

# Accelev EV Charger User Manual



Thank you for choosing our Accelev EV charger.  
We believe it is the best choice for your car.

Contents

- 1. General information ..... p. 2
- 2. Safety recommendations ..... p. 3
- 3. Installation ..... p. 4
- 4. Operating ..... p. 7
  - 4.1. Control Panel ..... p. 7
  - 4.2. Functions ..... p. 12
    - 4.2.1. BatteryCare ..... p. 12
    - 4.2.2. ReVive Balancing ..... p. 13
    - 4.2.3. No Full Charging ..... p. 13
    - 4.2.4. Grid Monitoring ..... p. 13
    - 4.2.5. Current Boost ..... p. 14
    - 4.2.6. Other features:
      - update, PIN protection, Wi-Fi ..... p. 14
- 5. Charger types ..... p. 16
  - 5.1 Technical specifications of Accelev EV Chargers ..... p. 19
- 6. Frequently Asked Questions ..... p. 22
  - 6.1. Error codes ..... p. 23
- 7. List of compatible vehicles ..... p. 25
- 8. Contact ..... p. 33

## 1. General Information

Accelev EV charging stations are an advanced system for charging electric cars from a three-phase AC outlet. Our EV chargers are aimed at all electric and hybrid car users. Each Accelev charging station is microprocessor controlled, giving you access to features that other chargers - especially "made in China" products - do not offer. Despite their technical advancement, Accelev chargers are very simple and intuitive to use - each charging station is controlled via a touch screen. You can disconnect your car from charging at any time.

What sets Accelev chargers apart from other EV chargers on the market?

Build quality, operating efficiency, and most importantly, a number of unique features designed to keep you and your car safe. In addition to a grid monitoring system (reducing power when load is detected) and a unique BatteryCare™ charging mode, among others, Accelev EV chargers can be updated via a micro USB port.

Accelev charging stations are our project - developed and created in Poland. This allows each product to be customized according to customer requirements.

We believe that Accelev EV chargers are the most advanced home EVSE stations of our time.

## 2. Safety recommendations



The EV Accelev charger is designed for indoor installation (except special version) and must be protected from direct sunlight.



Strictly protect against contact with water.



Do not enclose the charger - overly tight protection interferes with the air supply, which is used to cool the unit.



Do not carry the charger while charging or while it is plugged in.



Do not connect to the power supply before installing the charger.



Protect from dust and dirt. Clean with suitable wipes.



When used as a portable EV charger, the charging station should be placed horizontally and properly prepared before turning it on [see 3. Installation].



The charger must be mounted with a bottom bracket to prevent the unit from slipping out of the mounting rail.



Do not disconnect the EV Accelev charger from the power supply while charging.

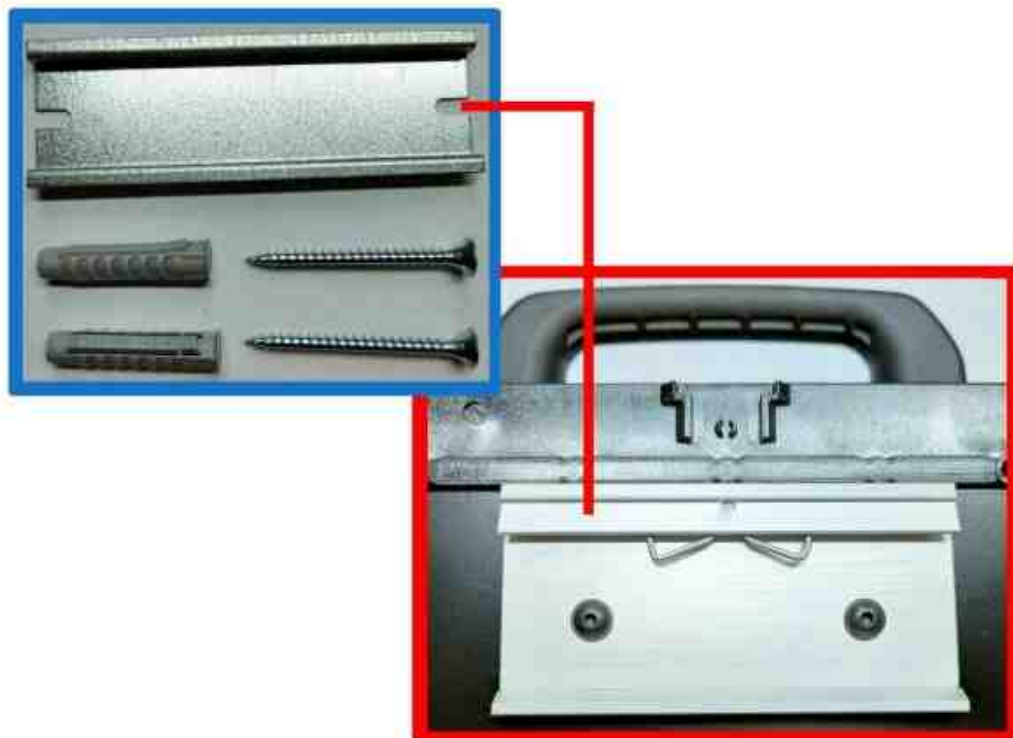


Absolutely do not open the Accelev charger case or modify it!

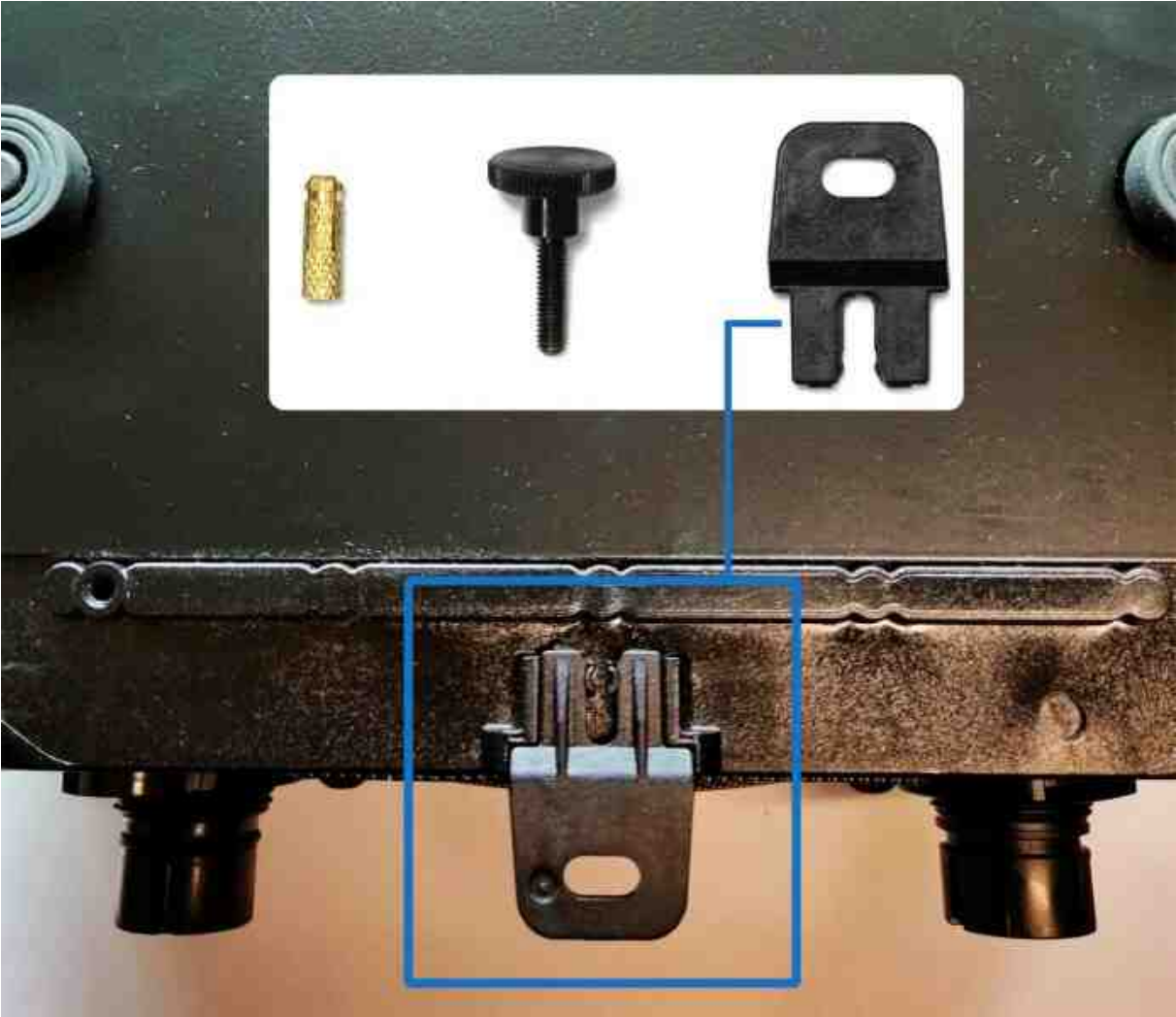
### 3. Installation

The EV Acelev charger can be used horizontally, but wall mounting is preferred due to better cooling of the unit. Remember not to cover the cooling inlet and outlet. Each EV Acelev charger comes with a charging cable and power cable, as well as the appropriate mounts for its installation. The charging station should be mounted on the wall of your choice, at least one meter above the ground, in a location where it is not exposed to direct sunlight, water or excessive heat / cold - the unit has a protection rating of IP42 [2-phase charger] and IP54 [1- and 3-phase charger]. When planning the installation of the charger, consider access to the power supply as well as to the vehicle to be charged.

1] To mount the unit, install the mounting rail on the wall using 2 mm x 6 mm x 50 mm screws or screws of similar length. Note that the weight of the Acelev EV charging station can be up to about 15 kg - so make sure the rail is installed correctly before embedding the charger.



2] There is a safety bracket at the bottom of the case, that prevents the unit from slipping off the mounting rail during daily use of the charger. The bracket is necessary to mount to avoid serious injury from a possible fall of the charger. The gold anchor should be installed in the pre-drilled hole [fi = 6] using the appropriate adhesive depending on the surface. Then the safety bracket should be inserted into the bottom of the charger case. Once the device is mounted on the wall, the charger can be stabilized with a screw.



3] The socket with the green marking is the input for the charging cable that you plug into your car. The socket with the red marking is the input for the power cable. The charging cable and the power cable are also color-coded - it is not possible to connect the plugs to the sockets incorrectly because they are different.



4] To unlock the cables, first turn off the power. Use a flathead screwdriver to unlock the latch [see figure]. Pull on the plug, leaving the latch unlocked. To reconnect the cable, a screwdriver is not necessary. Do not rotate the plugs while connecting the cable.

**CAUTION:** Remember that you can disconnect your car from charging at any time of your choosing. Maintenance and cleaning can only be performed when the power source is disconnected. Do not wash the device with a direct stream of water. Instead, use notebook / TV screen cleaning wipes.

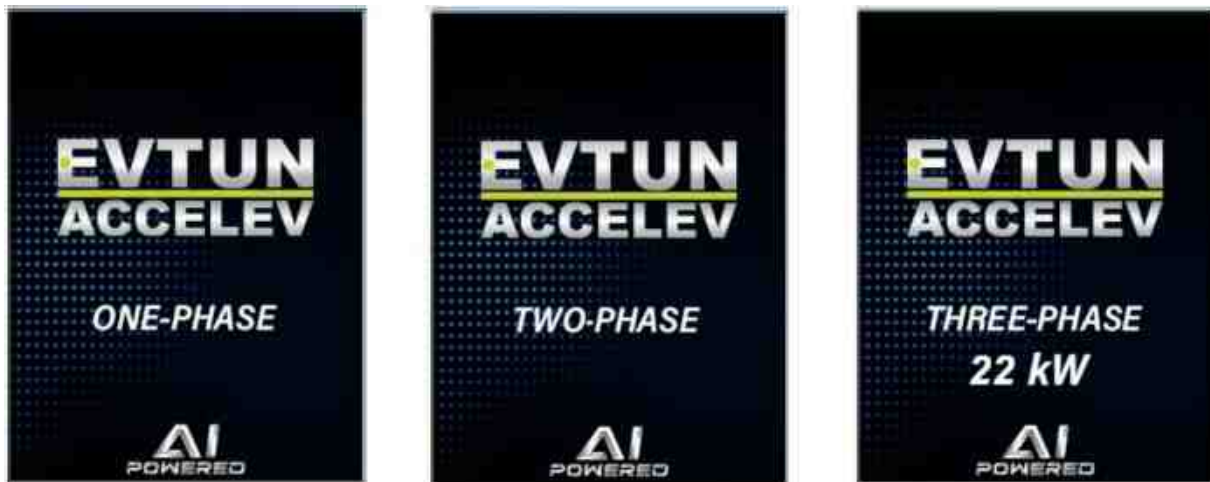


## 4. Operating

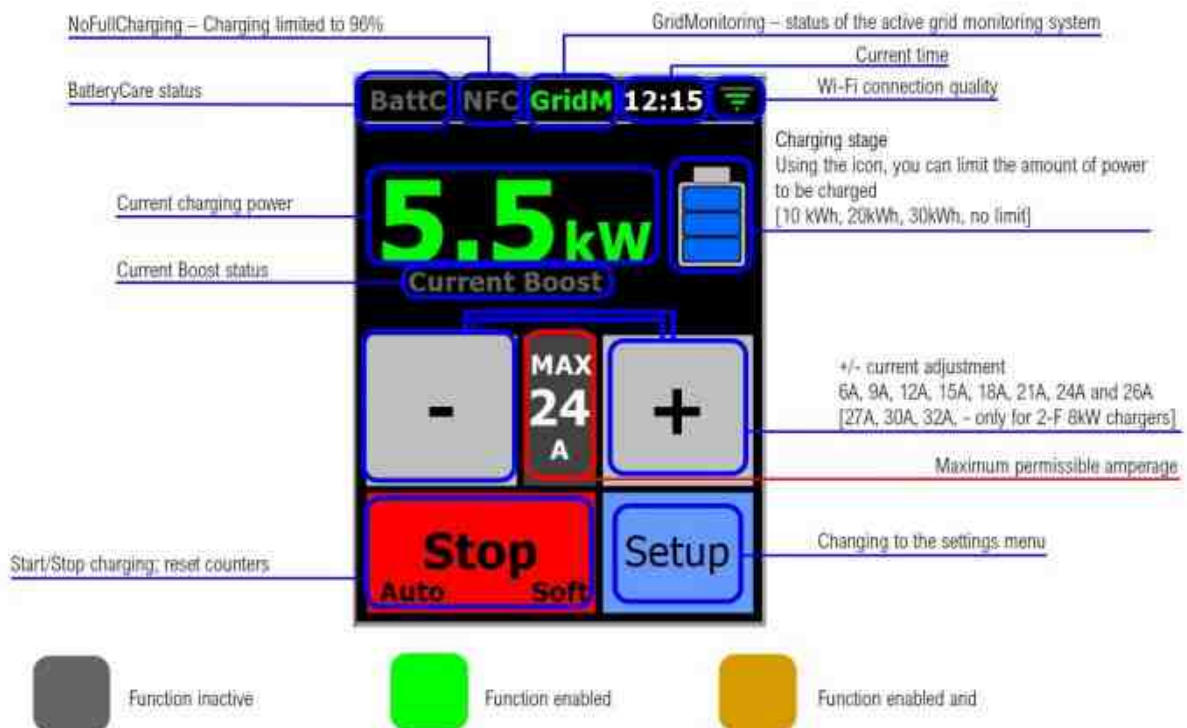
Operation of the charger is intuitive and is done by interacting with the interface, which is a 2.8" TFT color touch screen - the interface is active when the charger is connected to the power supply. Below is a diagram of the various menus with available functions.

### 4.1. Control Panel

A] Startup screens with information about the charger variant



B] Main menu



### C] Main menu in „Geek Mode”

Maximum intensity / current intensity

3-phase charging active

Voltage activating grid monitoring / current voltage

Charger internal temperature

Time from start of the charging

Current charge energy counter

State of Power: determines the quality and potential of a power source (e.g., home grid)

Voltage value on CP line (Control Pilot)

Auto Start - this function makes the charger ready for charging as soon as it is connected to the car. There is no need to initiate charging each time by pressing the "Start" button.

Soft Start - allows charging to begin at a lower amperage with a gradual increase while monitoring the grid. The goal is to determine the optimum amperage level from an unknown power source. It may take up to 8 minutes to analyze the capabilities of the source.

GridM 12:15

210/232V 24/23.8A 3P 25°C

00:20:23 5.521kWh

5.5kW

SOP:---

CP: 6.2V

MAX 24 A

Stop Auto Soft Setup

### D] Function menu 1

Activation / deactivation of individual functions

Move to the next menu

Move to the main menu

BatteryCare(TM)

No Full Charging

ReVive Balancing

Current Boost

Geek Mode

Back Next

### E] Function menu 2

Grid monitoring level [01 = the smallest gap, the fastest response]

Detailed grid monitoring

Change the grid monitoring level

Grid Monito 210/232V 04

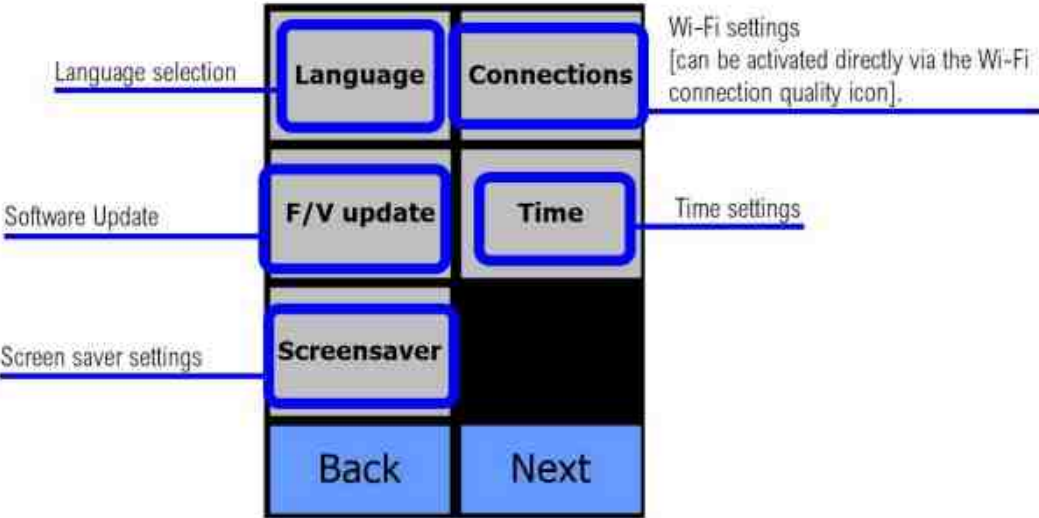
Manual Sensitive

- +

Auto Start Soft Start

Back Next

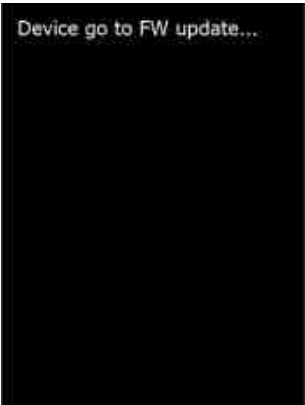
F] Function menu 3



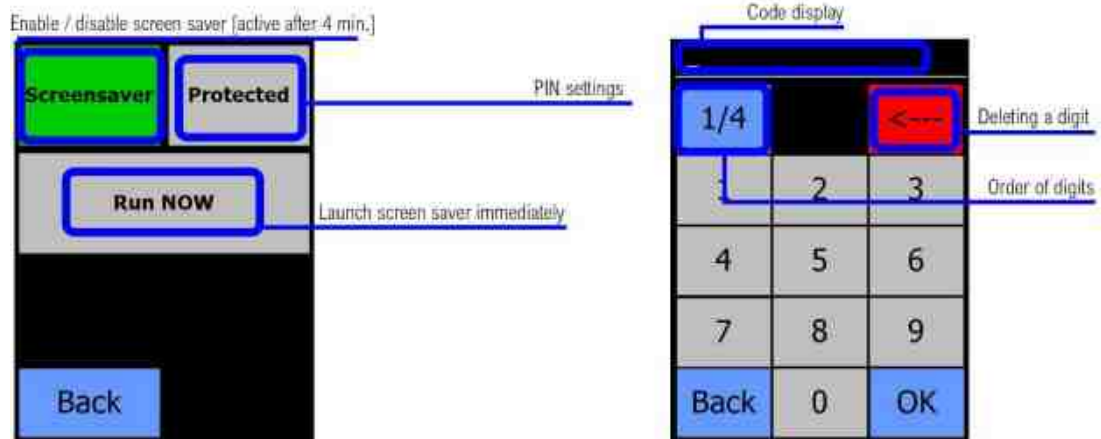
G] Language version selection menu - confirm choice with "OK" button



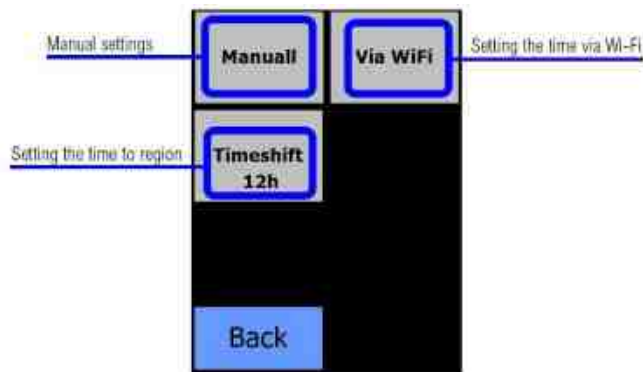
H] Software update screen - appears when you select update option [F/V update].



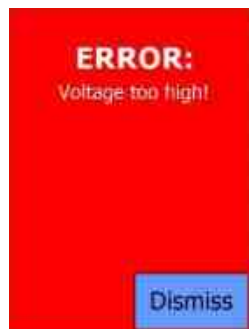
### I] Screen saver and PIN settings menu



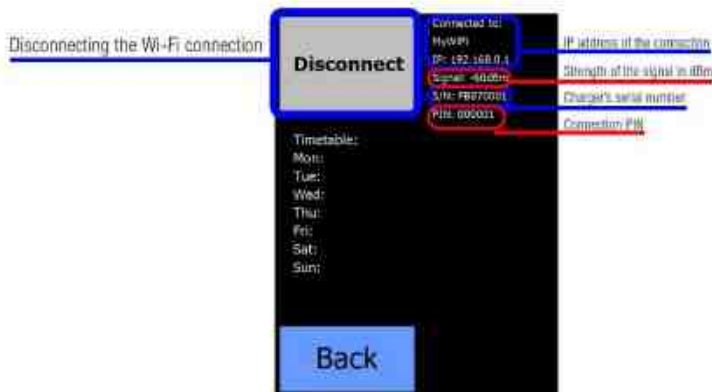
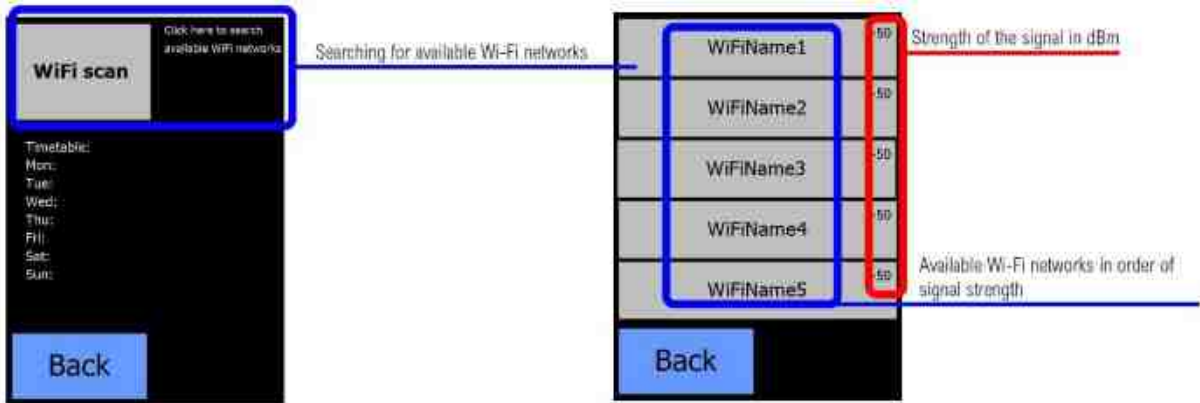
### J] Time Setup Menu



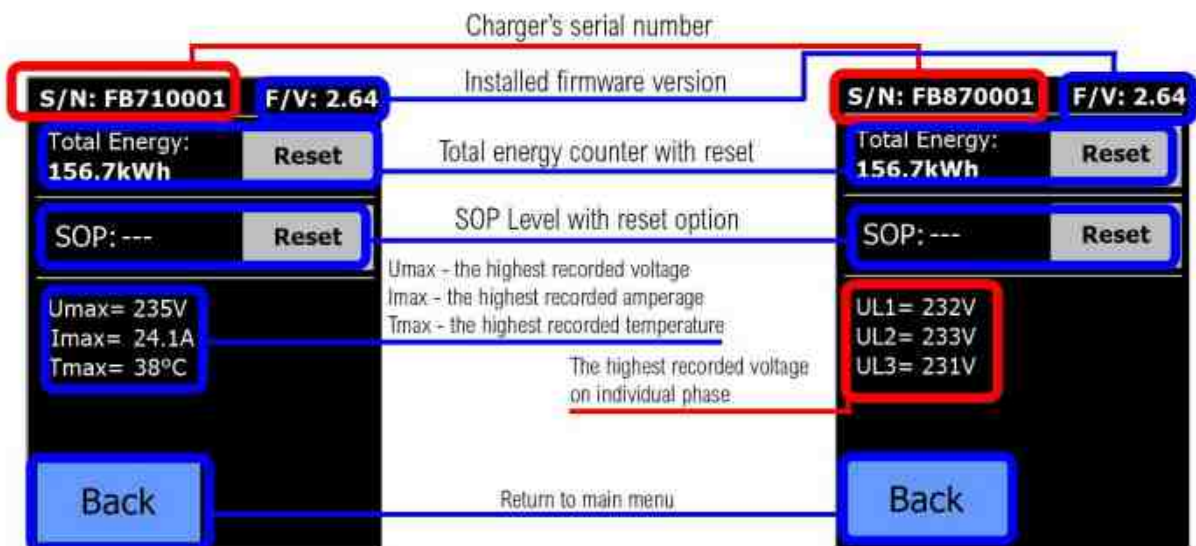
### K] Error screen - see 5.1. Error codes



L] Wi-Fi settings menu



M] Final menu

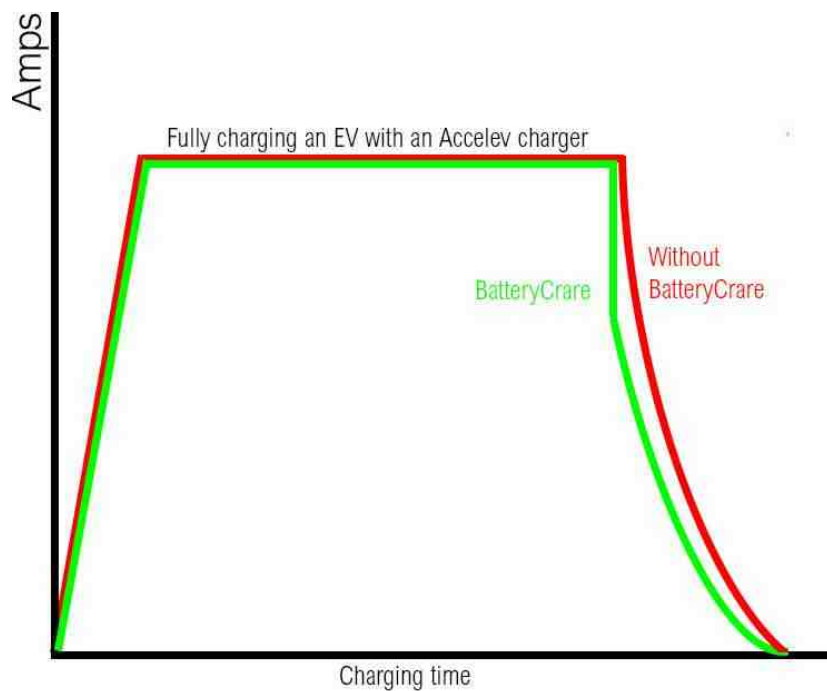


## 4.2. Functions

One of the most important differences between Accelev EV chargers and other charging stations is the number of features offered designed to care for the life of car batteries. Over time, batteries are affected by use and lose their initial capacity - Accelev is designed to not only control the charging process or protect battery health, but also to "recover" the loss by balancing the battery. Below is a description of the various functions.

### 4.2.1. BatteryCare

BatteryCare is a special method for full charging with reduced voltage. When activated, this function concentrates on the initial and final stages of charging. In order to minimize the risk of exceeding the maximum allowable voltage of a single battery cell, Accelev reduces the charging speed before the battery voltage reaches its maximum. The function activates when the voltage reaches the maximum allowed value (usually 4.12 V per cell).



#### **4.2.2. ReVive Balancing**

The function is used to balance the battery and partially restore the missing capacity depending on the type and condition of the battery. The process is based on a pulse charging algorithm and slow balancing - the balancing time can last up to 10 hours. When it is finished, the battery may not be fully charged. The procedure can be stopped at any time, but keep in mind that the battery will not be completely balanced.

The battery should be drained to less than 10% capacity before starting the procedure. We advise that you activate the network monitoring feature during balancing - BatteryCare is not available at that time. We also recommend balancing the battery every six months.

#### **4.2.3. No Full Charging**

This feature is designed to terminate charging when the battery is loaded to approximately 95% of its available capacity. Preventing the battery from being fully charged protects it from the harmful effects of accelerated use. When Acelev detects the final stage of charging the car battery, the "NFC" sign is highlighted in orange and the entire process stops.

No Full Charging is only active when BatteryCare is enabled.

#### **4.2.4. Grid Monitoring**

Grid Monitoring is based on fast and continuous measurement of the actual voltage in the electrical network. Grid Monitoring immediately reduces the load when an overload is detected, thus preventing so-called "fuse blowing". It is recommended to activate this feature conservatively so that the response point is no more than a few volts away from the voltage under the load [both parameters are displayed on the Grid Monitoring button]. On a scale of 01 to 20, level 08 is set as standard and optimal for most cases [01 - smallest load tolerance; increasing the tolerance extends the gap by 1-2 volts depending on the actual voltage]. Level 08 = approximately 15 V gap between idle voltage (no load) and load response, and approximately 8 V gap at 210 V.

If the Accelev responds to the load and reduces the charging rate, but the current reduction is not sufficient for a given fuse system, the "More Sens" function must be activated. When it is activated, the instantaneous current reduction is doubled.

#### **4.2.5. Current Boost**

The function is based on voltage boost: if the charging speed of the battery is limited by the low current on the on-board charger, Current Boost will gradually increase the charging current until the maximum level set via the interface is reached.

#### **4.2.6. Other features: update, PIN protection, Wi-Fi**

##### **1] Update**

To update the EV charger software, disconnect the Accelev from the power source. Then connect the micro USB cable between the Accelev and your Windows computer. The Micro USB port (covered by a plastic cover) is located on the right side of the Accelev. Navigate to the "Setup" menu and then to the "F/V Update" button.

Install Accelev Updater on your computer and run it with administrator rights. Select the appropriate update file and wait for the "Update" button to activate [data verification will occur beforehand]. Once the update is complete, disconnect the USB and reconnect Accelev to power. The update program and new software versions are available on our website [EVTUN.COM](http://EVTUN.COM).

##### **2] PIN protection**

A 4-digit PIN code option can be used to protect the EV charger from unauthorized access. Once activated, Accelev will request the code to unlock the interface.

### 3] Wi-Fi

You can register your Accelev EV charger at [evtun.com](http://evtun.com), which results in the creation of an individual account. With a Wi-Fi connection through your account, you have access to the ability to remotely control your charger, view its current status, and access data such as the number and time of individual charges.