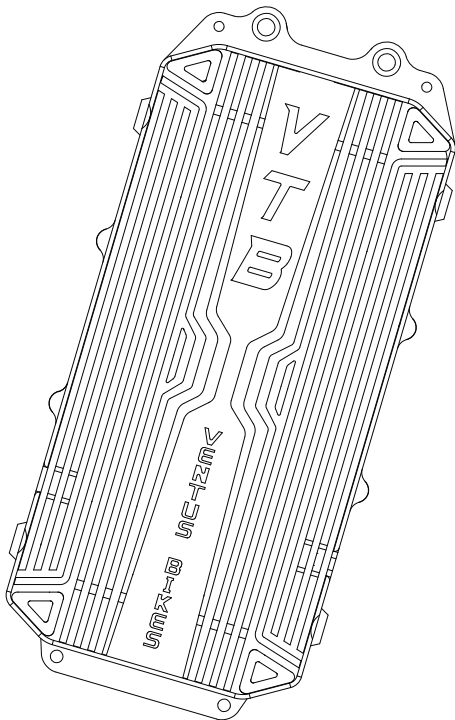




Venture To Begin

VTB Controller

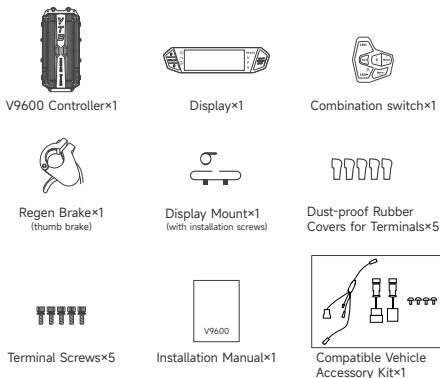


I. Preparations Before Installation

1. Installation Instructions

The V9600 controller is currently designed to operate in conjunction with the VTBGZ display, multi-functional combination switch, and regen brake (thumb brake). These components are packaged together with the controller for convenience. The installation of the accompanying components is straightforward, independently. It is recommended, however, that users refer to the contents of this manual for guidance during the installation process. The V9600 is a plug-and-play controller, requiring no prior knowledge of electronics or programming for installation and configuration.

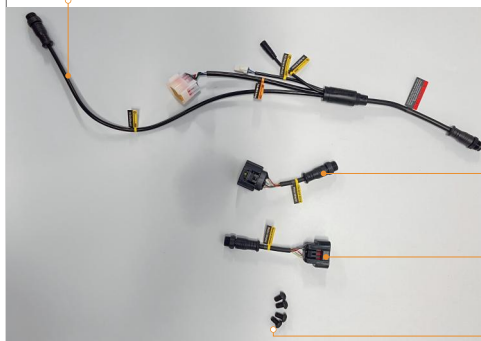
2. Packing List



Accessory Kit Contents

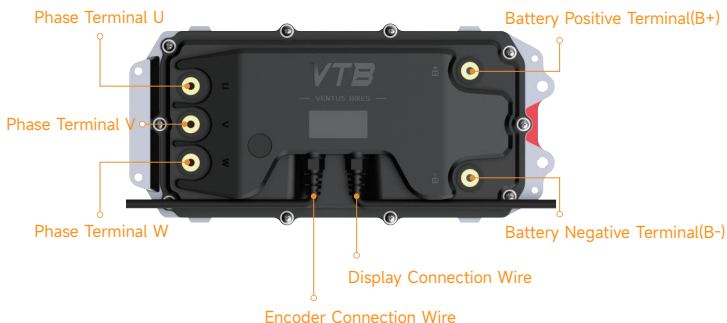
Mid-section Wiring Harness-TALARIA Sting Model×1

The model adapter connects to the bike's main wiring harness, with the upper and lower interfaces connecting to the longer controller harness and the display harness.



I. Preparations Before Installation

3.Route Description



Special Note

The V9600 controller is equipped with a motor calibration, allowing the phase connection sequence to be unrestricted and freely arranged. The designations of U, V, and W in this context are merely illustrative labels. This innovative feature is intended to accommodate various motor types, ensuring the system can automatically adjust phase sequences based on the connected motor to achieve optimal performance.

4.Installation Hole Diagram

The installation holes for the TALARIA STING are indicated by the four positions outlined in the rectangular frame in the diagram.



II. Installation and Precautions

1. Connecting Motor Phase Wires

Note

Before proceeding with the installation of the controller, ensure that the circuit breaker is completely turned off. Inspect the power lines connected to both sides of the circuit breaker to confirm they are securely fastened. If any wires are found to be loose, tighten the corresponding cross-head33 screws on the circuit breaker.

Connect the motor phase wires to the phase terminals. It is not necessary to differentiate between cable colors, as the connection sequence is unrestricted. While the phase wire lengths may vary, great care must be taken to avoid entanglement during the connection process. Use a wrench to apply a torque of 16 N·m to securely fasten the terminal screws, ensuring all connections are robust to prevent potential loosening during operation. Once all the phase wires are correctly and securely connected, cover the connection points with dust-proof rubber covers.

Note

The V9600 controller is equipped with a motor calibration feature, allowing the phase wire connection sequence to remain flexible. Connections should therefore be arranged according to the actual length of the wiring harness for ease of installation and organization.

2. Connecting the Positive and Negative Power Terminals

Connect the power lines following the sequence: red for the positive terminal and black for the negative terminal. Ensure that every connection point is securely fastened to prevent loosening during operation. Once the positive and negative power lines are properly fixed, cover the connection points with dust-proof rubber covers for protection.

The final appearance after completing the installation of both the motor phase wires and the positive and negative power lines is shown in the diagram below:



II. Installation and Precautions

3. Connecting the Motor Plug

Please choose either the Ultra Bee motor adapter or the general encoder motor adapter for installation based on specific requirements; only one is needed. VTB is dedicated to providing comprehensive service to our customers and therefore offers an alternative cable as a backup. We deeply appreciate your support and trust.

The stock VTB motor does not require the use of a motor adapter.



For the stock TALARIA STING motor, a TALARIA STING motor adapter is required.



For third-party encoder motors, a general encoder motor adapter is needed.



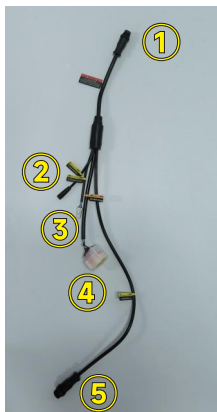
One end of the motor adapter connects to the motor harness interface, while the other end connects to the shorter harness of the controller.

Note

When connecting the square plug, a "click" sound indicates that the plug has been securely and correctly connected. If the plug is not fully inserted, it may loosen due to vibrations, resulting in functional abnormalities.

II. Installation and Precautions

4.Connect the Wiring Harness Plug



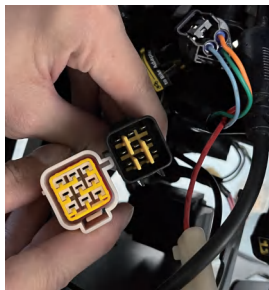
①Main signal interface of the controller, connected to the longer wiring harness of the controller.

②Use the OEM horn button for control.
No connection is required here.

③Regen brake (thumb brake) plug,
connected to the regen brake (thumb brake).

④TALARIA Sting model adapter harness, connected to the bike's main wiring harness.

⑤Display communication interface, connected to the display wiring harness.



Interface ④ connects to the main vehicle wiring harness interface



Interface③ connects to the electronic brake (thumb brake) harness interface.

Note

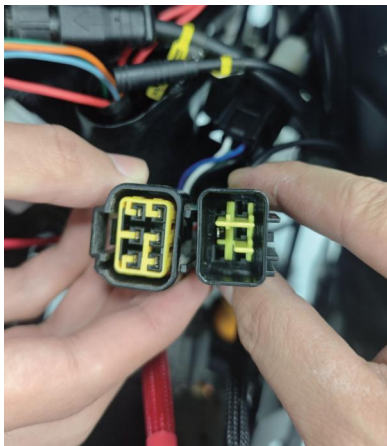
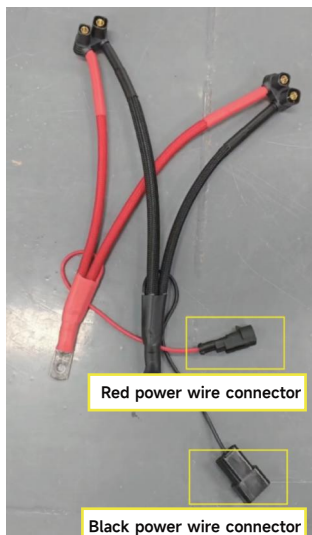
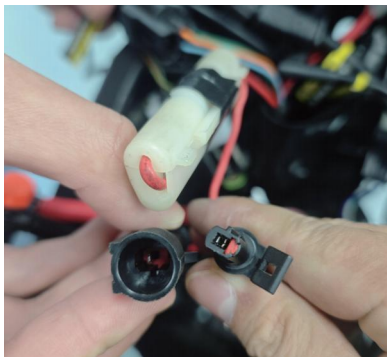
The pins of Interface ① are relatively delicate; exercise caution during connection to prevent misalignment or bending of the pins. When connecting the square plug, a "click" sound indicates that the plug has been securely and correctly connected. If the plug is not fully inserted, it may loosen due to vibrations, resulting in functional abnormalities.

II. Installation and Precautions

The red power wire connector is to be connected to the fuse connector, while the black power wire connector is to be connected to the vehicle's main harness connector.

Note

When connecting the square plug, a "click" sound indicates that the plug has been securely and correctly connected. If the plug is not fully inserted, it may loosen due to vibrations, resulting in functional abnormalities.



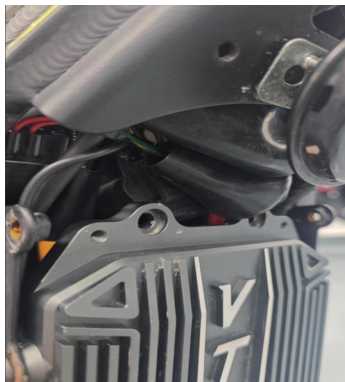
II. Installation and Precautions

5. Organize the Wiring Harness

Place the upper controller wiring harness in front of the battery cover. Route the mid-section harness (interface ⑤) along both sides of the controller from the start switch position, and connect it to the instrument panel. Secure the remaining harness in the gap above the controller. Position the lower harness in the space above the motor base cover. After routing all harnesses, install the identification plate.

Note

During the arranging of the wiring harness, it is crucial to avoid pinching or squeezing the wires. Ensure that they are not pulled or compressed when the handlebar rotates. When organizing the wiring harness, try to place the connectors into dustproof rubber covers to extend the lifespan of the harness.

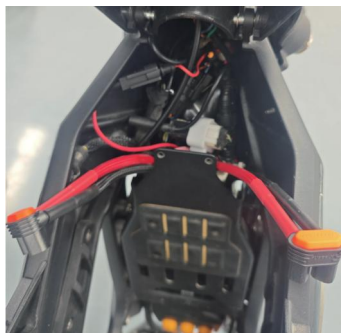


6. Fastening the Front Battery Panel

Attach the screws on both sides of the chassis to securely anchor the front battery panel, ensuring it remains stable and free from vibration.

Note

At the end of the throttle calibration, you need to select a gap; for normal use, choose the standard gap. The throttle gap refers to the minimum throttle opening needed for a response, with the ultra-small gap being even smaller than the standard gap.



II. Installation and Precautions

7.Installing the Controller

Begin by aligning and securing the lower mounting holes of the controller using screws from the accessory kit, fastening them with a wrench. Adjust the position of the controller to align with the upper mounting holes, then tighten the screws with a wrench. Secure all four mounting screws tightly to ensure the controller is stable and free of movement, and finally, tighten the screws on the top of the motor cover to complete the installation.

Note

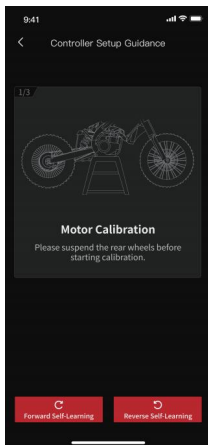
During the arranging of the wiring harness, it is crucial to avoid pinching or squeezing the wires. Ensure that they are not pulled or compressed when the handlebar rotates. When organizing the wiring harness, try to place the connectors into dustproof rubber covers to extend the lifespan of the harness.



The installed controller should appear as shown in the illustration.

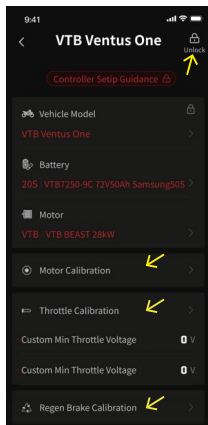
II. Installation and Precautions

8.Controller Setup Guide



After installing the controller, open the app and select the vehicle model on the main page to automatically enter the controller setup guide. Follow the instructions to complete the setup. During the guide, observe the wheel rotation direction during motor calibration. If it rotates correctly (forward) and a success message appears, the setup is complete. If not, select the alternative direction for calibration. Once familiar with the app's operations, you can independently perform motor self-learning, throttle calibration, or regen brake (thumb brake) calibration in the advanced settings.

At the end of the throttle calibration, you need to select a gap; for normal use, choose the standard gap. The throttle gap refers to the minimum throttle opening needed for a response, with the ultra-small gap being even smaller than the standard gap.



When adjusting battery or motor settings, you must first click on "Unlock" in the upper-right corner of the page and enter the unlock password: 123686, before making any changes.

Exercise extreme caution when altering battery or motor settings, as such modifications are not recommended for general users. The advanced settings are designed to meet the needs of users seeking a more refined and precise experience. The password is implemented as a safeguard to ensure the safety of non-professional users.

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