

Varstrom VD03 CAN

Varstrom VD03 Display User Manual

Model: VD03 CAN | Brand: Varstrom

1. INTRODUCTION AND OVERVIEW

The Varstrom VD03 Display is an advanced digital display unit specifically designed for BAFANG e-bike conversion kits. It provides essential riding data and allows for configuration of various e-bike parameters. Featuring a clear 1.5-inch HD LED screen and a robust IP67 waterproof rating, the VD03 ensures reliable performance in diverse conditions. Its triangular connector is engineered for seamless compatibility with BAFANG CAN protocol motors, including a wide range of mid-drive and the latest BBS series motors.



Figure 1.1: The Varstrom VD03 Display unit, showcasing its compact design and triangular connector.

2. COMPATIBILITY

The VD03 display is designed for BAFANG motors utilizing the CAN protocol. It is compatible with the latest 2025

versions of BBS01B, BBS02B, and BBSHD mid-drive motors that have been upgraded to CAN. Additionally, it supports BAFANG mid-drive systems including M200, M400, M420, M500, M510, M600, M620, M625, M325, and M225.



Figure 2.1: Visual guide to VD03 display compatibility with various BAFANG motors and protocols.

3. SETUP AND INSTALLATION

3.1 Mounting the Display

The VD03 display is designed for standard handlebars with a diameter of 22.2 mm. The adjustable mount ensures a secure and perfect fit for most bicycles.

1. Identify a suitable position on your handlebar, typically near the left grip.
2. Loosen the screw on the display's mounting bracket.
3. Place the bracket around the handlebar (22.2mm diameter).

4. Tighten the screw securely until the display is firmly in place and does not rotate freely.

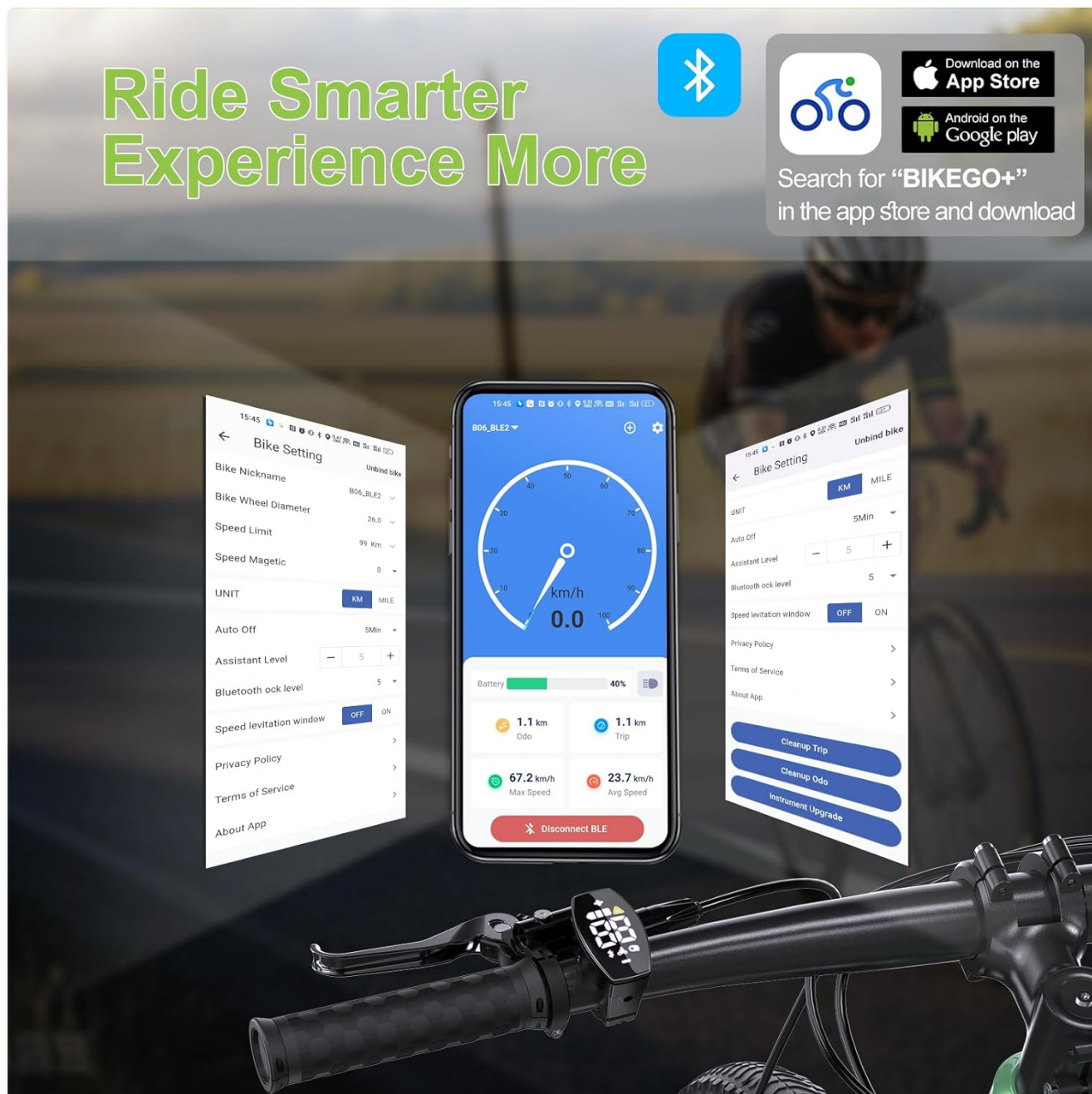


Figure 3.1: The VD03 display mounted on a standard 22.2mm handlebar.

3.2 Connecting the Display

The VD03 display connects to your BAFANG e-bike kit via a 5-pin male triangular connector. Ensure the cable from your e-bike kit has a compatible female 5-pin triangular connector.

1. Locate the corresponding 5-pin female triangular connector on your e-bike's wiring harness (typically from the 1T4 cable).
2. Align the male connector of the VD03 display with the female connector from the e-bike kit.
3. Gently push the connectors together until they click into place, ensuring a secure and waterproof seal.
4. **Important:** Confirm that the wiring diagram of your motor's cable matches the display's wiring. If the wiring diagram is different, the display will not function correctly.

CABLE PARAMETERS

- This image shows the wiring diagram of the display cable coming from the 1T4 cable.
- Please confirm with the seller of motor that if your cable is with the same wiring diagram.
- Attention: If the wiring diagram is different, the display will not work.

Female 5 Pins Our EB1T4 Connector



Male 5 Pins Our Display Connector



Figure 3.2: Detailed wiring diagram for the 5-pin CAN protocol connectors.

4. OPERATING THE DISPLAY

4.1 Display Functions

The 1.5-inch HD LED screen provides clear and easy-to-read data at a glance, even while riding. Key indicators include:

- **Battery Level Indication:** Shows the current charge status of your e-bike battery.
- **Maintenance Tips:** Alerts for routine maintenance or system issues.
- **Real-time Speed Display:** Shows your current riding speed.
- **Headlight Indication:** Indicates if the e-bike's headlight is on.
- **Bluetooth Icon:** Shows Bluetooth connection status.

VD03 Digital Display



Figure 4.1: Overview of the VD03 digital display and its various indicators.

4.2 PAS Level Settings

The display supports multiple Pedal Assist System (PAS) level options, typically 0-3, 0-5, or 0-9, allowing you to customize the level of motor assistance.

4.3 Speed Limitation

The display allows for adjustable speed limitation settings, enabling compliance with local regulations or personal preferences.

4.4 Bike Go App Integration

For extended functionality and advanced settings, the VD03 display can connect to the 'Bike Go' application. Search for "BIKEGO+" in your app store (App Store or Google Play) to download and install the app.

Through the Bike Go app, you can access and configure various parameters, including:

- Bike Nickname
- Bike Wheel Diameter

- Speed Limit
- Unit (KM/H or MPH)
- Auto Off Timer
- Assistant Level
- Bluetooth Lock Level
- Privacy Policy and Terms of Service
- About App information
- Cleanup Trip data
- Instrument Upgrade

Compatible With Most Handlebars



The adjustable mount fits handlebar diameters of 22.2mm, fitting most bicycles and ensuring a perfect fit.



Figure 4.2: The Bike Go app interface, demonstrating advanced settings and real-time data.

5. MAINTENANCE

To ensure the longevity and optimal performance of your Varstrom VD03 display, follow these maintenance guidelines:

- **Cleaning:** Wipe the display screen and body with a soft, damp cloth. Avoid using abrasive cleaners or solvents that could damage the plastic or screen.
- **Water Resistance:** The display has an IP67 waterproof rating, meaning it is protected against dust and can withstand immersion in water up to 1 meter for 30 minutes. However, it is not designed for prolonged submersion or high-pressure water jets. Avoid direct spraying with high-pressure washers.
- **Storage:** When not in use for extended periods, store the e-bike and display in a dry, cool place, away from direct sunlight and extreme temperatures.
- **Cable Inspection:** Periodically check the display cable and connector for any signs of wear, damage, or corrosion. Ensure the connection remains secure.

6. TROUBLESHOOTING

If you encounter issues with your Varstrom VD03 display, consider the following common troubleshooting steps:

- **Display Not Turning On:**
 - Check if the e-bike battery is charged and properly connected.
 - Ensure all cable connections, especially the 5-pin triangular connector, are fully seated and secure.
 - Verify that the wiring diagram of your motor's cable matches the display's wiring. A mismatch will prevent the display from working.
- **Incorrect Speed/Data Display:**
 - Check the wheel diameter setting in the Bike Go app or display settings. Ensure it matches your bicycle's wheel size.
 - Ensure the speed sensor on your e-bike motor is clean and properly aligned.
- **Bluetooth Connectivity Issues:**
 - Ensure Bluetooth is enabled on your smartphone.
 - Make sure the display is powered on.
 - Try restarting both the display and your smartphone.
 - Ensure you are using the correct 'BIKEGO+' app.
- **Display Error Codes:** If the display shows specific error codes, refer to the Bike Go app or contact technical support for detailed explanations and solutions.

If these steps do not resolve the issue, please contact Varstrom customer support for further assistance.

7. SPECIFICATIONS

Below are the technical specifications for the Varstrom VD03 Display:

PRODUCT SPECIFICATION



• Connector:	Male 5 PIN	• Button Holder:	ø22.2mm
• Protocol:	CAN	• Bluetooth:	5.2 + BLE (Optional)
• Screen:	1.5" TFT	• Waterproof:	IP67
• Voltage:	12V/24V/36V/48V/52V/60V	• Weight:	28g
• PAS Level:	3 5 9 Optional	• Operating temperature:	-20°C~70°C
• Speed Limited:	0km/h ~ 99km/h	• Auto OFF:	0~60min Optional
• Language:	English	• Bluetooth lock:	Yes

Figure 7.1: Detailed dimensions and key specifications of the VD03 display.

Feature	Specification
Model Name	VD03 CAN
Connector Type	Male 5 PIN (Triangular)
Protocol	CAN
Screen Type	1.5" HD LED
Voltage Compatibility	12V/24V/36V/48V/52V/60V
PAS Level Options	0-3 / 0-5 / 0-9 (Optional)
Speed Limit Range	0 Km/h ~ 99 Km/h (Adjustable)
Button Holder Diameter	Ø22.2 mm

Feature	Specification
Bluetooth	5.2 + BLE (Optional)
Waterproof Rating	IP67
Weight	28g
Operating Temperature	-20°C ~ 70°C
Auto OFF	0-60 min (Optional)
Bluetooth Lock	Yes
Language	English

8. WARRANTY AND SUPPORT

Varstrom is committed to customer satisfaction and provides comprehensive support for the VD03 display:

- **Return Policy:** A 30-day return policy is offered from the date of purchase.
- **Exchange/Repair Service:** Enjoy a one-year exchange or repair service for manufacturing defects.
- **Technical Support:** Lifetime technical support is available. Varstrom has a local warehouse and a dedicated technical team ready to assist you promptly.

For any inquiries, technical assistance, or warranty claims, please contact the seller, Greenergia-EU, or Varstrom customer service directly.