

## ledmo LEDMO-481230

# ledmo 48V to 12V 30A DC/DC Voltage Regulator Instruction Manual

Model: LEDMO-481230

## 1. INTRODUCTION

This manual provides essential information for the safe and efficient use of your ledmo 48V to 12V 30A DC/DC Voltage Regulator. This device is designed to convert a 48V DC input to a stable 12V DC output, suitable for various applications including golf carts, scooters, forklifts, and other vehicles requiring a step-down voltage conversion. Please read this manual thoroughly before installation and operation.

## 2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the device and connected equipment:

- Ensure the input voltage does not exceed 48V DC.
- Verify correct polarity before connecting the device. Incorrect wiring can cause severe damage.
- Do not exceed the maximum output current of 30A.
- Install the converter in a well-ventilated area, away from flammable materials.
- Disconnect power before making any connections or disconnections.
- The device is waterproof (IP68 rated), but avoid prolonged submersion or high-pressure water jets.



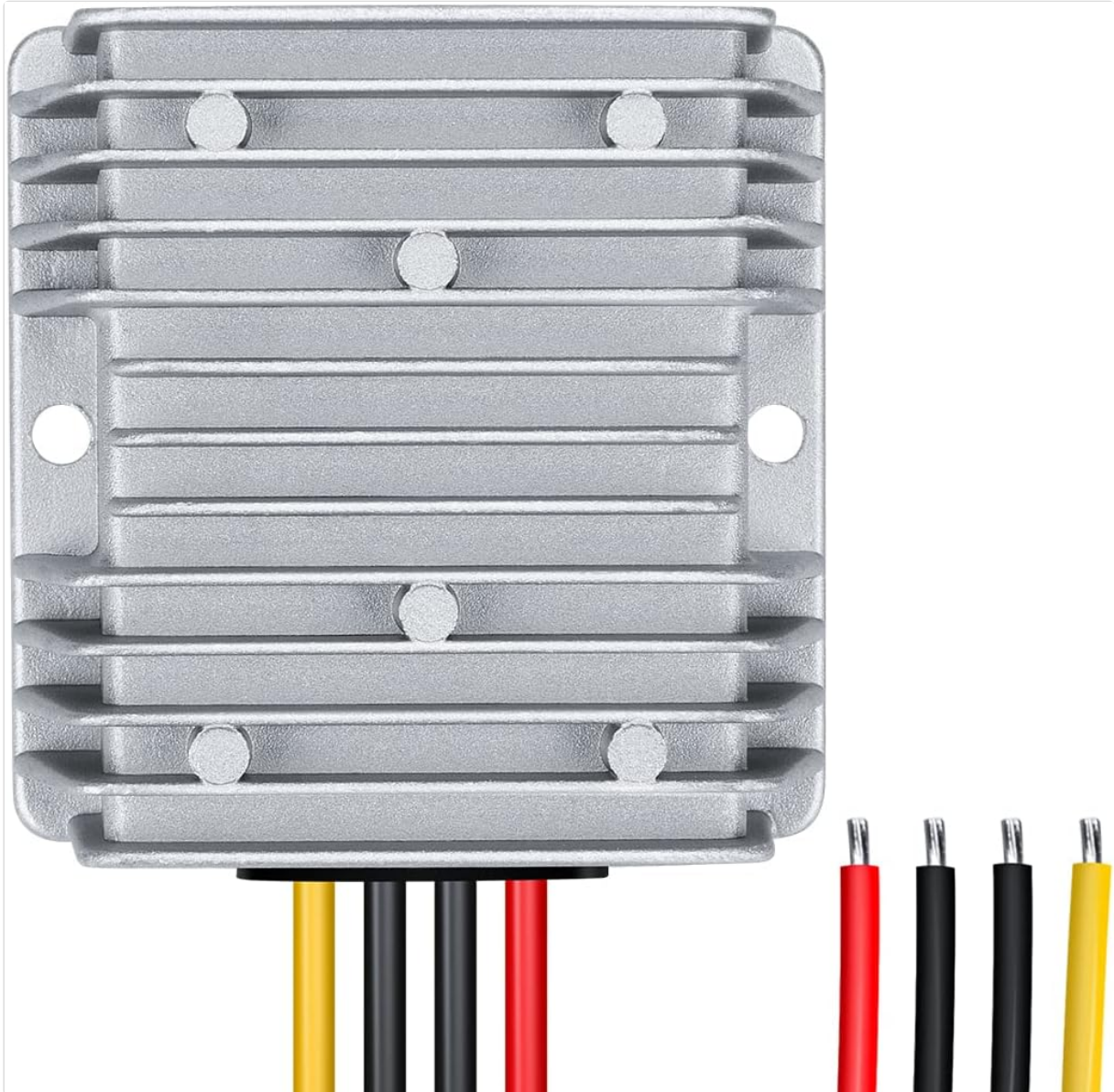
This image illustrates the built-in safety protections of the converter, including low voltage, over-voltage, short circuit, overload, overheat, and isolated input/output designs.

## 3. PRODUCT OVERVIEW

The ledmo 48V to 12V 30A DC/DC Voltage Regulator is engineered for reliability and performance. Key features include:

- **High Efficiency:** Achieves a maximum transfer efficiency of 96% using synchronization rectification technology.

- **Durable Construction:** Features a die-cast aluminum shell and high-quality internal components for enhanced longevity.
- **Waterproof Design:** IP68 rated, providing moisture-proof and anti-shock protection for use in various environments.
- **Advanced Safety:** Built-in smart chip offers comprehensive protection against over/under voltage input, over-current, overload, overhead, over-temperature, and short circuits.
- **Effective Heat Dissipation:** Upgraded fin-type heat sink with a thick aluminum plate ensures efficient heat management.



This image shows the compact, finned aluminum casing and integrated wiring of the ledmo 48V to 12V DC/DC Voltage Regulator.

# Dc Converter For Golf Cart



This image highlights the superior internal components used in the ledmo converter, such as a high-quality fiberglass board, aluminum material, thick copper core, and rubber cables, compared to lower quality alternatives.

## Built-in Safety Protections

Designed with Safety in mind

- Low voltage protection
- Over-voltage protection
- Short circuit protection
- Overload protection
- Over heat protection
- Isolated Input & Output design

This image displays the converter covered in water droplets, illustrating its IP68 waterproof and moisture-proof capabilities.

#### 4. SPECIFICATIONS

Parameter	Value
Model Number	LEDMO-481230
Input Voltage	48 Volts DC
Output Voltage	12 Volts DC
Output Current	30 Amperes
Output Power	360 Watts
Efficiency	Up to 96%
Waterproof Rating	IP68
Dimensions (L x W x H)	1.3 x 3 x 1.3 inches (approx.)
Item Weight	0.49 Kilograms

Plug Type

2 Pin

## 5. SETUP AND INSTALLATION

Follow these steps for proper installation:

1. **Mounting:** Choose a secure, dry, and well-ventilated location for mounting the converter. Ensure adequate space around the unit for heat dissipation.
2. **Wiring Connections:** The converter typically has three wires:
  - **Red Wire:** Connect to the positive (+) terminal of your 48V DC input source.
  - **Black Wire:** Connect to the negative (-) terminal of your 48V DC input source.
  - **Yellow Wire:** Connect to the positive (+) terminal of your 12V DC output device.

*Note: Always double-check the polarity before making final connections. Incorrect polarity will damage the unit and potentially the connected devices.*

3. **Secure Connections:** Ensure all wire connections are tight and insulated to prevent short circuits.
4. **Testing:** Before connecting your final 12V device, it is recommended to test the output voltage with a multimeter to confirm it is stable at 12V.



This image shows the ledmo DC/DC converter positioned near a golf cart, illustrating a typical installation scenario for powering 12V accessories from a 48V system.

## 6. OPERATING INSTRUCTIONS

Once installed correctly, operating the ledmo DC/DC Voltage Regulator is straightforward:

1. **Power On:** Apply 48V DC power to the input terminals. The converter will automatically step down the voltage to 12V DC.
2. **Connect Devices:** Connect your 12V DC devices to the output terminals. Ensure the total current draw does not exceed 30A.

3. **Monitoring:** The converter is designed for continuous operation. Monitor the performance of your connected devices.
4. **Power Off:** To turn off the converter, disconnect the 48V DC input power.

## 7. MAINTENANCE

The ledmo DC/DC Voltage Regulator requires minimal maintenance due to its robust design and IP68 rating. However, periodic checks are recommended:

- **Cleanliness:** Keep the exterior of the unit clean and free from dust and debris to ensure proper heat dissipation. Use a dry cloth for cleaning.
- **Connections:** Periodically inspect all wiring connections for tightness and signs of corrosion or damage. Re-tighten or replace as necessary.
- **Environmental Check:** Ensure the operating environment remains within suitable temperature and humidity ranges.
- **Physical Damage:** Inspect the casing for any physical damage. If damage is found, discontinue use and contact support.

## 8. TROUBLESHOOTING

If you encounter issues with your ledmo DC/DC Voltage Regulator, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No output voltage	No input power; Incorrect wiring; Blown fuse (if applicable); Internal fault	Check 48V input power source; Verify wiring polarity; Check external fuses; Contact support if issue persists.
Output voltage is unstable or incorrect	Loose connections; Overload; Input voltage fluctuation	Check all connections; Reduce load on the output; Ensure stable 48V input; Contact support.
Converter is overheating	Insufficient ventilation; Excessive load; High ambient temperature	Ensure proper airflow around the unit; Reduce output load; Relocate to a cooler environment.
Connected device not working	Device fault; Converter fault; Incorrect device voltage/current requirements	Test the 12V device separately; Verify converter output; Ensure device is compatible with 12V 30A output.

## 9. WARRANTY AND SUPPORT

The ledmo 48V to 12V 30A DC/DC Voltage Regulator comes with a **12-month warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use.

For technical support, warranty claims, or any questions regarding your product, please contact ledmo customer service through the retailer where the product was purchased or visit the official ledmo store online.

Please retain your proof of purchase for warranty validation.

