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› DC 12V Timer Module User Manual

YWBL-WH YWBL-WHyq3bgrc4ug

DC 12V Timer Module User Manual

Model: YWBL-WHyq3bgrc4ug

1. INTRODUCTION

This user manual provides comprehensive instructions for the installation, operation, and maintenance of the YWBL-WH DC 12V Timer Module. This adjustable timer delay turn-off relay module is designed for various applications requiring precise timing control, ranging from 1 to 10 seconds. Please read this manual thoroughly before using the module to ensure proper functionality and safety.

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the module:

- Ensure the power supply matches the module's specified voltage (DC 12V).
- Do not exceed the maximum current rating of 10 Amps for the relay contacts.
- Disconnect power before making any wiring connections or adjustments.
- Avoid touching live electrical components.
- Install the module in a dry environment, away from moisture and extreme temperatures.
- If you are unsure about any wiring or installation steps, consult a qualified electrician.

3. PRODUCT OVERVIEW

The DC 12V Timer Module is a compact and versatile electronic component designed for delay turn-off applications. It features an adjustable timing range and a relay output for controlling external loads.

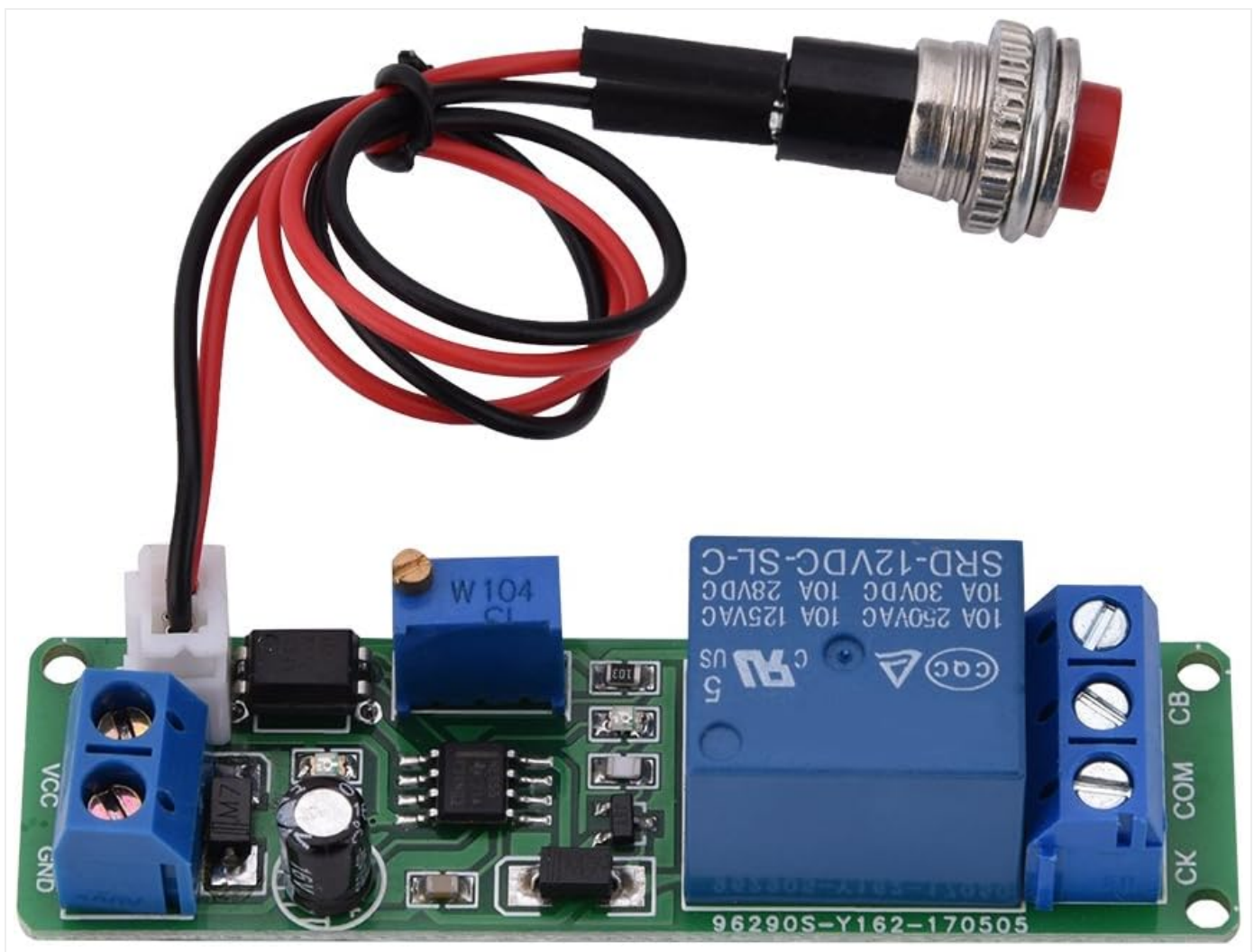


Figure 3.1: Overview of the DC 12V Timer Module with its connected push button.

Key components include:

- **Power Input Terminals (VCC, GND):** For connecting the 12V DC power supply.
- **Relay Output Terminals (CK, COM, CB):** These are the Common (COM), Normally Open (CK), and Normally Closed (CB) contacts of the relay.
- **Potentiometer (W104):** Used to adjust the delay time.
- **Trigger Button Connector:** For connecting the external momentary push button.
- **Power Indicator LED:** Illuminates when the module is powered.
- **Working Indicator LED:** Illuminates when the relay is active.

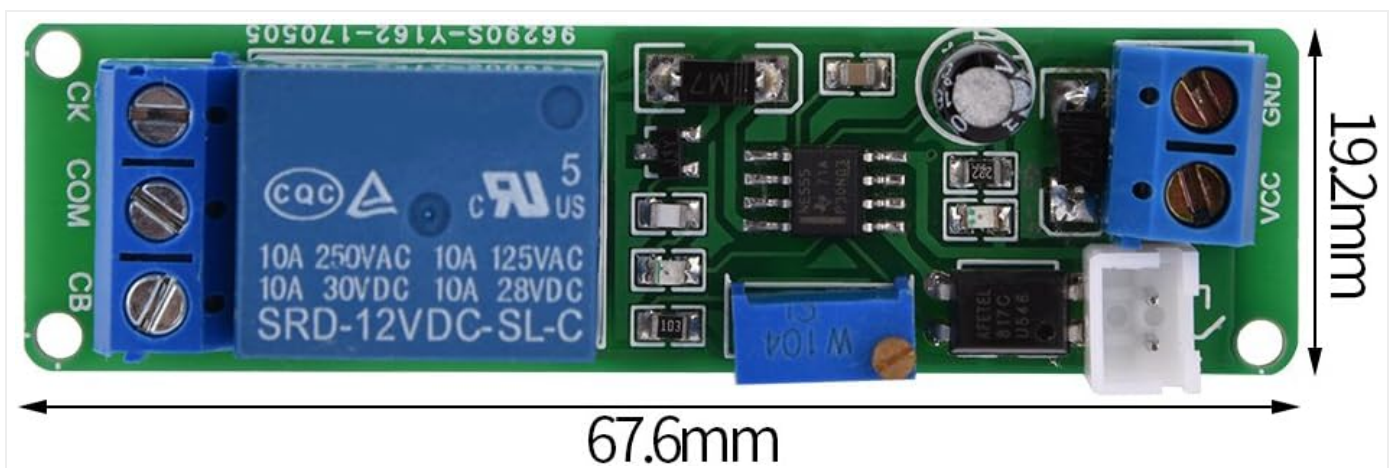


Figure 3.2: Top view of the module showing approximate dimensions (67.6mm x 19.2mm).

4. SPECIFICATIONS

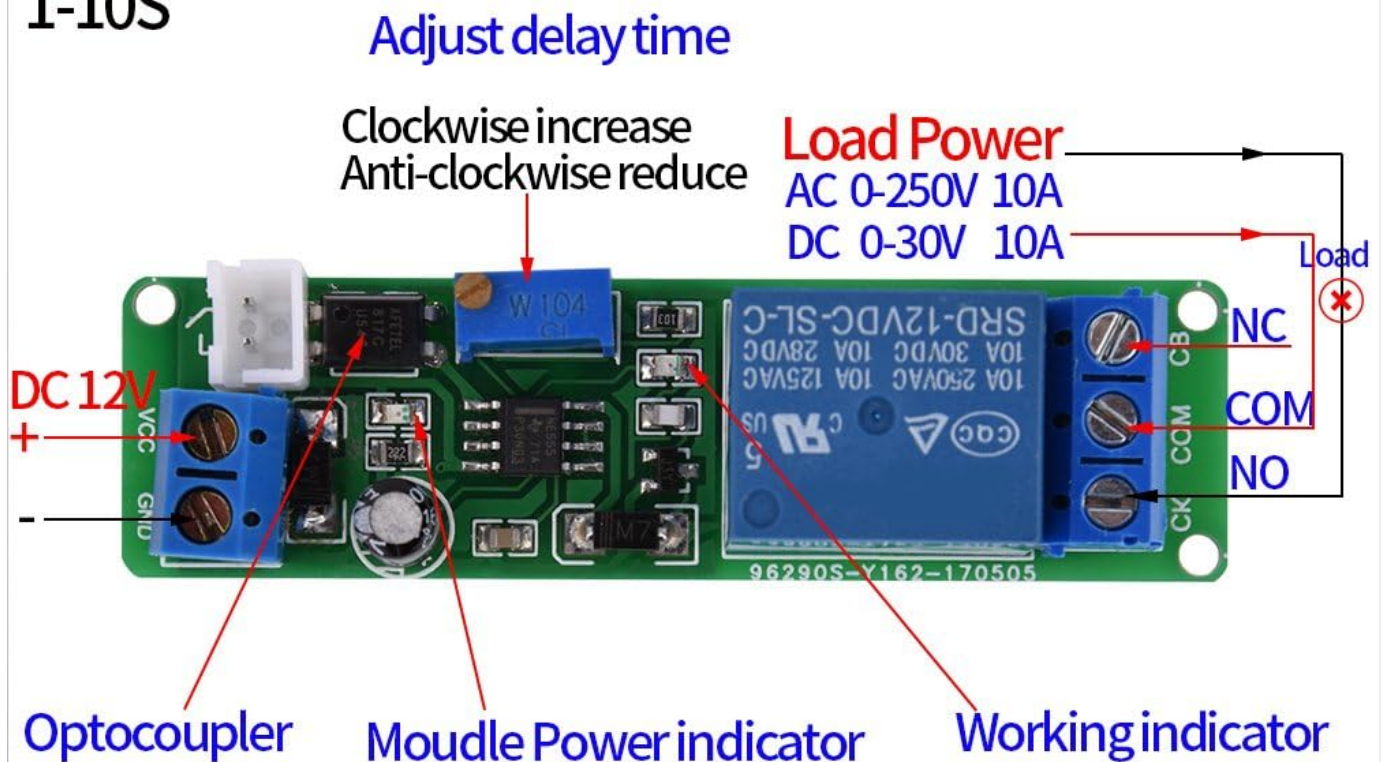
Feature	Specification
Model Number	YWBL-WHyq3bgrc4ug
Operating Voltage	DC 12V
Relay Contact Rating	10A at 250VAC / 10A at 125VAC / 10A at 30VDC / 10A at 28VDC
Adjustable Delay Time	1 to 10 seconds
Operation Mode	Adjustable Delay Turn Off
Dimensions (L x W x H)	4.06 x 2.36 x 0.99 inches (approx. 103 x 60 x 25 mm)
Item Weight	0.704 ounces (approx. 20g)
Compliance	CE, RoHS

5. SETUP AND WIRING

Proper wiring is crucial for the correct and safe operation of the timer module. Refer to the diagram below for connection details.

Trigger Delay Turn Off Relay Module

DC 12V
1-10S



Product application : can be used for robots, intelligent product development, automation equipment, PLC development, smart home, anti-theft alarm delay, electronic development, etc..

Figure 5.1: Detailed wiring diagram and component labels for the timer module.

- Power Connection:** Connect your DC 12V power supply to the VCC (positive) and GND (negative) terminals. Ensure correct polarity.
- Trigger Button Connection:** The included momentary push button connects to the dedicated 2-pin white connector on the module.
- Load Connection (Relay Output):**
 - COM (Common):** This is the common terminal for the relay. Connect one side of your load's power source (e.g., positive or negative, depending on your circuit design) to COM.
 - CK (Normally Open - NO):** When the relay is triggered, the COM terminal connects to CK. Use this if you want the load to turn ON after the trigger and then turn OFF after the delay.
 - CB (Normally Closed - NC):** When the relay is triggered, the COM terminal disconnects from CB. Use this if you want the load to turn OFF after the trigger and then turn ON after the delay.

Connect the other side of your load to the appropriate CK or CB terminal, and the remaining side of the load to the other side of your power source to complete the circuit.

Note: The terminal blocks for CK, COM, and CB are designed for small wire gauges. For larger current loads, ensure proper wire sizing and consider using pin connectors for secure attachment.

6. OPERATING INSTRUCTIONS

The module operates as a delay turn-off timer. Follow these steps for basic operation:

1. **Power On:** Apply DC 12V power to the VCC and GND terminals. The power indicator LED will light up. The relay will be in its default state (COM-CB connected, COM-CK disconnected).
2. **Triggering the Timer:** Press the momentary push button connected to the module.
3. **Relay Activation:** Upon pressing the button, the relay will activate. If wired to CK, the load will turn ON. If wired to CB, the load will turn OFF. The working indicator LED will illuminate.
4. **Delay Countdown:** The module will begin its timing countdown (1 to 10 seconds, as adjusted).
5. **Delay Completion:** After the set delay time expires, the relay will return to its original state (COM-CB connected, COM-CK disconnected). The working indicator LED will turn off.

The module is ready for another trigger cycle once the previous delay has completed.

7. ADJUSTING DELAY TIME

The delay time of the module can be adjusted using the onboard potentiometer (labeled W104). Use a small screwdriver to carefully turn the potentiometer:

- **Clockwise Rotation:** Increases the delay time.
- **Counter-clockwise Rotation:** Decreases the delay time.

The adjustable range is approximately 1 to 10 seconds. For longer delay times, it is possible to replace the capacitor or potentiometer with components of larger values, though this requires advanced electronic knowledge and is not covered in this manual.

8. APPLICATIONS

This versatile timer module is suitable for a wide range of applications, including but not limited to:

- Timer operating equipment
- Robotics projects
- Intelligent product development
- Automation equipment control
- PLC development
- Smart home systems (e.g., anti-theft alarm delay)
- Electronic development and prototyping



Video 8.1: Demonstration of the DC 12V Timer Module in operation, showcasing its delay function.

9. MAINTENANCE

The DC 12V Timer Module requires minimal maintenance. To ensure its longevity and reliable performance:

- Keep the module clean and free from dust and debris.
- Avoid exposing it to excessive moisture or corrosive substances.

- Periodically check all wiring connections to ensure they are secure.
- Do not attempt to modify the circuit board unless you have advanced electronic knowledge.

10. TROUBLESHOOTING

If you encounter issues with your timer module, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
Module does not power on (Power LED off)	No power supply, incorrect voltage, reversed polarity, faulty connection.	Verify 12V DC power supply. Check VCC and GND connections for correct polarity and secure contact.
Relay does not activate when button is pressed	Faulty trigger button, incorrect button wiring, internal module issue.	Ensure the trigger button is functioning. Check the connection of the button to the module.
Load does not turn ON/OFF as expected	Incorrect load wiring (CK/COM/CB), load requires different voltage/current, faulty load.	Review the wiring diagram (Figure 5.1) and ensure your load is connected to the correct relay terminals (CK for Normally Open, CB for Normally Closed) and that the COM terminal is properly integrated into your circuit. Verify load's power requirements.
Delay time is incorrect or not adjustable	Potentiometer setting, faulty potentiometer.	Adjust the potentiometer (W104) to set the desired delay. If adjustment has no effect, the potentiometer may be faulty.
Module behaves erratically or locks up	Unstable power supply, electrical interference, internal component issue.	Ensure a stable and clean 12V DC power supply. Isolate the module from sources of electrical noise if possible. If the issue persists, the module may be defective.

11. WARRANTY AND SUPPORT

For warranty information or technical support regarding your YWBL-WH DC 12V Timer Module, please refer to the product's purchase platform or contact the manufacturer directly. Keep your purchase receipt as proof of purchase.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question