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Hyuduo Hyuduou1y305w2oi-05

Hyuduo Worm Gear Motor Instruction Manual

Model: Hyuduou1y305w2oi-05

1. Introduction

This manual provides essential information for the safe and efficient use of your Hyuduo Worm Gear Motor. Please read these instructions carefully before installation and operation. Keep this manual for future reference.

The Hyuduo Worm Gear Motor is a high-torsion micro speed reduce turbine electric gearbox motor designed for various applications requiring controlled rotational movement. It features a reversible 8mm shaft and operates at 12V.



Figure 1: Overview of the Hyuduo Worm Gear Motor.

2. Safety Information

WARNING: Electrical components can cause injury or damage if not handled correctly. Always follow safety guidelines.

- Ensure the power supply matches the motor's voltage (12V DC).
- Disconnect power before making any wiring connections or performing maintenance.
- Avoid touching moving parts during operation.
- Do not expose the motor to excessive moisture or extreme temperatures.
- Ensure proper ventilation to prevent overheating.
- If the motor exhibits unusual noise, heat, or performance, disconnect power immediately and inspect.

3. Product Features

- **High Torsion:** Designed for applications requiring significant rotational force.

- **Reversible Rotation:** Motor direction can be changed by altering wiring connections.
- **Durable Construction:** Features a 31mm high-quality copper tube motor and metal gears for impact resistance and long life.
- **Wear Resistance:** Ball bearing design enhances shaft durability.
- **Compact Design:** The reducer output shaft is arranged vertically with the motor shaft, resulting in a relatively short overall motor output, suitable for installations with specific space requirements.
- **Low Noise:** Engineered for quiet operation.



Figure 2: Internal view showing copper tube motor, copper turbine worm, and ball bearing.



Figure 3: Exposed view of the motor's impact-resistant metal gears.

4. Specifications

Attribute	Value
Brand	Hyuduo
Model Number	Hyuduou1y305w2oi-05
Voltage	12V DC
Speed	30 RPM (Other RPM options available: 400, 200, 130, 50, 20, 12, 10 RPM)
Shaft Diameter	8mm
Product Dimensions	12 x 4 x 5 cm

Item Weight	0.1 kg
Material	Copper tube motor, zinc alloy case, metal gears

Note: Specific performance characteristics like rated torsion, rated current, maximum torsion, and stop current vary by RPM variant. Refer to product packaging or supplier for detailed specifications of your specific RPM model.



Figure 4: Dimensional drawing of the Hyuduo Worm Gear Motor.

5. Setup and Installation

Before installation, ensure all components are present and undamaged. Disconnect power from the circuit where the motor will be installed.

1. **Mounting:** Securely mount the motor using appropriate fasteners through the mounting holes on the gearbox. Ensure the mounting surface is stable and can support the motor's weight and operational forces.
2. **Shaft Connection:** Connect the 8mm output shaft to your application's mechanism. Ensure the connection is firm and properly aligned to prevent undue stress on the shaft or motor.
3. **Wiring:** The motor comes with two wires (typically red and black). Connect these to your 12V DC power source.
4. **Polarity:** The motor's rotation direction depends on the polarity of the connected wires.
    - Connecting red to positive (+) and black to negative (-) will result in one direction of rotation.
    - Reversing the polarity (red to negative (-), black to positive (+)) will reverse the motor's rotation direction.
5. **Testing:** After all connections are made, apply power briefly to test the motor's operation and direction. Observe for any unusual noises or vibrations.

6. Operating Instructions

The Hyuduo Worm Gear Motor is designed for continuous or intermittent operation within its specified voltage and load

limits.

1. **Power On:** Apply 12V DC power to the motor. The motor will begin to rotate in the direction determined by the wiring polarity.
2. **Direction Change:** To reverse the motor's direction, disconnect power, then reverse the polarity of the power supply connections to the motor wires. Reapply power.
3. **Load Management:** Avoid exceeding the motor's rated torsion and current limits to prevent damage and ensure longevity. Excessive load can lead to overheating and premature failure.
4. **Environmental Conditions:** Operate the motor within suitable environmental conditions, avoiding excessive dust, moisture, or temperatures outside its operational range.

7. Maintenance

Regular maintenance helps ensure the longevity and optimal performance of your worm gear motor.

- **Cleaning:** Periodically clean the exterior of the motor to prevent dust and debris buildup, which can impede cooling. Use a dry, soft cloth. Do not use solvents or abrasive cleaners.
- **Inspection:** Regularly inspect the motor for any signs of wear, damage, or loose connections. Check the shaft for smooth rotation and ensure mounting is secure.
- **Lubrication:** The internal gears are typically pre-lubricated for life. Avoid disassembling the gearbox unless absolutely necessary, as this can compromise the lubrication and sealing. If disassembly is required by a qualified technician, re-lubricate with appropriate gear grease.
- **Wiring Check:** Ensure all wiring connections remain tight and free from corrosion.

8. Troubleshooting

If you encounter issues with your Hyuduo Worm Gear Motor, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Motor does not run	No power supply, incorrect wiring, motor overload, internal fault.	Check power source and connections. Verify correct voltage. Reduce load if overloaded. If problem persists, contact support.
Motor runs slowly or with reduced power	Insufficient voltage, excessive load, internal friction.	Ensure stable 12V supply. Reduce mechanical load. Inspect for obstructions.
Unusual noise during operation	Misalignment, worn gears, foreign objects, loose mounting.	Check mounting and shaft alignment. Inspect for debris. If noise persists, internal components may be worn; professional inspection recommended.
Motor overheats	Continuous overload, insufficient ventilation, prolonged operation at high current.	Reduce load. Ensure adequate airflow around the motor. Allow for cooling periods if operating continuously under heavy load.

9. Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact Hyuduo customer service. Keep your purchase receipt as proof of purchase.

Manufacturer Contact Information: Wu han shi, Hu bei sheng 430061,CN

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