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› OptiMate 7 12V/24V TM260 Battery Charger & Maintainer User Manual

Optimate TM260v3

OptiMate 7 12V/24V TM260 Battery Charger & Maintainer User Manual

Model: TM260v3

1. INTRODUCTION

The OptiMate 7 12V/24V TM260 is an advanced 8-stage automatic battery charger, tester, and maintainer designed for 12V and 24V lead-acid batteries, including AGM, GEL, EFB, and STD types. It provides a safe and efficient solution for charging and maintaining starter and deep cycle batteries of any size, adapting its charge based on temperature and battery condition. Its intelligent features ensure optimal battery health and extended lifespan.



Figure 1: OptiMate 7 TM260 Battery Charger and its accessories, including battery clamps and ring terminals for versatile connection options.

2. SAFETY INFORMATION

Always read and understand all safety warnings and instructions before using the OptiMate 7. Failure to do so may result in electric shock, fire, or serious injury.

General Safety Precautions:

- Use the charger only in well-ventilated areas.
- Do not expose the charger to rain or wet conditions.
- Keep out of reach of children.
- Do not operate the charger if it has been dropped or damaged.
- Ensure the AC power cord is unplugged before making or breaking connections to the battery.

Battery Safety Precautions:

- Wear eye protection and protective clothing when working with batteries.
- Batteries can produce explosive gases; avoid flames and sparks.
- Do not charge frozen batteries.
- Ensure the battery voltage (12V or 24V) matches the selected setting on the charger. The charger will not initiate charging if there is a mismatch.

3. WHAT'S IN THE BOX

Your OptiMate 7 TM260 package includes:

- OptiMate 7 TM260 Charger Unit
- Weatherproof casing with wall mount
- 6ft/180cm Power cable
- 6ft/180cm Charging cable with SAE connector (includes battery clamps and ring terminals)

4. SETUP

Follow these steps to set up your OptiMate 7 charger:

1. **Mounting (Optional):** The weatherproof casing allows for wall mounting. Use appropriate screws (not included) to secure the unit in a suitable location.
2. **Connect to Battery:**
 - Ensure the charger is unplugged from the AC power outlet.
 - Choose between the included battery clamps or ring terminals based on your application.
 - Connect the red (+) clamp/terminal to the positive (+) battery terminal.
 - Connect the black (-) clamp/terminal to the negative (-) battery terminal.
 - For vehicle batteries, connect the black (-) clamp/terminal to the vehicle chassis away from the battery and fuel line if direct battery connection is not feasible.
3. **Select Voltage:** Use the selector switch on the charger to choose between 12V or 24V, matching your battery's voltage. The charger will not proceed if the selected voltage does not match the battery's actual voltage.
4. **Connect to AC Power:** Plug the charger's power cable into a standard AC power outlet (100-240V, 50-60Hz).

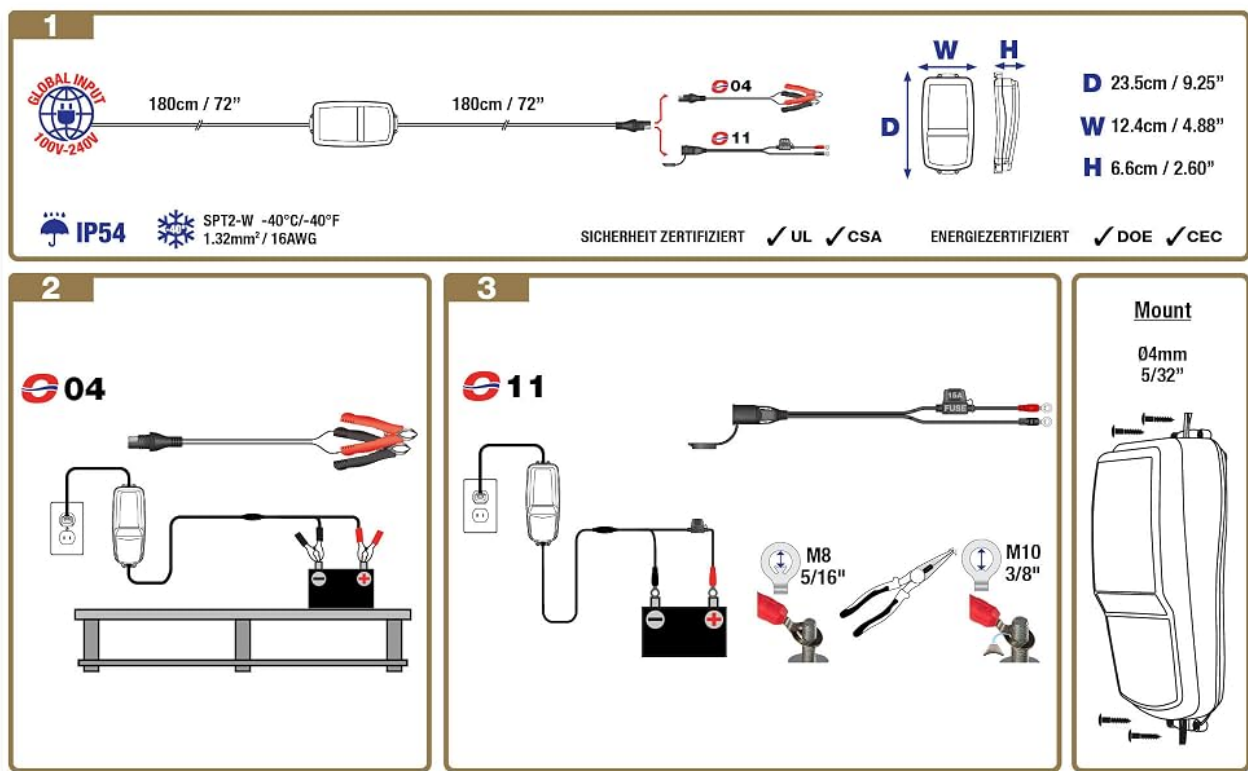


Figure 2: Connection and mounting options for the OptiMate 7 charger. Ensure correct polarity when connecting to the battery.

5. OPERATING INSTRUCTIONS

The OptiMate 7 operates automatically once connected and powered. It features an 8-stage charging program to optimize battery performance and lifespan.

Automatic 8-Stage Charging Program:

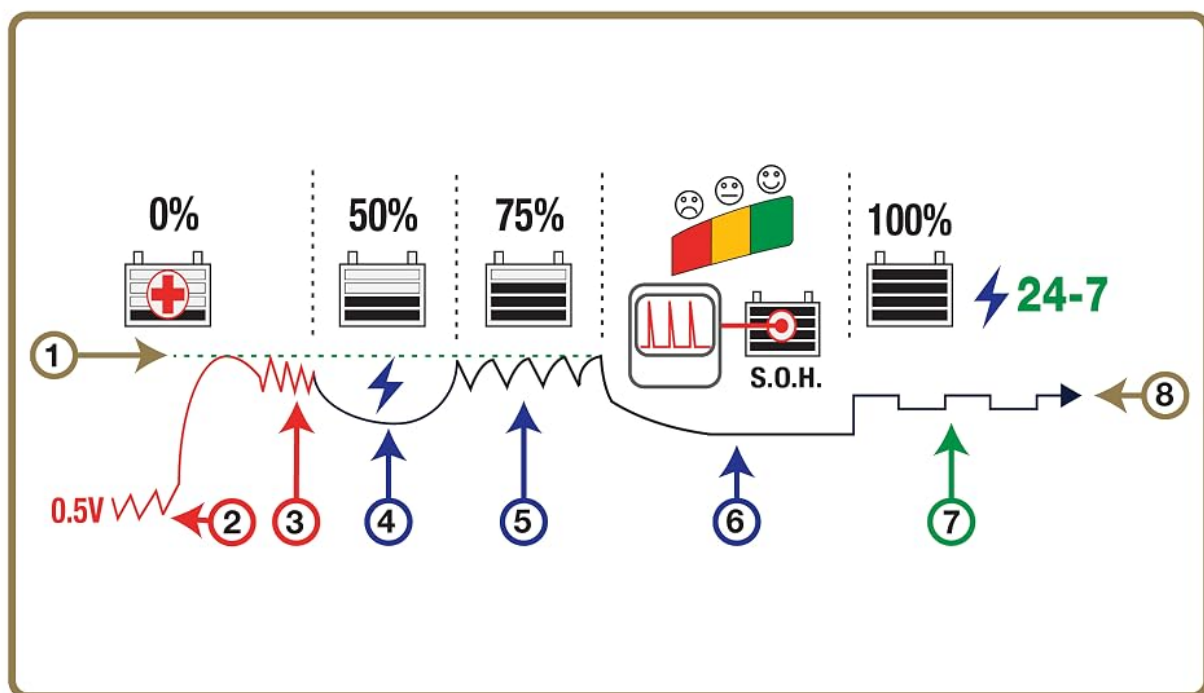


Figure 3: The 8-stage charging process, ensuring comprehensive battery care from recovery to long-term maintenance.

1. **0.5V Low Voltage Start:** Can recover deeply discharged batteries from as low as 0.5V.

2. **Desulfation:** Applies high voltage pulses to break down lead sulfate crystals in sulfated batteries.
3. **Bulk Charge:** Delivers maximum current to bring the battery to approximately 75% charge.
4. **Absorption:** Gradually reduces current while increasing voltage to fully charge the battery.
5. **Voltage Adjustment (Temperature Compensated):** The charger automatically adjusts charging voltage based on ambient temperature, ensuring optimal charge in cold or warm conditions.
6. **Ampmatic Charge Control:** The charger's Ampmatic system automatically adjusts the charging current to match the battery's size and condition. Smaller batteries receive less current, while larger batteries receive more, preventing overcharging or undercharging.

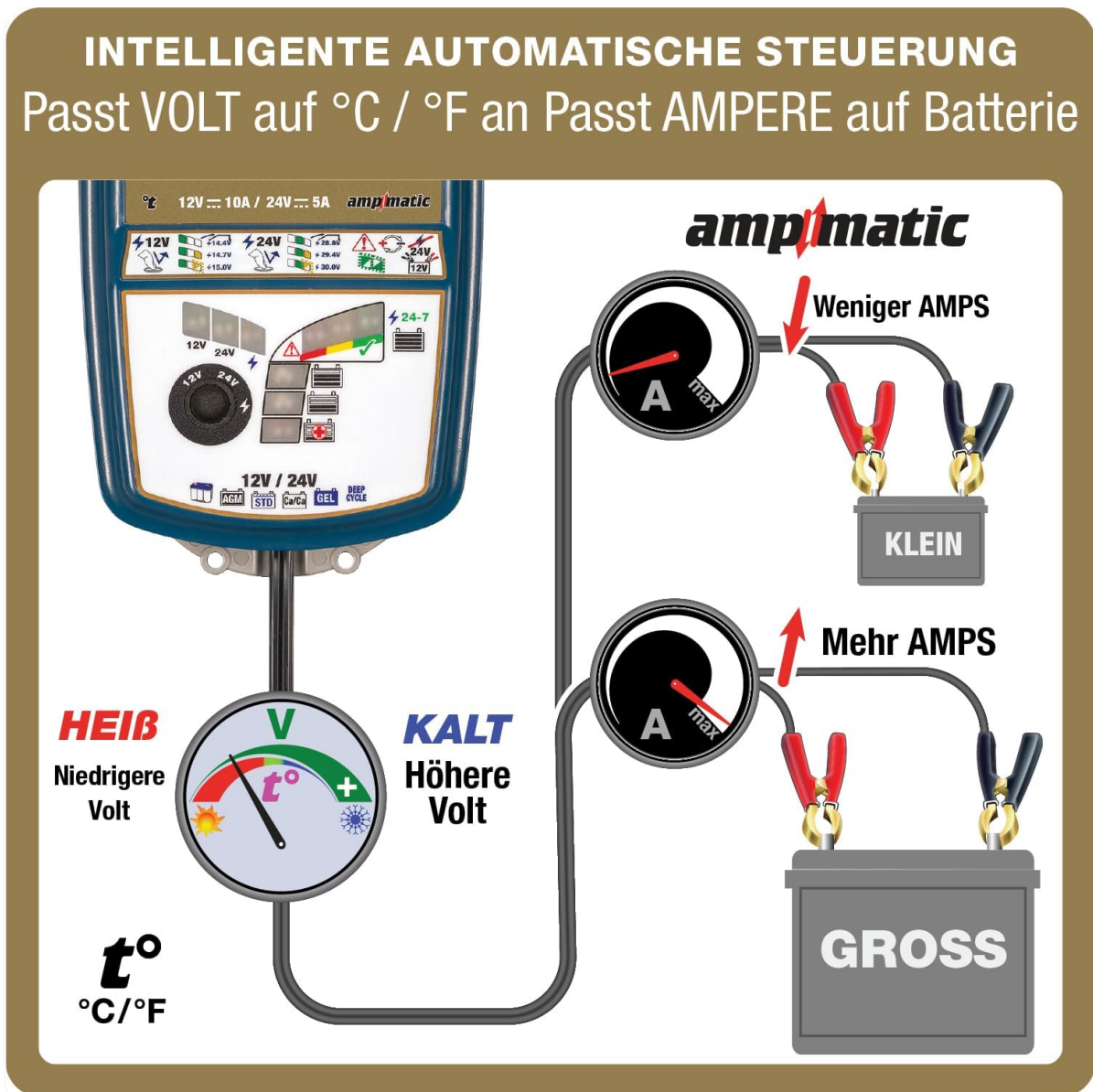


Figure 4: Intelligent automatic control, adapting charge based on battery size and ambient temperature.

7. **Battery Rescue Mode:** For deeply discharged batteries, the charger employs an 'electronics-safe' rescue mode. For 24V batteries, the user can override voltage protection if needed for extremely low voltage recovery.

RETTET „TOTE“ LEERE BATTERIEN

automatisch ab einer Spannung von nur 1/2 Volt.

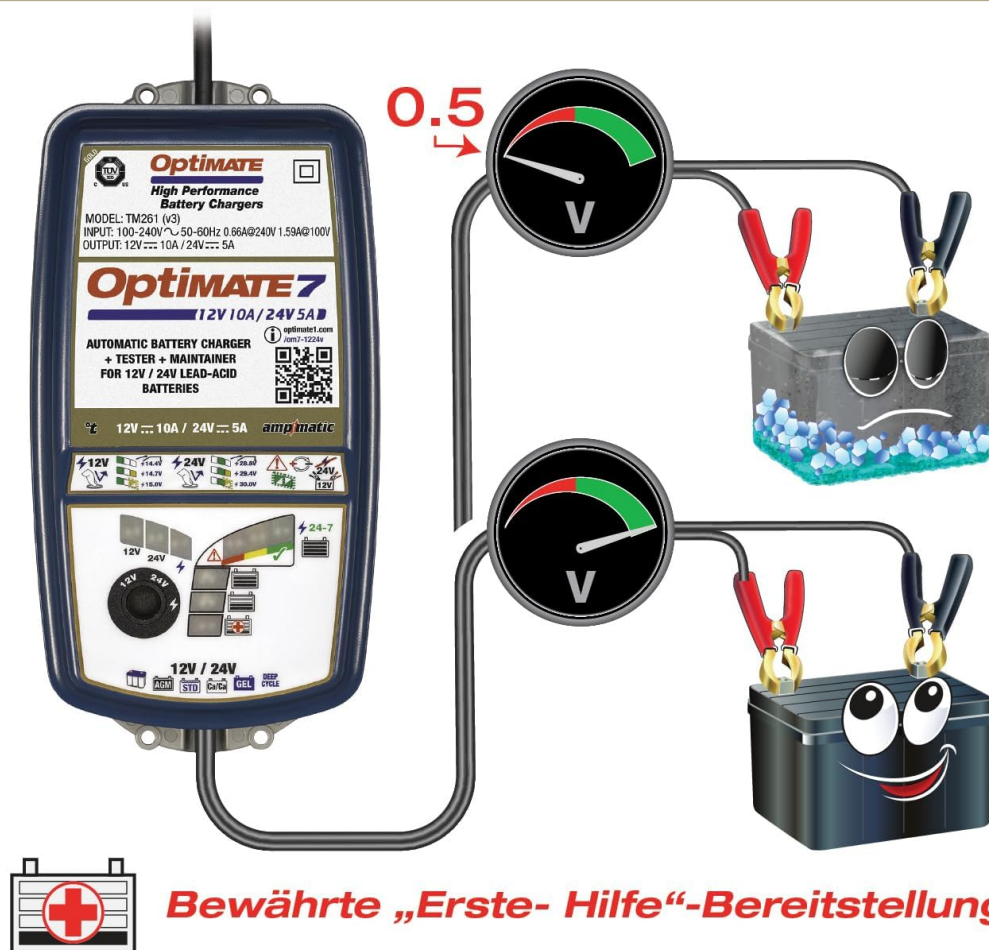


Figure 5: The OptiMate 7's ability to rescue deeply discharged batteries, even from 0.5 Volts.

8. **Interactive Maintenance (24-7):** Once fully charged, the OptiMate 7 enters a long-term maintenance mode. It continuously monitors the battery and delivers small charges as needed, preventing self-discharge and ensuring the battery remains at optimal charge without overcharging. This intelligent maintenance prevents discharge by connected consumers.

SICHERE INTERAKTIVE WARTUNG

Batterie wird stündlich getestet, Erhaltungsladung bei Bedarf.

Anschließen und vergessen!



Figure 6: Safe interactive maintenance, allowing the charger to be connected indefinitely for optimal battery health.

Battery Compatibility:

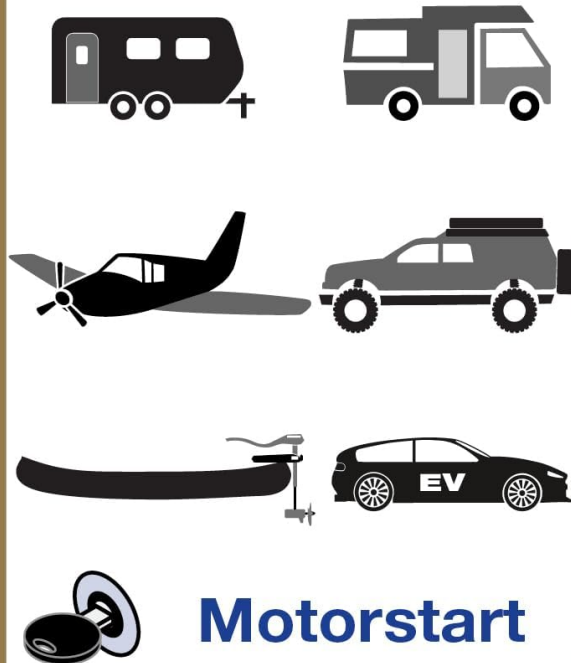
The OptiMate 7 is suitable for 12V and 24V lead-acid batteries, including:

- AGM (Absorbed Glass Mat)
- GEL (Gel Electrolyte)
- EFB (Enhanced Flooded Battery)
- STD (Standard Flooded)

BESTENS GEEIGNET FÜR TIEFENTLADUNGSBATTERIEN
Verbessert auch die Leistung von Motorstartbatterien.

12V Pb

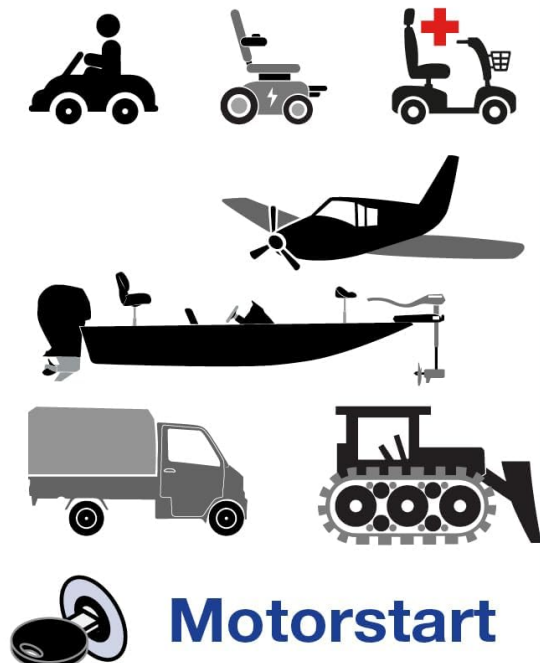
5Ah-120Ah



Motorstart

24V Pb

3Ah-120Ah



Motorstart

Figure 7: Compatible battery types and applications for 12V and 24V lead-acid batteries, including deep cycle and starter batteries.

Charging Modes:

The charger offers specific charging modes for different battery types to ensure precise and optimal charging.

DREI MODI FÜR 12V & 24V

zum präzisen Laden jeder Bleibatterie

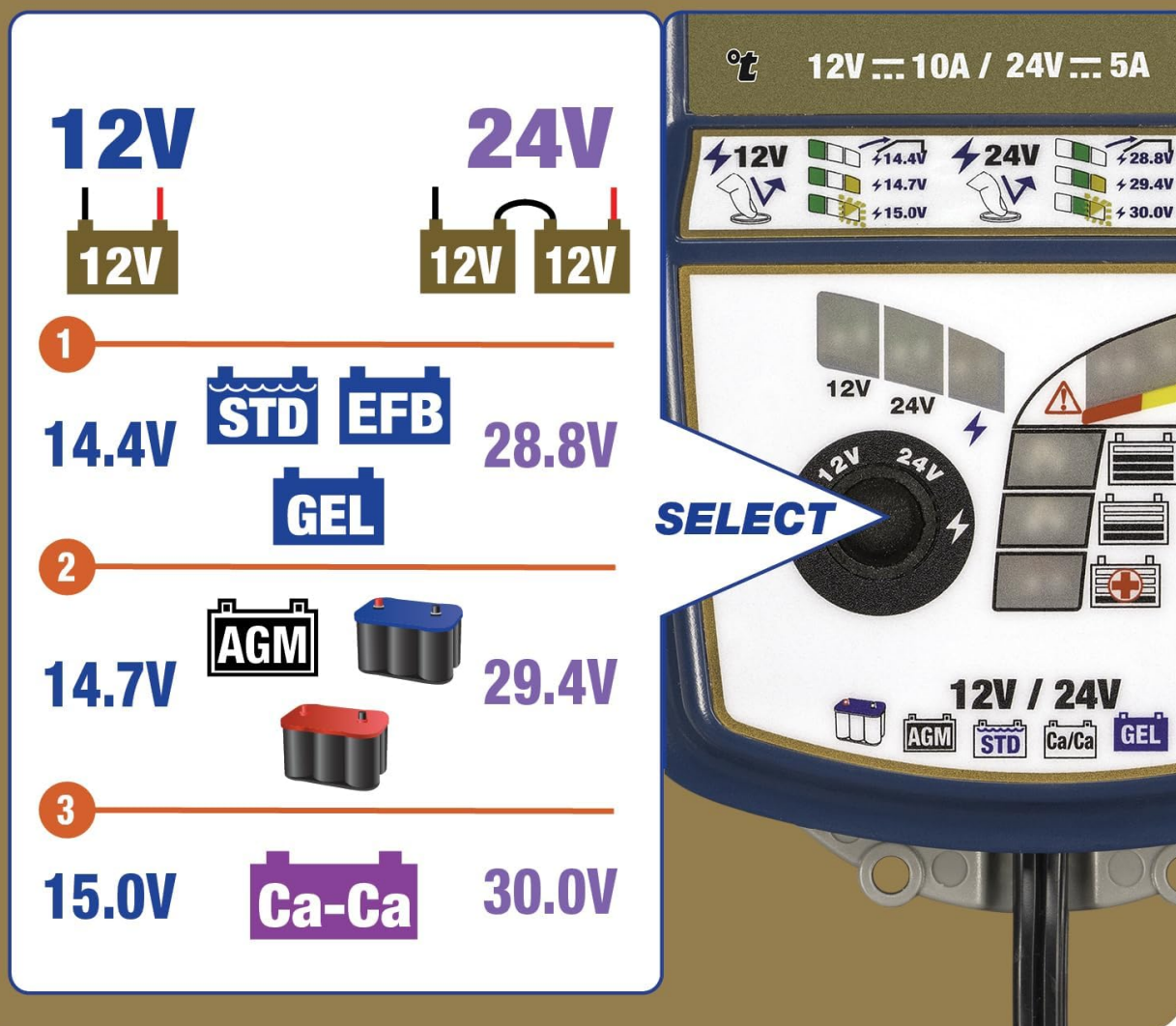


Figure 8: Three distinct charging modes for precise charging of various lead-acid battery types.

6. MAINTENANCE

Charger Maintenance:

- Keep the charger clean and dry. Wipe with a soft, damp cloth if necessary.
- Do not use harsh chemicals or abrasive cleaners.
- Store the charger in a cool, dry place when not in use.
- Regularly inspect cables and connectors for damage. Replace if any damage is found.

Battery Maintenance:

The OptiMate 7's 24-7 interactive maintenance program helps prolong battery life. For optimal battery health, ensure battery terminals are clean and free of corrosion. Check electrolyte levels in serviceable batteries periodically.

7. TROUBLESHOOTING

If you encounter issues with your OptiMate 7, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Charger does not turn on.	No AC power; Faulty power outlet; Damaged charger.	Check AC power connection and outlet. Try a different outlet. Inspect charger for damage.
Charging does not start.	Incorrect voltage selection (12V/24V mismatch); Poor battery connection; Battery too deeply discharged (below 0.5V).	Verify voltage selection matches battery. Ensure secure connections. For extremely low voltage, the charger may not initiate.
Charger enters maintenance mode too quickly.	Battery is already fully charged; Battery has internal fault.	This is normal if the battery is charged. If battery capacity is low, battery may need replacement.
Charger gets warm during operation.	Normal operation.	This is normal, especially during bulk charging. Ensure adequate ventilation.

If problems persist, contact OptiMate customer support for assistance. You can find more information and support at [optimize1.com/om7-1224v](https://www.optimate1.com/om7-1224v).

8. SPECIFICATIONS

Feature	Specification
Model	TM260v3
Input Voltage	100-240V AC, 50-60Hz
Output Voltage	12V / 24V DC (Automatic selection)
Charging Current	12V: 10A / 24V: 5A
Battery Types	AGM, GEL, EFB, STD Lead-Acid
Battery Capacity	5Ah - 120Ah (12V), 3Ah - 120Ah (24V)
Charging Stages	8-stage automatic
Minimum Start Voltage	0.5V
Dimensions (LxWxH)	30 x 21 x 8 cm (approx.)
Weight	1.47 kg
Enclosure Rating	IP54 (Weatherproof)

9. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation included with your product or visit the official OptiMate website. You can also contact OptiMate customer service directly for assistance with product operation, troubleshooting, or warranty claims.

Official Website: <http://optimize1.com>