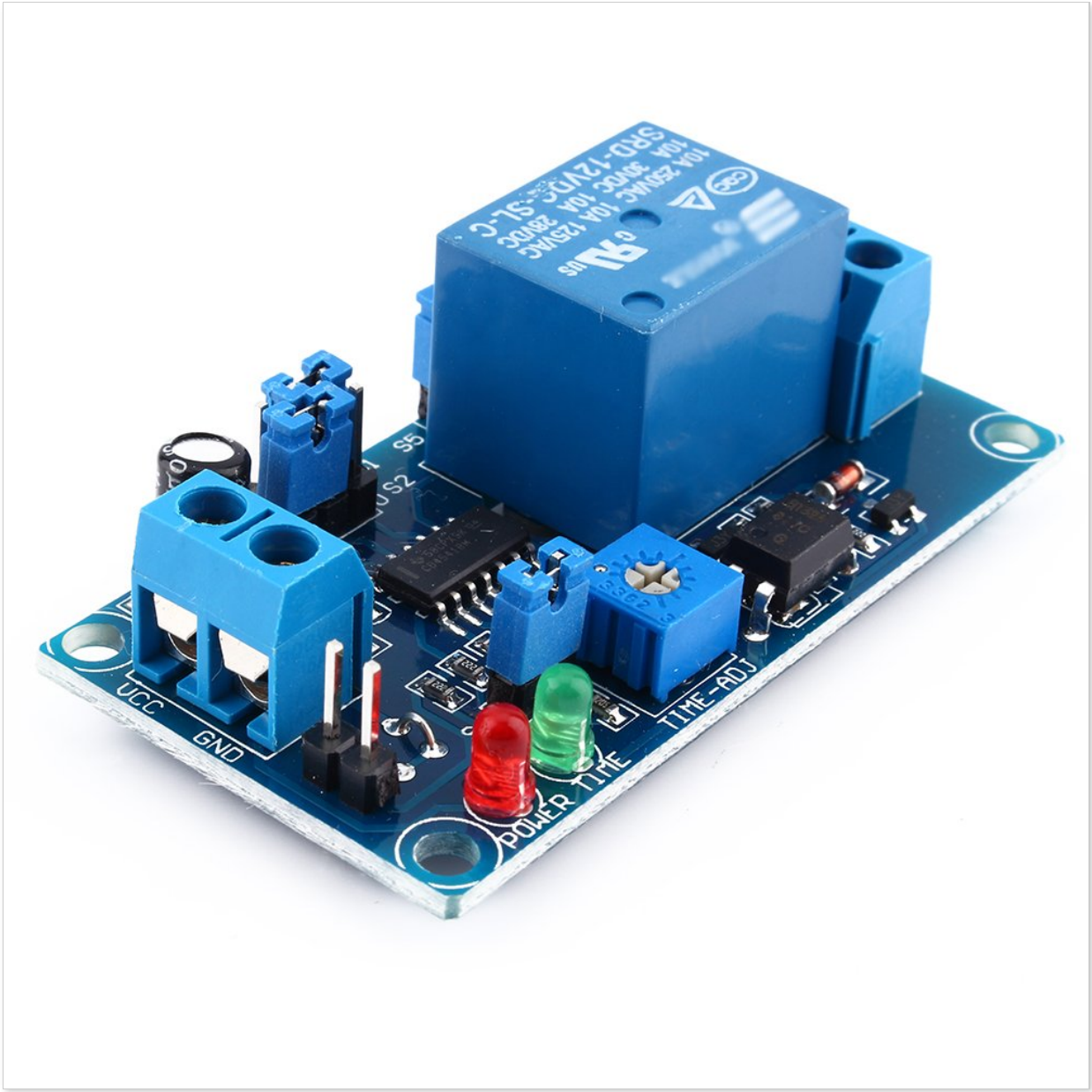

Figure 1: Angled view of the Yosoo 12V DC Delay Relay Module.

This image displays the Yosoo 12V DC Delay Relay Module from an angled perspective, showing the blue relay, terminal blocks for power and load connections, the potentiometer for time adjustment, and several jumpers.

2. Specifications

The Yosoo 12V DC Delay Relay Module offers the following technical specifications:

- **Input Voltage:** 12V DC
- **Quiescent Dissipation:** 13mA
- **Maximum Power Consumption:** 48mA
- **Relay Load Capacity:**
  - 250V AC, 10A
  - 30V DC, 10A
- **Dimensions:** 5.5 cm x 3 cm (2.16 inches x 1.18 inches)
- **Delay Time Range:** 0.1 seconds to 1 hour (adjustable via jumpers and potentiometer)
- **Protection:** Power reversal diode included
- **Model Number:** Yosoo-1322

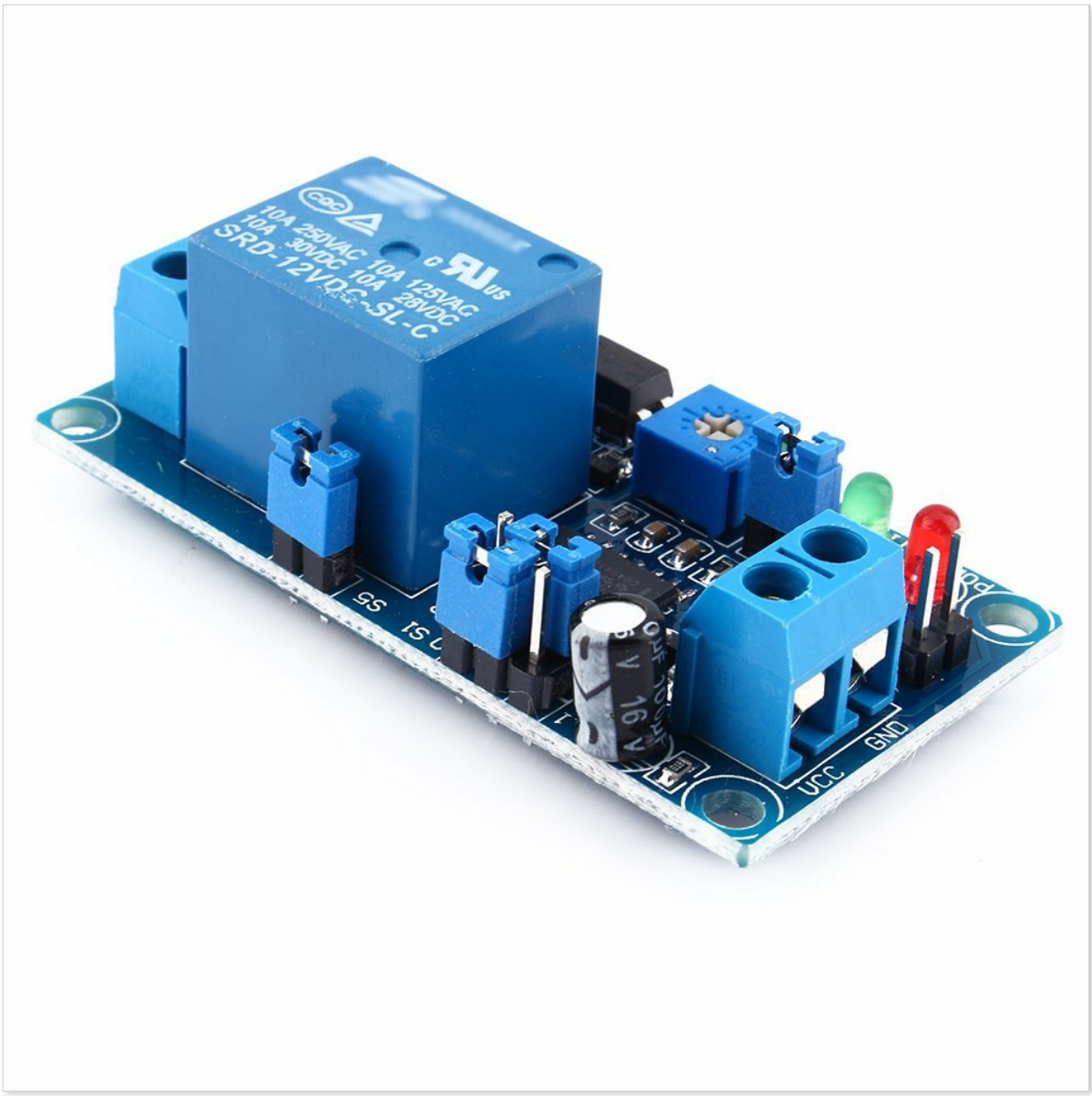

Figure 2: Yosoo 12V DC Delay Relay Module with indicated dimensions.

This image shows the Yosoo 12V DC Delay Relay Module with measurements indicating its length (5.2 cm), width (2.9 cm), and height (1.9 cm including the relay).

3. Setup and Wiring

Proper wiring is essential for the correct operation of the delay relay module. Refer to the diagram below for component identification and connection points.

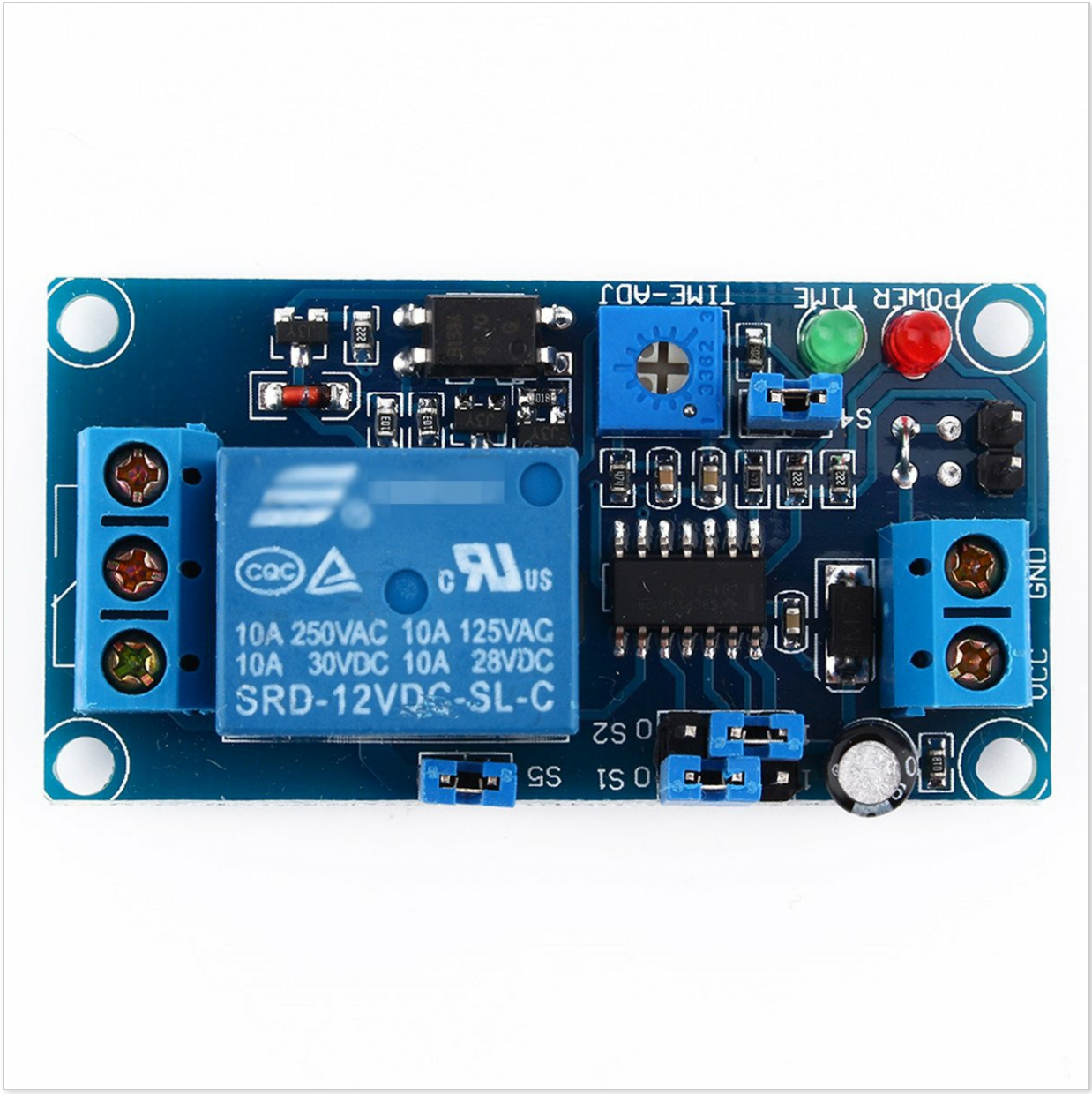

Figure 3: Top-down view of the module with key components labeled.

This image provides a top-down view of the Yosoo 12V DC Delay Relay Module, clearly showing the VCC and GND input terminals, the relay output terminals (NO, NC, COM), the 'TIME-ADJ' potentiometer, and the jumpers labeled S1, S2, and S5.

3.1 Component Identification

- **VCC:** Positive power input (12V DC).
- **GND:** Ground connection for power input.
- **Relay Output Terminals:** These are typically labeled NO (Normally Open), NC (Normally Closed), and COM (Common).
  - **COM:** Connects to one side of the load or power source.
  - **NO:** Connects to COM when the relay is activated (closed).
  - **NC:** Connects to COM when the relay is de-activated (open).
- **TIME-ADJ:** Potentiometer for fine-tuning the delay time.
- **Jumpers (S1, S2, S5):** Used to select the overall time range.

3.2 Basic Wiring

1. **Power Input:** Connect your 12V DC power supply to the VCC (positive) and GND (negative) terminals. The module includes a power reversal diode for protection against incorrect polarity.

2. **Load Connection:** Connect your device (load) to the relay output terminals. The choice between NO and NC depends on whether you want the load to be ON or OFF when the relay is in its default (de-energized) state. For example, to switch a load ON after a delay, connect one side of the load to COM and the other side to NO, with the appropriate power source for the load.

4. Operating Instructions

The module supports both delay-on and delay-off operations, with adjustable time ranges.

4.1 Time Range Selection

The module offers 8 time ranges, from 0.1 seconds to 1 hour. These ranges are selected by configuring the jumpers (S1, S2, S5). The specific configuration for each time range is not explicitly provided in the product details, but typically involves setting these jumpers in different positions (e.g., open, closed, or connected to specific pins) to define the coarse delay interval. Experimentation or consulting external resources may be necessary to determine the exact jumper settings for desired ranges.

4.2 Delay Time Adjustment

Once a time range is selected using the jumpers, the 'TIME-ADJ' potentiometer allows for fine-tuning the delay within that range. Rotate the potentiometer clockwise to increase the delay duration and counter-clockwise to decrease it.

4.3 Operating Modes (Delay On / Delay Off)

The module can be configured for different delay behaviors:

- **Delay-On Mode:** When power is applied to the VCC/GND terminals, the module waits for the set delay time. After the delay, the relay activates (COM connects to NO, disconnects from NC). This mode is suitable for applications where a device needs to start after a specific interval.
- **Delay-Off Mode:** When power is applied, the relay activates immediately (COM connects to NO). If the power input is then removed or a trigger signal is removed, the relay remains activated for the set delay time before deactivating (COM disconnects from NO, connects to NC). This mode is useful for keeping a device running for a period after its primary power or trigger is removed.

The specific trigger mechanism for delay-off (e.g., external trigger input vs. power removal) may depend on the module's internal logic. For most basic modules, delay-off is achieved by maintaining power to the module and then removing a separate trigger signal, or by the module itself timing out after its initial activation upon power-up.

5. Maintenance

The Yosoo 12V DC Delay Relay Module is designed for reliable operation with minimal maintenance. Follow these guidelines to ensure longevity:

- Keep the module clean and free from dust and debris.
- Avoid exposing the module to extreme temperatures, high humidity, or corrosive environments.
- Ensure all connections are secure to prevent intermittent operation or damage.
- Do not exceed the specified input voltage or relay load capacity.

6. Troubleshooting

If you encounter issues with your Yosoo 12V DC Delay Relay Module, refer to the following troubleshooting

steps:

- **Module not powering on:**
  - Verify that the 12V DC power supply is correctly connected to the VCC and GND terminals.
  - Check the power supply itself to ensure it is providing the correct voltage.
- **Incorrect delay time:**
  - Ensure the jumpers (S1, S2, S5) are set correctly for the desired time range.
  - Adjust the 'TIME-ADJ' potentiometer to fine-tune the delay within the selected range.
- **Relay not activating or deactivating as expected:**
  - Check the load wiring to the NO, NC, and COM terminals. Ensure it matches the desired operating mode (delay-on or delay-off).
  - Verify that the load's current and voltage requirements do not exceed the relay's capacity (250V AC 10A or 30V DC 10A).
  - Confirm that the module is receiving continuous power if operating in a delay-on mode, or that the trigger is correctly applied/removed for delay-off.
- **Confusion between Delay-On and Delay-Off:**
  - Review Section 4.3 on Operating Modes and ensure your wiring and application logic align with the intended delay behavior.

7. Warranty and Support

Specific warranty information for the Yosoo 12V DC Delay Relay Module (Model Yosoo-1322) is not provided in the product details. For warranty claims, technical support, or further inquiries, please contact the manufacturer, Yosoo, directly through their official channels or the retailer from whom the product was purchased.