

ZYWUOY UX-52/003

ZYWUOY UX-52/003 AC220V 400W Multifunction Digital Motor Speed Controller User Manual

Model: UX-52/003

1. INTRODUCTION

The ZYWUOY UX-52/003 is a sophisticated AC220V digital motor speed controller designed for various industrial and scientific applications. It utilizes advanced MCU digital control technology to provide precise and stable motor speed regulation. This controller offers a range of features for enhanced performance and user convenience.

Key Features:

- Utilizes MCU digital control technology for rich functions and excellent performance.
- Features a digital display menu for convenient and quick parameter modification.
- Display magnification can be adjusted according to user needs, with automatic conversion of the display target value.
- Supports slow acceleration and slow deceleration functions.
- Can be operated via the panel or controlled by an external switch.
- The panel knob automatically corresponds to the maximum speed, providing convenient and safe adjustment and control. (Note: This function protects against locked-rotor overload but not non-locked-rotor overload.)
- Includes an operating cycle addition function.

400W



Figure 1.1: ZYWUOY UX-52/003 Motor Speed Controller with its connection cable.

2. SAFETY INSTRUCTIONS

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

- **Electrical Hazard:** Ensure the power supply is disconnected before making any electrical connections or performing maintenance.
- **Qualified Personnel:** Installation and wiring should only be performed by qualified electricians or technicians.
- **Proper Voltage:** Verify that the operating voltage of the controller (AC220V) matches your power supply.
- **Grounding:** Ensure proper grounding to prevent electric shock.
- **Overload Protection:** While the controller offers some overload protection, it is recommended to use external overload protection for the motor.
- **Environment:** Do not expose the controller to moisture, dust, corrosive gases, or extreme temperatures.

3. PACKAGE CONTENTS

Carefully unpack the box and ensure all items are present and undamaged. If any items are missing or damaged, please contact your supplier immediately.

- 1 x ZYWUOY UX-52/003 Motor Speed Controller

4. PRODUCT OVERVIEW

The UX-52/003 controller features a user-friendly front panel with a digital display, control buttons, and a speed adjustment knob. The rear panel provides terminal blocks for power input, motor connections, and external control signals.

Front Panel Controls:





Figure 4.1: Front Panel Layout.

- **Digital Display:** Shows current speed, parameters, and menu options.
- **MODE Button:** Enters/exits menu settings.
- **Up/Down Buttons (▲ / ▼):** Navigates menu options and adjusts parameter values.
- **ENTER Button:** Confirms selections and saves parameter changes.
- **REV Button:** Initiates reverse rotation.
- **STOP Button:** Stops motor operation.
- **FWD Button:** Initiates forward rotation.
- **Speed Knob:** Analog adjustment for motor speed (0-10 scale).

5. INSTALLATION

The UX-52/003 controller is designed for panel screw installation. Ensure adequate space for ventilation and access to terminals.

5.1 Mounting

- Cut an opening of 52 x 80 mm (width x height) in the desired panel.
- Insert the controller into the opening from the front.
- Secure the controller using screws through the designated mounting holes.

5.2 Wiring

Refer to the wiring diagram below and the terminal labels on the rear of the controller. Ensure all connections are secure and correct before applying power.

UX-52/103 (Programmable - Multi-function - Governor)



L, N: 220V Input U1: main line U2, Z1: start the capacitor

S1, S2: Speed detection 0V: internal ground FED/REV: external function control bit

Figure 5.1: Rear Terminal Connections.

Terminal	Description
L, N	AC 220V Power Input
U1	Motor Main Line Connection
U2, Z1	Motor Start Capacitor Connections
S1, S2	Speed Detection Input (for feedback)
0V	Internal Ground
FED/REV	External Function Control Bit (e.g., for Forward/Reverse switch)

6. OPERATION

Once properly installed and wired, the controller is ready for operation.

6.1 Basic Speed Control

1. Ensure the power supply is connected. The digital display will illuminate.
2. Turn the **Speed Knob** to the desired speed setting. The display will show the current speed.
3. Press the **FWD** button for forward rotation or the **REV** button for reverse rotation.
4. To stop the motor, press the **STOP** button.

6.2 Digital Display Menu

The digital display menu allows for advanced parameter adjustments and display magnification settings.

1. Press the **MODE** button to enter the menu. The display will show a parameter code.
2. Use the **Up/Down** (▲ / ▼) buttons to navigate through different parameters.
3. Press **ENTER** to select a parameter and view its current value.
4. Use the **Up/Down** (▲ / ▼) buttons to adjust the parameter value.
5. Press **ENTER** again to save the new value.
6. Press **MODE** to exit the menu and return to normal operation.

6.3 Slow Acceleration and Deceleration

The controller supports configurable slow acceleration and deceleration ramps. These settings can be adjusted via the digital display menu to prevent sudden motor starts or stops, which can reduce mechanical stress and improve system stability. Refer to the detailed parameter list in the full manual for specific settings.

7. MAINTENANCE

Regular maintenance ensures the longevity and reliable operation of your motor speed controller.

- **Cleaning:** Keep the controller clean and free from dust and debris. Use a soft, dry cloth for cleaning. Do not use liquid cleaners or solvents.
- **Inspection:** Periodically inspect all wiring connections for tightness and signs of wear or damage.
- **Ventilation:** Ensure that the ventilation openings are not obstructed to prevent overheating.
- **Power Disconnection:** Always disconnect power before performing any maintenance or inspection.

8. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with the UX-52/003 motor speed controller.

Problem	Possible Cause	Solution
Controller does not power on.	No power supply; incorrect wiring.	Check power connections (L, N terminals). Ensure AC220V is supplied.
Motor does not run.	Incorrect motor wiring; motor fault; speed knob at zero; STOP button engaged.	Verify motor connections (U1, U2, Z1). Check motor functionality. Adjust speed knob. Press FWD/REV.
Motor speed is erratic or incorrect.	Speed detection wiring issue (S1, S2); incorrect parameter settings.	Check S1/S2 connections. Review and adjust speed-related parameters in the digital menu.
Overload protection triggers frequently.	Motor overloaded; locked rotor condition.	Reduce motor load. Check for mechanical obstructions. Ensure motor is suitable for the application.

9. SPECIFICATIONS

Detailed technical specifications for the ZYWUOY UX-52/003 Motor Speed Controller.

UX-52/003 Programmable multi-function governor
operating voltage 220V 50HZ/60HZ

Rated power 6-400W

Adjustment range 90-1400r/min



Figure 9.1: Controller Dimensions.

Parameter	Value
Product Model	UX-52/003
Operating Voltage	110-240V AC
Frequency	50Hz / 60Hz
Rated Power	Up to 400W (60W, 120W, 300W, 400W variants)
Adjustment Range	90-1400 RPM

Parameter	Value
Dimensions (L x W x H)	60 x 100 x 78 mm
Opening Size (for panel mount)	52 x 80 mm
Installation Method	Panel screw installation
Item Weight	230 g

10. WARRANTY AND SUPPORT

Information regarding product warranty and customer support is not available in the provided product details. Please refer to the product packaging or contact the seller/manufacturer directly for warranty terms and support inquiries.

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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