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**Tecmate TM-497**

# TECMATE OptiMATE TM-497 Lithium Ion Motorcycle Charger User Manual

Model: TM-497

## 1. INTRODUCTION

This manual provides essential instructions for the safe and effective use of your TECMATE OptiMATE TM-497 Lithium Ion Motorcycle Charger. The OptiMATE TM-497 is specifically designed for 12.8V LiFePO4 (Lithium Iron Phosphate) batteries, offering automatic charging and maintenance to ensure optimal battery performance and longevity. Please read this manual thoroughly before operating the charger.



Figure 1: TECMATE OptiMATE TM-497 Charger with included accessories.

## 2. SAFETY INFORMATION

Always prioritize safety when working with electrical equipment and batteries. Failure to follow these safety guidelines may result in electric shock, fire, or damage to the charger or battery.

- **Read all instructions:** Before using the charger, read all instructions and cautionary markings on the charger, the battery, and the product using the battery.
- **Ventilation:** Ensure adequate ventilation when charging. Do not operate the charger in a confined area or restrict ventilation in any way.
- **Battery type:** This charger is designed exclusively for 12.8V LiFePO4 (Lithium Iron Phosphate) batteries. Do not use it with other battery types (e.g., lead-acid, Ni-Cd, Ni-MH) as this may cause damage or injury.
- **Avoid sparks:** Connect and disconnect the battery cables only when the AC power cord is disconnected from the outlet to prevent sparks.
- **Moisture:** Do not expose the charger to rain or excessive moisture. It is designed for indoor use.
- **Damaged equipment:** Do not operate the charger if it has received a sharp blow, been dropped, or otherwise damaged. Contact customer support for assistance.
- **Children:** Keep the charger and battery out of reach of children.
- **Professional use:** This device is intended for consumer use. For professional or commercial applications, consult the manufacturer.

### 3. PACKAGE CONTENTS

Verify that all items are present in the package:

- OptiMATE TM-497 Lithium Ion Motorcycle Charger Unit
- Vehicle Side Cable (for permanent connection to the battery)
- Alligator Clip Cable (for temporary connection to battery terminals)
- AC Power Cord





Figure 2: Contents of the OptiMATE TM-497 package.

## 4. SETUP AND CONNECTION

Follow these steps to connect your OptiMATE TM-497 charger to a 12.8V LiFePO4 battery:

### 1. Choose Connection Method:

- **Vehicle Side Cable:** For long-term maintenance, connect the ring terminals of the vehicle side cable directly to your battery terminals (red to positive, black to negative). Ensure a secure connection. This allows for quick plug-in charging without accessing the battery each time.
- **Alligator Clip Cable:** For temporary charging, attach the red alligator clip to the positive (+) battery terminal and the black alligator clip to the negative (-) battery terminal. Ensure clips are firmly attached and do not touch each other or other metal parts.

2. **Connect Charger to Battery Cable:** Plug the chosen battery connection cable (vehicle side or alligator clip) into the output port of the OptiMATE TM-497 charger.

3. **Connect to AC Power:** Plug the AC power cord into a standard 100-240V AC wall outlet. The charger will automatically begin its charging program.

# 繋ぐだけで自動充電

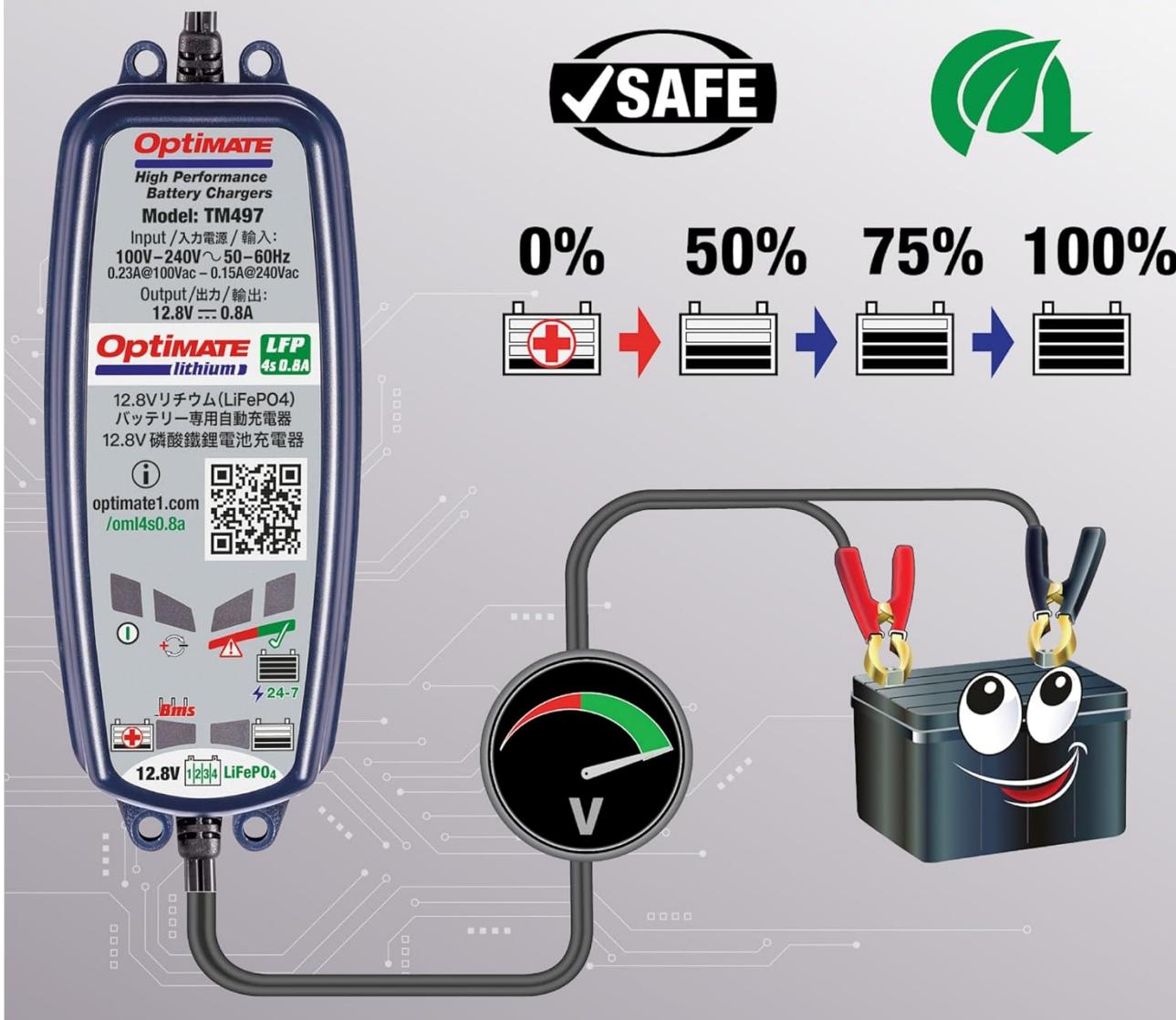


Figure 3: Illustrates connecting the charger to the battery and then to the power outlet.

## 5. OPERATING INSTRUCTIONS

The OptiMATE TM-497 operates automatically once connected. It features a multi-stage charging program optimized for 12.8V LiFePO4 batteries.

### 5.1. Charging Process

Upon connection, the charger will perform a diagnostic check and then proceed through its charging stages. The output is 12.8V at 0.8A maximum. The charger is designed to recover deeply discharged batteries and maintain them at optimal levels without overcharging.

車両メーカーにも認められています  
**長期乗らない間も安心!**  
**繋げっぱなし充電が可能!**



Figure 4: Visual representation of the charging progress from 0% to 100%.

### 5.2. Battery Management System (BMS) Compatibility

The OptiIMATE TM-497 is compatible with LiFePO4 batteries equipped with a Battery Management System (BMS). It can detect and recover batteries that have entered a 'sleep' state due to deep discharge, automatically reactivating them for charging.

# 世界中で使用されている *OptiMATE* 車両メーカーに認められた充電器



Figure 5: Depicts the automatic recovery process for batteries in a 'sleep' state.

## 6. MAINTENANCE

The OptiMATE TM-497 charger requires minimal maintenance. Keep the unit clean and dry. Regularly inspect the cables and connectors for any signs of damage or wear. If any damage is observed, discontinue use and contact customer support.

For long-term battery health, it is recommended to keep the charger connected to your LiFePO4 battery when the vehicle is not in use, especially during storage periods. The charger will automatically maintain the battery at its optimal charge level.

## 7. TROUBLESHOOTING

If the charger does not appear to be functioning correctly, refer to the following common issues:

- No indicator lights:** Ensure the AC power cord is securely plugged into a live outlet and the charger. Check the wall outlet with another appliance.
- Charger not starting:** Verify that the battery connections are correct (red to positive, black to negative) and

secure. Ensure the battery is a 12.8V LiFePO4 type.

- Battery not charging:** The battery may be severely discharged or faulty. The OptiMATE TM-497 has a recovery mode for deeply discharged LiFePO4 batteries. Allow the charger sufficient time to attempt recovery. If the issue persists, the battery may need replacement.
- Unusual heat or smell:** Immediately disconnect the charger from both AC power and the battery. Do not use the charger if it exhibits unusual heat, smoke, or a burning smell. Contact customer support.

## 8. SPECIFICATIONS

<b>Model</b>	TM-497
<b>Brand</b>	Tecmate (OptiMATE)
<b>Input Voltage</b>	100-240V AC, 50-60Hz
<b>Output Voltage</b>	12.8V DC
<b>Output Current</b>	0.8A (Maximum)
<b>Battery Type</b>	12.8V LiFePO4 (Lithium Iron Phosphate)
<b>Product Dimensions</b>	30 x 20 x 20 cm (approximate)
<b>Weight</b>	670 g (approximate)

## 9. WARRANTY AND SUPPORT

For warranty information, technical support, or further inquiries regarding your OptiMATE TM-497 charger, please refer to the official Tecmate website or contact their customer service department.

Additional product information and support can often be found at the manufacturer's dedicated product page:

[OptiMATE TM-497 Product Page](#)

### Related Documents - TM-497

 OptiMate 1 DUO INSTRUCTIONS FOR USE Model: TM409 AC: 100-240V 50-60Hz DC: 12.8V 0.8A Dimensions: 30 x 20 x 20 cm Weight: 670 g Automatic charger for 12V lead-acid & 12.8V LiFePO4 batteries Charger for 12V lead-acid batteries & 12.8V LiFePO4 batteries Cargador automático para baterías 12V plomo-ácido & 12.8V LiFePO4	<a href="#">OptiMate 1 DUO Automatic Battery Charger - Model TM409 User Manual</a> Comprehensive user manual for the OptiMate 1 DUO (Model TM409), an automatic maintenance charger for 12V lead-acid and 12.8V LiFePO4 batteries (2Ah-20Ah). Covers safety, operation, charging stages, LED indicators, troubleshooting, and warranty.
 OptiMATE 2 INSTRUCTIONS FOR USE Model: TM420 / TM421 AC: 100-240V 50-60Hz DC: 12.8V 0.8A Dimensions: 30 x 20 x 20 cm Weight: 670 g Automatic charger for 12V lead-acid batteries & Charger substation for batteries 12V plomo-ácido • Cargador automático para baterías 12V Automaatische lader voor 12V Blei-Säure-Batterien • Automatische lader voor 12V Blei-Säure-Batterien • Cargador automático para baterías 12V plomo-ácido • Automatische lader voor 12V plomo-ácido	<a href="#">OptiMATE 2 Automatic Maintenance Charger User Manual</a> Comprehensive user manual for the OptiMATE 2 automatic battery charger (Models TM420/TM421). Includes safety instructions, charging procedures, LED indicators, maintenance, and warranty information for 12V lead-acid batteries.

	<p><b>OptiMATE 7 12V 10A Automatic Battery Charger - User Manual</b></p> <p>Comprehensive user manual and safety instructions for the TecMate OptiMATE 7 automatic battery charger. Covers operation, maintenance, and safety precautions for 12V lead-acid batteries.</p>
	<p><b>OptiMATE 4 Dual Program Battery Charger User Manual</b></p> <p>Comprehensive user manual for the TecMate OptiMATE 4 Dual Program battery charger, detailing operation, safety instructions, and diagnostics for 12V lead-acid batteries. Supports STD, AGM, MF, and GEL types.</p>
	<p><b>TecMate OptiMATE 4 Automatic Battery Charger User Manual</b></p> <p>Comprehensive guide to using the TecMate OptiMATE 4 automatic diagnostic battery charger for 12V lead-acid batteries. Includes instructions, safety precautions, program details, and warranty information.</p>
	<p><b>OptiMATE4 Dual Program Battery Charger: User Manual and Safety Instructions</b></p> <p>Comprehensive user manual and safety guide for the TecMate OptiMATE4 Dual Program automatic diagnostic battery charger. Covers charging, testing, and maintenance for 12V lead-acid batteries, with multi-language support.</p>

Documents - Tecmate – TM-497



## [pdf] Declaration of Conformity

Microsoft Word Optimate Lithium 4s 0.8A Használati Útmutató doc 4254 1710 eshop micronixkft hu data att 001 |||

Használati tmutat Optimate Lithium 4s 0.8A tlthz Modell: TM470, TM471, TM472,

TM478, TM497 AC: 100-2 ... dul, LED #3 vagy a LED #4 sajt magban fog vilgtani. Az egy kimenettel rendelkez tlk esetn, TM-47x, **TM-497** a kvetkezket tegye: 1. Vlassza le a tl a hlzati ramforrsrl. Vrja meg, mg a LED #1 kialszik. ....

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