

EPEVER MT50

EPEVER MT50 Remote Meter Instruction Manual

Model: MT50 | Brand: EPEVER

1. INTRODUCTION

The EPEVER MT50 Remote Meter is an optional accessory designed to monitor and program EPEVER MPPT solar charge controllers. It provides a user-friendly interface to view system operating data, status, and modify control parameters. This manual provides essential information for the proper installation, operation, and maintenance of your MT50 Remote Meter.

Compatibility: The MT50 is compatible with EPEVER LS-B, LS-BP, VS-BN, Tracer-BN, Tracer-A, eTracer, and iTracer series solar charge controllers. It is not compatible with Renogy or HQST brand controllers.

2. KEY FEATURES

- Automatic identification of the connected controller and display of relevant parameter data.
- Large-screen informative LCD for displaying all operating data and system working status.
- Simple and convenient operation with navigation keys.
- Real-time alarm for failure information.
- Extended communication distance via RS485.
- Diversified load control modes: Manual Control, Light ON/OFF, Light ON+ Timer, Time Control.
- Battery type selection: Gel, Sealed, Flooded, and User-programmable.
- Programmable parameters for customized system settings.
- Energy statistics display function.
- Low self-consumption backlight and acoustic alarm (less than 65mA).
- Password setting parameter for enhanced system security.
- Adjustable temperature compensation coefficient.

MT50

REMOTE METER

UNIT OF MEASURE

in

Main function and data size

- Self-consumption Backlight and acoustic alarm ON <65mA
- The password setting parameter ensures the whole solar system circuit safety
- Temperature compensation coefficient is adjustable according to personal need



4.49



Image: The EPEVER MT50 Remote Meter displaying real-time solar panel voltage, battery voltage, and load current. The screen shows icons for solar input, battery status, and load output, along with numerical values for voltage and current.

3. PACKAGE CONTENTS

Upon opening the package, verify that all items listed below are present and undamaged:

- 1x MT50 Remote Meter
- 1x Wall Mounting Board
- 1x 2-meter Communication Cable (RJ45)
- 4x Mounting Screws

MT50

REMOTE METER



Contains the accessories

- Plastic gasket x 4
- The big screw x 4
- Small screws x 4



Image: The EPEVER MT50 Remote Meter shown alongside its accessories, including the communication cable, mounting screws, and wall mounting board, indicating a complete package.

4. SETUP AND INSTALLATION

Follow these steps to properly install your MT50 Remote Meter:

- 1. Choose a Mounting Location:** Select a suitable location for the MT50. The faceplate dimensions are 98mm x 98mm (3.86in x 3.86in), and the frame dimensions are 114mm x 114mm (4.49in x 4.49in). Ensure the location is easily accessible for viewing and operation, and within the ambient temperature range of -20°C to +70°C (-4°F to 158°F).
- 2. Mount the Wall Board:** Use the provided mounting screws to secure the wall mounting board to your chosen surface.
- 3. Install the MT50:** Insert the MT50 Remote Meter into the wall mounting board. The design allows for easy fitting.
- 4. Connect the Communication Cable:** Connect one end of the provided RJ45 communication cable to the MT50's RJ45 port. Connect the other end to the RJ45 port on your compatible EPEVER solar charge controller. The standard cable length is 2 meters, with a maximum supported length of 50 meters.
- 5. Power On:** Once connected, the MT50 will automatically power on and identify the controller, displaying relevant parameter data.



Image: The EPEVER MT50 Remote Meter separated from its mounting frame, illustrating the two-part design for easy installation and removal from a wall or panel.

5. OPERATING INSTRUCTIONS

The MT50 features a large LCD and six navigation function keys for easy operation. The display provides real-time operational data and working status in digital, graphic, and textual forms.

5.1 Navigating the Display

Use the navigation keys (typically labeled with arrows and 'Enter' or 'OK') to scroll through different display screens and access various parameters. The specific layout and menu structure will depend on the connected EPEVER controller model.

5.2 Parameter Settings

The MT50 allows for modification of various controller parameters. Refer to your specific EPEVER solar charge controller manual for detailed explanations of each parameter.

- **Battery Type:** Select the appropriate battery type (Gel, Sealed, Flooded, or User-defined) to ensure correct charging algorithms.
- **Load Control Modes:** Configure how the load output operates. Options typically include Manual Control, Light ON/OFF, Light ON+ Timer, and Time Control.
- **Programmable Parameters:** Adjust charging voltages, discharge cut-off voltages, and other system-specific

settings as needed.

Note: Always exercise caution when modifying parameters, as incorrect settings can affect system performance or battery life. Consult your controller's manual for recommended values.

6. MAINTENANCE

The EPEVER MT50 Remote Meter requires minimal maintenance to ensure optimal performance.

- **Cleaning:** Periodically wipe the display and casing with a soft, dry cloth. Avoid using abrasive cleaners or solvents.
- **Connections:** Ensure the RJ45 communication cable remains securely connected to both the MT50 and the solar charge controller.
- **Environmental Conditions:** Keep the MT50 within its specified operating temperature and humidity ranges to prevent damage.

7. TROUBLESHOOTING

If you encounter issues with your MT50 Remote Meter, consider the following common troubleshooting steps:

- **No Display/Power:**
 - Check the RJ45 communication cable connection at both ends. Ensure it is firmly seated.
 - Verify that the connected solar charge controller is powered on and functioning correctly. The MT50 draws power from the controller.
- **Incorrect Data Display:**
 - Ensure the MT50 is compatible with your specific EPEVER controller model.
 - Restart both the controller and the MT50 by disconnecting and reconnecting the communication cable.
- **Communication Error:**
 - Inspect the RJ45 cable for any physical damage. Try using a different, known-good RJ45 cable if available.
 - Ensure the cable length does not exceed the maximum recommended 50 meters.
- **Alarm Sounds:**
 - The MT50 provides real-time failure information. Check the display for specific error codes or messages and refer to your controller's manual for their meaning and resolution.

8. SPECIFICATIONS

Parameter	Value
Faceplate Dimension	98 × 98 mm (3.86 × 3.86 inch)
Frame Dimension	114 × 114 mm (4.49 × 4.49 inch)
Connector Type	RJ45
Meter Cable Length	Standard 2m, Max 50m

Parameter	Value
Ambient Temperature	-20°C to +70°C (-4°F to 158°F)
Item Weight	11.3 ounces
Product Dimensions	6.77 x 1.73 x 5.47 inches
Material	Plastic
Display Type	LCD

9. PRODUCT VIDEOS

The following videos provide additional information and visual guidance for the EPEVER MT50 Remote Meter and compatible EPEVER products.

Video: Product overview and demonstration (approx. 4:09 duration).

Video: Detailed features and usage guide (approx. 5:28 duration).

Video: Installation and connection guide (approx. 2:10 duration).

Video: Advanced settings and programming (approx. 5:52 duration).

Video: Quick start guide (approx. 0:52 duration).

10. WARRANTY AND SUPPORT

For warranty information, please refer to the documentation provided with your purchase or contact your authorized EPEVER dealer. For technical support or further assistance, please reach out to EPEVER customer service or visit their official website.