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EPEVER MT50

EPEVER MT50 Remote Meter Instruction Manual

Model: MT50 | Brand: EPEVER

1. INTRODUCTION

The EPEVER MT50 Remote Meter is designed for monitoring and setting parameters of compatible EPEVER solar charge controllers. It provides real-time operational data, working status, and alarm information through its large LCD screen, enhancing user control and system management.

2. SAFETY INFORMATION

Please read this manual carefully before installation and operation. Keep it in a safe place for future reference. Improper installation or use may result in damage to the device or connected equipment.

- Ensure all power connections are disconnected before installing or removing the MT50 meter.
- Connect the MT50 only to compatible EPEVER solar charge controllers as specified.
- Avoid exposing the device to extreme temperatures, direct sunlight, or moisture.
- Do not attempt to disassemble or repair the MT50 meter yourself. Contact qualified personnel for service.

3. PACKAGE CONTENTS

Verify that all items are included in your package:

- EPEVER MT50 Remote Meter
- Communication Cable (RJ45)
- Mounting Screws and Caps
- Instruction Manual



Image: EPEVER MT50 Remote Meter, communication cable, mounting screws, and caps.

4. PRODUCT OVERVIEW

The MT50 remote meter features a large LCD display and intuitive navigation buttons for easy interaction with your EPEVER solar charge controller.

4.1. Key Features

- **Compatibility:** Designed for EPEVER LS-B(P), VS-BN, Tracer-BN, Tracer-A(N), eTracer, and iTracer series controllers.
- **Real-time Monitoring:** Displays operational data and working status in digital, graphic, and textual forms.
- **Automatic Identification:** Automatically identifies the connected controller model and relevant parameter data.
- **Alarm Function:** Provides real-time failure information and alarms.

- **User-Friendly Interface:** Six navigation function keys for direct and rapid operation.
- **Power Supply:** Powered directly via the communication cable from the controller, no external power needed.
- **Battery Type Selection:** Supports Gel, Sealed, Flooded, and User-defined (programmable) battery types.
- **Load Control Modes:** Offers Manual, Light On/Off, Light On+Timer, and Time Control load modes.

4.2. Front and Back View



Front and back view

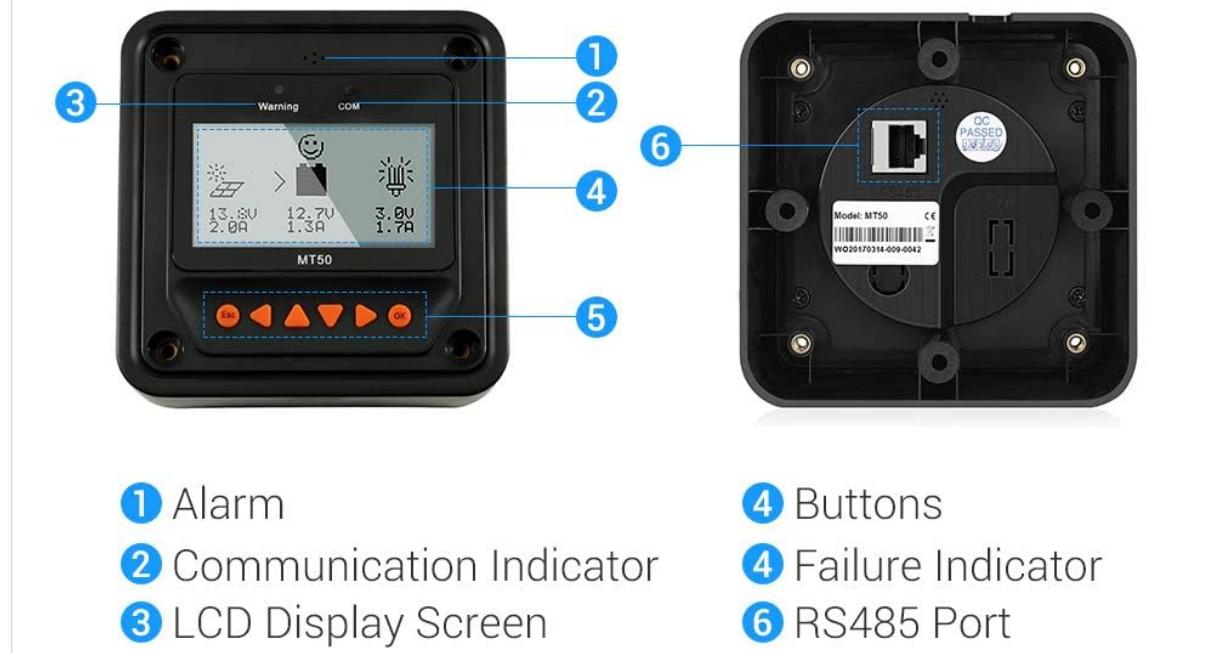


Image: Front and back view of the MT50 Remote Meter. Key components include: 1. Alarm, 2. Communication Indicator, 3. LCD Display Screen, 4. Buttons, 5. Failure Indicator, 6. RS485 Port.

5. SETUP AND INSTALLATION

Follow these steps to properly install and connect your EPEVER MT50 Remote Meter to a compatible solar charge controller.

5.1. Mounting the MT50

1. Choose a suitable location for the MT50 meter, ensuring it is easily accessible and visible.
2. Use the provided mounting screws to secure the meter to a flat surface.
3. Ensure the communication cable can reach the solar charge controller without excessive tension.

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Video: Unboxing and installation guide for the MT50 Remote Meter, demonstrating how to mount the unit and connect the communication cable.

5.2. Connecting to the Solar Charge Controller

The MT50 connects to the solar charge controller via an RJ45 communication cable. This cable supplies power to the MT50 and facilitates data exchange.

1. Locate the RS485 communication port on your EPEVER solar charge controller.
2. Connect one end of the RJ45 communication cable to the MT50's RS485 port.
3. Connect the other end of the RJ45 communication cable to the RS485 port on your solar charge controller.
4. Once connected, the MT50 display should power on and show real-time data from the controller.



Compatible with Only EPEVER Controllers:
LS-B(P), VS-BN, Tracer-BN, Tracer-AN, eTracer, iTracer

Image: Diagram illustrating the connection of the MT50 to an EPEVER MPPT solar charge controller, which is connected to a solar panel, battery, and load.

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Video: Demonstration of connecting the MT50 Remote Meter to a solar charge controller and observing the display of status and data.

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Video: Instructions on how to connect the MT50 to a TracerBP Controller, showing the physical connection process.

6. OPERATING INSTRUCTIONS

The MT50 provides various screens for monitoring and parameter settings. Use the navigation buttons (Esc, Up, Down, Left, Right, OK) to navigate through the menus and adjust settings.

6.1. Monitoring Data

The main display shows real-time data such as solar panel voltage/current, battery voltage/current, and load voltage/current. Use the navigation buttons to scroll through different monitoring screens.



Real-time display



Image: The MT50 LCD screen displaying real-time operational data, including solar input, battery status, and load output.

6.2. Setting Parameters

To enter the setting interface, press and hold the "OK" button for 1 second. You can then navigate through various parameters such as battery type, battery capacity, voltage control parameters, and load control modes.

- **Battery Type Selection:** Choose between Gel, Sealed, Flooded, or User-defined. For User-defined, you can set specific voltage parameters.
- **Load Control Modes:** Select from Manual, Light On/Off, Light On+Timer, or Time Control to manage

your load output.

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Video: Detailed demonstration of how to navigate the MT50 menu to set battery type, capacity, and other voltage control parameters.

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Video: Overview of the EPEVER MT50 LCD screen display and how to monitor and set data, including various operational parameters.

7. MAINTENANCE

The EPEVER MT50 Remote Meter requires minimal maintenance. Regular checks can ensure optimal performance and longevity.

- Keep the display screen clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- Periodically check the communication cable for any signs of damage or loose connections.
- Ensure the meter is securely mounted and not exposed to excessive vibrations.

8. TROUBLESHOOTING

If you encounter issues with your MT50 Remote Meter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
MT50 display is blank	No power from controller, faulty cable, or incompatible controller.	Check controller power. Verify cable connection. Ensure controller is compatible.
Incorrect data displayed	Incorrect parameter settings on MT50 or controller.	Review and adjust parameters in the "Control Para." menu.
Alarm indicator active	System fault (e.g., over-voltage, low battery).	Check the "Failure Info." menu for details and address the underlying issue with the solar system.
Buttons unresponsive	Temporary software glitch or physical damage.	Disconnect and reconnect the MT50. If issue persists, contact support.

9. SPECIFICATIONS

Feature	Detail
Model	MT50
Display Type	LCD
Dimensions (Package)	5.24 x 5.16 x 3.15 inches
Item Weight	12.3 ounces
Color	Grey

Feature	Detail
Batteries Required	No (powered by controller)
Communication Interface	RS485 (RJ45)
Compatible Controllers	EPEVER LS-B(P), VS-BN, Tracer-BN, Tracer-A(N), eTracer, iTracer Series

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your EPEVER solar charge controller or visit the official EPEVER website. Keep your purchase receipt as proof of purchase.