peblar ROCKSOLID CHARGERS

Peblar
Home / Business

User manual

Table of Contents

1. Introduction

1.1. About this document

This user manual is part of the technical documentation provided with the Peblar Type 2 AC charger, and is written to ensure safe and proper use of the charger. The original manual is written in UK English. All other language versions are translations of the original manual. Keep this manual for future reference.

Only use the charger within the specified environmental conditions as stated in the spec sheet, available on **www.peblar.com**.

1.2. Symbols used in this manual

This manual contains symbols that indicate useful information that complements the instructional text and illustrations.

Symbol	Meaning
NOTICE	Could result in damage to the product if this instruction is ignored or not followed correctly.
Note	Additional information or emphasis on an instruction.

1.3. Glossary

Abbreviations

Abbreviation	Meaning
AC	Alternating Current
API	Application Programming Interface
CT	Current Transformer
EV	Electric Vehicle
LED	Light Emitting Diode
QR	Quick Response
RFID	Radio-Frequency Identification
URL	Uniform Resource Locator
WLAN	Wireless Local Area Network

Units of measurement

Unit	Description
A	Ampere
cm	centimeter
kWh	kiloWatt-hour

2. Safety

The charger is intended exclusively for charging EVs compatible with Type 2 chargers. Read and follow these safety precautions before using the charger.

NOTICE

- Only use the charger at temperatures between -30 and +50ºC.
- Do not use adapter plugs with the charger.
- Do not use extension cords with the charger.
- Do not apply excessive force on the charging cable.
- Always keep the charger at a minimum distance of 25cm from your body when in use.
- Place the protective cap on the vehicle connector when not using the charger.
- Do not leave the vehicle connector of the charging cable on the ground.
- Do not use aggressive cleaning agents. Only clean the charger with a dry cloth.
- Do not use a pressure washer.
- Do not remove or adjust any markings or labels from the charger.
- Only transport the charger packaged in the original packaging.

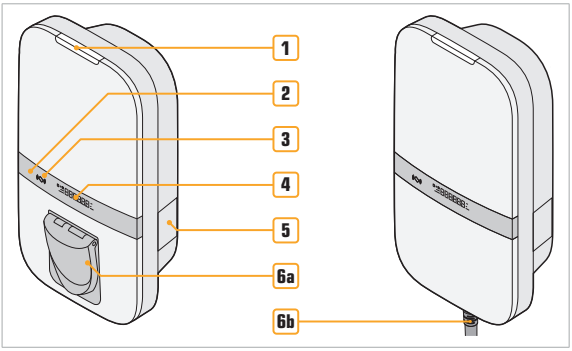
3. Get to know your charger

3.1. Intended use

The Peblar electric vehicle (EV) charger is designed to provide a safe and efficient method for charging EVs with a Type 2 charging port. Only use the charger within the specified environmental conditions as stated in the installation manual. A qualified installer must ensure that the charger is installed in accordance with the relevant country-specific standards and local regulations. Read and follow the safety precautions before using the charger.

3.2. Main parts

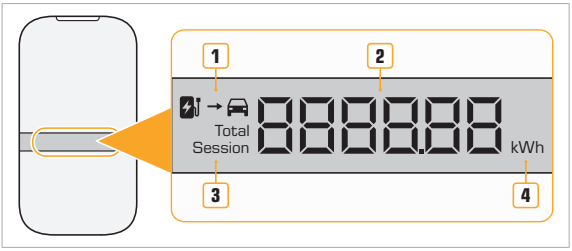
1. Status LED
2. Ambient light sensor
3. RFID scanner
4. Display
5. Product identification label
6. a: Type 2 charging socket
   b: Fixed Type 2 charging cable



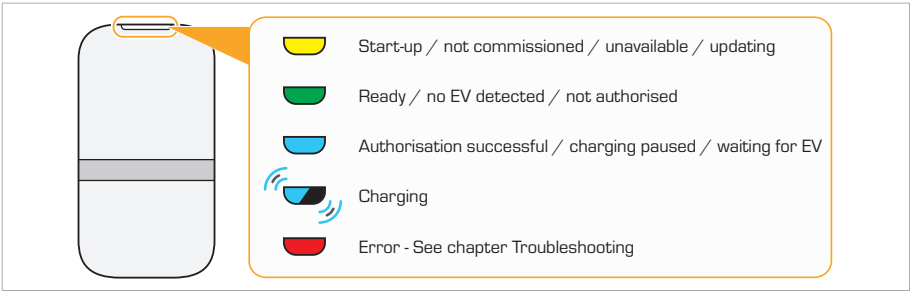
3.3. Display

The charger is equipped with a display to present energy metering information from either the current charging session or the total lifetime of the charger. Below you can find an explanation of the display information.

1. Charging
2. Measured energy / Error code
3. Current session / Total lifetime energy charged
4. Unit of measurement



3.4. Status LED colours

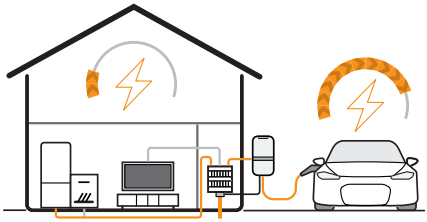
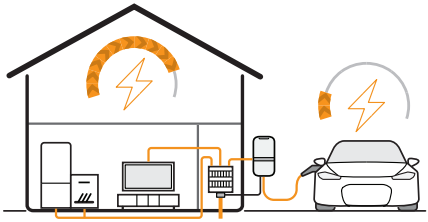


4. Smart features

The Peblar is equipped with multiple advanced features developed to optimize the charging process for EVs. The charger offers a range of smart capabilities designed to enhance efficiency, convenience, and energy management.

4.1. Dynamic load balancing

Dynamic load balancing monitors the real-time current draw of the household or building grid automatically adjusts the charging current based on the current usage per phase of the household. The limit is based on the phase with the lowest available current, preventing overloads and ensuring efficient use of available power.

Low household usage – high charging current	High household usage – low charging current
	

4.2. Phase imbalance monitoring

If configured, the charger uses a connected measurement source to monitor how electricity is distributed across the three phases of the power supply. It aims to balance the load evenly to prevent overloading on any single phase, maintaining consistent charging speeds and reduce the risk of electrical issues.

4.3. Charging strategies

Default charging

Start charging right after plugging in the EV and authorising the session if needed, with no additional requirements or variables apart from dynamic load balancing, if configured.

Scheduled charging

Set a personalized charging schedule to take advantage of off-peak electricity rates or align charging with your daily routines.

Solar charging

Combine solar energy with grid electricity to maximize the use of renewable energy for charging your EV.

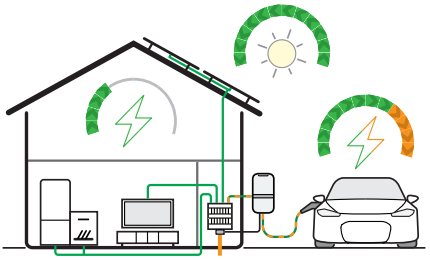
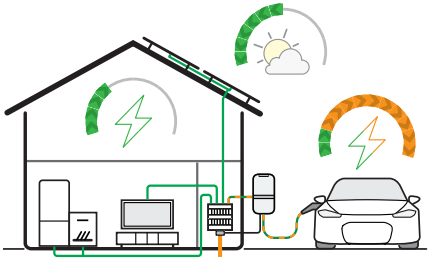
Note: Only available for single chargers.

Note: Not available in combination with CT coils as measurement source.

There are three solar charging modes: Fast solar, Smart solar and Pure solar. Choose the strategy that best suits your needs, considering factors such as weather conditions and energy demand.

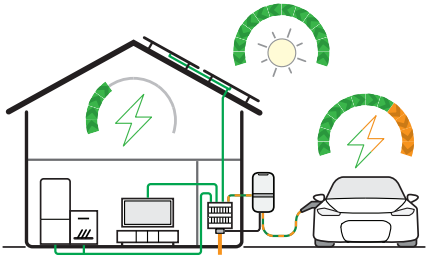
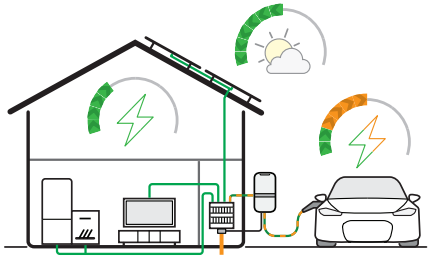
Fast solar

Charge at the maximum current. All available solar power is used, topped up with power from the grid to reach the maximum charging speed.

High solar generation	Low solar generation
	

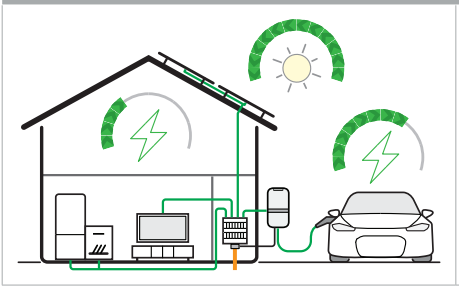
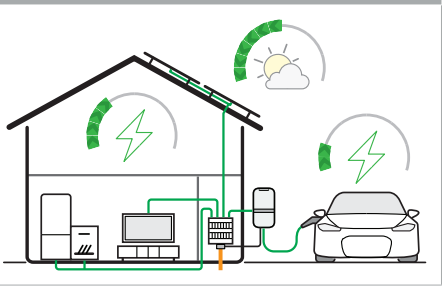
Smart solar

Charge with a balanced combination of solar power and power from the grid.

High solar generation	Low solar generation
	

Pure solar

Charge using only solar power. Charging starts when at least 6A of solar power flows back into the electricity grid.

High solar generation	Low solar generation
	

4.4. Active power control

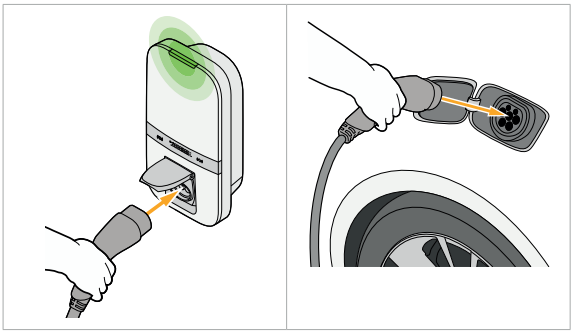
For chargers with digital inputs, the charger can be connected to two external switches. These switches control the charging current remotely. By default, activating the first switch stops charging completely. Activating the second switch limits charging (slow charging). It helps prevent grid overloads by allowing your electricity provider to manage charging loads.

5. Use

5.1. Start charging

Note: Always fully unwind the charging cable before use.

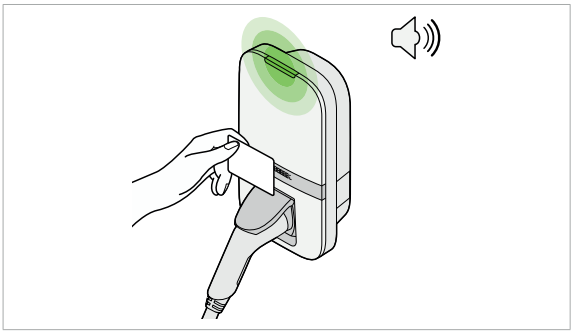
1. Check the LED. If it is green, the charger is ready for use.
2. For socket chargers, push the plug into the charger socket.
3. Plug the vehicle connector into your EV.



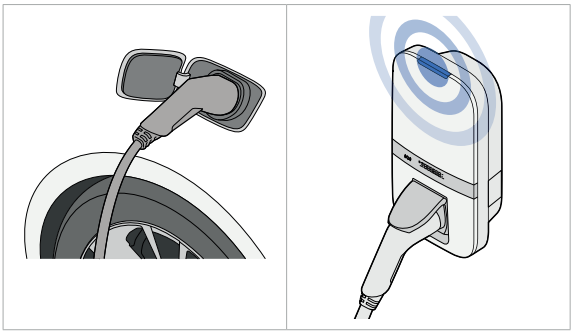
4. If needed, scan your RFID token. Wait for a beep and a green flash of the LED.

Note: With socket chargers, the charging cable is now locked.

Note: For unmanaged chargers, enable charging without authorization via the web interface.

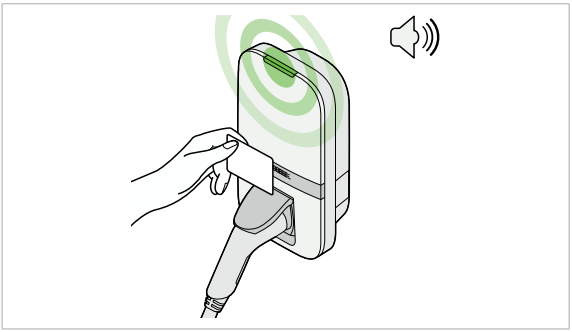


The LED pulsates blue when the EV is charging and turns solid blue when charging is finished or paused.



5.2. Stop charging

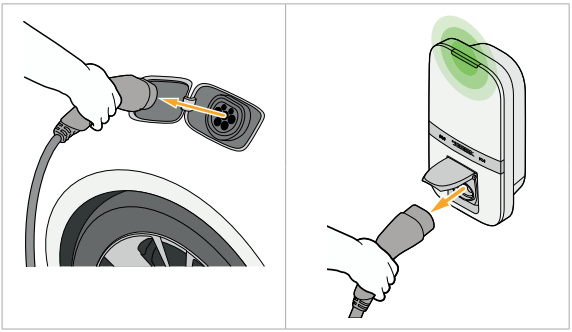
1. Check the LED:
   Pulsating blue:
   Charging is in progress.
   Solid blue:
   Charging is paused or complete.
2. If needed, scan your RFID token. Wait for a beep and a green flash of the LED.



3. Unlock your EV and unplug the charging cable from your EV.
4. For socket chargers, unplug the charging cable from the charger.

NOTICE

Do not pull the cable, always pull the plug.



5. For fixed cable chargers: loosely wind the charging cable around the charger. Make sure the plug is at least 50cm above ground level to avoid dirt entering the plug.

6. Web interface

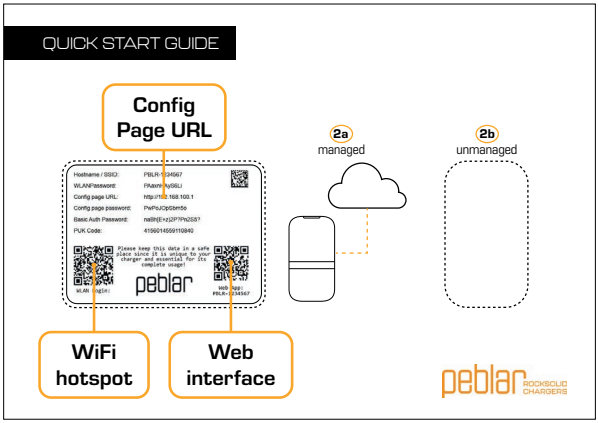
Use the web interface to manage charging strategies, see charging data, check the system status for any errors or warnings and adjust various other settings.

6.1. Access the web interface

The installer typically connects the charger to your local network during commissioning. To access the web interface, connect your device to the same local network and enter the **Config page URL** in a web browser, or open your browser and navigate to PBLR-XXXXXXX.local while connected to the same network.

Note: xxxxxxx represents the ID of the charger, which you can find on the side label of the product, in the quick start guide, or as the name of the WiFi hotspot.

If the above method does not work, try accessing the IP address of the charger assigned by the router. To find this, go to the IP address of the router (usually indicated on the router itself) and look for the page listing connected devices. The charger should be listed there with the assigned IP address.

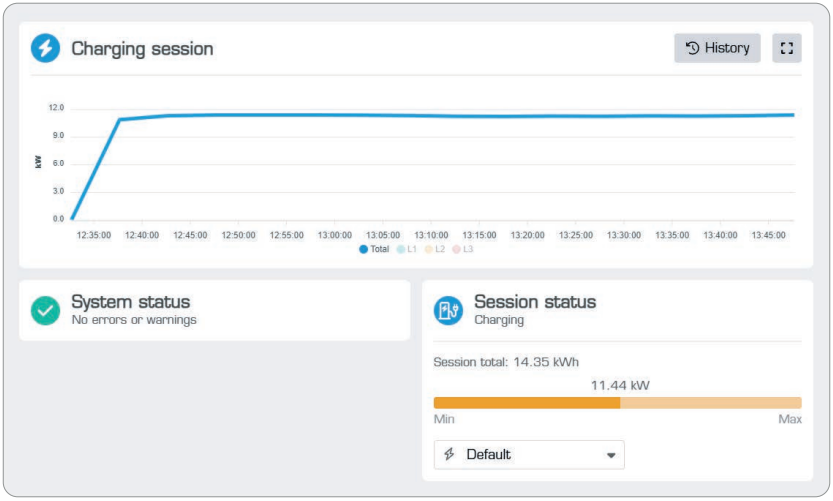


If the charger is not yet connected to your local network, enable WiFi on your device and connect to the WiFi hotspot of the charger. To activate the hotspot for 15 minutes, switch the power supply off and back on again.

Once connected, enter the **Config page URL** in a web browser, or scan the **Web App** QR code printed on the Quick start guide.

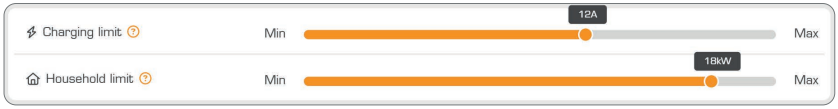
Note: You can permanently turn on the hotspot under the **Network** tab in the **Settings** page of the web interface.

6.2. Dashboard



The Web interface opens to the **Dashboard**. At the top you will find a graph showing real-time details of the active **Charging session**.
Errors or warnings are listed under **System status**, and the **Session status** shows the energy usage of the charging session, as well as the option to quickly switch between charging strategies.
Press the **History** button to view and download historical charging session data.

6.3. Smart charging



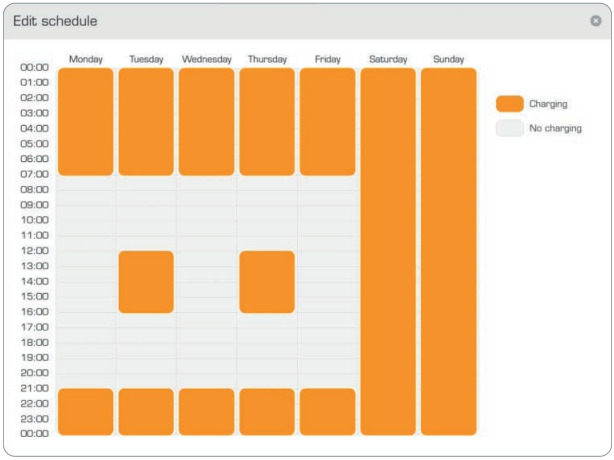
Charging limit
Use the **Charging limit** slider to adjust the maximum current that can be used to charge your EV. The slider ranges from a minimum of 6A up to the charging limit as configured during commissioning.

Household limit
Use the **Household limit** slider to set the maximum amount of power that can be used in a household. The charging power is limited, taking into account the power usage of the household. This can be especially helpful in regions where limiting the household power comes with financial benefits.

Note: When the charging session is paused, the power limit can still be exceeded by other appliances consuming significant power.

Note: This function is not available if CT coils are chosen as a measurement source / load balancing.

Scheduled charging



Set personalized charging schedules to take advantage of off-peak electricity rates or align charging with your daily routines. An example schedule is shown above. Tap times on the schedule to enable or disable charging for that period.

Solar charging

The charger can seamlessly combine solar energy with grid electricity, allowing you to maximize the use of renewable energy for charging your EV.

Note: Not available in combination with CT coils as measurement source.

Solar charging had three distinct modes: Fast solar, Smart solar and Pure solar, each serving different charging needs. Choose the strategy that best suits your needs, considering factors such as weather conditions and energy demand. Refer to Chapter 4.3. Charging strategies for more information.

6.4. Settings

General

Adjust the LED brightness and notification volume of the charger.

Authorization - for unmanaged chargers only

If the charger is managed, authorization requirements and RFID token registration is done by the charge point operator.

For unmanaged chargers, activate or deactivate authorization requirement before charging or register authorized RFID tokens to the charger. To register an RFID token:

1. Press Add tag.
2. Scan the RFID token you wish to add.
3. Enter a name for the RFID token.
4. Press Add.

To remove a token, press the trash bin icon in the list next to the token.

Network

Enable or disable network connection methods and adjust the network settings. Enable the Wi-Fi hotspot to permanently activate the Wi-Fi hotspot of the charger.

Note: Disabling the network connection can impact correct functioning of the charger. Only disable the network connection as a means of troubleshooting when the charger is not functioning as expected.

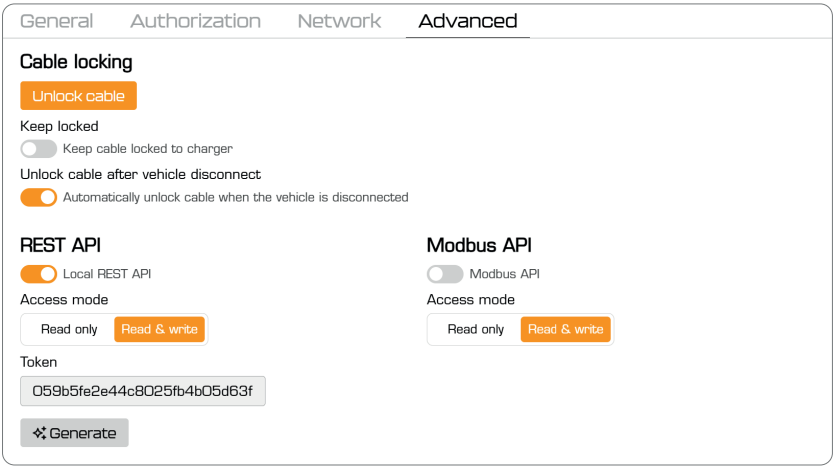
Advanced

Cable locking

Enable permanent cable locking to lock the plug in the charger. When enabled, the cable can only be unlocked via the Unlock cable button in the web interface. You can also choose to unlock the cable when the EV is disconnected.

API

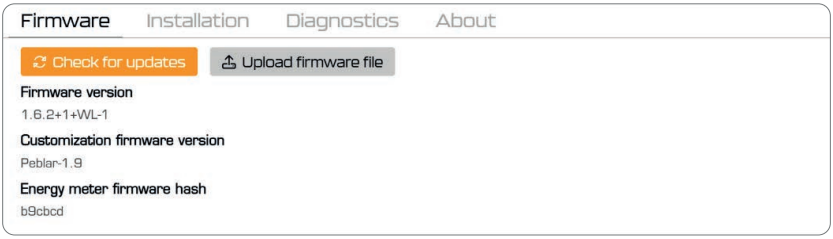
Enable and edit API settings for communication with external devices. See **developer.peblar.com** for more information.



6.5. System

Firmware

See the current firmware version of the charger and check for available updates. If an update is available, a notification will appear. It is also possible to manually upload the firmware. The latest firmware version can be downloaded from **peblar.com/downloads**.

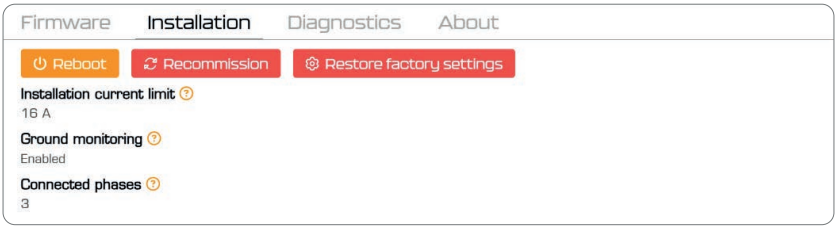


Installation

See an overview of the selected settings during commissioning of the charger, reboot the charger, recommission the charger, or reset the charger to factory settings.

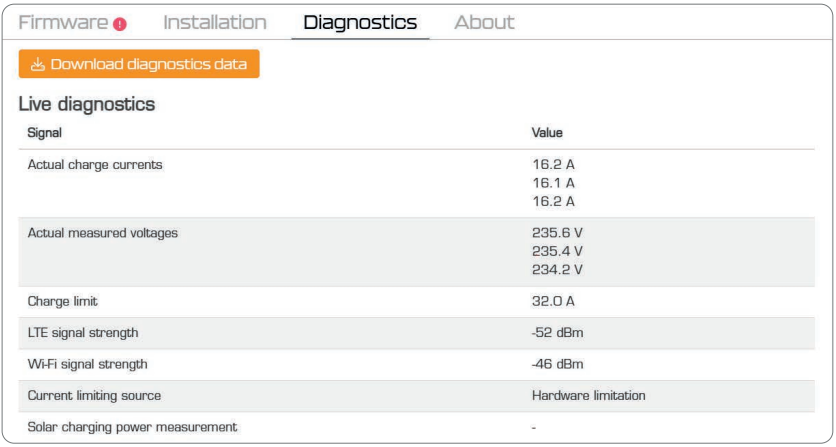
Note: A factory reset deletes all charging history data, adjusted settings, charging schedules, and authorised RFID tokens.

To perform a factory reset or recommission the charger, you need to enter the configuration page password, found on the sticker in the Quick start guide. Refer to Chapter 6.1. Access the web interface.



Diagnostics

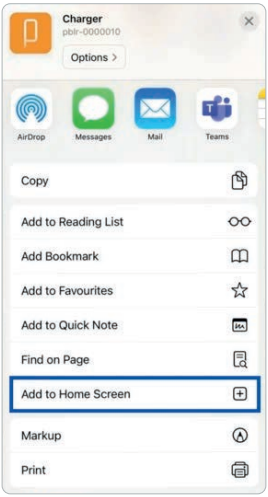
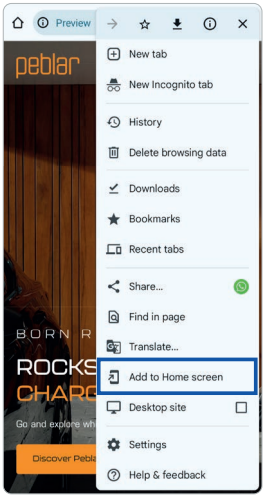
Read or download an overview of live diagnostics of various real-time signal measurements.



About

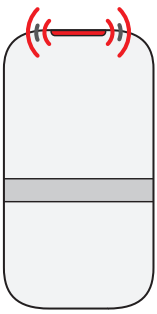
Read the product identification numbers and identify the charger by flashing the status LED.

6.6. Add the Web interface to your home screen

For iOS	For Android
	
1. Open Safari and go to the web interface. 2. Tap the **Share** button (a square with an arrow pointing up). 3. Select **Add to Home Screen**.	1. Open Chrome and go to the web interface. 2. Tap the three dots in the upper-right corner. 3. Select **Add to Home screen**.

7. Troubleshooting

When an error is detected, the status LED indicates this with a sequence of flashing red lights. This chapter explains how the user can troubleshoot these errors.



1×	**Incorrect installation or ground fault**
	Contact your installer to solve this issue
2×	**Internal fault**
	Perform a reboot using the web interface. Contact your installer or charge point operator if the issue persists.
3×	**EV connection fault**
	1. Unplug the charging cable from the vehicle. 2. For socket models, unplug the charging cable from the charger. 3. Inspect the charging cable and plug for dirt or damage. 4. If the charging cable or plug is damaged, contact customer support. Contact your installer or charge point operator if the issue persists.

APPENDIX A: **DECLARATION OF CONFORMITY**

Hereby, Prodrive Technologies N.E. B.V. declares that the radio equipment type AC charger is in compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address: **peblar.com/downloads**

APPENDIX B: **DISCLAIMER OF LIABILITY**

The manufacturer cannot be held responsible for personal injury, damage to the charger or property damage caused by incorrect use, foreseeable misuse or failure to follow the instructions in this manual. This also applies to unauthorised modifications of the charger and the use of non-approved spare parts, tools or accessories.

Prodrive Technologies N.E. hereby excludes all liabilities, warranties, terms and conditions, whether oral or written, express or implied by law, customer or otherwise, including, but not limited to, any warranties, terms and conditions, of fitness for purpose, description, and quality to the maximum extent permitted under applicable law. Prodrive Technologies N.E. have compiled the contents of this document to the best of their knowledge. No express or implied warranty is given for the completeness, accuracy, reliability, or fitness for particular purpose of its content. Specifications and performance data contain average values within existing specification tolerances and are subject to change without prior notice.

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