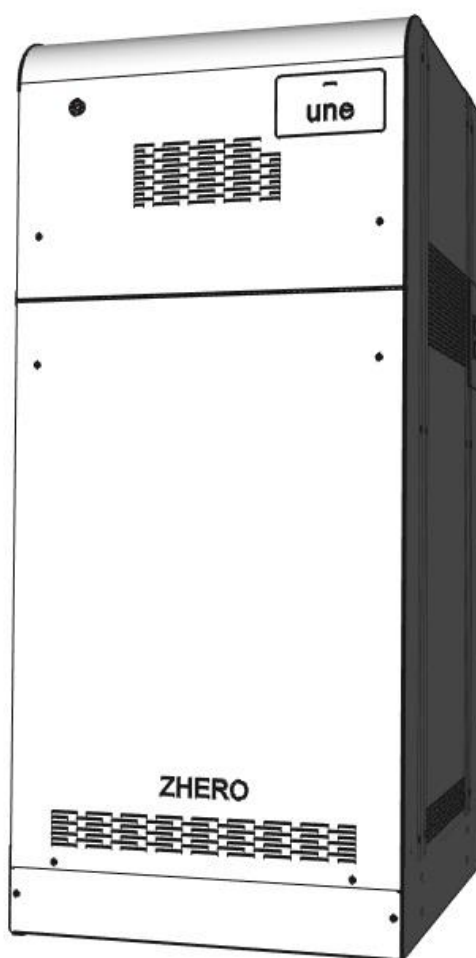


# ZHERO Installer Tool MANUAL



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## 1. INFORMATION ABOUT THIS DOCUMENT



Installer



Technician

This manual contains the instructions for using the software “ZHERO Installer Tool”, both for verification of the correct installation, and the analysis of the operation.

The original language of this document is Italian, in case of inconsistencies or doubts, request the original document to UNE srl.

## 2. NECESSARY EQUIPMENT

- Pc with windows 7 or higher;
- USB cable: Type A-Type B con ferrites:
  - Cable example: **182-8831** maximum length 1 meter;
  - Ferrites example: **ZCAT1730-0730A-BK** to the ends of the cable.



Figure 1 – USB Cable for the connection ZHERO-PC

- Program for opening file .zip e .exe (WinRAR – 7Zip for example);
- A stable Internet connection (it is possible that the PC will have to download some drivers automatically);
- Always check that the installed program is the last version, of the monitoring program “**ZHERO Installer Tool**” in the dedicated section:

<https://www.unesrl.com/index.php/area-download/>



### 3. ISTRUCTION FOR ACCESSING THE USB PORT

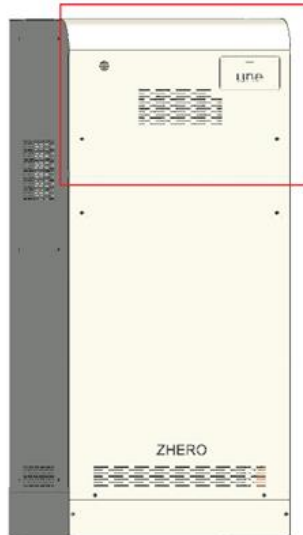


Figure 2 – ZHERO main panel

- Be sure to always operate safely and remove the parts of the carpentry only in absence of dangerous voltage;
- Remove the “**UNE**” plate that covers the switches;
- Remove the ZHERO main panel (Fig. 2);
- Locate the hole in the upper part of the carter, with the words: “**USB PC**” and connect the cable (the USB is in position indicated by the image) (Fig. 3);

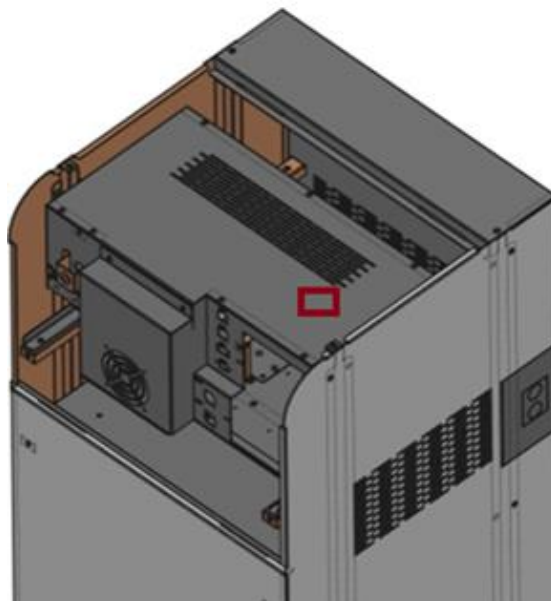


Figure 3 – Hole position for **USB PC port**

## 4. STARTING THE PROGRAM AND CONFIGURING THE COM-PORT

### 4.1. INTALLATION OF THE PROGRAM

- Double-click the setup entry in the program folder;
- Click **"Next >"** in the installation window of ZHERO Installer Tool;
- If necessary, indicate the installation folder of the (usually automatically detected);
- Press again **"Next >"** to confirm the installation;
- A window will open where you will need to provide installation permission, accept, and proceed;
- Press **"Close"** once the installation in complete.

At this point the program will be installed and the shortcut become visible, to launch it double-click on the icon and confirm the required permission in the next window.



Figure 4 - ZHERO Installer Tool icon

When the program has finished loading, the following window will appear:

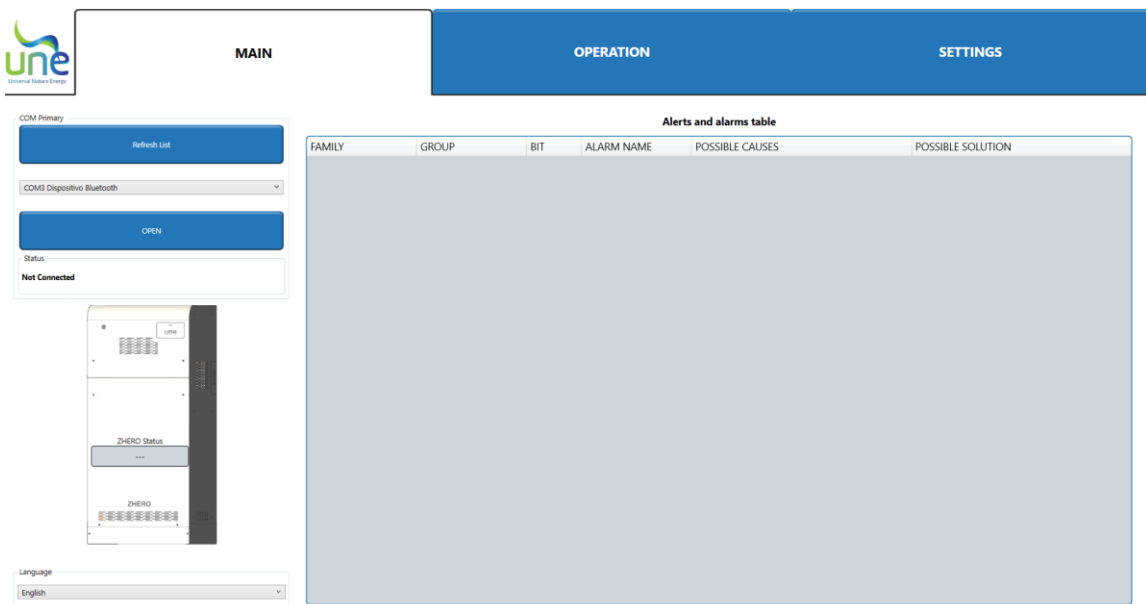


Figure 5 - "MAIN" window of ZHERO Installer Tool

**Note:** in case of block during start-up or excessive slow opening, it is recommended to add the program to the antivirus exceptions of your PC.



## 4.2. "MAIN" section

The "**MAIN**" section indicates the correct functioning of the system with the related active alarms / signal and permit the opening of the COM-port for ZHERO-PC communication.

### 4.2.1. COM-port opening

- a) Select the language chosen in the bottom right;
- b) Click: "**Refresh list**" top right;
- c) From the drop-down menu select the COM marked as follows: "**COM... UNE ZHERO S6**"; Press "**OPEN**" e and make sure that "**Connected**" appears in the status section.

**Note:** If the opening of the COM port is impossible, not detected or often went wrong we recommend a restart of the system and the release of the photovoltaic system.

### 4.2.2. Checking the operation

Open the COM port in the ZHERO Status box and you will see:

- **OK:** in case of correct operation;
- **ERROR:** in case of system in alarm.

In "**Alerts and alarms table**", all the alarms and signals will be displayed with an indication of:

- **FAMILY:** indicates whether the alarm is specific to one of the internal devices or concerns the entire system;
- **GROUP:** represent the subdivision of the alarm family into groups of 8;
- **BIT:** number of the signalled bit;
- **ALARM NAME:** name assigned to the alarm;
- **POSSIBLE CAUSES:** one of the possible causes for which this alarm is generated is indicated;
- **POSSIBLE SOLUTION:** a possible solution to the problem or indication for which a normal behaviour is indicated.

**Note:** In case the table remains, empty there are no anomalies or reports.



### 4.3. "OPERATION" section

The "OPERATION" section it is useful to view the firmware versions of the machine, the real-time enhancement of the main variables and the status of the system (**ON-GRID, OFF-GRID, ONLINE O WARMUP ECC...**).

In case the fields are empty or lost during operation, it means that the COM port has not been opened or has stopped.

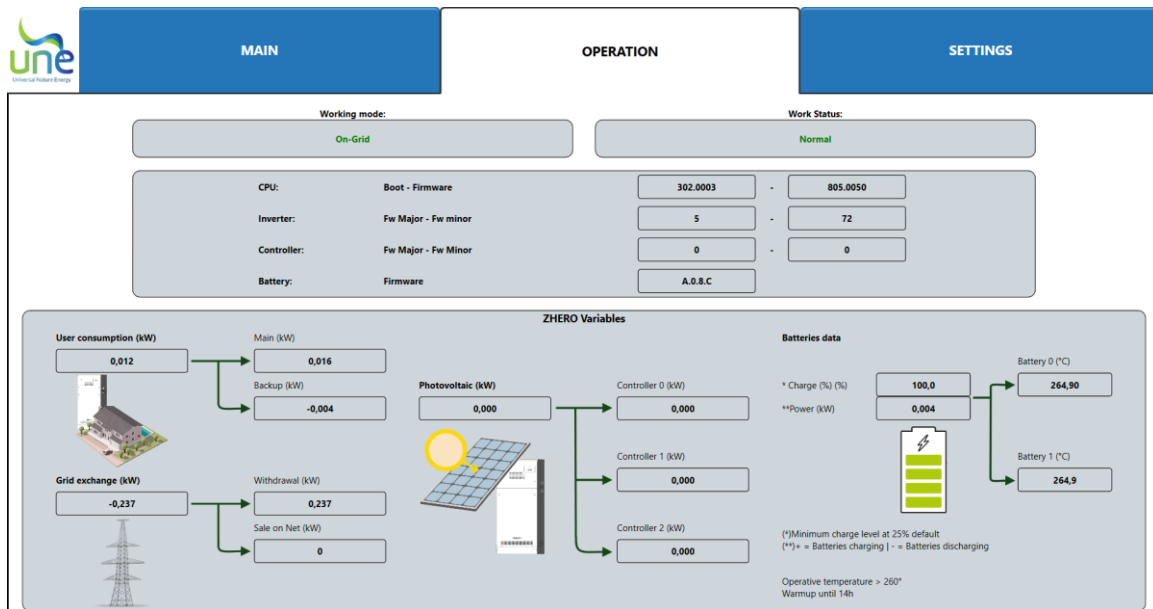


Figure 6 - Example of the "OPERATION" screen enhanced

#### 4.3.1. Operating mode

- **On Grid:** inverter ON and connected in parallel to the grid (Standard working mode);
- **Off Grid:** inverter ON but not connected to the grid;
- **Bypass:** ZHERO connected to the grid but inverter OFF;
- **ERROR:** abnormal working mode (both inverter and Grid disconnected).

#### 4.3.2. Working state

- **Warmup:** if the batteries have not reached their operating temperature (260°C);
- **Normal:** if the batteries are at operating temperature and enabled.



### 4.3.3. Firmware table

• CPU	<b>Boot - Firmware</b>	bootloader and firmware CPU;
• Inverter	<b>Fw Major – Fw minor</b>	Inverter firmware;
• Controller	<b>Fw Major – Fw minor</b>	Controllers firmware;
• Battery	<b>Batteries Firmware</b>	Batteries firmware.

### 4.3.4. Variables table

- **User consumption (kW):** power used by the user;
  - **Main (kW):** power under wattmeter (no backup)
  - **Backup (kW):** power under backup line
  
- **Grid exchange (kW):** power exchanged by the grid: if negative it indicates the quantity withdrawn from the grid, if positive the quantity fed into the grid;
  - **Withdrawal (kW):** energy withdrawn from the grid;
  - **Sale on Net (kW):** energy sold to the grid;
  
- **Photovoltaic (kW):** power produced by photovoltaics;
  - **Controller 0 (kW):** photovoltaic production of the main controller;
  - **Controller 1 (kW):** photovoltaic production of the additional controller 1;
  - **Controller 2 (kW):** photovoltaic production of the additional controller 2;
  
- **Salt batteries data:**
  - **Charge (%):** total percentage value of the battery pack;
  - **Power (kW):** total power of the batteries;
  - **T° Battery 1 (°C):** batteria 1 internal temperature.
  - **T° Battery 2 (°C):** battery 2 internal temperature.





## 4.4. "SETTINGS" section

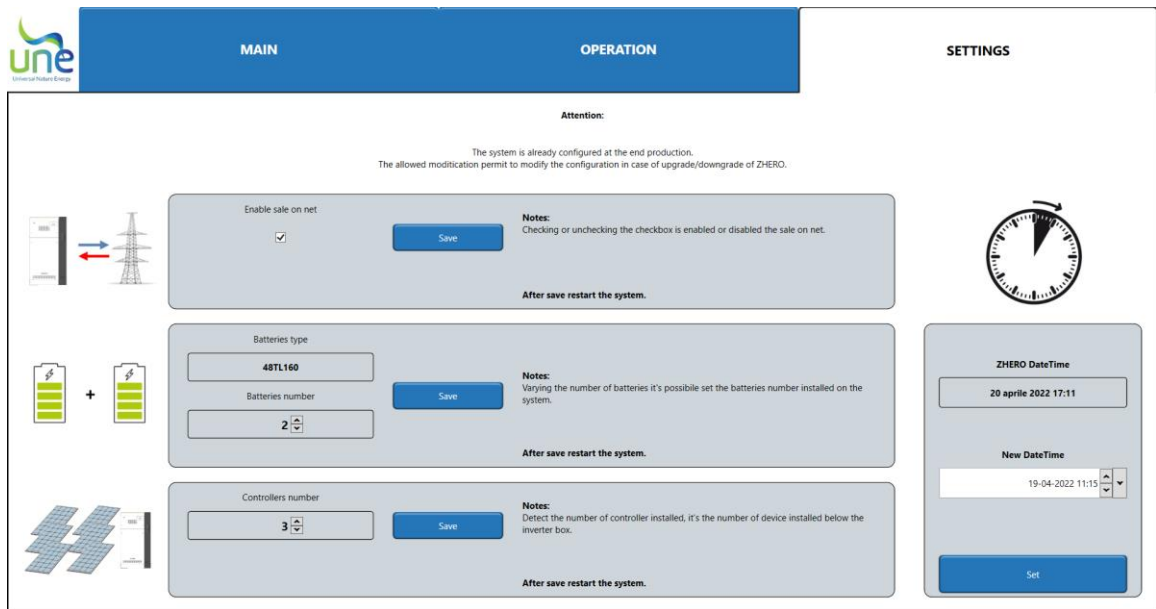


Figure 7 – Example of the screen "SETTINGS"

In the "CONFIGURATION" section it is possible to change the system configuration in case of disabling the sale on net, the upgrade / downgrade of the system itself.

### **WARNING:**

The system is already programmed at the end of production.  
The allowed modifications permit to change the system configuration in case of UNE ZHERO Upgrade/Downgrade.

### 4.4.1. Sale on net

Put or remove the check "Enable sale on net" and press: Save; at the end, the UNE ZHERO system must be restarted to make the changes effective.

### 4.4.2. Batteries

The system automatically recognizes the type of battery installed: the additional battery must be of the same type as the one installed.

Number of batteries: it is possible to set the number of batteries installed, both in case it is added, and in case it is removed.

At the end of the setting press: Save.

**Warning: the system cannot work without batteries, consequently the minimum number cannot be less than 1.**



### 4.4.3. Controllers

In this section it is possible to set the number of controllers installed, both in case they are added and in case they are removed.

At the end of the setting press: Save.

### 4.4.4. Date and time ZHERO

In this section you can set the date and time of the ZHERO system if this is not set correctly.

The first box shows the date and time set on ZHERO, in the menu below: "New date and time" it is possible to set the value to be acquired; at the end of the setting it is necessary to press "Set" in the lower part of the section.

## 5. CLOSING OF THE PROGRAM

To close the program, simply go back to the main table and press the CLOSE button under the COM primary selection box, then close the window by pressing the "X" of the windows window at the top right.

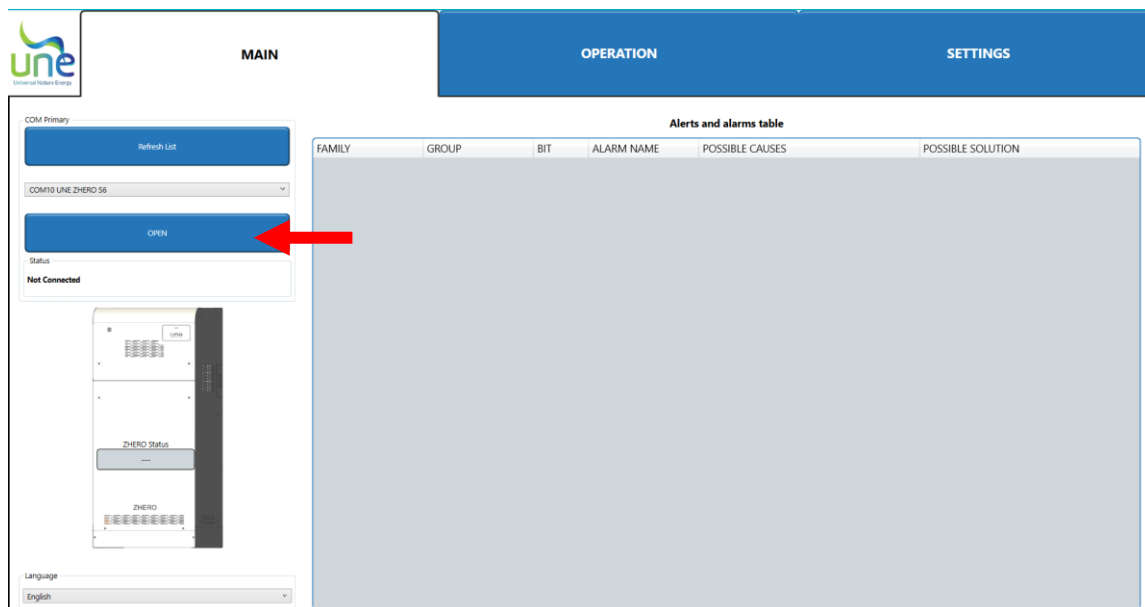


Figure 8 - MAIN screen with the "CLOSE" button indicated

