

Tecmate TM-275v2

Tecmate Optimate Lithium 4s 10A (TM275v2) Battery Charger & Maintainer User Manual

Model: TM-275v2 | Brand: Tecmate

1. INTRODUCTION

The Tecmate Optimate Lithium 4s 10A (TM275v2) is an advanced 10-step battery saving charger, tester, and maintainer specifically designed for 12.8V/13.2V LiFePO4 (Lithium Ferrous Phosphate) batteries. This high-performance unit provides ultimate protection for your battery, featuring a BMS (Battery Management System) wake-up mode and a TUNE mode for stable battery support during vehicle ECU programming.



Image: The Optimate Lithium 4s 10A (TM275v2) battery charger with included accessories.

2. WHAT'S IN THE BOX

Your Tecmate Optimate Lithium 4s 10A (TM275v2) package includes the following items:

- Sealed Battery Saving Charger & Maintainer
- Weatherproof Battery Lead (with M8 / 5/16" - M10 / 3/8" ringlets)
- Battery Clip Set

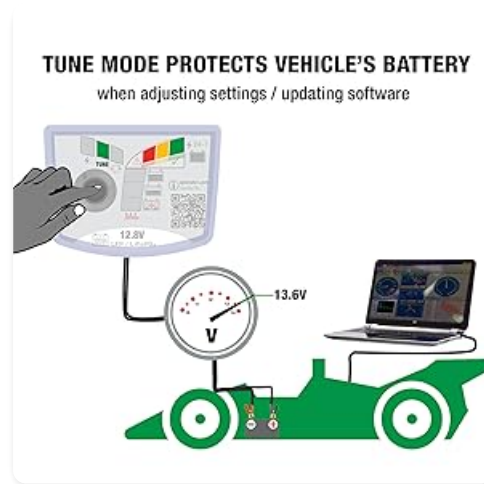


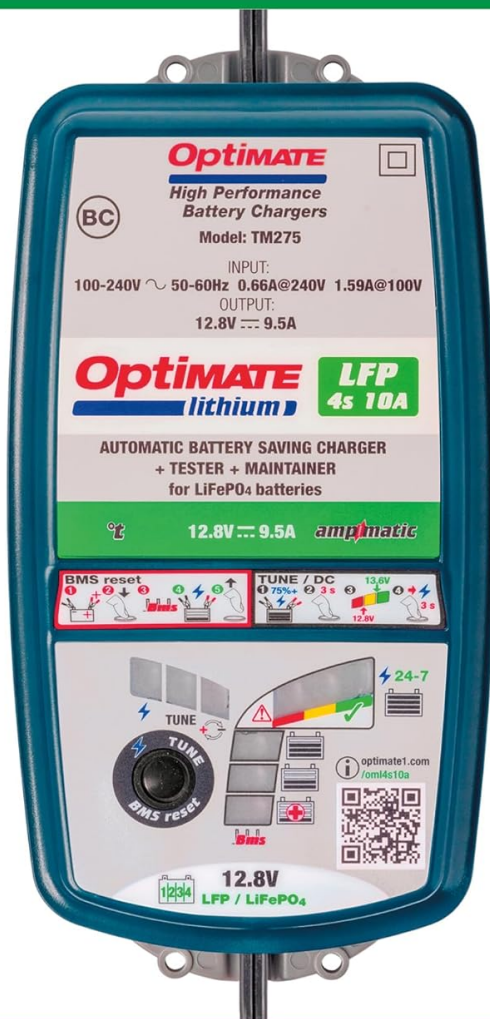
Image: Visual representation of the items included in the product packaging.

3. SETUP

Follow these steps to correctly set up your Optimate Lithium charger:

1. **Connect to AC Power:** Plug the charger into a standard 100-240V AC power outlet. Lamp 1 (green) will illuminate, indicating the charger is receiving power.
2. **Connect to Battery:** Attach the battery lead or clips to your 12.8V/13.2V LiFePO4 battery. Ensure correct polarity: red to the positive (+) terminal and black to the negative (-) terminal. If connected incorrectly, Lamp 2 (red) will light up, indicating reverse polarity. Correct the connection for charging to proceed.

For a 12V Li-LFP BATTERY in motorcycle, racing or leisure



12.8V 13.2V LiFePO₄

LFP LiFe

2Ah-120Ah

12V/12.8V/13.2V

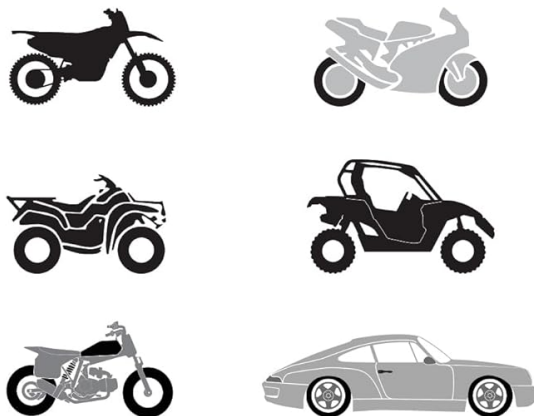


Image: The Optimate Lithium charger connected to a battery using the included clips.

4. OPERATING INSTRUCTIONS

The Optimate Lithium charger features a 10-step charging and maintenance program. The LED indicators on the charger provide real-time status updates:

- **Lamp 1 (Green):** Indicates AC power connection.
- **Lamp 2 (Red):** Indicates reverse polarity connection. Correct immediately.
- **Lamp 3 (Orange/Red):** Lights up when connected to a discharged battery (retaining at least 0.5V) or indicates BMS pulse reset.
- **Lamp 4 (Yellow):** Lights up when charging has progressed from save mode, or the battery is at least 50% charged.
- **Lamp 5 (Green):** Lights up when the battery has reached full charge and is healthy.
- **Lamp 6 (Red):** Blinks if a fault is detected within the battery during save mode, or if the battery cannot hold sufficient charge during the final test, or if current draw from the vehicle is higher than the charger can deliver.

BMS (Battery Management System) Reset

Lithium batteries with an advanced BMS may enter a protected sleep mode if deeply discharged. The Optimate Lithium charger can safely wake up these batteries.

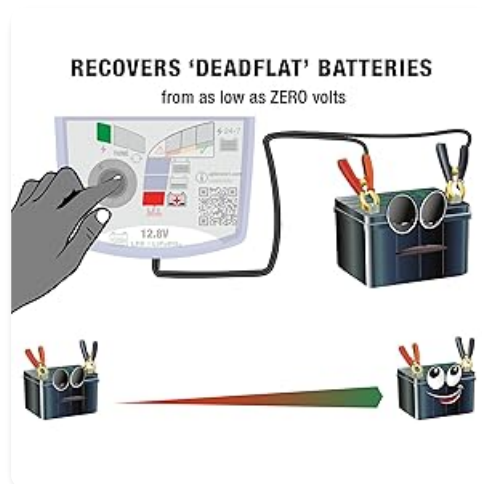


Image: The Optimate Lithium charger's ability to save deeply discharged batteries or manually reset the BMS.

Your browser does not support the video tag.

Video: Demonstration of the BMS reset function on an Optimate charger, showing how to reactivate a deeply discharged lithium battery. This video is for a similar Optimate model (Optimate4) but illustrates the core BMS reset concept.

TUNE Mode

The TUNE mode provides stable battery support during ECU programming or diagnostic work, ensuring consistent power delivery to sensitive vehicle electronics.

WHAT'S IN THE BOX

1 Sealed Battery Saving Charger & Maintainer



2 Weatherproof Battery Lead



3 Battery Clip Set



With adjustable M8 / 5/16" - M10 / 3/8" ringlets that fit most automotive and marine battery terminals.



Custom designed battery clips to fit all batteries.



Image: The TUNE mode protects a vehicle's battery when adjusting settings or updating software, providing a stable power supply.

5. MAINTENANCE

The Optimate Lithium charger offers a 24/7 interactive maintenance program. Once the battery is fully charged and tested as healthy, the charger monitors the battery's charge level and delivers a maintenance charge only when necessary. This ensures the battery remains charged and healthy, even during long periods of storage.

SAFE INTERACTIVE MAINTENANCE

battery tested hourly, float charge when needed

Connect and Forget!



The image shows an Optimate TM275 High Performance Battery Charger on the left. It is a blue and white device with a digital display showing '12.8V --- 9.5A' and 'ampmatic' mode. It has various buttons and a QR code. On the right is a cartoon battery with a smiling face, wearing a lifebuoy that says 'SAFE CARE'. The battery is connected to the charger with red and black cables. Below the battery is a lightning bolt icon and the text '24-7'.

Image: The Optimate Lithium charger providing safe, interactive 24/7 maintenance, allowing users to connect and forget.

6. TROUBLESHOOTING

If Lamp 6 (red) blinks, it indicates a potential issue:

- **Faulty Battery:** The charger detected a fault within the battery during the save mode. The battery may be permanently damaged.
- **Unable to Hold Charge:** The battery could not hold sufficient charge during the final test.
- **High Current Draw:** The current draw from the vehicle is higher than the charger can deliver. Disconnect the vehicle's electrical system or reduce parasitic drains.

If the issue persists, consult a professional or contact Tecmate customer support.

7. SPECIFICATIONS

Feature	Specification
Manufacturer	TecMATE
Model	TM-275v2
Output Voltage	12.8 Volts
Item Weight	3.1 pounds (1.41 Kilograms)
Product Dimensions	9.25 x 4.88 x 2.6 inches
Specification Met	CE


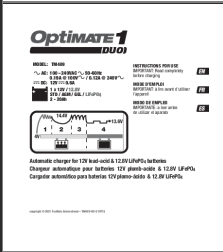
8. WARRANTY AND SUPPORT

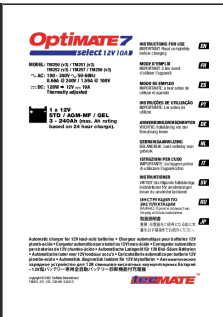


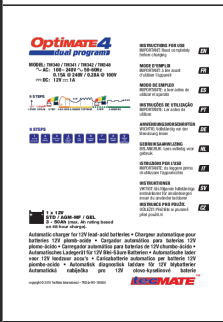
For warranty information and technical support, please refer to the documentation included with your product or visit the official Tecmate website. Ensure you have your model number (TM-275v2) and purchase details available when contacting support.

Visit Optimate1.com for more information


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Related Documents - TM-275v2

	<p>OptiMATE 2 Automatic Maintenance Charger User Manual</p> <p>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>
	<p>OptiMate 1 DUO Automatic Battery Charger - Model TM409 User Manual</p> <p>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.</p>

	<p>OptiMATE 7 12V 10A Automatic Battery Charger - User Manual</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>OptiMATE 4 Dual Program Battery Charger User Manual</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>TecMate OptiMATE 4 Automatic Battery Charger User Manual</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>OptiMATE4 Dual Program Battery Charger: User Manual and Safety Instructions</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-275v2




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[\[pdf\]](#) Warranty

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T Martin Human CEO / CTO original engineer M cell: 905-3996087 office: 905-3372095 email: mart ... s High Performance Battery Chargers 26 TUNE MODE EQUIPED P r o d u c t s MSRP: 181.95 MFG#: TM-275v2 LeMans#: 3807-0576 NEW PRODUCT ALERT MORE POWER 10A SAFELY RESET, SAVE, CHARGE, TEST, AND...

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