Powallon L04

Powallon L04 E-Bike LCD Display Instruction Manual

Model: L04 | Brand: Powallon

Overview Package Contents Setup Operation Advanced Settings Maintenance Troubleshooting Specifications Warranty & Support

1. Product Overview

The Powallon L04 E-Bike LCD Display is designed for Bafang UART mid and hub motors, offering a clear 3.5-inch screen and Bluetooth app control. It provides essential riding data and allows for convenient adjustments to your e-bike system.

Key Features:

- **Wide Voltage Compatibility:** Supports 36V, 48V, and 52V Bafang e-bike conversion systems. Note: Not supported if voltage exceeds 52V.
- **Easy Plug-and-Play Installation:** Features an M5 round female connector for simple plug-in installation. Securely fits 22.2mm, 25.4mm, and 31.8mm handlebars.
- **High-Visibility LCD Screen:** A large 3.5-inch LCD panel ensures clear visibility of riding data, even in strong outdoor sunlight.
- **Bafang UART Compatibility:** Works with UART-based mid and hub motors, including BBS02, BBS-HD, G020, G062, and G063.
- **Center Mount with Separate Keypad:** Designed for handlebar center mounting with a separate keypad for stable control and improved riding ergonomics.
- **Bluetooth Smart Control:** Connects with a mobile application for functions such as lock/unlock, PAS tuning, and real-time ride data access.
- **Full Data Display:** Shows speed, PAS level, battery status, voltage, mileage, error codes, and walk-assist indicators.

2. Package Contents

Verify that all items are present in the package:

- Powallon L04 E-Bike LCD Display

3. Setup and Installation

3.1 Handlebar Mounting

The L04 display is designed for central mounting on your e-bike handlebars. The mounting bracket is adjustable to fit handlebar diameters of 22.2mm, 25.4mm, and 31.8mm. Ensure the display is securely fastened and positioned for optimal viewing.



Image: Side view of the L04 display showing the handlebar mounting mechanism.



Image: The separate keypad, designed for ergonomic control, can be mounted independently on the handlebar.

3.2 Electrical Connection

The L04 display uses a 5-pin M5 female connector for connection to your Bafang UART motor system. Ensure the connector is clean and dry before plugging it in. Align the pins carefully to avoid damage.

5-PIN E BIKE LCD DISPLAY

Orange wire meter power
Black wire instrument ground wire
Green wire communication send (TX)
White Line communication receive (RX)
Brown wire is the positive pole



Display- end 5-pin female connector pinout (Bafang UART protocol)

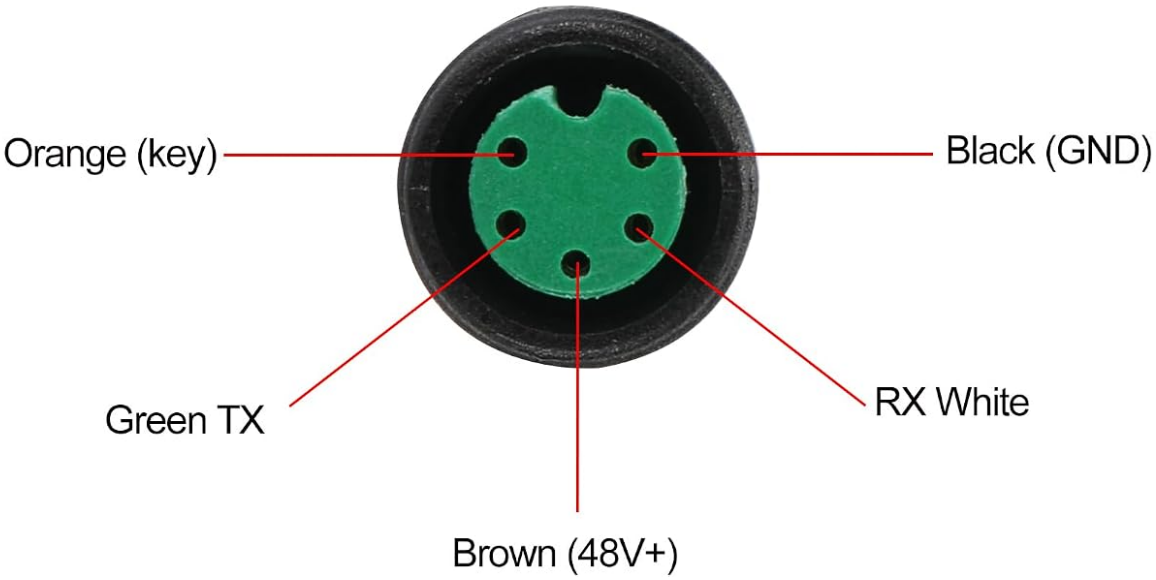


Image: Pinout diagram for the 5-pin M5 female connector, detailing wire functions (Orange: meter power, Black: ground, Green: TX, White: RX, Brown: 48V+).



Image: Detailed view of the M5 female port, highlighting its design for Bafang e-bike displays.

The display is compatible with Bafang UART mid-drive motors (BBS02, BBS-HD) and hub motors (G020, G062, G063).



Image: The L04 display is compatible with Bafang BBS02 and BBSHD mid-drive motor kits.



Image: The L04 display is also compatible with Bafang hub motor conversion kits.

4. Operating Instructions

4.1 Power On/Off

To power on the display, press and hold the power button on the separate keypad. To power off, press and hold the power button again.

4.2 Display Interface

The 3.5-inch LCD screen provides a comprehensive view of your riding data. Key indicators include:



Image: The L04 display interface showing various data points: Headlight Indicator, Lock & Unlock status, Battery Level, Real-time Speed, Max Speed, Walk Assist, PAS Level Display, Trip Distance, Odometer, Battery Voltage, Power, and Average Speed.

- **Real-time Speed:** Displays current riding speed.
- **PAS Level:** Shows the current Pedal Assist System level (0-5 or 0-9, depending on configuration).
- **Battery Status:** Indicates remaining battery charge.
- **Voltage:** Displays the current battery voltage.
- **Mileage:** Includes Odometer (total distance) and Trip Distance (current ride distance).
- **Error Codes:** Alerts to system malfunctions.
- **Walk-Assist:** Indicates when walk-assist mode is active.
- **Headlight Indicator:** Shows if the e-bike's headlight is on.
- **Lock & Unlock:** Indicates the system's security status.

4.3 Adjusting PAS Levels

Use the '+' and '-' buttons on the separate keypad to increase or decrease the Pedal Assist System (PAS) level. This adjusts the amount of motor assistance provided during pedaling.

4.4 Bluetooth App Control

The L04 display supports Bluetooth connectivity, allowing you to connect to a mobile application for enhanced control and data access. Through the app, you can:

- Lock/Unlock your e-bike system.
- Tune PAS settings for customized assistance levels.
- Access real-time ride data and statistics.

Your browser does not support the video tag.

Video: An overview of the L04 LCD Display, demonstrating its features and operation, including real-time speed display and advanced settings access. This video is provided by Cycle Science, the seller.

5. Advanced Settings

The L04 display allows access to advanced settings for customization of various parameters. These settings are typically accessed by pressing and holding specific button combinations (e.g., power and '+' buttons simultaneously) while the display is powered on. Common adjustable parameters (P-codes) may include:

- **P1:** Motor Assist Ratio (adjusts power output).
- **P2:** PAS Level Configuration (e.g., 0-5 or 0-9 levels).
- **P5:** Speed Limit Setting.
- **P7:** Wheel Diameter Setting.
- **dF:** Display Unit (Metric/Imperial).
- **bW:** Battery Voltage Setting.

Refer to the specific Bafang motor controller manual or the mobile application for detailed instructions on adjusting these advanced parameters, as incorrect settings can affect performance or safety.

6. Maintenance

To ensure the longevity and optimal performance of your Powallon L04 E-Bike LCD 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 screen or casing.
- **Water Resistance:** The display has an IP66 international protection rating, indicating it is protected against dust ingress and powerful water jets. While it is water-resistant, avoid submerging the display or exposing it to high-pressure water streams for extended periods.



Image: The L04 display and keypad are designed to withstand water splashes, ensuring durability in various weather conditions.

- **Connection Checks:** Periodically inspect the 5-pin M5 connector and cables for any signs of wear, corrosion, or damage. Ensure connections are secure.
- **Storage:** If storing your e-bike for an extended period, ensure the display is clean and dry. Store in a cool, dry place away from direct sunlight.

7. Troubleshooting

If you encounter issues with your L04 E-Bike LCD Display, refer to the following common problems and solutions:

- **Display Does Not Power On:**
  - Check the battery level of your e-bike.
  - Ensure all cable connections, especially the 5-pin M5 connector, are securely seated and free from damage.
  - Verify the e-bike's main power switch is on.
- **Display Shows Incorrect Speed/Mileage:**

- Confirm that the wheel diameter setting in the advanced settings (P7) is correctly configured for your e-bike's wheel size.
- Check the speed sensor and its magnet for proper alignment and function.

- **Cannot Enter Program Mode (Advanced Settings):**
  - Ensure you are pressing the correct button combination (e.g., power and '+' buttons) simultaneously and holding for the required duration. Refer to the specific Bafang controller documentation for the exact procedure.
- **Bluetooth Connection Issues:**
  - Ensure Bluetooth is enabled on your mobile device.
  - Make sure the display is powered on and within range of your device.
  - Restart both the display and your mobile device.
- **Display Shows Error Codes:**
  - Consult your Bafang motor controller manual for a list of error codes and their corresponding troubleshooting steps.
- **Voltage Compatibility:**
  - The display supports 36V, 48V, and 52V systems. If your system voltage exceeds 52V, the display may not function correctly or could be damaged. Verify your e-bike's battery voltage.

8. Specifications

Brand	Powallon
Model Number	L04
Color	Black
Product Dimensions (L x W x H)	3.4" x 2.4" x 0.3"
Item Weight	0.17 Kilograms
Screen Size	3.5 Inches
Display Type	LCD
Sensor Type	Speed Sensor
Connectivity Technology	Proprietary Wired (UART Protocol)
Mounting Type	Handlebar Mount (22.2 / 25.4 / 31.8 mm)
Human Interface Input	Buttons (Separate Keypad)
International Protection Rating	IP66
Voltage Compatibility	36V, 48V, 52V

9. Warranty & Support

9.1 Warranty Information

This Powallon L04 E-Bike LCD Display comes with a **1 Year Manufacturer Warranty**. This warranty covers defects in materials

and workmanship under normal use. It does not cover damage resulting from misuse, accidents, unauthorized modifications, or improper installation.
Please retain your proof of purchase for warranty claims.

9.2 Customer Support

For technical assistance, troubleshooting not covered in this manual, or warranty inquiries, please contact Powallon customer support through the retailer where the product was purchased or refer to the official Powallon website for contact information.

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