

YIYIBYUS WMTCE

YIYIBYUS Electric Gear Motor WMTCE Instruction Manual

Model: WMTCE

1. PRODUCT OVERVIEW

This manual provides instructions for the YIYIBYUS 110V 6W AC Single Phase Gear Reduction Motor, Model WMTCE. This unit includes a gear motor, a reducer, and an adjustable speed controller, designed for stable and efficient operation across various applications. Key features include:

- **Stable Operation:** Designed for consistent performance with reduced noise.
- **Adjustable Speed:** The included governor allows for variable speed control from 0 to 450 RPM.
- **Durable Construction:** Features heat resistance, low noise, and high-quality components for extended service life.
- **Wide Application:** Suitable for use in packaging, printing, textile, dyeing, chemical, food, medical, pharmaceutical, and various other industrial and automated machinery.

2. PRODUCT COMPONENTS

The YIYIBYUS Electric Gear Motor system consists of three primary components:

- **Gear Motor:** The main power unit.
- **Reducer:** An integrated component that reduces the motor's output speed and increases torque.
- **Speed Controller:** Allows for precise adjustment of the motor's rotational speed.

3 parts



motor



reducer



speed
controller

Figure 2.1: The three main components of the YIYBYUS Electric Gear Motor system: the motor, the reducer, and the speed controller.

Internal components are designed for efficiency and durability:

- **All Copper Coil:** Stator and rotor parts are made of pure copper coil, tested for durability.
- **Rotor with Ball Bearings:** Equipped with ball bearings at both ends for low friction and reduced temperature.
- **Heat Sink:** Built-in fan fin at the motor tail ensures smooth exhaust and effective heat dissipation.

Fine accessories

integrated reducer, heat treatment process,
improve gear wear resistance

All copper coil

stator and rotor parts of pure copper coil,
SKT test through durability test



Heat sink

motor tail exhaust smoothly,
built-in fan heat sink,
effective heat dissipation

Rotor

The rotor is equipped with
ball bearings at both ends.
The friction is small and the
temperature of friction is low.

Figure 2.2: Exploded view illustrating the internal components, including the copper coil, rotor, and heat sink.

01

Motor tail exhaust smoothly,
built-in fan fin, effective heat dissipation.



Figure 2.3: Detail of the motor's heat sink, designed for efficient cooling.

The reducer features a keyway for secure shaft installation.

03

The keyway is equipped with a fixed key pin, which is fixed and installed according to the shape of the keyway.



Figure 2.4: The keyway on the reducer's output shaft, used for secure attachment.

3. INSTALLATION AND SETUP

3.1 Mounting

Ensure the motor and reducer are securely mounted to a stable surface. Refer to the dimension diagram for appropriate mounting hole spacing and overall size for your application.

6W size

COMMODITY PARAMETERS



Figure 3.1: Dimensions of the 6W motor and reducer for mounting and integration.

3.2 Wiring Procedure

Follow these steps carefully for proper electrical connection:

1. **Connect Motor to Governor:** Align the red output line from the motor with the red line of the governor.
2. **Prepare Speed Controller:** Before applying power, turn the governor knob fully to the left (minimum speed setting). Press the switch to illuminate the indicator light. Do not remove the 1.3 connecting wire.
3. **Power Connection:** After adjusting the knob, connect the power supply as follows:
 - Line 1 (COM): Keep line 1 still.
 - Line 2 (CW): For clockwise rotation.
 - Line 3 (CCW): For counter-clockwise rotation. To reverse direction, change this line after power is off.
 - Line 4: Connect to AC 110V power supply.
 - Line 5: Connect to AC 110V power supply.
 - Line 6 (FG): Ground wire.

Wiring procedure



Figure 3.2: Step-by-step wiring procedure for the motor and speed controller.

WARNING: Ensure all power is disconnected before performing any wiring or installation to prevent electrical shock.

4. OPERATING INSTRUCTIONS

4.1 Powering On

After ensuring all connections are secure and correct, apply power to the unit. The indicator light on the speed controller should illuminate.

4.2 Adjusting Speed

The speed controller allows for variable speed adjustment. Rotate the knob on the speed controller to increase or decrease the motor's RPM. Turning the knob towards 'High' will increase speed, and towards 'Low' will decrease speed.

The motor can achieve speeds from 0 to 450 RPM.

4.3 Changing Rotation Direction

To change the motor's rotation direction (Clockwise/Counter-Clockwise), you must first disconnect power. Then, refer to the wiring diagram (Figure 3.2) and swap the connections for Line 2 (CW) and Line 3 (CCW). Reapply power after making the change.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your YIYIBYUS Electric Gear Motor.

- **Cleaning:** Keep the motor and speed controller free from dust and debris. Use a soft, dry cloth for cleaning. Ensure the motor's heat sink area (Figure 2.3) is clear for proper ventilation.
- **Connection Inspection:** Periodically check all electrical connections to ensure they are tight and free from corrosion.
- **Environmental Conditions:** Operate the motor within its specified environmental conditions. Avoid excessive moisture, dust, or extreme temperatures.
- **Load Management:** Do not exceed the motor's rated load and torque specifications to prevent premature wear or damage.

6. TROUBLESHOOTING

If you encounter issues with your motor, refer to the following troubleshooting guide:

- **Motor Not Starting:**
 - Check power supply: Ensure the unit is receiving 110V AC power.
 - Inspect wiring: Verify all connections are secure according to the wiring diagram (Figure 3.2).
 - Speed controller setting: Ensure the speed knob is not set to 'Low' or 'Off'.
- **Incorrect or Unstable Speed:**
 - Adjust speed controller: Slowly rotate the speed knob to find the desired RPM.
 - Check load: Ensure the motor is not overloaded, which can affect speed stability.
 - Power fluctuations: Verify stable input voltage.
- **Unusual Noise or Vibration:**
 - Mounting: Check if the motor and reducer are securely mounted. Loose mounting can cause vibration.
 - Load alignment: Ensure the load is properly aligned with the motor shaft.
 - Obstructions: Check for any foreign objects obstructing the motor's rotation or cooling fan.

If problems persist after following these steps, please contact customer support.

7. SPECIFICATIONS

Parameter	Value
Brand	YIYIBYUS
Model Number	WMTCE
Rated Voltage	AC 110V
Rated Speed	0-450 RPM (Adjustable)
Reduction Ratio	1:3 (3K)
Power Phase	Single-phase
Horsepower	6 Watts
Shaft Diameter	12mm
Torque (at full speed)	2.2 Nm
Item Weight	10 Kilograms
Included Components	1 * Gear Motor, 1 * Speed controller, 1 * Reducer

8. WARRANTY AND SUPPORT

Your YIYIBYUS Electric Gear Motor comes with dedicated customer support.

- **Customer Service:** For any concerns or assistance, please contact our customer support team. We offer 24-hour email support.
- **Product List:** The package includes 1 Gear Motor, 1 Speed Controller, and 1 Reducer.

We are committed to providing assistance and ensuring your satisfaction with our product.

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