

## Senzooe XY-WM01

# Senzooe XY-WM01 Multi-Function Trigger Delay Cycle Timing MOS Tube Control Relay Module

User Manual

## INTRODUCTION

This user manual provides detailed instructions for the Senzooe XY-WM01 multi-function trigger delay cycle timing MOS tube control relay module. The XY-WM01 is a versatile control module designed for various applications requiring precise timing, delay, and cycle control using a MOS tube output. It supports operating voltages of 5V, 12V, and 24V, making it adaptable to different power systems. Please read this manual thoroughly before operation to ensure correct usage and optimal performance.

## SAFETY INFORMATION

- Ensure the module is powered with the correct voltage (5V, 12V, or 24V DC) as specified. Incorrect voltage can damage the module.
- Disconnect power before making any wiring connections or disconnections.
- Avoid touching the module's components while it is powered on, especially the MOS tube, as it may become hot during operation.
- Do not expose the module to moisture, extreme temperatures, or corrosive environments.
- This module is designed for control applications. Ensure that the load connected to the MOS tube output does not exceed its maximum current and voltage ratings.
- If you are unsure about any wiring or operation, consult a qualified technician.

## PRODUCT OVERVIEW

The XY-WM01 module features a digital display for parameter settings and status indication, along with control buttons for easy configuration. Its MOS tube output allows for switching DC loads.



**Figure 1:** Front view of the XY-WM01 module. This image shows the module's digital display, which indicates current settings and operational status, along with the four control buttons (up, down, set, power) used for navigation and parameter adjustment.



**Figure 2:** Side view of the XY-WM01 module with wiring. This image illustrates the terminal blocks for power input and MOS tube output connections, along with the included connecting wires (red, black, yellow) for integration into a circuit.

SPECIFICATIONS

| Parameter                       | Value                                   |
|---------------------------------|-----------------------------------------|
| Model                           | XY-WM01                                 |
| Operating Voltage               | 5V, 12V, 24V DC (selectable)            |
| Output Type                     | MOS Tube Control                        |
| Maximum Switching Voltage (MOS) | 24V DC                                  |
| Operation Mode                  | Automatic (Trigger Delay, Cycle Timing) |

| Parameter            | Value                  |
|----------------------|------------------------|
| Dimensions (approx.) | 78.8mm x 42.9mm x 38mm |
| Weight (approx.)     | 40g                    |

## SETUP AND WIRING

Before connecting the module, ensure all power sources are disconnected. Refer to Figure 2 for terminal identification.

- Power Input:** Connect the positive (+) terminal of your DC power supply (5V, 12V, or 24V) to the module's VCC terminal. Connect the negative (-) terminal of your DC power supply to the module's GND terminal. Ensure the input voltage matches the module's specified operating voltage.
- Load Connection (MOS Tube Output):** The module uses a MOS tube for switching. This means it acts as a low-side switch for DC loads.
  - Connect the positive (+) terminal of your DC load (e.g., motor, LED strip) directly to the positive (+) terminal of your load's power supply.
  - Connect the negative (-) terminal of your DC load to the module's OUT terminal.
  - Connect the module's GND terminal to the negative (-) terminal of your load's power supply.

*Note: The MOS tube output is designed for DC loads up to 24V. Do not connect AC loads or loads exceeding the module's current capacity.*

- Trigger Input (Optional):** If using an external trigger, connect the trigger signal to the module's TRIG terminal. The trigger can be a positive pulse or a switch closure to GND, depending on the configured mode.

## OPERATING MODES AND PROGRAMMING

The XY-WM01 module offers multiple operating modes to suit various timing and control applications. The module is configured using the onboard buttons and the digital display.

### Button Functions:

- SET Button:** Enters/exits parameter setting mode, confirms selections.
- UP/DOWN Buttons:** Navigate through modes, adjust parameter values.
- Power Button:** Toggles power or starts/stops operation in some modes (functionality may vary by mode).

### General Programming Steps:

- Enter Mode Selection:** Press and hold the **SET** button for a few seconds until the display shows a mode code (e.g., "P-1", "P-2").
- Select Mode:** Use the **UP** and **DOWN** buttons to cycle through the available operating modes.
- Enter Parameter Setting:** Once the desired mode is displayed, briefly press the **SET** button to enter its parameter setting interface.
- Adjust Parameters:** The display will show parameters like "OP" (ON time), "CL" (OFF time), "LOP" (Loop count). Use **UP** and **DOWN** buttons to change values. Briefly press **SET** to move to the next parameter.
- Set Time Unit:** While adjusting time parameters, a short press of the **UP** or **DOWN** button might change the time unit (e.g., seconds, minutes, hours). Look for a decimal point on the display (e.g., "XXX." for seconds, "XX.X" for 0.1 seconds, "X.X.X" for minutes/seconds).
- Save Settings:** After setting all parameters for the chosen mode, press and hold the **SET** button until the display flashes and returns to the main display, indicating settings are saved.

### Common Operating Modes (Illustrative Examples):

Note: Specific mode codes and their exact functionalities may vary. Refer to the module's display for actual labels.

- **P-1 (Trigger Delay ON/OFF):**
  - **P-1.1:** Triggered, output turns ON for a set time (OP), then turns OFF.
  - **P-1.2:** Triggered, output turns OFF for a set time (CL), then turns ON for a set time (OP), then turns OFF.
  - **P-1.3:** Triggered, output turns ON for a set time (OP), then turns OFF for a set time (CL), then turns ON.
- **P-2 (Cycle Timing):**
  - **P-2.1:** Power ON, output turns ON for OP time, then OFF for CL time, repeats LOP times. If LOP is "---", it repeats indefinitely.
  - **P-2.2:** Triggered, output turns ON for OP time, then OFF for CL time, repeats LOP times.
- **P-3 (Delay ON/OFF):**
  - **P-3.1:** Power ON, output turns ON after a delay (OP).
  - **P-3.2:** Power ON, output turns ON, then turns OFF after a delay (OP).

## MAINTENANCE

- Keep the module clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Regularly check wiring connections to ensure they are secure and free from corrosion.
- Avoid placing the module in areas with high humidity or significant temperature fluctuations.
- Do not attempt to disassemble or modify the module, as this will void any potential warranty and may cause damage.

## TROUBLESHOOTING

| Problem                               | Possible Cause                                                                                                             | Solution                                                                                                                                                                                                                |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Module does not power on.             | Incorrect power supply voltage or polarity; loose power connections.                                                       | Verify power supply voltage (5V, 12V, or 24V DC) and polarity. Check all power wiring for secure connections.                                                                                                           |
| Output does not switch the load.      | Incorrect load wiring; load exceeds MOS tube capacity; module not in correct operating mode; parameters not set correctly. | Review load wiring (ensure low-side switching). Check load current/voltage against module specifications. Verify the selected operating mode and its parameters. Ensure the module is triggered if in a triggered mode. |
| Timing is inaccurate or inconsistent. | Incorrect time unit selected; power fluctuations.                                                                          | Double-check the time unit setting (seconds, 0.1 seconds, minutes). Ensure a stable power supply.                                                                                                                       |
| Module display is blank or erratic.   | Power issue; internal fault.                                                                                               | Check power supply. If power is stable and correct, and the issue persists, the module may be faulty.                                                                                                                   |

## WARRANTY AND SUPPORT

For warranty information or technical support regarding your Senzooe XY-WM01 module, please refer to the retailer or vendor from whom you purchased the product. Keep your purchase receipt as proof of purchase. Do not attempt to repair the module yourself, as this may void any applicable warranty.

## Ask a question about this manual

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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.

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