

## Ejoyous DC 12-60V 40A

# Ejoyous DC 12-60V 40A Motor Speed Controller Instruction Manual

## 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of the Ejoyous DC 12-60V 40A Motor Speed Controller. This device is designed to control the speed and direction (forward/reverse/stop) of DC brush motors within the specified voltage and current ranges. Please read this manual thoroughly before use to ensure safe and efficient operation.

## 2. SAFETY INFORMATION

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- Always disconnect power before making any wiring connections or performing maintenance.
- Ensure the input voltage is within the specified range of DC 12-60V. Exceeding this range can damage the controller.
- Do not exceed the maximum output current of 40A.
- Ensure proper ventilation to prevent overheating.
- Keep the device away from water, moisture, and flammable materials.
- Only qualified personnel should perform installation and wiring.
- Verify all connections are secure before applying power.

## 3. PRODUCT OVERVIEW

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The Ejoyous DC Motor Speed Controller features a robust design for reliable performance. It includes a speed control knob and a three-position switch for forward, reverse, and stop functions.



Figure 1: Front view of the Ejoyous DC Motor Speed Controller.

The controller is housed in a protective case that helps dissipate heat and protects the internal circuitry.

#### 4. SPECIFICATIONS

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Feature	Specification
Supply Voltage	DC 12-60V
Output Current	40A (Max)
Control Method	PWM (Pulse Width Modulation)
Rotation Control	Forward / Reverse / Stop
Dimensions (L x W x H)	99mm x 60mm x 90mm (3.9in x 2.36in x 3.54in)
Mounting Size	81mm x 52mm (3.19in x 2.05in)
Material	Copper (internal components), Plastic (casing)
Display Type	Analogue (knob markings)



Figure 2: Product dimensions.

## 5. SETUP AND INSTALLATION

Follow these steps for proper installation and wiring:

1. **Mounting:** Secure the controller using the designated mounting holes. Refer to the mounting size in the specifications.
2. **Power Connection:** Connect your DC power supply to the terminals labeled **+POWER-**. Ensure correct polarity: positive (+) to +POWER and negative (-) to -POWER. The input voltage must be between 12V and 60V DC.
3. **Motor Connection:** Connect your DC brush motor to the terminals labeled **+MOTOR-**. Ensure correct polarity for desired initial rotation direction. If the motor rotates in the opposite direction, reverse the motor connections.
4. **Verify Connections:** Double-check all wiring connections for security and correct polarity before applying power. Loose connections can cause damage or malfunction.



Figure 3: Wiring terminals for power input and motor output.

## 6. OPERATING INSTRUCTIONS

Once the controller is properly installed and wired, follow these steps to operate your DC motor:

1. **Apply Power:** Turn on your DC power supply. The controller is now ready for operation.
2. **Set Rotation Direction:** Use the three-position switch located at the bottom of the front panel to select the desired motor direction:
  - **UP position:** Forward rotation.
  - **MIDDLE position:** Stop.

- **DOWN position:** Reverse rotation.
3. **Adjust Speed:** Rotate the central knob labeled 'SPEED CONTROL' to adjust the motor's speed. Turn the knob towards 'High' for increased speed and towards 'Low' for decreased speed. The markings (10, 20, 30, etc.) indicate relative speed levels.
  4. **Stopping the Motor:** To stop the motor, move the three-position switch to the middle position.



Figure 4: Speed control knob and direction switch.

## 7. MAINTENANCE

The Ejoyous DC Motor Speed Controller is designed for durability and requires minimal maintenance. To ensure optimal performance and longevity:

- Keep the controller clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Ensure the operating environment is dry and free from excessive moisture or corrosive substances.
- Periodically check all wiring connections to ensure they remain tight and secure.
- Do not attempt to open the casing or modify the internal circuitry, as this will void any potential warranty and may cause damage.

## 8. TROUBLESHOOTING

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If you encounter issues with your motor speed controller, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Motor does not run	No power supply; Incorrect wiring; Faulty motor; Direction switch in 'Stop' position.	Check power supply and connections; Verify wiring polarity; Test motor separately; Move direction switch to 'Forward' or 'Reverse'.
Motor runs at full speed, cannot be adjusted	Speed control knob faulty; Internal circuit issue.	Ensure knob is not stuck; Contact support if issue persists.
Motor runs in wrong direction	Incorrect motor wiring polarity.	Reverse the motor connections (+MOTOR-).
Controller overheats	Overload; Insufficient ventilation; Short circuit.	Reduce motor load; Ensure adequate airflow around the controller; Check for short circuits in wiring.

If the problem persists after attempting these solutions, please contact customer support.

## 9. WARRANTY AND SUPPORT

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For warranty information or technical assistance, please refer to the product packaging or contact Ejoyous customer support through your purchase platform. Please have your product model number (DC 12-60V 40A Motor Speed Controller) and purchase details ready when contacting support.