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NQBRPZQDZ

Generic QS138 70H 3000W V3 Mid Drive Motor User Manual

Model: QS138 70H 3000W V3 (NQBRPZQDZ)

1. Introduction

This manual provides essential information for the safe installation, operation, and maintenance of your Generic QS138 70H 3000W V3 Mid Drive Motor. This high-performance Permanent Magnet Synchronous Motor (PMSM) is designed for electric motorcycles, mopeds, and dirt bikes, offering significant torque output through its internal 1:2.35 reduction gears.

2. Safety Information

WARNING: Failure to follow these safety instructions may result in electric shock, fire, serious injury, or death.

- **Professional Installation Recommended:** Installation should be performed by a qualified technician with experience in electric vehicle systems.
- **Electrical Safety:** Always disconnect the battery power before performing any installation, maintenance, or inspection. High voltage systems can be lethal.
- **Mechanical Safety:** Ensure all mounting hardware is securely fastened. Moving parts can cause injury.
- **Heat:** The motor can become very hot during operation. Allow it to cool before handling.
- **Environment:** Do not expose the motor to excessive moisture, dust, or corrosive substances unless specifically rated for such conditions.
- **Read All Instructions:** Familiarize yourself with this manual and any accompanying controller manual before proceeding.

3. Package Contents

Please check the package contents upon receipt. If any items are missing or damaged, contact your supplier immediately.

- QS138 70H 3000W V3 Mid Drive Motor (with integrated reduction gears)
- Motor phase cables (typically 3 thick cables)
- Hall sensor and temperature sensor wiring harness
- Mounting hardware (may vary, inspect package)

4. Setup and Installation

Proper installation is crucial for the performance and longevity of the motor. Refer to your vehicle's specific frame design

and the motor controller's manual for detailed wiring diagrams and mounting procedures.

4.1 Mounting the Motor

Securely mount the motor to the vehicle's frame using appropriate brackets and hardware. Ensure the motor is aligned correctly with the drive chain/belt system. All bolts must be tightened to the manufacturer's recommended torque specifications to prevent loosening due to vibration.



Figure 1: Side view of the QS138 70H 3000W V3 Mid Drive Motor, showing the main body, cooling fins, and the attached orange phase cables with terminal lugs, along with a white connector for sensor wires.

4.2 Electrical Connections

Before making any electrical connections, ensure the battery is disconnected.

1. **Phase Wires:** Connect the three thick motor phase wires (typically orange, yellow, blue, or green) to the corresponding phase outputs on your motor controller. Ensure a secure, low-resistance connection.
2. **Hall Sensor Wires:** Connect the smaller Hall sensor wire harness (usually a 5 or 6-pin connector) to the dedicated Hall sensor input on your motor controller. Ensure correct pin alignment.

3. **Temperature Sensor (if applicable):** Connect the temperature sensor wire (often a single or two-pin connector) to the controller's temperature input if your controller supports this feature.
4. **Grounding:** Ensure proper grounding of the motor and controller as per your vehicle's electrical system design.



Figure 2: Angled view of the QS138 70H 3000W V3 Mid Drive Motor, highlighting the output shaft with a keyway, mounting bolt locations, and the robust construction of the motor housing.

After all connections are made, double-check them for correctness and security before reconnecting the battery.

5. Operating Instructions

The operation of the QS138 70H 3000W V3 motor is managed by an external motor controller (not included). Refer to your motor controller's user manual for specific operating procedures, throttle calibration, and parameter settings.

- **Initial Power-Up:** After installation, perform a low-power test to ensure the motor spins correctly and smoothly in the desired direction.
- **Controller Settings:** Configure your motor controller with the correct motor parameters (pole pairs, current limits,

voltage limits, etc.) to match the QS138 70H 3000W V3 motor. Incorrect settings can damage the motor or controller.

- **Thermal Management:** Monitor motor temperature, especially during demanding operation (e.g., steep climbs, heavy loads). Excessive heat can reduce motor lifespan.

6. Maintenance

Regular maintenance ensures optimal performance and extends the lifespan of your motor.

- **Visual Inspection:** Periodically inspect the motor for any signs of damage, loose connections, or excessive wear. Check for cracks in the housing or frayed wires.
- **Mounting Security:** Verify that all mounting bolts are tight and secure.
- **Cleaning:** Keep the motor free from dirt, mud, and debris. Use a soft, dry cloth or compressed air to clean the exterior. Avoid using high-pressure water jets directly on the motor.
- **Gearbox (Internal):** The internal reduction gears are typically sealed and require no user maintenance. If unusual noises or performance issues arise, professional inspection may be required.
- **Cable Integrity:** Check all electrical cables for chafing, cuts, or corrosion.

7. Troubleshooting

If you encounter issues with your motor, refer to the following common troubleshooting steps. Always ensure safety precautions are followed before attempting any diagnosis or repair.

Symptom	Possible Cause	Solution
Motor does not spin	No power to controller, faulty controller, disconnected motor phase wires, faulty Hall sensors.	Check battery connection and voltage. Verify controller is powered. Inspect all motor phase and Hall sensor connections. Consult controller manual for diagnostic codes.
Motor spins roughly or makes unusual noise	Incorrect phase wire connection, damaged Hall sensors, internal motor damage, controller misconfiguration.	Verify phase wire order (try swapping two phase wires if motor spins in wrong direction or roughly). Check Hall sensor connections. Review controller settings. If noise persists, professional inspection is recommended.
Motor overheats	Excessive load, insufficient cooling, incorrect controller current limits, prolonged high-power operation.	Reduce load. Ensure adequate airflow around the motor. Adjust controller current limits to be within motor specifications. Allow motor to cool down between demanding uses.

If problems persist after troubleshooting, contact your supplier or a qualified service technician.

8. Specifications

Model	QS138 70H 3000W V3
Motor Type	Permanent Magnet Synchronous Motor (PMSM)
Rated Power	3000W

Internal Reduction Ratio	1:2.35
Weight	Approximately 14 kg
Dimensions (Length)	Approximately 215 mm
Application	Electric Motorcycle, Moped, Dirtbike
Manufacturer Part Number	QS138 V3 (as per product description) / NQBRPZQDZ (as per item model number)

9. Warranty and Support

For warranty information, please refer to the terms and conditions provided by your original point of purchase or contact the seller directly. Keep your proof of purchase for any warranty claims.
For technical support, troubleshooting assistance beyond this manual, or spare parts inquiries, please contact the retailer or manufacturer from whom you purchased this product.

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