

## MDWXDOFP UX-52

# MDWXDOFP UX-52 Intelligent Digital Display Speed Controller User Manual

Model: UX-52

## 1. INTRODUCTION

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The MDWXDOFP UX-52 Intelligent Digital Display Speed Controller is designed for precise control of AC 220V geared motors. It features a digital display for speed indication, intuitive buttons for operation, and a rotary knob for fine-tuning speed. This manual provides essential information for the safe and efficient installation, operation, and maintenance of your speed controller.

## 2. SAFETY INFORMATION

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Please read and understand all safety instructions before installing or operating this device. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Electrical Hazard:** This device operates on AC 220V. Ensure power is disconnected before making any wiring connections.
- **Qualified Personnel:** Installation and wiring should only be performed by qualified electricians or technicians.
- **Proper Grounding:** Ensure the motor and controller are properly grounded according to local electrical codes.
- **Environmental Conditions:** Do not expose the controller to moisture, extreme temperatures, or corrosive environments.
- **Load Compatibility:** Ensure the motor's power rating (25W, 40W, 60W, 90W, 120W, 250W) is compatible with the controller's specifications.

## 3. PRODUCT OVERVIEW

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The UX-52 speed controller features a user-friendly interface with a digital display and control buttons on the front panel, and a terminal block for secure wiring connections on the rear panel.



**Figure 3.1:** Front and rear view of the UX-52 Speed Controller. The front panel shows the digital display, control buttons (MODE, UP, DOWN, ENTER, REV, STOP, FWD), and a speed adjustment knob. The rear panel displays the terminal block for power and motor connections, along with control signal inputs.

### 3.1 Front Panel Controls

- **Digital Display:** Shows current speed setting or parameter values.
- **MODE Button:** Used to cycle through different operating modes or settings.
- **UP/DOWN Buttons (▲/▼):** Adjust values or navigate menus.
- **ENTER Button:** Confirms selections or enters settings.
- **REV Button:** Initiates reverse rotation of the motor.
- **STOP Button:** Halts motor operation.
- **FWD Button:** Initiates forward rotation of the motor.
- **Speed Knob:** Rotary potentiometer for continuous speed adjustment.

### 3.2 Rear Panel Connections

The rear panel features a terminal block for connecting power input and motor output. Refer to the wiring diagram in Section 4 for detailed connection instructions.

## 4. SETUP AND WIRING

Proper wiring is crucial for the safe and correct operation of the UX-52 controller. Ensure all power is disconnected before proceeding with wiring.

### 4.1 Wiring Diagram

The following diagram illustrates the typical wiring connections for the UX-52 speed controller with an AC 220V geared

motor.



**Figure 4.1:** Detailed view of the rear terminal block. Connections include: REV (Reverse signal), FWD (Forward signal), 0V (Common ground), Speed Feedback (yellow, white, green wires), N (Neutral AC 220V), L (Live AC 220V).

- **Power Input (AC 220V):** Connect the Live (L) and Neutral (N) wires from your AC 220V power supply to the corresponding terminals on the controller.
- **Motor Connections:** Connect the motor's power wires to the designated output terminals. Ensure correct phase connection for desired forward/reverse operation.
- **Speed Feedback:** Connect the speed feedback wires from the motor (typically yellow, white, green) to the corresponding terminals on the controller. This allows the controller to display and regulate speed accurately.
- **Control Signals (REV, FWD, 0V):** These terminals are for external control signals, if applicable. Connect external switches or control systems to these terminals for remote forward/reverse control. 0V is the common ground for these signals.

After all connections are made, double-check for secure and correct wiring before applying power.

## 5. OPERATING INSTRUCTIONS

Once the controller is properly wired and powered on, follow these steps to operate your motor.

### 5.1 Basic Operation

1. **Power On:** Apply AC 220V power to the controller. The digital display should illuminate.
2. **Set Speed:** Rotate the **Speed Knob** clockwise to increase motor speed and counter-clockwise to decrease it. The digital display will show the current speed setting.
3. **Start Motor (Forward):** Press the **FWD** button to start the motor in the forward direction.

4. **Start Motor (Reverse):** Press the **REV** button to start the motor in the reverse direction.
5. **Stop Motor:** Press the **STOP** button to halt motor operation.

## 5.2 Advanced Settings (MODE/UP/DOWN/ENTER)

The MODE, UP, DOWN, and ENTER buttons allow access to advanced settings and parameters. Specific functions may vary based on the firmware version. Refer to the on-screen prompts or a more detailed technical manual for advanced parameter adjustments.

- Press **MODE** to cycle through available parameters (e.g., acceleration time, deceleration time, maximum speed limit).
- Use **UP** (▲) and **DOWN** (▼) buttons to adjust the value of the selected parameter.
- Press **ENTER** to confirm the new parameter value and save it.

## 6. MAINTENANCE

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The UX-52 speed controller is designed for reliable operation with minimal maintenance. Regular checks can help ensure longevity and optimal performance.

- **Cleaning:** Keep the controller clean and free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners.
- **Connection Checks:** Periodically inspect all wiring connections to ensure they are secure and free from corrosion.
- **Ventilation:** Ensure adequate ventilation around the controller to prevent overheating.

## 7. TROUBLESHOOTING

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This section provides solutions to common issues you might encounter with the UX-52 speed controller.

Problem	Possible Cause	Solution
Controller does not power on.	No power supply; incorrect wiring; blown fuse (internal/external).	Check AC 220V power input. Verify L and N connections. Inspect for any blown fuses.
Motor does not respond to FWD/REV.	Incorrect motor wiring; motor fault; controller fault.	Verify motor connections. Ensure motor is compatible and functional. Check controller settings.
Speed display is erratic or inaccurate.	Loose speed feedback wires; faulty speed sensor in motor.	Check connections of speed feedback wires (yellow, white, green). Consult motor manual for sensor issues.
Motor runs at full speed regardless of knob.	Speed knob faulty; controller in bypass mode; internal fault.	Ensure the speed knob is properly connected. Check advanced settings for any override modes. Contact support if issue persists.

## 8. SPECIFICATIONS

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Technical specifications for the MDWXDOFP UX-52 Intelligent Digital Display Speed Controller.

- **Model:** UX-52
- **Input Voltage:** AC 220V
- **Compatible Motor Power:** 25W, 40W, 60W, 90W, 120W, 250W Geared Motors
- **Control Type:** Digital Display Speed Control

- **Product Dimensions:** 1.18 x 0.79 x 0.79 inches
- **Item Weight:** 1.76 ounces
- **Manufacturer:** MDWXDOFP

## 9. WARRANTY AND SUPPORT

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For warranty information and technical support, please contact your retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.

**Manufacturer:** MDWXDOFP

For further assistance, please refer to the contact information provided with your product packaging or visit the official MDWXDOFP website.