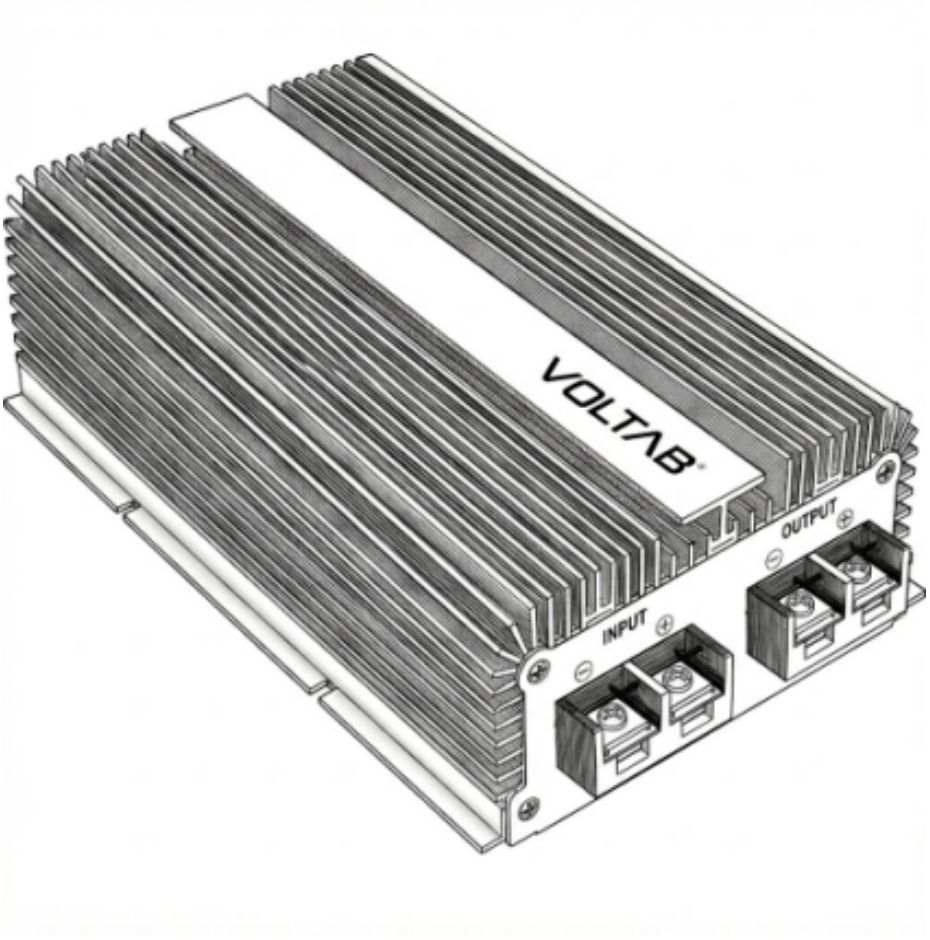
VOLTAB®

The New Power Generation

12V Buck Supply

User Manual



v. 1.0

VOLTAB® - 12V Buck Supply

Please keep this manual carefully.

For any support needs regarding the installation or the interpretation of this manual, please write to:

support@voltab.energy

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1. IMPORTANT SAFETY INSTRUCTIONS

This manual contains important safety, installation and operating instructions for the 12V buck supply to be connected to VOLTAB®.

Before starting the installation, carefully read all the instructions and precautions provided in the manual. Failure to comply with the instructions may cause damage to the product, to the system, or personal injury.

⚠ **Warning**: indicates a potentially hazardous situation that requires particular attention during the related operations.

⚠ **Caution**: represents critical procedures for the safe and correct operation of the regulator.

☞ **Note**: indicates a function or program important for the safety and correct operation of the regulator.

1.1 SAFETY INFORMATION

- Read this manual carefully before using and installing the product, for correct and safe use.
- When the device is not used for long periods, make sure that VOLTAB® is switched off or disconnected.
- High voltages and currents are present inside the device: unqualified personnel are not authorized to open or disassemble it.
- The input and output terminals must be connected in a secure and reliable way to avoid overheating at the connection points.
- Do not use the product if the cables, connectors or the aluminum case are damaged.
- Do not open or disassemble the device; high voltages and currents are present inside.
- In case of faults that the user is unable to resolve, contact VOLTAB customer support or write to support@voltab.energy.

1.2 TECHNICAL SPECIFICATIONS

The converter uses a high-efficiency "Step Down" technology to reduce the voltage without excessive heat dissipation. The aluminum structure ensures high heat dissipation and optimal mechanical protection against shocks and vibrations.

- Input Voltage: 30V – 90V DC
- Output Voltage: 12V DC
- Maximum Current: 70A
- Rated Power: 840 W
- Typical Efficiency: 93%
- Environmental Protection: IP68
- Operating Temperature: -20°C to +80°C
- Dimensions: 220 x 130 x 50 mm
- Weight: 2200 g

1.3 PACKAGE CONTENTS

The accessories included after purchasing the device are as follows:

1) 1 pc VOLTAB® 12V Buck Supply
2) 1 pc Connection wiring to VOLTAB®
3) 1 pc User Manual

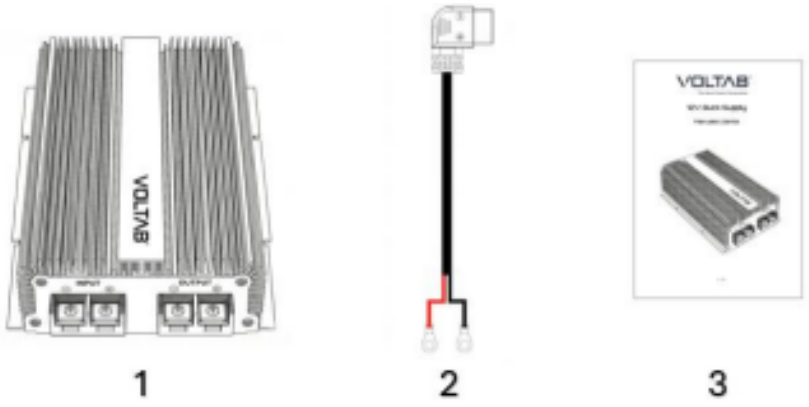


Figure 1 - Package contents

2. SAFETY WARNINGS

⚠ **IMPORTANT**: Read carefully before installation.

- **POLARITY**: this device is not protected against reverse polarity. Swapping the positive (+) and negative (-) cables during connection will permanently damage the converter.
- **OVERHEATING**: during high-power use, the aluminum body can become hot. This is normal, as it acts as a heat sink. Do not cover the device.
- **BUILT-IN PROTECTIONS**: the device includes protections against overload, overvoltage and over-temperature.

3. INSTALLATION GUIDE

⚠ **CAUTION**: The installation of the VOLTAB® Alternator Charger must be carried out by qualified personnel or by a technician experienced in electrical systems.

3.1 POSITIONING

Install the device on a flat surface, in a location that allows air recirculation. Avoid completely sealed compartments or those without ventilation.

⚠ A space of at least 10 cm must be left around the finned walls to ensure good air circulation and heat dissipation.

Installation steps

Step 1: Place the regulator in the intended installation location and check that there is enough space for ventilation above and below, as well as for the cable connections around the regulator.

Step 2: Use a pen to mark the four positions of the mounting holes on the installation surface.

Step 3: Remove the regulator and drill four mounting holes of the appropriate size at the marked points.

Step 4: Place the regulator back in position, aligning it with the four holes drilled in Step 3, and fix it with suitable screws to the support on which it is being installed.

3.2 CONNECTION DIAGRAM

⚠ **CAUTION**: Before proceeding, check that the polarities (**+** and **-**) exactly match those indicated on the device labels. A reversal of polarity could irreparably damage the electronic components. Make sure that the terminals are properly tightened to ensure a stable contact and prevent overheating. Make sure that during installation VOLTAB® is switched off.

☞ **Note**: for the 12V output, the use of cables with a cross-section of **16 mm²** is recommended if the distance is less than 2 m, or **25 mm²** to ensure less overheating and lower losses over greater distances.

Carefully follow the steps described below, and illustrated in *Figure 2*, to correctly connect the power unit to the external loads using the VOLTAB® device as the source.

3.2.1 CONNECTING THE LOADS (OUTPUT)

• **Output wiring**: locate the **OUTPUT** section on the converter.
• **Connection to the loads**: connect the output cables to the corresponding terminals to power the 12V load (shown in Figure 1 as **Loads**):

- Make sure that the positive terminal (**+**) of the output is connected to the positive input of the load.
- Make sure that the negative terminal (**-**) of the output is connected to the negative input of the load.

👉 **Note**: to ensure maximum protection of the system, it is recommended to install an **80A fuse** on the output line (Output +). The fuse must be positioned immediately downstream of the positive terminal of the converter and upstream of the wiring that powers the load.

3.2.2 CONNECTION TO VOLTAB (INPUT)

• **Input wiring**: Connect the two ring-terminal cables of the VOLTAB® connection wiring to the terminals of the **INPUT** section of the converter:

- Connect the **red positive (+)** cable to the terminal marked with the symbol **(+)**.
- Connect the **black negative (-)** cable to the terminal marked with the symbol **(-)**.

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• **Connection to VOLTAB**: make sure that VOLTAB® is switched off. Connect the connector of the connection cable to VOLTAB® directly to the EXTPV socket located on the right side of VOLTAB®, opening the protective rubber covers and checking that the socket is clean and free of obstructions.

Once all the wiring has been safely completed (Input from VOLTAB® and Output to the Loads), press the power button of VOLTAB® to activate the dedicated output port to power the DC-DC 12V Buck Supply converter.

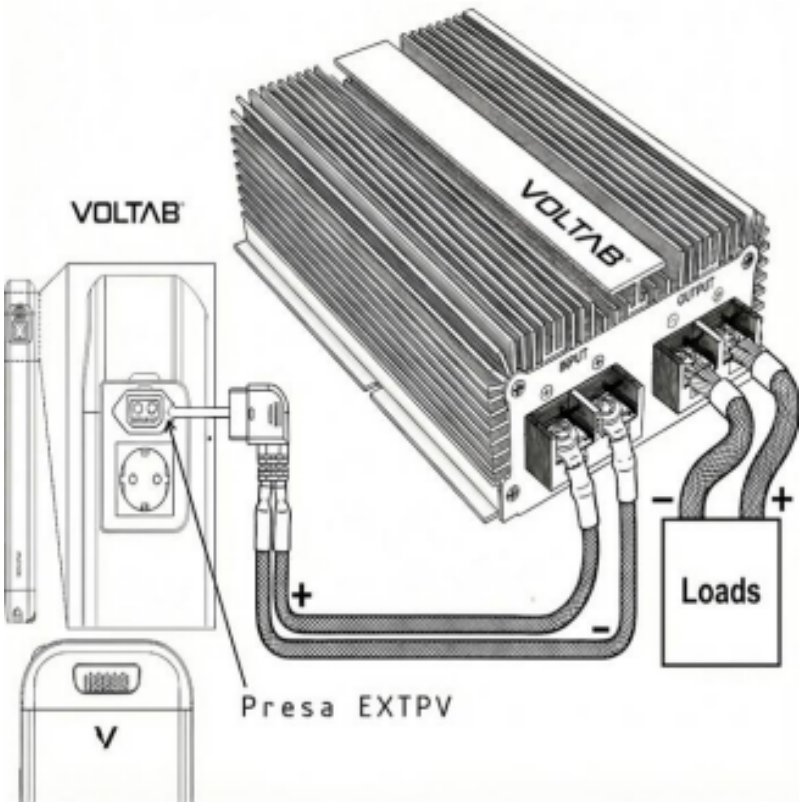


Figure 2 - Wiring and connection diagram of the 12V Buck Supply.

4. TROUBLESHOOTING

- **No output**: after switching off VOLTAB®, check that the terminals are properly tightened.
- **Overheating**: the device enters thermal protection if it exceeds 80°C; improve the ventilation.

5. OPERATING ENVIRONMENT

- Use the device in a **clean and well-ventilated** environment.
- Keep away from direct sunlight and acidic environments.
- Avoid the accumulation of dust during use.
- Use in **flammable or explosive** environments is prohibited: pay attention to the

presence of flames or sparks.

- Use in environments with a temperature between -20°C and 80°C.

6. SAFETY AND ENVIRONMENT

- At the end of its life cycle, dispose of the product in accordance with the WEEE (Waste Electrical and Electronic Equipment) regulations.
- Do not dispose of the device with household waste.

Made in China
Manufactured to the specification of Reefilla srl
Imported into Italy by Reefilla srl
Lungo Dora Pietro Colletta 85, 10153, Torino (TO)

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For any technical doubts or support during installation, the VOLTAB team is at your disposal.

- Email: support@voltab.energy
- Web: www.voltab.energy

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