

JESSINIE XY-MP12-W

JESSINIE XY-MP12-W Motor Speed Controller User Manual

Model: XY-MP12-W

Brand: JESSINIE

1. INTRODUCTION

This manual provides detailed instructions for the JESSINIE XY-MP12-W Motor Speed Controller. This device is designed for precise control of DC motors and LED lighting, offering adjustable frequency and duty cycle, soft start/stop functions, and optional WiFi connectivity. Please read this manual thoroughly before operation to ensure proper use and to maximize the lifespan of your device.

Key Features:

- LCD display for frequency and duty cycle.
- Digital encoder for precise adjustments.
- Dual mode operation (Normal and Fine) for duty cycle accuracy.
- High current and high frequency support with low internal resistance MOS tubes.
- Configurable soft start and soft stop functions.
- Integrated start/stop button and key lock function.
- Support for 0-10V analog control.
- Optional WiFi module for remote control via mobile app.

2. PRODUCT OVERVIEW



Figure 2.1: The JESSINIE XY-MP12-W controller features an LCD display, a rotary encoder for adjustments, and an ON/OFF button. The included WiFi module allows for remote control capabilities.



Figure 2.2: Front panel of the XY-MP12-W controller, displaying the LCD screen for frequency and duty cycle, the rotary encoder, and the power button.



Figure 2.3: Internal view of the controller's circuit board, showing connection terminals for power input, PWM output, and analog control.

3. SPECIFICATIONS

Parameter	Value
Working Voltage	DC 6-30V
Operating Temperature	-10°C to 40°C
Rated Current	12A
Maximum Power	360W
Operating Frequency (Normal Mode)	1Hz - 150kHz
Operating Frequency (Fine Mode)	1Hz - 15kHz
Duty Cycle Accuracy (Normal Mode)	1% - 100% (1% accuracy)
Duty Cycle Accuracy (Fine Mode)	0.1% - 100% (0.1% accuracy)
Soft Start Time	000 - 999 seconds
Soft Stop Time	00.0 - 99.9 seconds
Analog Control Input	DC 0-10V
Product Dimensions (L x W x H)	79mm x 27mm x 43mm
Product Weight	47g

4. SAFETY INFORMATION

- **Voltage:** Ensure the input voltage is strictly within DC 6-30V. Connecting reverse polarity or AC power will cause irreversible damage to the device.
- **Current/Power:** Do not exceed the rated current of 12A or the maximum power of 360W to prevent overheating and damage.
- **Environment:** Operate the controller within the specified temperature range of -10°C to 40°C. Avoid exposure to moisture,

dust, or corrosive environments.

- **Wiring:** Always disconnect power before making any wiring changes or connections to prevent electric shock or damage to the device.
- **Ventilation:** Ensure adequate ventilation around the controller during operation.

5. SETUP AND INSTALLATION

5.1 Wiring Connections

Refer to Figure 2.3 for a visual guide to the connection terminals.

- **Power Input:** Connect your DC 6-30V power supply to the input terminals. Observe correct polarity: positive (+) to positive, negative (-) to negative.
- **Motor/LED Output:** Connect your DC motor or LED lighting to the output terminals. The controller provides a PWM signal to these terminals.
- **Analog Control (Optional):** For external analog control of the duty cycle, connect a 0-10V DC signal to the dedicated analog input terminals (0-10V and GND).
- **WiFi Module (Optional):** If using the WiFi module, connect it to the designated port on the controller. Ensure correct orientation.

5.2 Initial Power-Up

After all connections are securely made, apply power to the controller. The LCD display should illuminate, showing the current frequency and duty cycle settings.

6. OPERATING INSTRUCTIONS

6.1 Basic Operation

- **Power On/Off:** Press the yellow ON/OFF button on the front panel to toggle the power to the output.
- **Adjusting Frequency and Duty Cycle:** Rotate the digital encoder knob to change the displayed value. Press the knob briefly to switch between adjusting frequency (Hz/kHz) and duty cycle (%).
- **Normal Mode vs. Fine Mode:** The controller supports two modes for duty cycle adjustment. Normal mode offers 1% accuracy, while Fine mode provides 0.1% accuracy for more precise control. The mode can typically be switched through a menu setting (refer to advanced settings).

6.2 Advanced Settings

Access advanced settings by pressing and holding the digital encoder knob for a few seconds (exact entry method may vary, refer to on-screen prompts).

- **Setting Upper/Lower Limits:** Configure minimum and maximum values for both frequency and duty cycle. This prevents operation outside desired ranges, protecting connected devices and ensuring optimal performance.
- **Soft Start/Soft Stop:** Set the soft start time (0-999 seconds) and soft stop time (0.0-99.9 seconds). These functions gradually increase or decrease power, reducing impact current on motors and extending their lifespan.
- **Key Lock Function:** Activate the key lock function to prevent accidental changes to frequency and duty cycle settings during operation. Press and hold a specific button combination (often the ON/OFF button or encoder) to toggle this feature.
- **Analog Control:** When enabled, the controller's duty cycle can be controlled by an external 0-10V analog signal connected to the dedicated input terminals.
- **WiFi Control (Optional):** If the WiFi module is connected, download the compatible mobile application. Follow the app's instructions to pair with the controller. The app allows remote control of functions, including adjusting frequency, duty cycle, and potentially motor direction (forward, reverse, brake) if supported by your motor setup.

7. MAINTENANCE

- **Cleaning:** Keep the device clean and free from dust. Use a dry, soft cloth for cleaning. Do not use liquid cleaners or solvents.
- **Environment:** Avoid exposing the controller to moisture, direct sunlight, or extreme temperatures. Store in a dry, cool place when not in use.
- **Inspection:** Periodically check wiring connections for looseness or damage.

8. TROUBLESHOOTING

- **No Power/Display:**
 - Check power input connections.
 - Verify input voltage is within DC 6-30V.
 - Ensure correct polarity (+/-).
- **Motor Not Responding/LED Not Lighting:**
 - Verify output connections to the motor/LED.
 - Check frequency and duty cycle settings; ensure they are appropriate for your connected device.
 - Confirm the output is enabled (ON/OFF button).
 - Check if the key lock function is active.
- **Unstable Operation:**
 - Ensure the power supply is stable and provides sufficient current.
 - Check for proper wiring and secure connections.
 - Verify operating temperature is within specifications.

9. CONTACT SUPPORT

For further assistance, technical support, or inquiries regarding your JESSINIE XY-MP12-W Motor Speed Controller, please contact JESSINIE customer service through your purchase platform or the official brand website.

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.

Name

Anonymous

Email

you@example.com

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