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› doinal 2000W 48V Brushless Motor Kit Instruction Manual

doinal 48V 2000W No Bracket

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Model: 48V 2000W No Bracket | Brand: doinal

1. INTRODUCTION

This manual provides essential information for the safe and efficient installation, operation, and maintenance of your doinal 2000W 48V Brushless Motor Kit. Please read all instructions carefully before use to ensure proper function and longevity of the product. This kit is designed for electric scooter conversion, mid-drive motor applications, electric motorcycles, and electric go-karts.

BEEP ALARM

1.1 During normal startup, the buzzer will sound once and then stop.

1.2 If a continuous beep is heard, check whether both the brake and throttle are engaged simultaneously.

This feature can be used to verify the status of the brake and throttle: the buzzer will sound when both are pressed and stop when either is released.

1.3 If the pattern consists of two short beeps followed by one long beep, repeating cyclically, it indicates that the controller is in self-learning mode. Proceed with the self-learning operation steps to complete the process.

1.4 If the pattern consists of two short beeps, a brief pause, and then one short beep, repeating cyclically, it indicates a controller program verification failure. In this case, the program must be upgraded again.

1.5 If the pattern consists of four short beeps, one long beep, and then five short beeps, repeating cyclically, it indicates that the upgraded program is incompatible with the controller. Check whether the program matches the model number on the controller's label. If not, locate the correct program and perform the upgrade again.

1.6 If the buzzer sounds between 1 and 15 times, the number of beeps corresponds to a specific fault. Refer to the following fault table for details.

Beep Count	Reason		
1	Motor Hall Sensor Fault	8	Controller Over-Temperature
2	Current Protection Restart	9	Phase Current Sudden Change
3	Throttle Pedal Fault	10	Phase Current Zero Point Fault
4	Phase Current Overflow	11	Phase Wire Short Circuit
5	Voltage Fault	12	Line Current Zero Point Fault
6	Anti-Theft Alarm Signal	13	MOSFET Upper Bridge Fault
7	Motor Over-Temperature	14	MOSFET Lower Bridge Fault
		15	MOE Peak Line Current Protection

(If you find an error but don't know how to solve it, please let us know)

Figure 1: Examples of applications for the doinal 2000W 48V Brushless Motor Kit.

2. PRODUCT OVERVIEW

The doinal 2000W 48V Brushless Motor Kit includes a high-performance brushless DC motor, a sine wave controller, a half-twist throttle with voltage display, a T8F sprocket, and a T8F chain. This kit is engineered for efficiency and durability.

2.1 Key Components

- **48V 2000W Brushless Motor:** Features a pure copper core, high efficiency, and high-temperature resistance.
- **45A Sine Wave Controller:** Equipped with a self-learning function and is programmable.
- **Half Twist Throttle:** Includes an integrated voltage display for monitoring battery status.
- **T8F Sprocket and Chain:** Essential for power transmission.

BRUSHLESS DC MOTOR

- 6MM² PHASE WIRE
- FORWARD & REVERSE
- TEMPERATURE SENSING
- CAR WATERPROOF CABLES



Doinal

Why Choose us?

- Doinal is a professional design, development, production of high quality electric bike, motorcycle parts enterprise.
- We focus on the motor industry for nearly ten years, adhering to the purpose of independent innovation, service first, enjoy a good reputation at home and abroad

Brushless Motor Kit

- 1x Brushless Motor
- 1x Fardrive Controller
- 1x LED Throttle with Key
- 1x T8F Sprocket
- 1x T8F Chain

Suitable for Electric Go Kart Kit, Electric Scooter Motor Kit, E-Motorcycle, DIY

Figure 2: Motor with detachable heat sink housing and key specifications.



Figure 3: Internal view of the motor showing copper core.



Figure 4: Motor with heat dissipation holes.



Figure 5: Sine Wave Controller.

2.2 Product Video

3. SAFETY INFORMATION

Always prioritize safety when working with electrical components and machinery. Failure to follow safety guidelines can result in injury or damage to the product.

- Ensure all power is disconnected before performing any installation, maintenance, or troubleshooting.
- Wear appropriate personal protective equipment (PPE), including safety glasses and gloves.
- Verify all wiring connections are secure and correctly insulated to prevent short circuits.
- Do not operate the motor kit in wet conditions unless all components are specifically rated for such environments.
- Keep hands and loose clothing away from moving parts, such as the chain and sprocket, during operation.
- This motor kit is intended for off-road use only. Always check and comply with local laws and regulations regarding electric vehicle use.

4. SETUP AND INSTALLATION

Careful installation is crucial for the optimal performance and safety of your motor kit. Follow these steps for proper setup.

4.1 Motor Installation

- The motor features installation holes suitable for M6 screws. Ensure a secure mounting to your vehicle's frame.
- Mount the motor in a location that allows for proper chain alignment and heat dissipation.

**THE INSTALLATION
HOLE IS SUITABLE
FOR M6 SCREWS**

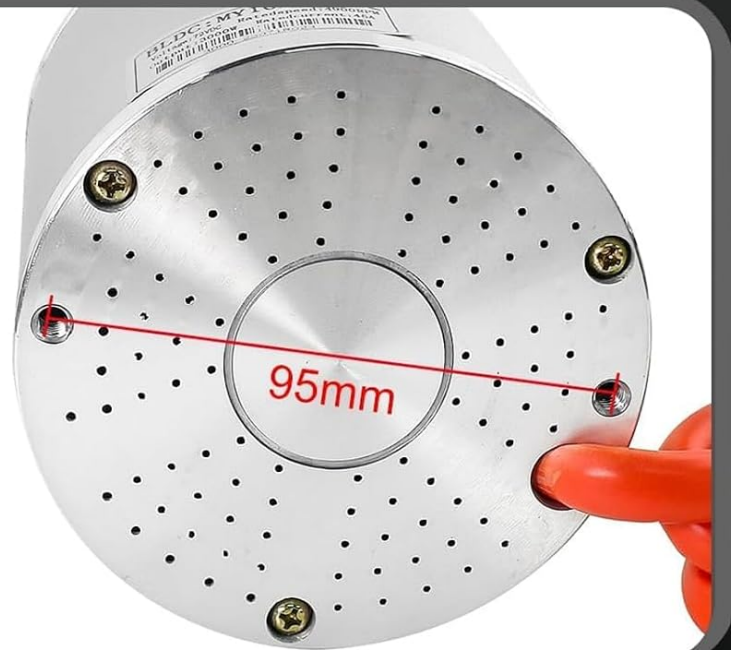
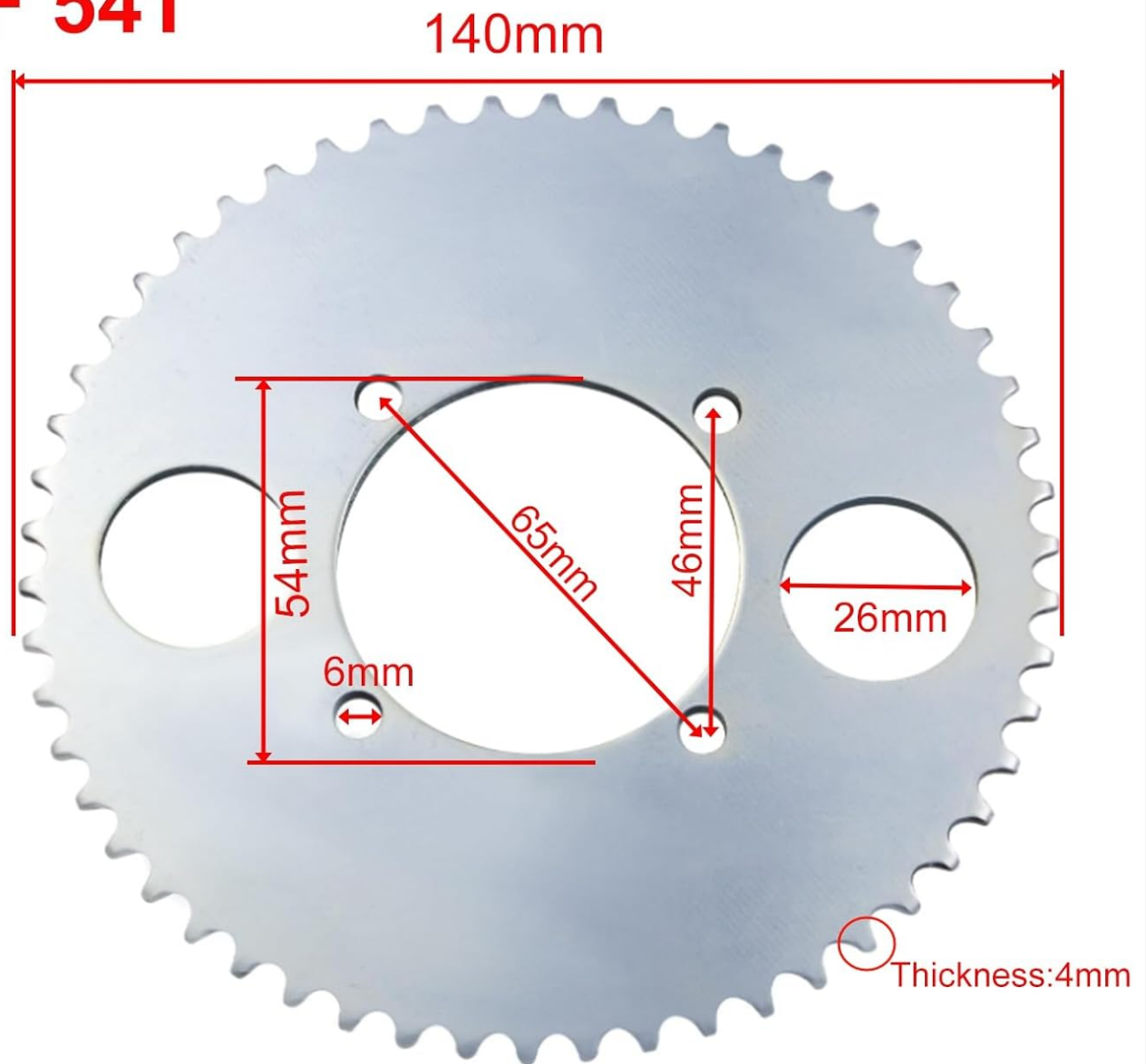


Figure 6: Motor installation hole for M6 screws (95mm diameter).

4.2 Sprocket and Chain Installation

- Install the T8F 54T sprocket onto the motor shaft.
- Connect the T8F chain, ensuring proper tension.

T8F 54T



Note: Due to manual measurement 1-2mm error occurs

Figure 7: T8F 54T Sprocket dimensions.

4.3 Wiring the Controller and Components

Refer to the following diagrams for correct wiring connections. Ensure all connections are tight and properly insulated.

PRODUCT WIRING

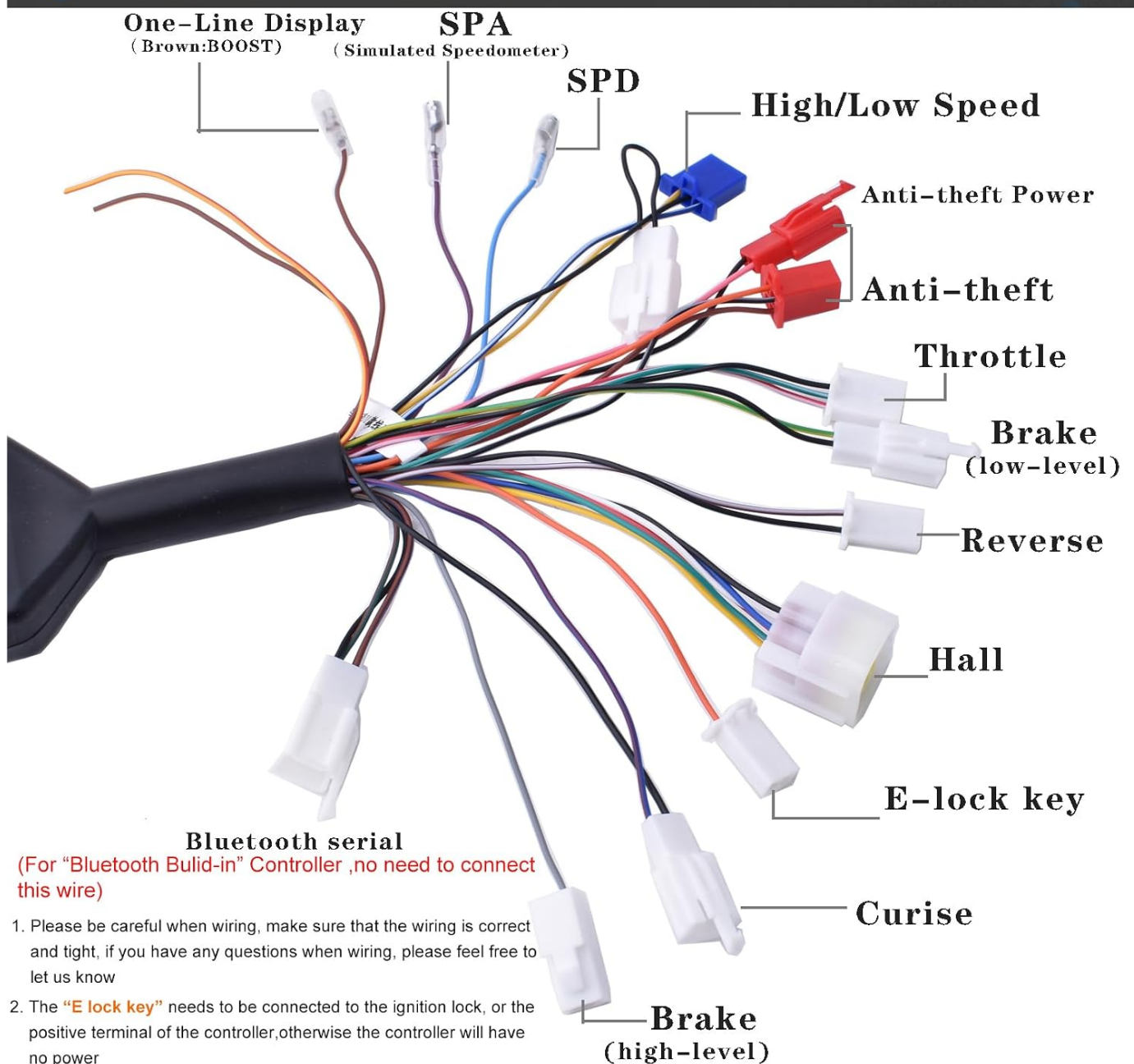
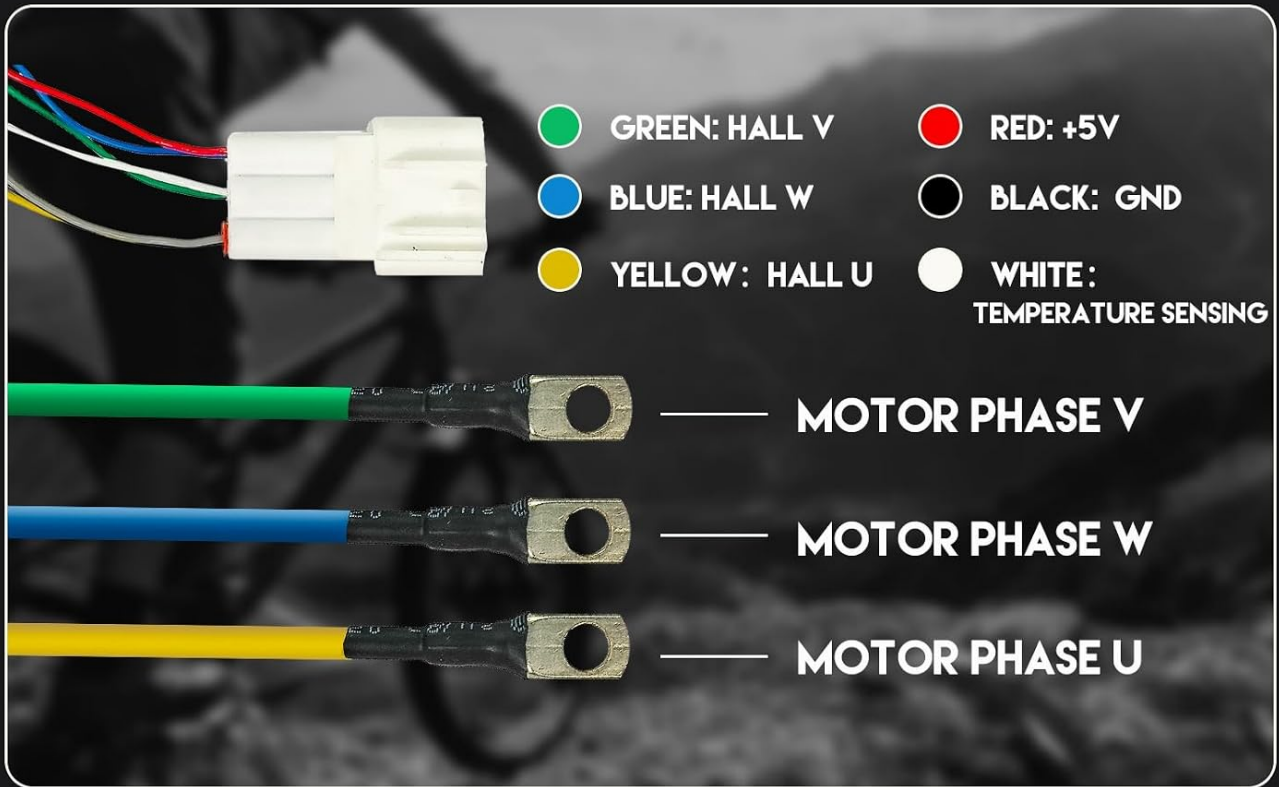


Figure 8: Overall Product Wiring Diagram.

MOTOR INTERFACE

ATTENTION TO DETAIL



Larger copper plug / Sprocket for T8F (25H) / Car waterproof connector
KTY84-130 temperature sensor / 6mm² enlarged phase wires

Figure 9: Motor Interface Wiring Details.

Fardriver APP Download:

Android App:

Method 1: Download from

<http://182.92.233.85:6868/FarDriverSigned.apk>

Method2:

Please con tact with our Team.

Aple App:

search: FARDRIVER

in your app store direct!



Product guides and documents

Instructions for Use (IFU) (PDF)

User Guide (PDF)

Find the controller in our store, the instructions are in the link details

Figure 10: Hall Sensor Wiring.

E-LOCK(Power Lock):

When using the controller, you need to connect the "E Lock" to the positive of the controller or the ignition lock, otherwise the controller will no power and cannot be used normally

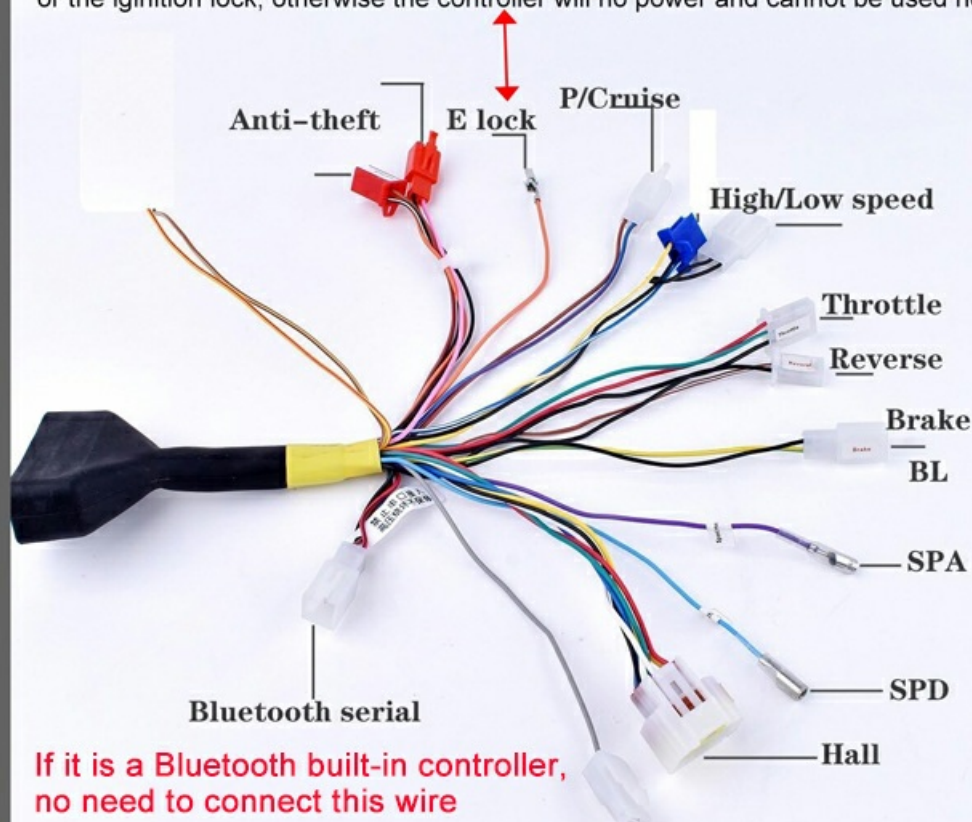


Figure 11: Wiring for Anti-Theft, P/Cruise, High/Low Speed, Throttle, Reverse, and Brake.

E-Lock (Power Lock) Connection

When using the controller, you must connect the "E Lock" wire to the positive terminal of the controller or the ignition lock. Failure to do so will prevent the controller from receiving power and operating normally.



- **Rated Voltage:** 48V
- **Rated Power:** 2000W
- **Torque:** 6.9 N.m
- **Rated Speed:** 4300rpm
- **Rated Current:** 42A
- **Max Speed:** 5400RPM
- **Magnet Poles:** 4Pair/8PC
- **Phase Degree:** 120°
- **Waterproof Grade:** IP54
- **Phase offset Degree:** 90-110° (You can set it 100°)

Figure 12: E-Lock (Power Lock) Wiring.

Bluetooth Serial Connection

For controllers with built-in Bluetooth, there is no need to connect a separate Bluetooth serial wire. The controller can be directly connected to the Fardrive application for parameter settings.

5. OPERATING INSTRUCTIONS

Once installed, follow these instructions to operate your doinal motor kit.

5.1 Initial Power-Up

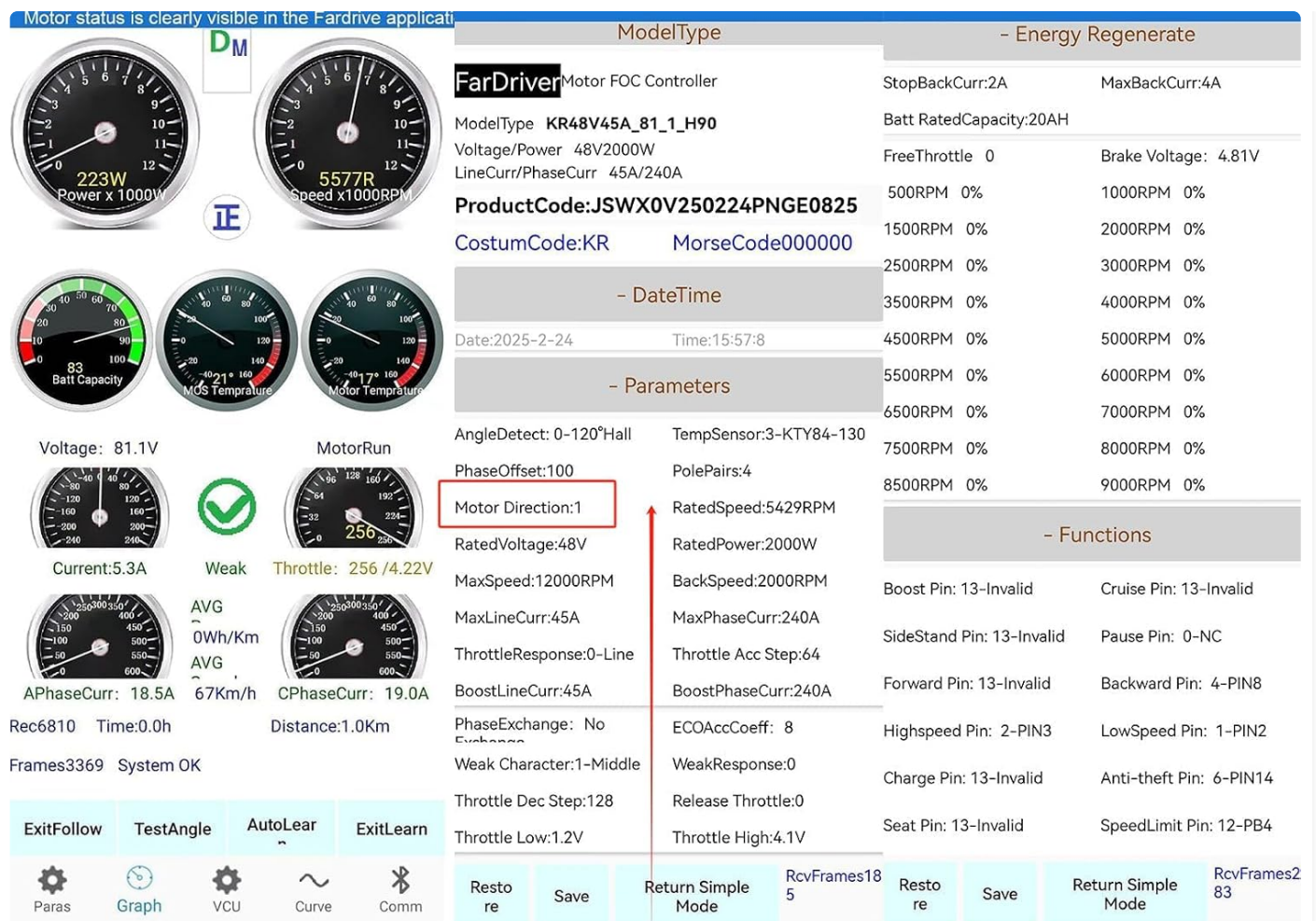
- Ensure all connections are secure before turning on the power.
- Turn the ignition key (if installed) to the ON position.
- The voltage display on the throttle will show the current battery voltage.

5.2 Throttle Operation

The half-twist throttle controls the motor speed. Twist the throttle gently to accelerate. Release the throttle to decelerate.

5.3 Fardrive Application Usage

The Fardrive application allows you to monitor motor status and adjust controller parameters. The motor's status, including speed and current, is clearly visible within the app.



1. By changing the number (0 or 1) in the“Motor Direction”, the motor can rotate clockwise or counterclockwise.
2. The working state of the motor is clearly visible in the Fardrive APP
3. Before packaging, we have already set the parameters of the controller, which can work normally with the motor. If you need to tune controller, please read the manual carefully and ask us or a professional for help, otherwise the controller may not work properly

Figure 13: Fardrive App Interface for monitoring and settings.

Motor Direction Adjustment

The motor's rotation direction (clockwise or counter-clockwise) can be changed by adjusting the corresponding setting (0 or 1) in the Fardrive application.

Controller Parameter Tuning

The controller comes with pre-set parameters. If tuning is required, refer to the Fardrive application's detailed instructions or consult a professional. Incorrect tuning may affect controller performance.



- **Rated Voltage:** 72V
- **Rated Power:** 3000W
- **Torque:** 5.4N.m
- **Rated Speed:** 4900rpm
- **Rated Current:** 45A
- **Max Speed:** 6700RPM
- **Magnet Poles:** 4Pair/8PC
- **Phase Degree:** 120°
- **Waterproof Grade:** IP54
- **Phase offset Degree:** 90-110° (You can set it 100°)

Figure 14: Fardrive App Download Information.

6. MAINTENANCE

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

- **Wiring Inspection:** Regularly check the wiring of the controller and motor to ensure all connections are tight and free from corrosion or damage. Loose connections can lead to overheating or short circuits.
- **Cleaning:** Keep the motor and controller free from dirt, dust, and moisture. Use a dry cloth for cleaning.
- **Heat Dissipation:** Ensure the motor's heat sink housing and any ventilation areas are clear of obstructions to allow for efficient heat dissipation.
- **Sprocket and Chain:** Inspect the sprocket and chain for wear and proper tension. Lubricate the chain as needed.

7. TROUBLESHOOTING

This section provides guidance for common issues. For complex problems, contact customer support.

7.1 Beep Alarm Codes

The controller may emit beep alarms to indicate specific issues. Refer to the table below for common beep patterns and their meanings.

HIGH POWER MOTORCYCLE CONTROLLER

suit for 2-3kw motors, QS motor/Kunray Motor/
other brand motor. if you want to match with new brand
motor, some parameters should be tested by yourself.





Rated Voltage
42-72V

Adapter Motor
2-3KW

Max DC Current
80A

Protect Phase Current
260A

Net Weight
1KG

Waterproof
IP67

(Please regularly check the condition of the connectors to ensure they are tight.
Loose connectors may cause local overheating or even short circuits)

Figure 15: Beep Alarm Codes and Reasons.

- **Normal Startup:** One short beep.
- **Continuous Beep:** Indicates brake and throttle are engaged simultaneously. Release both to stop the beep.
- **Two Short Beeps, One Long Beep (repeated):** Controller is in self-learning mode. Proceed with self-learning operations.
- **Two Short Beeps, Brief Pause, One Short Beep (repeated):** Controller program verification failure. An upgrade may be required.
- **Four Short Beeps, One Long Beep, Five Short Beeps (repeated):** Indicates an incompatible program. Verify the program matches the controller's model.

7.2 General Troubleshooting Tips

- **No Power:** Check battery connections, E-Lock wiring, and ensure the ignition is on.
- **Motor Not Spinning:** Verify throttle connection, Hall sensor wiring, and check for any beep alarms.
- **Irregular Operation:** Inspect all wiring for loose connections. If using the Fardrive app, check motor status and parameters.

8. SPECIFICATIONS

Feature	Specification
Motor Type	Brushless DC Motor
Rated Voltage	48V

Rated Power	2000W
Rated Speed	4300 RPM
Max Speed	5400 RPM
Rated Current	42A
Torque	6.9 N.M
Controller Max DC Current	45A
Controller Phase Current	240A
Waterproof Grade	IP57 (Motor), IP67 (Controller)
Motor Dimensions	5.3"W x 4"H (approx. 135mm x 105mm)
Material	Aluminum, Copper
Item Weight	12.1 pounds (approx. 5.5 kg)

9. WARRANTY INFORMATION

For specific warranty details regarding your doinal 2000W 48V Brushless Motor Kit, please refer to the warranty documentation provided at the time of purchase or contact the seller directly. Keep your proof of purchase for any warranty claims.

10. SUPPORT

If you encounter any issues not covered in this manual or require further assistance, please contact the seller or manufacturer's customer support. Provide your product model number and a detailed description of the issue for efficient service.

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

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