



SEREN

#600000 7.4kW



 Full User Guide

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FULL USER GUIDE FOR SEREN EV CHARGER

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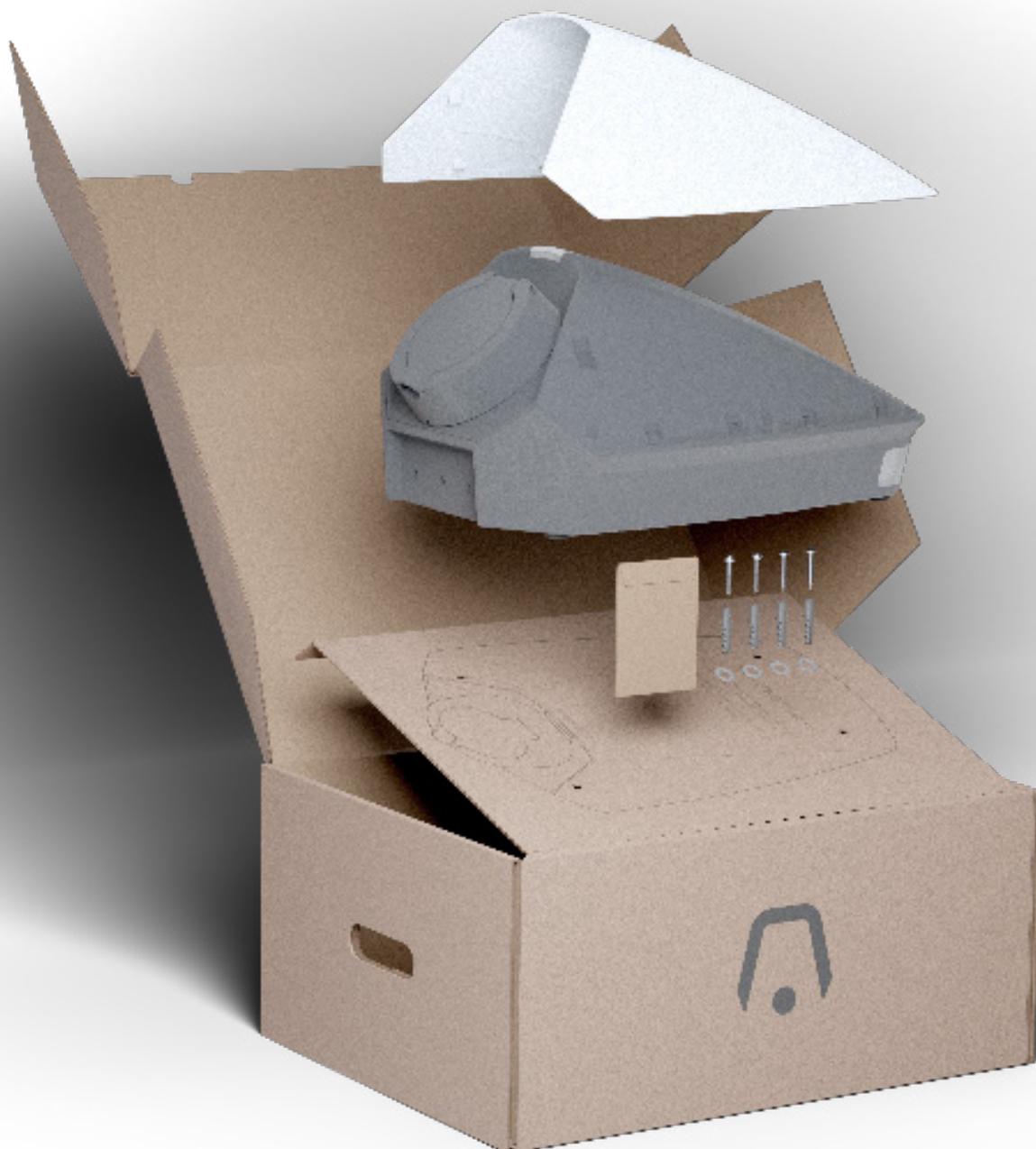
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Inside the box

- 1x** Seren EV Charger with white faceplate
- 1x** Tearable Mounting template
- 1x** Accessory pack:
 - 4x** Mounting Screws (M5*40mm)
 - 4x** Mounting Rawl Plugs (M8*40mm)
 - 4x** Plastic washers (Inner diameter 5mm, Outer diameter 10mm)



Technical Specifications

General Specifications

Output Current	AC
Connector Type	Untethered Type 2 (7.4 kW)
Dimensions	328mm x 239mm x 159mm
Ratings	IP55 & IK10 rated
Warranty	3 year warranty

Electrical Specifications

Rated Supply Voltage	230V AC single phase
Rated Power	7.4kW
Supply Frequency	50Hz/60Hz
Rated Current	32A max
Standby Power	3W
Charging Mode	Mode 3
Electronic Protection	Integrated RCD protection & PEN fault detection
Breaker Compatibility (UK)	MCB - Min. 40A, Icn 6kA RCBO - Max. 30mA / 40A (type B), fulfilling IEC 62423

Connectivity

Dedicated App	Seren Energy App
Connection Type(s)	Wifi Connect (2.4GHz Only), Ethernet Connect
Functionality*	Built-in DSR, Smart charging
Customisation*	Scheduling, Lighting, Communication

*Achievable through the Seren Energy app

Important Information

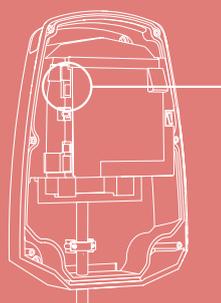
ELECTRICAL HAZARD/FIRE HAZARD

- When installing for the first time, switch off the power supply before connecting to the charger input. Do not connect with live power.
- Ensure that power to Seren EV Charger is switched OFF when operating, maintaining, or connecting the charger to mains electricity.
Never open or remove the front of the EV charger enclosure whilst mains electricity is live. Opening or removing the cover, or operating, maintaining, or connecting the charger whilst mains electricity is live is a safety hazard and could result in injury.
- Seren EV Charger should only be installed by a qualified electrical professional in accordance with the British wiring regulations (BS 7671) and Building Regulations Part P.
- The Seren charger must be connected to a breaker with a short-circuit protection function (see page 3 for details on Breaker Compatibility).
- The charger's socket (including the charging cable) must be regularly inspected for damage, and the casing must be checked for any signs of damage
- If the charger is damaged, it must be switched off immediately and replaced.
- Charger repair or replacement should only be carried out by an approved installer.
- Modifying the charger without authorisation poses a safety risk and will void your Seren warranty.
- Do not remove safety symbols, warning labels, nameplates, signs, or markings.
- Your Seren EV Charger should only be connected to electric vehicles that are suitable for charging with a 7.4kW EV charger. It should not be used for other loads such as power tools.
- Always follow the electric vehicle manufacturer's instructions when using Seren EV Charger.
- Seren EV Charger is not suitable for use in environments that pose an explosion risk due to ignition.
- Ensure that the PE (Protective Earth) end of the charger is reliably grounded; failure to do so may result in electric shock or fire.
- Installation Power network: TN, IT, or TT
- The charger cannot be connected with a reduced power connector.
Installation Power Requirements: Max.32A, single phase.

- Dip-Switches inside the product

The default position for the dip-switches are:
OFF OFF OFF OFF

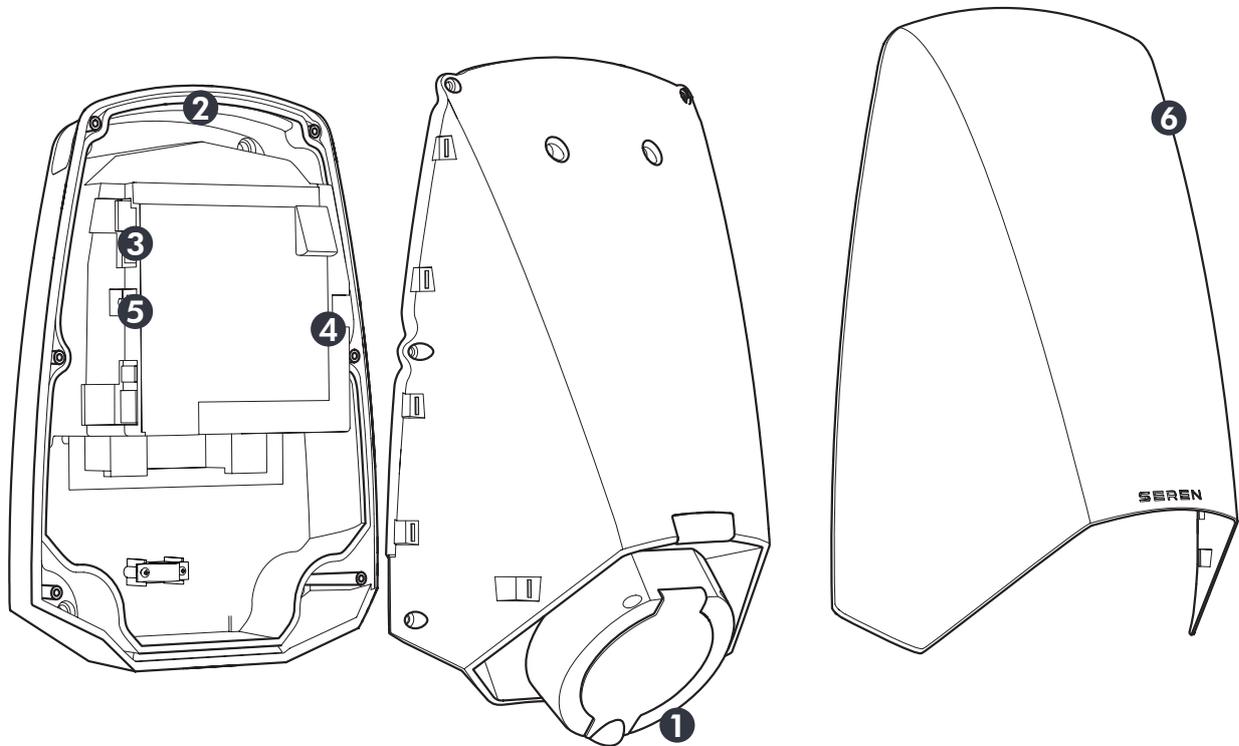
These switches should NOT be touched at any point during the installation of Seren EV.



Dip-switches
Do NOT touch,
keep default settings



Product Diagram

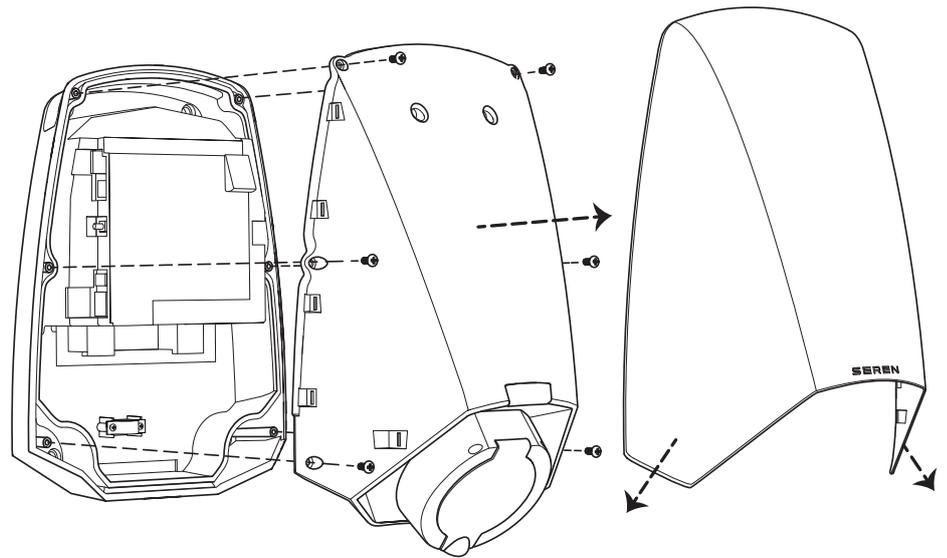


- ❶ Charge point
- ❷ Light-Bar
- ❸ Dip-switch
- ❹ Cover-open switch
- ❺ Reset button
- ❻ Face cover

Installation

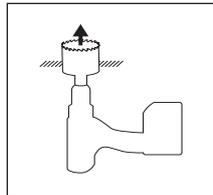
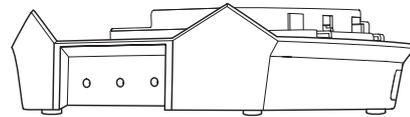
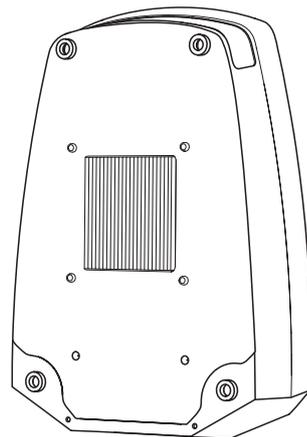
1. Remove faceplate

Unclip and remove the faceplate. Then unscrew the 6 anti-tamper screws and carefully remove the front of the case.



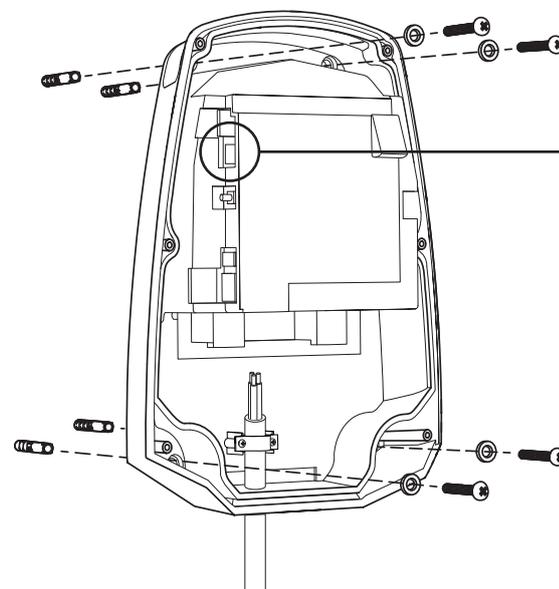
2. Input entry

Using a holesaw with the appropriate diameter for your chosen IP rated cable gland, create a hole on the back or underside of the product.



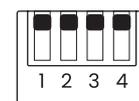
3. Wall mounting

Using the included mounting template, mark and drill the 4 mounting holes, then mount the product onto the wall with the included screws, plugs, and washers.



Dip-switches

Do NOT touch, keep default settings

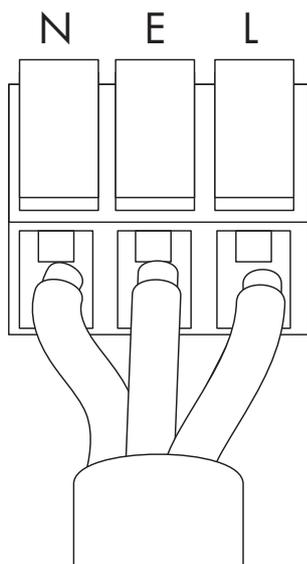


Installation

4. Input wiring

Use an appropriate cable with a core diameter up to 10mm² & strip back 18mm². Input into the terminal.

N > Neutral (Blue)
E > Earth (Green/Yellow)
L > Live (Brown)



Note

EV Ultra cable recommended - if multi core please use ferrules crimp.

Warning

Please ensure cables are fully inserted and there is no exposed copper.

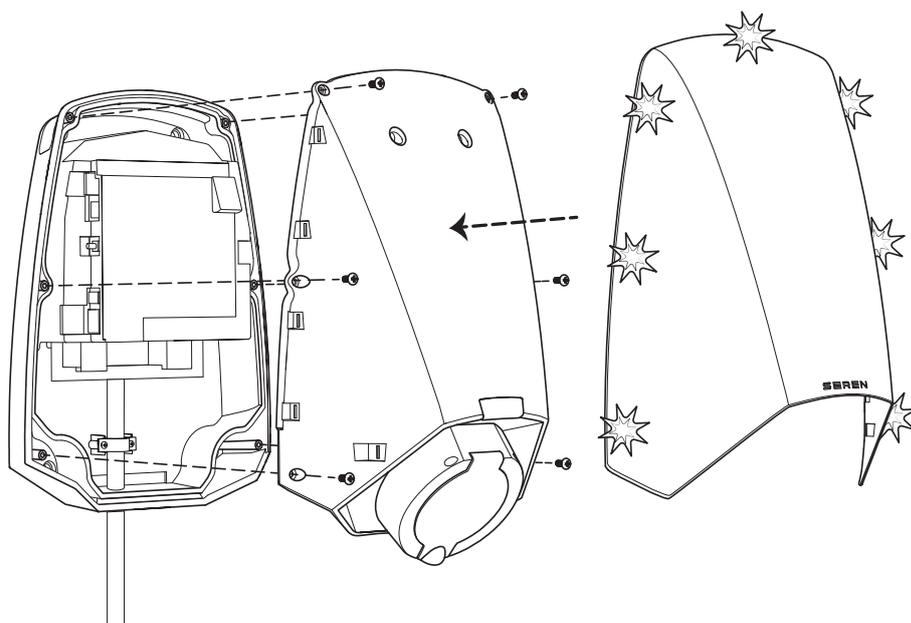
5. Attach faceplate

Carefully attach the front of the case using the 6 anti-tamper screws. Finally gently clip on the faceplate.



DO NOT SWITCH ON THE POWER UNTIL THE HOUSING IS CLOSED AND THE FACEPLATE IS FITTED.

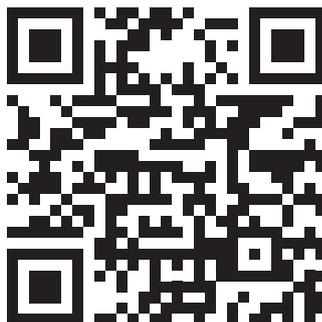
DO NOT OPEN THE HOUSING WITH THE POWER ON.



6. App control

Download the Seren App:

Use schedules, track savings, adjust lighting.

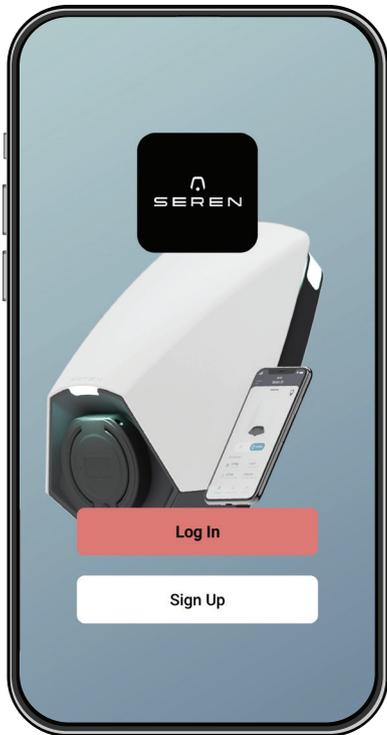


www.serenenergy.com/appdownload

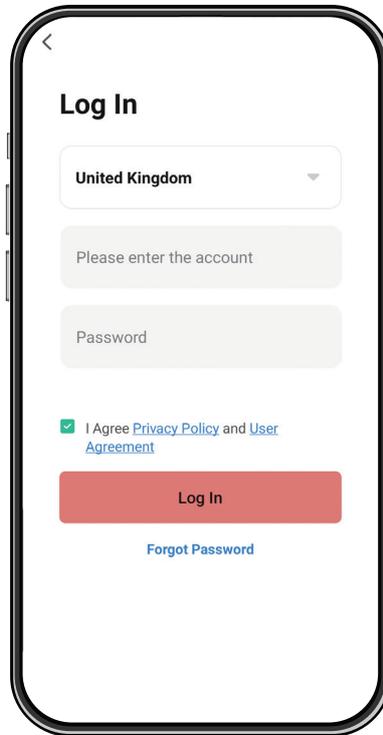
Seren Energy App Guide

1. Register and login

Open the app and Sign Up to create an account



Log in to your new account with your details

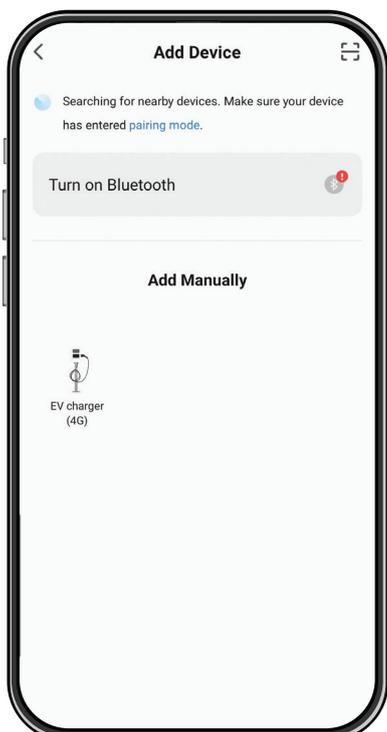


You are now logged in, click on "Add Device"



2a. Connect to your device via ethernet (ensure Seren EV is connected via Ethernet (Preferred) or Wifi to the same network)

Click on the Camera button on the top right



Scan the QR code on the bottom label of Seren EV



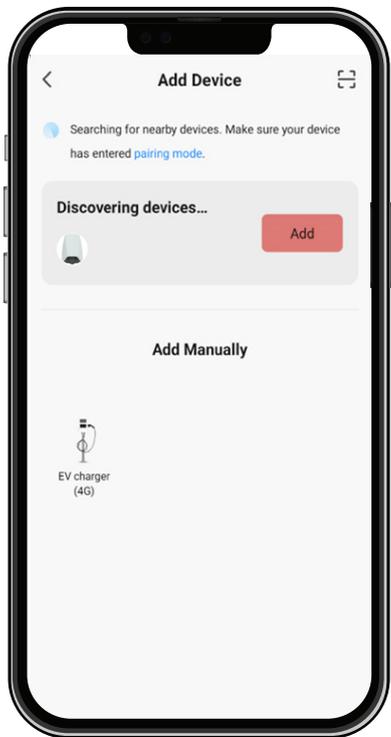
Wait for the app to connect to the Seren EV



Seren Energy App Guide

2b. Connect to your device via WiFi (ensure Seren EV is connected via Ethernet (Preferred) or Wifi to the same network)

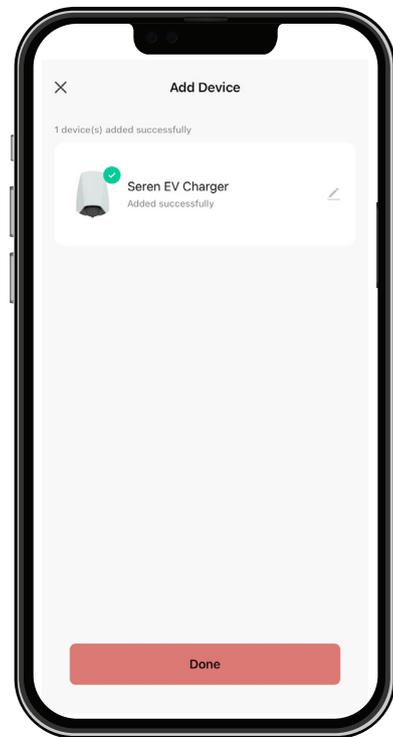
Once the app auto detects your device, select 'Add'



Select WiFi & enter the password.



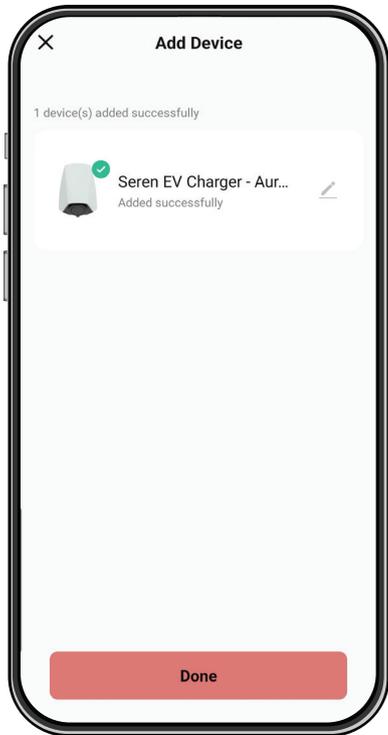
Click done and the device is now connected



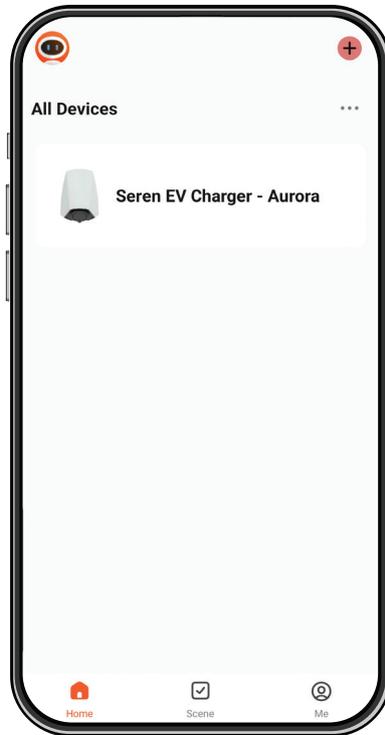
Seren EV Charger App Guide

3. Enter your device view

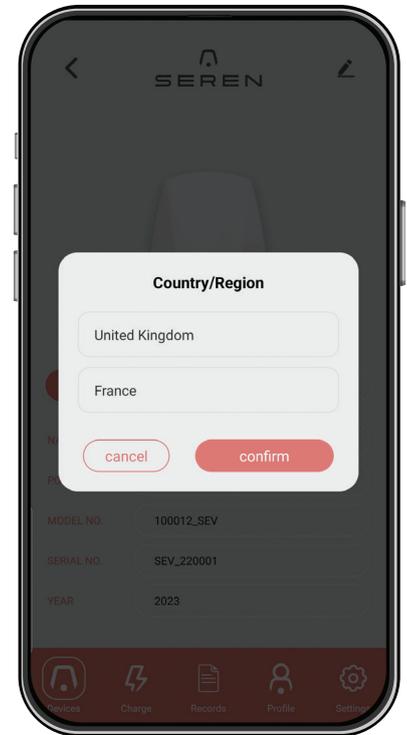
Once your device has been added, click 'Done' to confirm



To enter your device view, click on your device icon

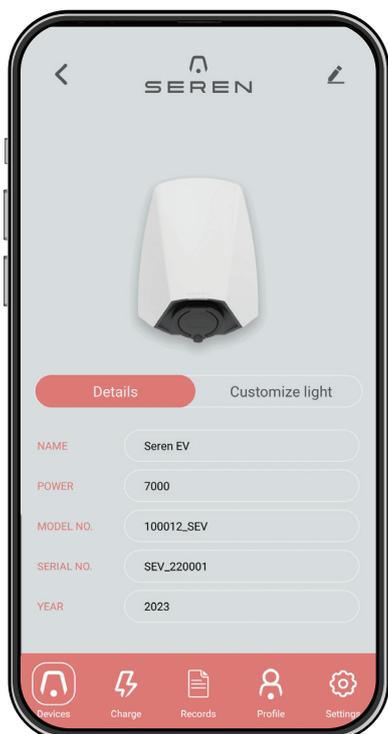


You are now in the device view, confirm your country

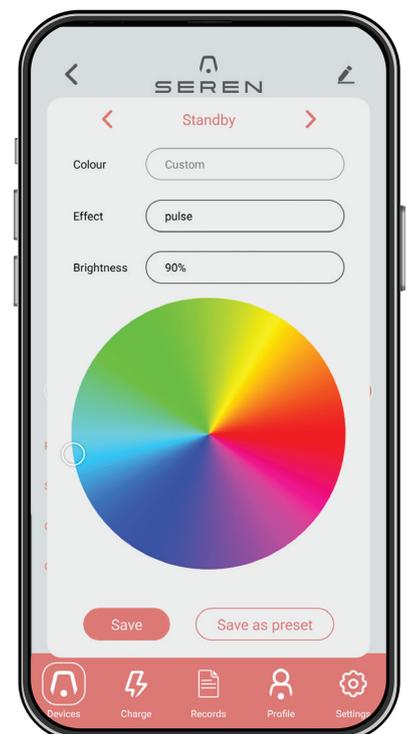
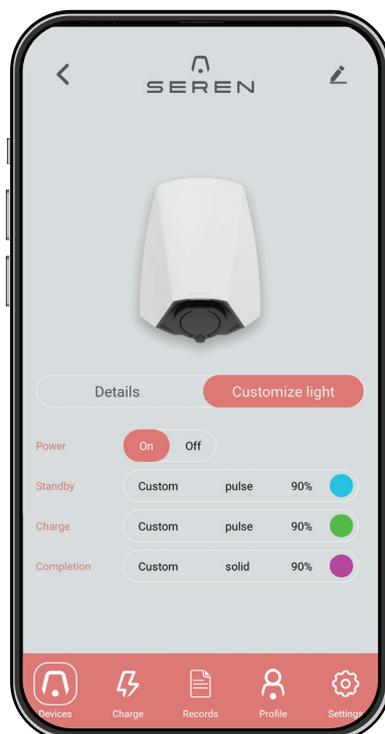


4. Device view

In the 'Details' tab, view your Seren EV Charger's information



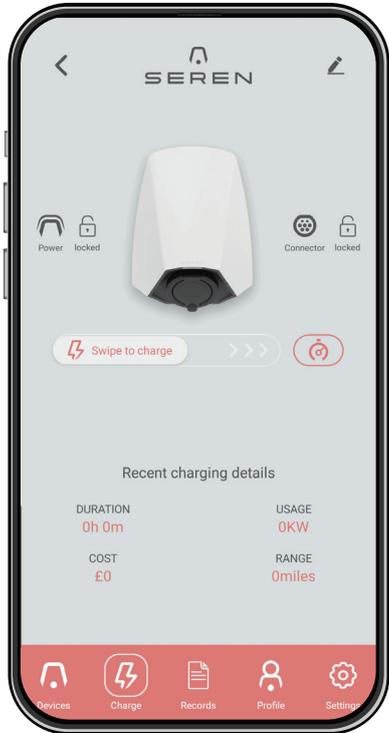
In the 'Customize light' tab, change the lighting language of your Seren EV charger. Click **Save** to apply the selection you have made.

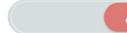


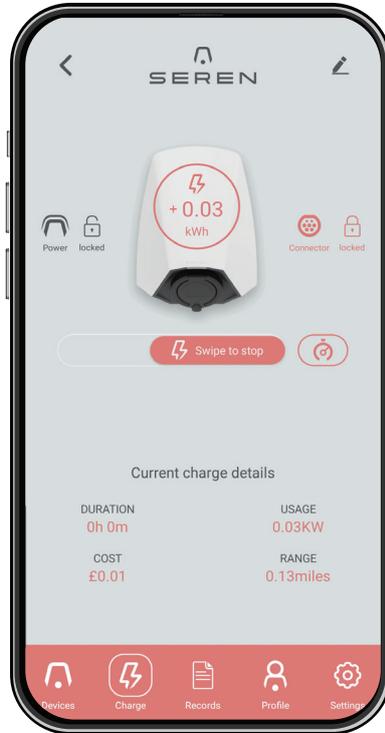
Seren EV Charger App Guide

5. Charge view, charging and stopping

Swipe the  button to begin charging



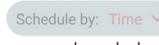
Swipe the  button to stop charging

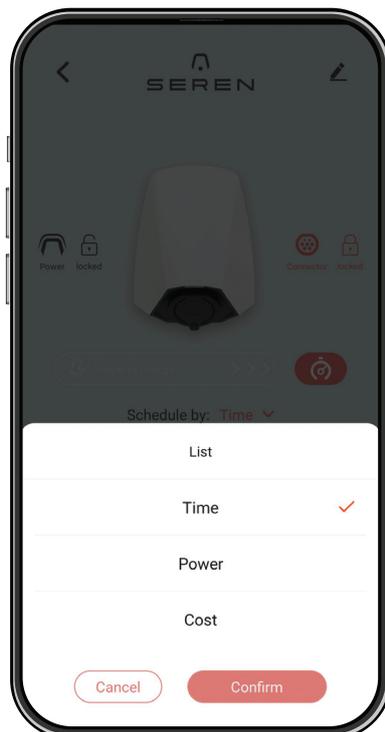


6. Charge view, scheduling

Click the  and  buttons to open scheduling tab



Click the  button and choose schedule conditions



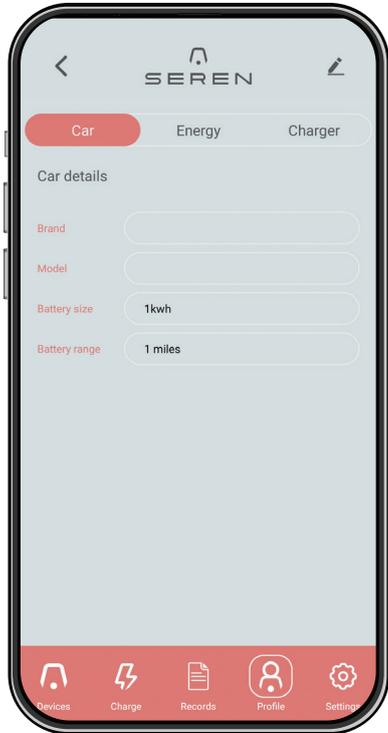
After filling in all information, click the save button 



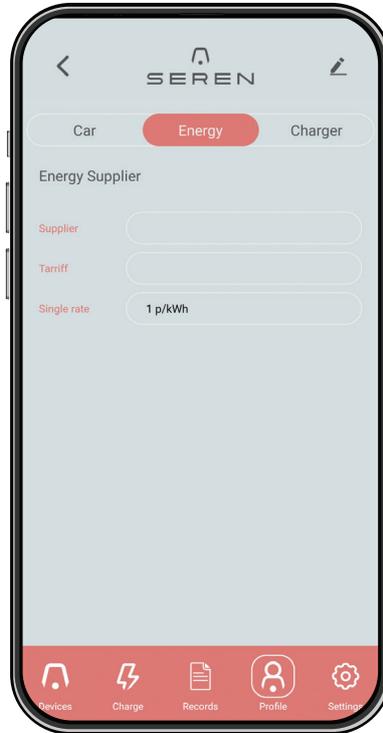
Seren EV Charger App Guide

7. Profile view

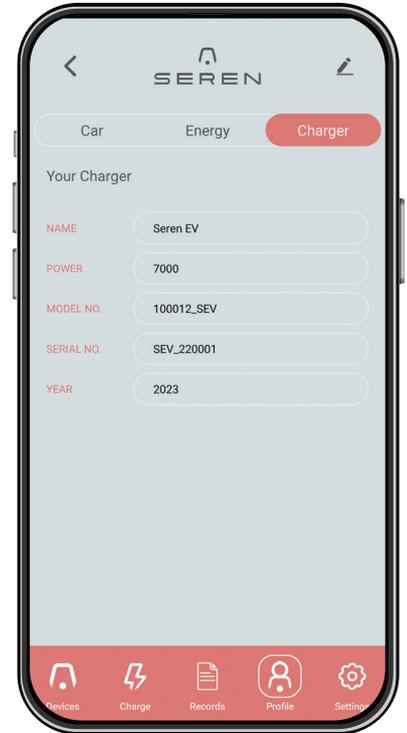
In 'Car' tab, add details to ensure charging calculations are correct



In 'Energy' tab, add your energy supplier information



In the 'Charger' tab, view your Seren EV Charger's information

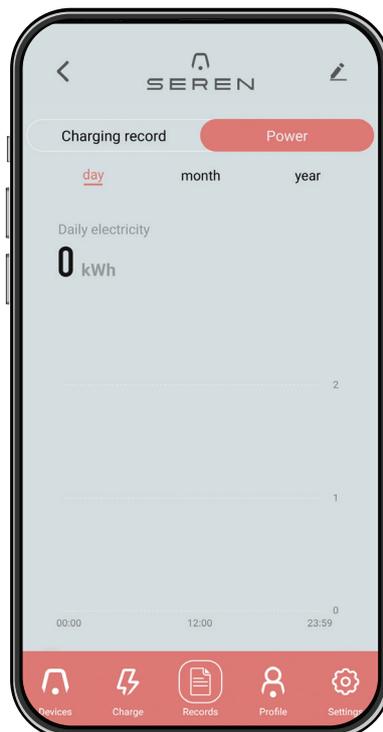


8. Records view

In 'Charing Record' tab, view record data in date/text format

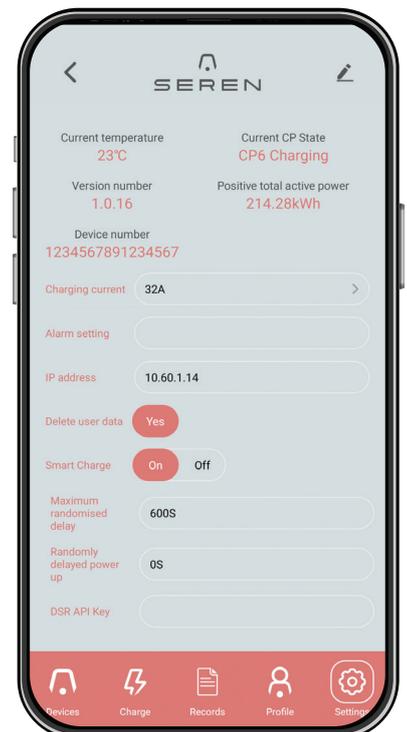


In 'Power' tab, view record data in graph format



9. Settings view

Adjust additional settings for your charger



Maintenance

The power distribution system

The AC input to the charger is fed from a suitable distribution board, and power **MUST** be switched off before making any connections. The steps for powering on and off are as follows:

- Check whether the power supply voltage is normal.
- To power-on: First, close the main switch of the distribution box, and then close the branch circuit breaker in turn.
- To power-off: Switch off each branch circuit breaker first, and then switch off the main switch of the distribution box. Pull the main switch in case of an emergency.

Power Line system

Annual routine inspection:

- Check the connection between the cable and the charger to ensure it is secure.
- Assess the reliability of the earth connection.
- Inspect the cable for signs of overheating and damage.
- Verify that the cable's insulation resistance meets the necessary requirements.
- Confirm the integrity of the sealing measures for the charger

Equipment appearance

Perform a monthly check of the charger's appearance to identify any stains and clean the charger shell accordingly.

Recycle your EV charger

Seren EV charger is electronic and therefore may not be disposed of as part of unsorted domestic waste. Inquire with local authorities regarding proper disposal. Alternatively you can return your EV charger to - Seren, 6 Little Burrows, Burrowfield, Welwyn Garden City, AL74SW and we can dispose for you.



This symbol is known as the "Crossed- Out Wheelie Bin Symbol". When marked on a product or battery it means these items should not be disposed of with your general household waste. Some chemicals contained within the electrical/electronic products or batteries can be harmful to health and the environment. Only dispose of electrical/electronic/battery items in separate collection schemes, which cater for the recovery and recycling of materials contained within. Your co-operation is vital to ensure the success of these schemes and for the protection of the environment. Thank you.

Colour Communication

STATUS AND FAULT IDENTIFICATION

Seren EV Charger utilises a simple light effect system for status and fault identification via the lightbar on the EV charger.

While the Seren Energy App should mainly be used for understanding the state of your charger, the light effects on the product's unique light bar can also help to identify the state of your EV charger.

	State	Light Effect	1st Colour	2nd Colour
 Working and active	Free	Solid	White	No Colour
	Connected	Solid	Blue	
	Charging	Pulse	White	
	Complete	Solid	Green	
 Critical error	Ground fault	Flash*	Red	Red
	Leakage protection	Flash*	Red	White
	Over temperature fault	Flash*	Red	Blue
	PEN fault protection activated	Flash*	Red	Green
 Warning	Undervoltage alarm	Flash*	Yellow	Yellow
	Overvoltage alarm	Flash*	Yellow	White
	Over temperature protection	Flash*	Yellow	Blue
	Cover switch opening alert	Flash*	Yellow	Green
 Connectivity failure	Metering communication error	Flash*	Purple	Purple
	Memory failure	Flash*	Purple	White
	Clock abnormatily	Flash*	Purple	Blue
	Unbound WIFI	Flash*	Purple	Green

* Flash sequence

...1st Colour 0.5s > No colour, short pause 0.5s > 2nd Colour 0.5s > No colour, long Pause 1.5s >.....

Troubleshooting

AC Overvoltage

Possible Cause: AC Input Voltage Too High

1. If the voltage exceeds 257.6VAC for a short time, wait for the power grid to restore itself to the normal voltage range.
2. Check the background monitoring data and analyse. If the voltage in this area remains in an overvoltage state for an extended period, adjust the input overvoltage protection point to 257.6VAC by configuring the app (Settings > Alarm setting).

AC Undervoltage

Possible Cause: AC Input Voltage Too Low

1. Check the background monitoring data and analyse. If the voltage in this area remains in an undervoltage state for an extended period adjust the input undervoltage protection point to a minimum of 202.4VAC by configuring the app (Settings > Alarm setting).

AC Overcurrent

Possible Cause: Excessive AC Input Current

1. Immediately turn off the leakage/overcurrent protection circuit breaker of the power distribution box.
2. Check for low impedance or short circuits between the Seren EV Charger' output lines.
3. After the fault is rectified, power on the device again. If the fault persists, please contact Seren Support.

Overtemperature

Possible Cause: The Temperature in the Seren Charger is Too High

1. Check the Seren charger installation environment. Check whether there are other heating devices nearby. Ensure that the ambient temperature remains below 40°C.

Leakage Current Exceeds Standard

Possible Cause: High Leakage Current to the Ground

1. Immediately turn off the leakage/overcurrent protection switches in the power distribution box.
2. Check whether the output line of the Seren charger is damaged or has a low impedance connection to the ground.
3. After the fault is rectified, power on the device again. If the fault persists, please contact Seren Support.

Ground Fault

Possible Cause: Improper Grounding of Input/Output or Inverted Input L/N Connection

1. Immediately turn off the leakage/overcurrent protection switches in the power distribution box.
2. Check whether the input and output cables of the Seren EV Charger are correctly grounded and whether the input L/N cables are connected in the normal sequence.
3. After the fault is rectified, power on the device again. If the fault persists, please contact Seren Support.

Troubleshooting

Issues communicating with the charger (Smart Features)

Possible Cause: Poor Background Communication of Seren EV Charger

1. Check whether the network cable is properly connected.
2. If using a wireless network, ensure both your device and the Seren EV Charger is in range.
3. If using a wireless network, ensure your network is properly configured and using a 2.4 GHz band.
4. Verify that your network has an internet connection.

If the fault persists, please contact Seren Support.

Abnormal Connection of Charging Gun

Possible Cause: Charging Gun CC/CP Connection Exception

1. Check whether the charging gun is connected correctly and reliably.

If the fault persists, please contact Seren Support.

Over-Temperature Fault

Possible Causes:

1. The ambient temperature exceeds the working temperature specification.
2. The input voltage of the AC power supply is too high.
3. Internal charger failure.

Actions:

Install the Seren charger in an environment with a lower ambient temperature.

If the problem cannot be resolved, please do not use the Seren charger.

Contact your local company representative or a qualified electrical contractor.

Device Overvoltage

Possible Causes:

1. The input voltage of the AC power supply is too high.
2. Internal charger failure.

Actions:

Check the input voltage.

If the problem cannot be resolved, please do not use the Seren charger.

Contact your local company representative or a qualified electrical contractor.

Device Undervoltage

Possible Causes:

1. The input voltage of the AC power supply is too low.
2. Internal charger failure.

Actions:

1. Check the input voltage.

If the problem cannot be resolved, please do not use the Seren charger.

Contact your local company representative or a qualified electrical contractor.

Troubleshooting

Grounding Fault

Possible Cause: Ground fault.

1. Check whether the ground wire is reliably connected.

Overcurrent Fault

Possible Cause: Overload protection.

1. Please contact your local company representative or a qualified electrical contractor.

IMPORTANT Notes	
<ul style="list-style-type: none"> The energy meter must be protected by a 6A MCB 	
Description	
<p>The Seren electric vehicle charge point can be configured to change the charging current to the EV depending upon the power available from the supply. In a domestic/ residential supply, this is usually the supply to the property.</p> <p>This is known as load management and can be achieved using different methods:</p>	<ol style="list-style-type: none"> 1. The maximum charging current can be set within the Seren APP. 2. Charging current varies depending upon other loads at that particular time (Dynamic Load Balancing), using an energy meter and CT clamp.
Setting the Maximum Charging Current	
<p>The commissioning electrician must determine the maximum demand within the dwelling and the size of the DNO fuse.</p> <p>Once the spare capacity is determined, this value can be set as the maximum charging current using the Seren APP.</p> <p>The user can then adjust the charging current in the Seren APP up to the maximum set. For example, if the charge point is on a 32A radial circuit and the maximum charging current is set with the Seren APP is 20A, the user can only adjust the charging current between 6A and 20A, in 1A increments.</p>	
Dynamic Load Balancing	Installation
<p>The commissioning electrician must determine the maximum demand within the dwelling and the size of the DNO fuse.</p> <p>If there is a limited spare capacity, or the capacity is reduced when other loads switch on, e.g. an electric shower, cooker, it is possible to configure the charge point so that the charging current to the EV varies as these loads switch on and off.</p> <p>To achieve this, the EV charge point must be connected to an energy meter which measures the amount of energy being drawn from the supply.</p> <p>The energy meter must be located near the incoming supply and have a data communication cable, i.e. RS485 cable, connected between it and the charge point.</p> <p>In domestic property, the CT clamp must be clamped around the meter tails directly after the customers meter.</p> <p>The Seren APP must be configured for Dynamic Load Balancing.</p>	<p>The energy meter must be located near the electricity meter and be mounted either in the consumer unit (if there are spare ways) or in a suitable enclosure.</p> <p>The energy meter requires a 230V supply. The CT clamp/coil must be clamp around the incoming meter tails and wired back to the energy meter – clamp must be fitted with arrow pointing away from the customer electricity meter.</p> <p>The 2-core data cable must be routed from the energy meter to the charge point.</p> <p>Terminate the energy meter:</p> <p>Terminal 1 - CT Coil connection in Terminal 2 - CT Coil Connection out Terminal 3 - N Terminal 4 - L Terminal 9 - Modbus B Connection Terminal 10 - Modbus A Connection</p>
Commissioning	
<p>Within the Seren APP, select:</p> <ul style="list-style-type: none"> > Load Balancing > Adaptive Power Sharing 	
Voltage Supply for Meter	230V~
Maximum Current	100A
Data Protocol	Modbus RS485

Resetting

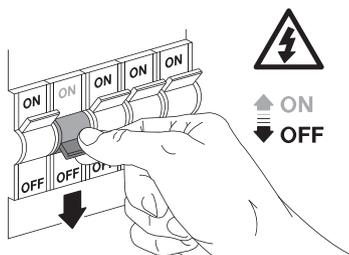
The RESET button is used to unbind the Seren EV Charger from your phone and network settings will restore to factory default.

Use cases:

- User/installer has failed to connect to the charger via QR code or wifi.
- Connection cannot be made as the charger is already bound to an inaccessible phone.

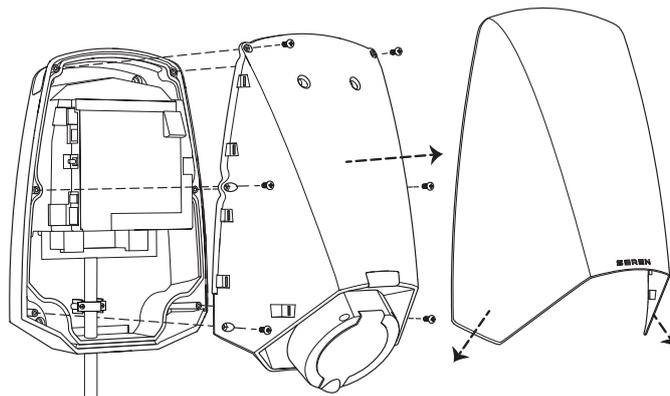
1. Power OFF

Ensure the power is switched OFF from the mains and the product is safe to open.



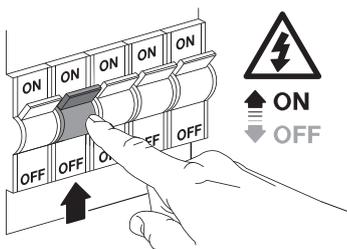
2. Remove faceplate

Unclip and remove the faceplate. Then unscrew the 6 anti-tamper screws and carefully remove the front of the case.



3. Power ON

Switch ON the power and wait 30-60 seconds.

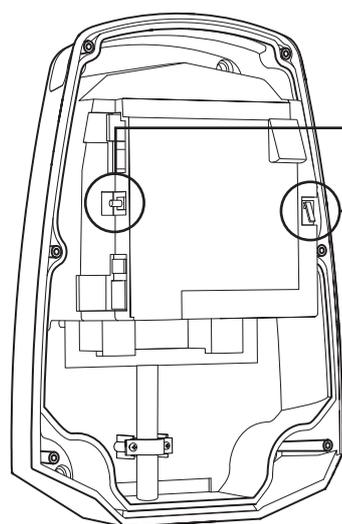


DANGER - BE AWARE THAT MAINS VOLTAGE IS NOW PRESENT ON THE INCOMING MAINS TERMINALS

4. Press & hold

While holding the cover-open switch closed, press the reset button 3 times.

Release the buttons and wait 10 seconds. Your Seren EV Charger is now reset and ready.



Reset button
Press 3 times

Cover-open switch
Press and hold

Contact information

Customer and technical Support

Should you encounter any issues or require assistance with your Seren EV Charger, please don't hesitate to contact our passionate customer support team.

Phone: +44 1707 228700

Email: support@serenenergy.com

Hours of Operation: Monday - Friday: 9:00 AM - 5:00 PM (GMT/BST)

Sales and Product Information

To learn more about our range of EV chargers or if you're looking to make a purchase:

Phone: +44 1707 228700

Email: sales@serenenergy.com

Hours of Operation: Monday - Friday: 9:00 AM - 5:00 PM (GMT/BST)

Mailing Address

6 Little Burrow, Burrowfield, Welwyn Garden City, AL7 4SW

Online Resources

Website: www.serenenergy.com

Full user guide, videos, FAQs, and other documentation: www.serenenergy.com/support

App: www.serenenergy.com/appdownload

Warranty Information: www.serenenergy.com/warranty

Twitter, Instagram, Facebook: @Serenenergy

Feedback and Suggestions

We value your feedback and aim to continually improve our products. If you have any feedback or suggestions, please email us at sales@serenenergy.com

**Thank you for choosing Seren for your electric vehicle charging needs.
Safe charging and happy driving!**



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