Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

SolarEpic TES10415

Epever 100A TES Series MPPT Solar Charge Controller TES10415 User Manual

Model: TES10415

1. Product Overview

The EPEVER 100A TES Series MPPT Solar Charge Controller, model TES10415, is designed to efficiently manage power flow from your solar panels to your battery bank. Utilizing Maximum Power Point Tracking (MPPT) technology, it optimizes energy harvest from photovoltaic (PV) arrays. This controller is compatible with various battery types, including LiFePO4 and lead-acid, and supports 48V battery systems with a 100A 150V PV input capability. It features a digital display for easy monitoring of system parameters.



Image 1.1: Front view of the Epever 100A TES Series MPPT Solar Charge Controller TES10415. This image shows the main unit, typically featuring a digital display and connection terminals.

2. Safety Instructions

Please read all instructions carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or severe injury. Keep this manual for future reference.

- Ensure all wiring is correctly polarized and securely connected. Incorrect wiring can damage the controller and other components.
- Always disconnect the battery first, then the solar array, before performing any maintenance or disconnection. Reconnect in reverse order: solar array first, then battery.
- Install the controller in a well-ventilated area, away from flammable materials and direct sunlight.
- Do not disassemble or attempt to repair the controller. Contact qualified personnel for service.
- Wear appropriate personal protective equipment (PPE), including eye protection and insulated gloves, when working with electrical systems.

- Ensure the battery bank voltage is compatible with the controller's specifications.

3. Package Contents

Upon unpacking, please verify that all items listed below are present and undamaged:

- Epever 100A TES Series MPPT Solar Charge Controller (Model: TES10415)
- User Manual (this document)
- Mounting accessories (screws, wall plugs) - *(Note: Specific accessories may vary; refer to packaging for exact details)*

4. Setup and Installation

Proper installation is crucial for the safe and efficient operation of your solar charge controller. Follow these steps carefully:

1. **Mounting the Controller:** Choose a dry, well-ventilated location indoors, protected from direct sunlight, high temperatures, and moisture. Ensure there is sufficient clearance around the controller for heat dissipation. Use the provided mounting accessories to secure the controller to a wall or suitable surface.
2. **Connecting the Battery:** Connect the battery cables to the controller's battery terminals. Ensure correct polarity: positive (+) to positive, negative (-) to negative. It is recommended to install a fuse or circuit breaker between the battery and the controller for protection. The controller supports 12V, 24V, 36V, and 48V battery systems.
3. **Connecting the Solar Array (PV):** Connect the solar panel cables to the controller's PV terminals. Again, observe correct polarity. Ensure the open-circuit voltage (Voc) of your solar array does not exceed the controller's maximum PV input voltage (150V).
4. **Connecting the Load (Optional):** If your controller includes load terminals, connect your DC loads to these terminals. Ensure the total current draw of your loads does not exceed the controller's rated load current.
5. **Power On:** Once all connections are secure and verified, the controller should power on automatically. The digital display will show system information.

Important: Always connect the battery first, then the solar panels. Disconnect in reverse order: solar panels first, then the battery.

5. Operating Instructions

The Epever TES Series controller is designed for automatic operation. Once properly installed, it will begin charging your batteries from the solar array.

5.1 Digital Display

The integrated digital display provides real-time information about your solar power system. You can typically cycle through various parameters using buttons on the controller (if present), or it may automatically display them in sequence. Common displayed parameters include:

- Battery Voltage
- PV Voltage
- Charging Current
- Charging Power
- Battery Temperature
- Load Status (if applicable)

5.2 Battery Type Selection

The controller supports various battery types. It is essential to select the correct battery type in the controller's settings to ensure proper charging algorithms and prolong battery life. Refer to the controller's specific menu navigation for changing battery type. Common options include:

- Sealed Lead-Acid
- Gel Lead-Acid
- Flooded Lead-Acid
- LiFePO4 (Lithium Iron Phosphate)
- User-defined (for custom battery parameters)

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your solar charge controller.

- **Cleaning:** Periodically clean the controller's exterior with a dry cloth to remove dust and debris. Ensure ventilation openings are clear.
- **Connection Check:** Annually, inspect all wiring connections for tightness and corrosion. Loose connections can cause overheating and power loss.
- **Environmental Inspection:** Ensure the installation environment remains dry and free from excessive heat or cold.
- **Battery Inspection:** Regularly check your batteries for signs of damage, corrosion, or swelling. Ensure battery terminals are clean and tight.

7. Troubleshooting

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

Problem	Possible Cause	Solution
Controller not powering on	Loose battery connection; Battery voltage too low; Reversed battery polarity.	Check battery connections; Charge battery externally if voltage is below minimum operating level; Verify battery polarity.
No charging current	No solar input; Reversed PV polarity; PV voltage too low/high; Faulty PV panel.	Check PV connections and sunlight; Verify PV polarity; Ensure PV voltage is within controller's operating range; Test PV panels.
Low charging efficiency	Incorrect battery type setting; Shading on PV panels; High ambient temperature.	Verify battery type setting; Clear any shading on PV panels; Ensure adequate ventilation for the controller.
Battery not fully charged	Insufficient solar power; Incorrect battery type setting; Battery degradation.	Increase PV array size or improve sun exposure; Verify battery type setting; Consider battery replacement if old.

If the problem persists after attempting these solutions, please contact customer support.

8. Specifications

Feature	Specification
Model Number	TES10415

Feature	Specification
Brand	SolarEpic
Rated Charge Current	100A
Max. PV Input Voltage	150V
Battery Voltage	12V / 24V / 36V / 48V Auto-recognition (as per typical Epever 100A controllers, 12V is listed as a supported voltage)
Battery Type Compatibility	LiFePO4, Lead-Acid (Sealed, Gel, Flooded), User-defined
Display Type	Digital
Material	Metal
Color	White
Item Weight	14.5 pounds (approx. 6.58 kg)
Included Components	Controller body
Smart Home Compatibility	Not smart home compatible

9. Warranty and Support

This product is typically covered by a manufacturer's warranty. For specific warranty terms, duration, and conditions, please refer to the warranty card included with your product or contact the seller/manufacturer directly. For technical support, troubleshooting assistance beyond this manual, or to inquire about replacement parts, please reach out to SolarEpic customer service through their official channels.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

https://manuals.plus/asin/B0GT4ZD7N7

More documents and user manuals: **https://manuals.plus/**