

[Manuals.plus](#) /

› [Varstrom](#) /

› Varstrom SW2M58 EBIke Display User Manual

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Model: SW2M58 Display | Brand: Varstrom

1. INTRODUCTION

Thank you for choosing the Varstrom SW2M58 EBIke Display. This 3.8-inch LCD display is engineered to provide essential riding data and control for your electric bicycle, specifically compatible with BAFANG BBS01B/02B HD mid-motor systems. This manual will guide you through the installation, operation, and maintenance of your new display, ensuring a safe and enjoyable riding experience.



Figure 1: The Varstrom SW2M58 EBike Display, featuring a large screen for clear data display and a separate button panel for easy control.

2. PRODUCT FEATURES

- **Versatile Compatibility:** Supports Bafang mid-motor systems (BBS01B, BBS02B, BBS03 HD) and G020, G0900, G062 hub motors, operating at 24V, 36V, 48V, and 52V. Requires a 5PIN female circular connector (UART protocol).
- **Comprehensive Real-Time Data:** Displays current speed, single trip distance, total mileage, and battery level. Includes a password protection system for enhanced security.
- **Advanced Settings & Error Detection:** Features a factory-set password for advanced settings (e.g., speed limits, wheel diameter) and automatically shows error codes for motor issues.
- **User-Friendly Design:** 3.8-inch vertical LCD screen with a separate button design for ergonomic use and handlebar space saving. Adjustable backlight (5 levels) for optimal visibility.
- **Efficient Speed Control & Durability:** Offers 9 adjustable speed settings. Boasts an IPX5 water-resistant rating for reliable performance in various weather conditions.

3. COMPATIBILITY INFORMATION

The SW2M58 display is designed for specific ebike motor systems. It is crucial to verify your motor's protocol and connector type before installation.

3.1 Protocol and Connector Type

This display operates using the **UART protocol** and connects via a **5-pin female circular connector**. It is compatible with BAFANG BBS series mid-motors (BBS01B, BBS02B, BBS03 HD) and certain BAFANG hub motors (G020, G0900, G062) that also use the UART protocol and a circular connector.

Important: This display is **NOT compatible** with CAN protocol motors, which typically feature a 5-pin pentagonal connector. Attempting to use adapter cables or modifying connectors will not resolve compatibility issues between UART and CAN protocols.

UNIVERSAL COMPATIBILITY



UART PROTOCOL
5 Pin Female Round



- M215 MMG340.250.C
- M315 MM G340.250.C
- M315 MM G340.350.C
- M315 MM G340.500.C
- M315 MM G340.750.C
- M615 MM G320.1000.C

BAFANG BBS Series Motor



- RM G020.36V 250w.DC
- RM G020.48V 500w.DC
- FM G020.500.D
- RM G0F0.48V 750w.DC
- RM G060.48V 750w.DC
- RM G062.48V 1000w.DC
- RM G0900.48V 750w.DC

BAFANG Hub Motor



CAN PROTOCOL
5 Pin Male Triangular



Other Brand Motor



- M620 MMG510.750.C
- M620 MMG510.1000.C
- M225 MM G341.250.C
- M325 MM G341.500.C
- M625 MM G321.750.C
- M625 MM G321.750.C
- M625 MM G321.1000.C
- M625 MM G321.1000.C

Other BAFANG Mid Drive Motor



We would send message to confirm the order detail with you, please notice your amazon inbox

Figure 2: Visual guide to compatible (UART Protocol, 5 Pin Female Round) and incompatible (CAN Protocol, 5 Pin Male Triangular) connectors and motor types.

4. SETUP AND INSTALLATION

Follow these steps to properly install your SW2M58 EBike Display.

4.1 Mounting the Display

1. Identify a suitable location on your handlebar for the display and its separate button panel. Ensure it does not obstruct your view or control of the bike.
2. Loosen the screws on the display's mounting bracket and the button panel's clamp.
3. Position the display and button panel on the handlebar. The display supports holder sizes of $\phi 22.2\text{mm}$, $\phi 25.4\text{mm}$, and $\phi 31.8\text{mm}$.
4. Tighten the screws securely, ensuring the display and button panel are stable and do not rotate during riding.

4.2 Electrical Connection

The SW2M58 display connects to your ebike's main wiring harness (1T4 cable) via its 5-pin female circular connector.

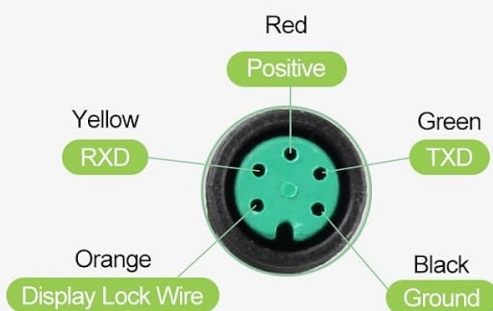
- Locate the corresponding 5-pin male circular connector on your ebike's wiring harness.

- Align the pins and carefully push the display's connector into the harness connector until it clicks securely into place.
- Ensure all connections are firm and waterproof.

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 Display Connector



Male 5 Pins Our EB1T4 Connector



Figure 3: Detailed wiring diagram for the 5-pin connectors and a system overview showing how the display integrates with other ebike components.

5. OPERATING INSTRUCTIONS

Familiarize yourself with the display's functions and controls.

5.1 Power On/Off

- To power on the display, press and hold the Power button (usually the 'M' button on the separate panel) for a few seconds.
- To power off, press and hold the Power button again until the display turns off.

5.2 Display Navigation and Settings

The separate button panel allows for easy navigation and adjustment of settings.



Figure 4: Overview of key display features including PAS levels, mounting dimensions, screen size, brightness adjustment, and password protection.

- **PAS Level Adjustment:** Use the Up/Down buttons on the separate panel to cycle through the 9 available Pedal Assist System (PAS) levels. Higher levels provide more motor assistance.
- **Backlight Brightness:** The display offers 5 levels of backlight brightness. Access this setting through the menu (refer to the full manual for specific button sequences) to adjust for optimal visibility in different lighting conditions.
- **Password Protection:** The display includes a password protection system to prevent unauthorized use. The factory-set advanced settings password is **1919**. It is recommended to keep this password secure.
- **Information Cycling:** Press the 'M' button (or mode button) briefly to cycle through different displayed information such as ODO (total mileage), TRIP (single trip distance), AVG (average speed), and MAX (maximum speed).

6. DISPLAY FUNCTIONS AND INDICATORS

The SW2M58 display provides a wealth of information at a glance. Understand the various indicators and data points.



Figure 5: Annotated diagram of the SW2M58 display screen, highlighting all key data points and indicators.

- **Speed:** Displays current riding speed in mph or km/h.
- **Battery Level:** Shows the remaining battery charge as a percentage and/or graphical indicator.
- **PAS Level:** Indicates the current pedal assist level (0-9).
- **ODO (Odometer):** Total accumulated mileage of the ebike.
- **TRIP (Trip Distance):** Distance covered during the current ride. Can be reset.
- **AVG (Average Speed):** Average speed of the current ride.
- **MAX (Maximum Speed):** Highest speed reached during the current ride.
- **Headlight Indicator:** Illuminates when the ebike's headlights are on.
- **Error Code:** Displays specific codes if a motor or system error is detected, aiding in troubleshooting.
- **Low Voltage Warning:** Indicates when the battery voltage is critically low.
- **Walk Assist Mode:** Activates a low-speed assist for walking the bike.

7. SPECIFICATIONS

PRODUCT SPECIFICATION



• Connector:	5PIN Female	• Size:	L93.4mm * W56.4mm*H6.4mm
• Protocol:	UART	• Holer:	φ22.2mm/25.4mm/31.8mm
• Screen:	3.8" LCD Screen	• Cable Length:	233mm
• Voltage:	24V/36V/48V/52V	• Waterproof:	IP65
• PAS Level:	3/5/9	• Rated Operating Current:	10mA
• Advanced password:	1919	• Max. Output Current:	30mA
• Speed Limited:	0-100km/h	• Operating Temperature:	-20°C ~ 45°C
• Brightness:	1-5 Optional	• Storage Temperature:	-30°C ~ 80°C
• USB Port:	NO	• Light-sensitive:	NO

Figure 6: Dimensional drawing and a comprehensive list of technical specifications for the SW2M58 display.

Feature	Specification
Connector	5PIN Female Circular
Protocol	UART
Screen	3.8" LCD Screen
Voltage Compatibility	24V/36V/48V/52V
PAS Levels	9 (Adjustable)
Advanced Settings Password	1919
Speed Limited	0-100km/h
Brightness	1-5 Optional

Feature	Specification
USB Port	NO
Dimensions (L*W*H)	93.4mm * 56.4mm * 6.4mm
Holer (Mounting Diameter)	φ22.2mm/25.4mm/31.8mm
Cable Length	233mm
Waterproof Rating	IPX5
Rated Operating Current	10mA
Max. Output Current	30mA
Operating Temperature	-20°C ~ 45°C
Storage Temperature	-30°C ~ 80°C
Light-sensitive	NO

8. TROUBLESHOOTING

This section provides guidance for common issues you might encounter with your SW2M58 display.

8.1 Error Codes

The display is designed to automatically show error codes if a problem is detected with the motor or system. Refer to the specific error code displayed on the screen and consult the Bafang motor manual or contact customer support for detailed explanations and solutions for each code.

8.2 Common Issues

- **Display Not Powering On:**

- Check if the battery is charged and properly connected to the ebike system.
- Ensure the 5-pin circular connector between the display and the ebike harness is securely fastened.
- Verify that the ebike's main power switch (if any) is turned on.

- **Inaccurate Speed/Distance Readings:**

- Ensure the wheel diameter setting in the advanced settings is correctly configured for your ebike's wheel size. (Access with password 1919).
- Check the speed sensor and its magnet for proper alignment and cleanliness.

- **Display Freezes or Malfunctions:**

- Try powering off the display and then powering it back on.
- Ensure no water has entered the display, despite its IPX5 rating.

9. MAINTENANCE

Proper maintenance will extend the lifespan of your SW2M58 display.

- **Cleaning:** Use a soft, damp cloth to wipe the display screen and body. Avoid using abrasive cleaners, solvents, or harsh chemicals that could damage the plastic or screen.
- **Water Exposure:** While the display has an IPX5 water-resistant rating, it is not designed for submersion. Avoid direct high-pressure water jets when cleaning your ebike.
- **Storage:** When not in use for extended periods, store the ebike and display in a dry, cool place, away from direct sunlight and extreme temperatures.
- **Cable Inspection:** Periodically check all cables and connectors for any signs of wear, damage, or loose connections.

10. WARRANTY AND SUPPORT

Varstrom stands behind the quality of its products.

- **Return Policy:** 30 Days Return.
- **Replacement Policy:** 90 Days Replacement.
- **Technical Guidance:** Lifetime technician guidance is provided for your product.

For any technical assistance, warranty claims, or further inquiries, please contact Varstrom customer support through the platform where you purchased the product.