Tenergy TN600

Tenergy TN600 Wall Smart Charger User Manual

Model: TN600 | Brand: Tenergy

Introduction

The Tenergy TN600 Wall Smart Charger is designed for efficient and safe charging of 6V and 12V Sealed Lead Acid (SLA) batteries. This manual provides essential information for the proper setup, operation, and maintenance of your charger to ensure optimal performance and longevity.



Image: The Tenergy TN600 charger with alligator clips, ready to charge a sealed lead acid battery.

Important Safety Instructions

Please read and understand all safety instructions before using the charger. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Do not short circuit the (+) and (-) terminals with any metals.**
- **Do not immerse, throw, or wet the battery in water.**
- **Do not place above an AC or DC primary power source.**
- **Do not disassemble, crush, or modify the battery.**
- **Stop using the battery if abnormal heat, odor, deformation, or abnormal condition is detected.**

- Use this charger only for 6V and 12V Sealed Lead Acid (SLA) batteries. Do not attempt to charge other battery types.
- Ensure proper ventilation during charging.
- Keep out of reach of children.

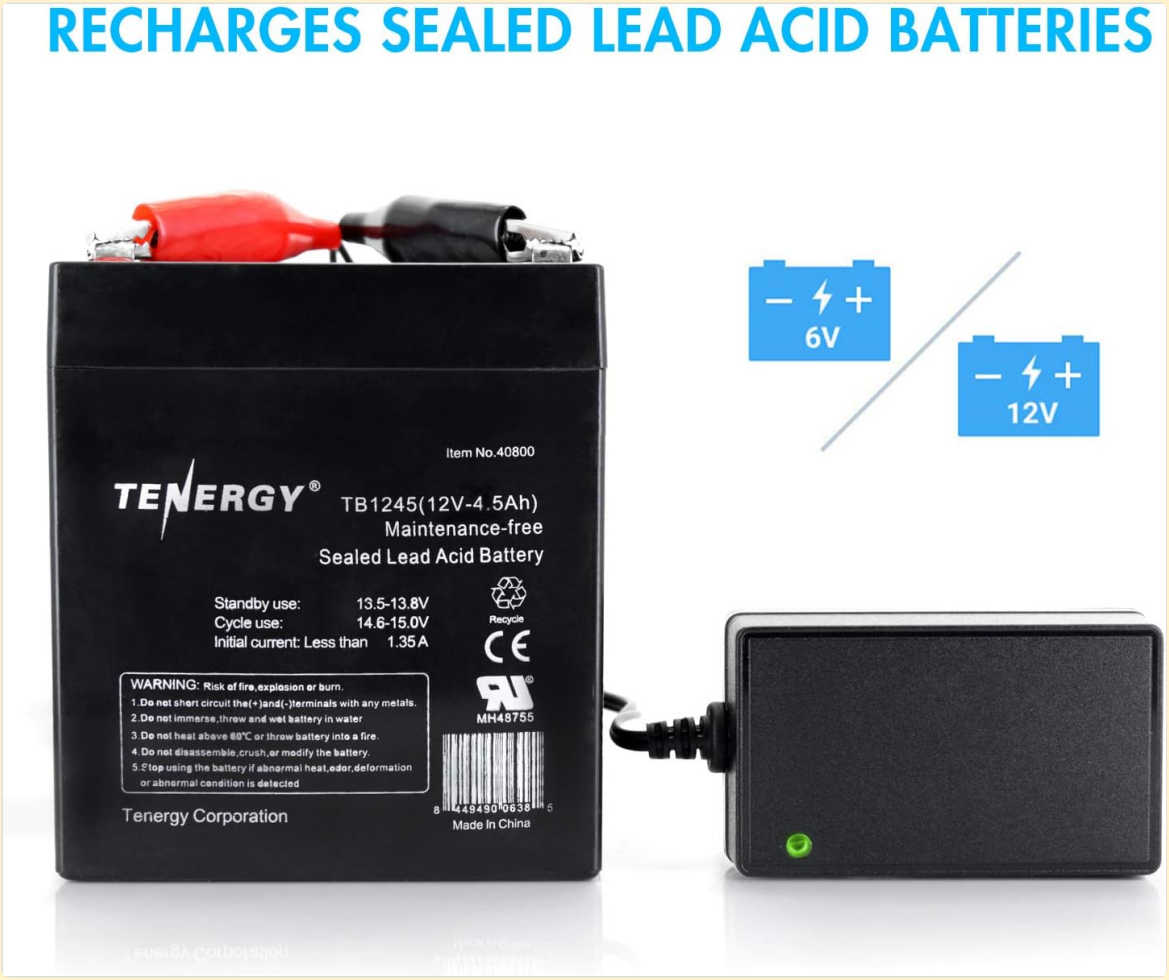


Image: A sealed lead acid battery with a warning label, emphasizing safety precautions for battery handling and charging.

Product Features

The Tenergy TN600 charger incorporates several features for efficient and safe battery charging:

- **Automatic Voltage Detection:** Automatically detects and provides the correct voltage for 6V and 12V SLA batteries.
- **3-Stage Charging:** Ensures batteries are fully recharged and maintained.
- **LED Status Indicators:** Simple red and green lights indicate charging status.
- **Built-in Protections:** Includes safeguards against over-voltage, short circuits, and reverse polarity.



Image: The Tenergy TN600 charger highlighting its built-in safety features: Over-Voltage Protection, Short Circuit Protection, and Reverse Polarity Protection.

Setup Instructions

Follow these steps to set up your Tenergy TN600 charger:

1. **Inspect the Charger and Battery:** Before each use, check the charger, cables, and battery for any damage. Do not use if damaged.
2. **Connect to Battery:**
   - Connect the **red** alligator clip to the positive (+) terminal of the battery.
   - Connect the **black** alligator clip to the negative (-) terminal of the battery.

   Ensure a secure connection.
3. **Plug into Power Outlet:** Plug the charger's AC adapter into a standard 100-240VAC (50-60Hz) wall outlet.



Image: The Tenergy TN600 charger with its alligator clips, demonstrating the connection to a battery terminal.

Operating Instructions

Once connected, the charger will automatically begin the charging process. The TN600 features automatic voltage detection and a 3-stage charging process.

Automatic Voltage Detection

The charger automatically identifies whether a 6V or 12V SLA battery is connected and adjusts its output accordingly. No manual selection is required.



Image: The Tenergy TN600 charger demonstrating its automatic voltage detection capability for both 6V and 12V sealed lead acid batteries.

3-Stage Charging Process

The TN600 utilizes an intelligent 3-stage charging method to optimize battery life and ensure a full charge:

1. **Stage 1: Bulk Charging** - Charges the battery at a constant current until it reaches its maximum voltage. The battery will be approximately 80-90% charged at the end of this stage.
2. **Stage 2: Absorption Charging** - Charges the battery at a constant voltage while the current gradually tapers down. The battery will be about 98% charged at the end of this stage.
3. **Stage 3: Float Charging** - Supplies a small charging current to bring the battery to 100% and then maintains it by counteracting self-discharge.

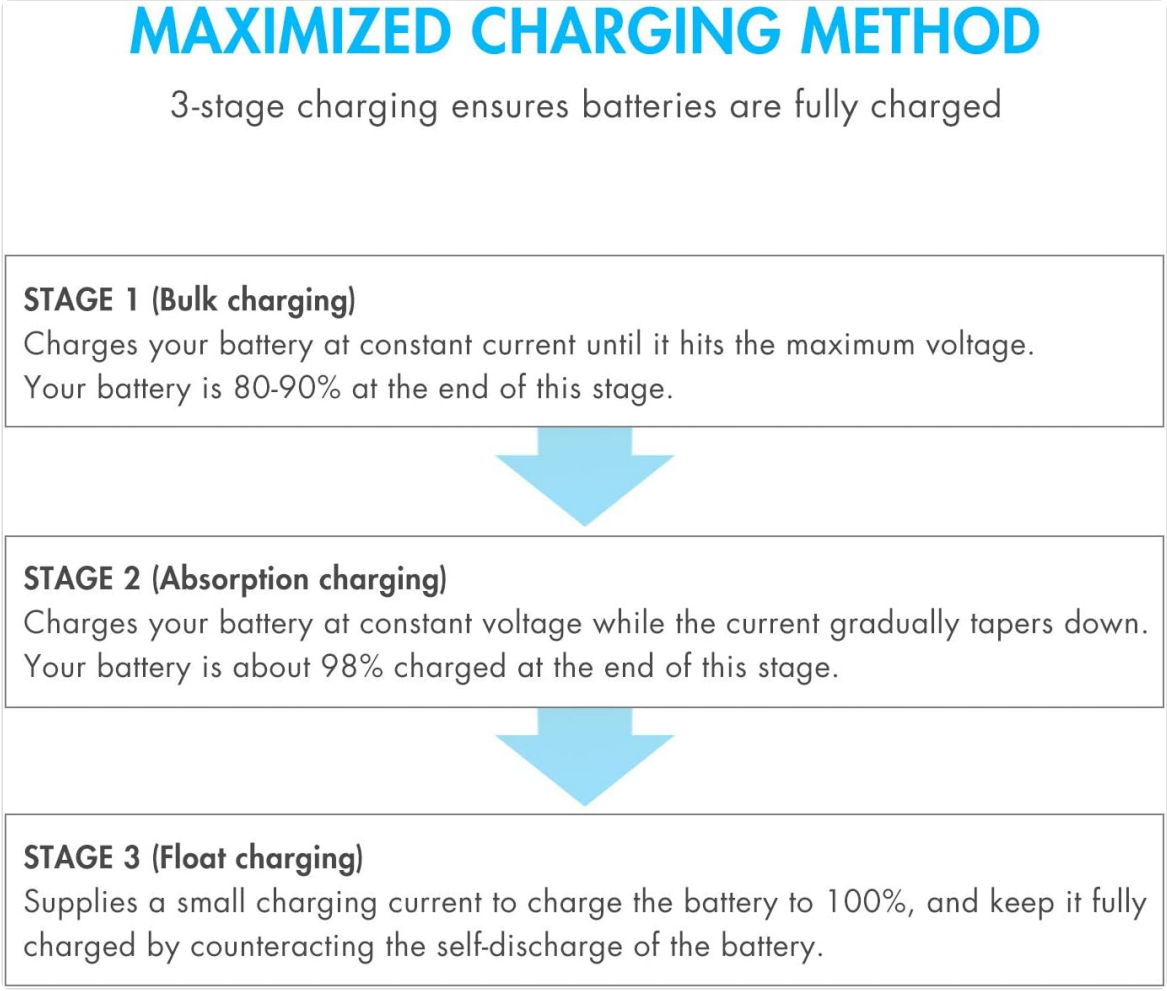


Image: A graphical representation of the 3-stage charging process (Bulk, Absorption, Float) showing voltage and current curves over time, ensuring a fully recharged battery.

Official Product Video

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Video: An official Tenergy video demonstrating how to recharge SLA batteries using the Tenergy TN600 smart charger, highlighting its ease of use and smart features.

LED Status Indicators

The Tenergy TN600 charger features a simple LED indicator to communicate the charging status:

- **Red LED:** Indicates that the battery is currently charging.
- **Green LED:** Indicates that the battery is fully charged and the charger is in float mode.



Image: The Tenergy TN600 charger displaying its LED status lights, with red indicating charging and green indicating a fully charged battery.

Troubleshooting

If you encounter issues with your Tenergy TN600 charger, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Charger LED does not light up.	No power to the charger or loose connection.	Ensure the charger is securely plugged into a live wall outlet. Check the battery connections.
Charger LED blinks red and green, then turns off.	Battery is severely over-discharged (below 11V for 12V batteries) or damaged.	The charger may not recognize severely discharged batteries. The battery might be unrecoverable. Consider replacing the battery.
Charger LED remains red for an extended period.	Battery is taking a long time to charge or is very large.	This is normal for deeply discharged or high-capacity batteries. Allow more time for charging. If it never turns green, the battery might be faulty.
Charger or battery becomes excessively hot.	Faulty battery or charger, or poor ventilation.	Immediately disconnect the charger and battery. Allow them to cool. Ensure adequate ventilation. If the issue persists, discontinue use and contact support.

Specifications

Brand	Tenergy

Model Number	TN600
Input Voltage	100-240VAC (50-60Hz)
Output Voltage	6V & 12V (Automatic Detection)
Output Current	500mA
Charging Stages	3-Stage (Bulk, Absorption, Float)
Connector Type	Alligator Clips
Protections	Over-Voltage, Short Circuit, Reverse Polarity
Dimensions	70mm x 42mm x 30mm (approximate charger unit size)



Image: A visual representation of the Tenergy TN600 charger's dimensions, showing its compact size.

Warranty and Support

The Tenergy TN600 Wall Smart Charger comes with a**12-month manufacturer warranty**. For technical support, warranty claims, or any questions regarding your product, please contact Tenergy Customer Service.
Please visit the official Tenergy website or refer to your product packaging for the most current contact information.

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