



# **Instructions for installation and use of the Ladergy AC Wallbox charging station**

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## **1. General information**

### **1.1 Purpose of the manual**

This manual applies to the Ladergy AC Wallbox charging station, including all possible modifications and variants. This manual describes the following operations:

- installation of the charging station;
- commissioning the charging station;
- maintenance of the charging station;
- Troubleshooting the charging station;
- Disposal of the charging station.

This document contains important sections and warnings that must be observed when installing and maintaining the charging station. The information and warnings in this manual are binding. The manual is intended for installation engineers who are suitably qualified.

### **1.2 How to use this manual**

- Make sure you are familiar with the structure and contents of this manual;
- Read the chapter on safety and make sure that you have understood all the points;
- Follow the steps in the relevant procedures in the correct order.

## **2. Description of the Ladergy AC Wallbox charging station**

### **2.1 Brief description and equipment options**

By using the charging station, you have access to an innovative solution for charging electric vehicles.

Thanks to the built-in modern digital capabilities, including mobile app control, you have a convenient tool for monitoring and controlling the charging process.

The charging station provides advanced charging technology, making it the perfect choice for today's electric vehicle technology requirements.

	Classic	Pro	Commercial
Charging power 7 / 11 / 22 kW	+	+	+
Premium design	+	+	+
Industrial contactor	+	+	+
Matrix display	+	+	+
WiFi (2.4 GHz - 802.11 b, g, n)	+	+	+
RFID card reader		+	+
Ethernet/LAN		+	+
OCPP 1.6j - OCPP 2.0		+	+
MID certified counter			+
LTE connection		optional	+

The charging station versions are available in several colors of the front glass and body. Available colors: black, white.

## 2.2 Technical information

Variation of Ladergy AC Wallbox coding  
Ladergy AC WXX-YYZ0-R-L-A

XX – Rated power in kW: 4 / 7 / 11 / 22 / 8 / 9 / 19

YY – Number of phases: 1P / 3P

Z – Type of socket or connector:

S – Type 2 socket

F – Type 2 socket with a curtain

J – Type 1 socket

E – Type 2

G – GBT AC

N – NACS

0 – Cable length, if available

5 – 5 meters

8 – 7.6 meters

R – Availability of RFID reader

L – Built-in 4G LTE modem

M – Installed verified MID meter

A – Ambient RGB LED lighting along the station contour

Parameter	Characteristics
Charging current	6-80 A, 1-3 phases
Voltage	230/400 V
Power output	up to 20 kW, built-in power measurement and control options
Operating temperature range	-25°C... +50°C
Storage temperature range	-30°C...+60°C
User authorization	RFID card (optional)
Charging standard	Mode 3
Charging connector	Infrastructure Socket Type 2 Type 1, Type 2, GB/t AC or NACS
Digital connections	WiFi, 4G LTE
Communication protocols	OCPP 1.6J, OCPP 2.0
Software update	Remotely
Measurements	MID, 3-phase voltage, current and power
Protection class	IP54
IK 10 rating	IK 10
Mounting	Wall mounted, rack mounted (optional)
Dimensions (H×W×D)	293 × 170 × 453 mm
Weight	12 kg (complete with socket), 14.4 kg (complete with 3-phase cable)
HMI	4 LED indicators, dot matrix display, Ambient lighting
Safety	Overcurrent protection, over/under voltage protection. Leakage current monitoring
Safety standards	IEC/EN61851-1, IEC/EN62311, IEC/UL62479, IEC/UL62955 TuV compliance UL2594, UL2231-1, UL2231-2, UL1998, CSAC22.2.NO.280
Other standards	IEC61851-21-2, EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-3-2, EN61000-3-3, EN61000-3-11, EN61000-3-12 CERED-WLAN/RFID/E-UTRA: EN300328 V2.1.1, EN300330 V2.1.1, EN301908-1 V1.1.2, EN301908-13 EN50470-1, EN50470-3
Certificates	CE, EAC
Warranty	12 months

## 2.3 Overview of the Ladergy AC Wallbox charging station

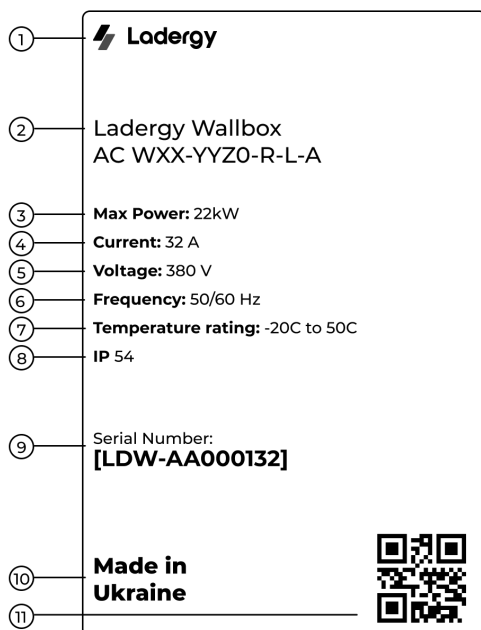
This charging station is an electrical device designed to supply electricity for charging electric vehicles that are being charged via the mains, both in indoor and private outdoor areas. The installation and use of the charging station must comply with local regulations. The equipment must be used in accordance with the environmental conditions specified for the equipment.

When connecting the charging station to the mains, ensure that it is properly grounded and connected in accordance with the prescribed safety standards.

Periodically check the condition of the charging station and its components for possible damage or wear, and replace or repair if necessary. If you notice any malfunctions or unusual behavior of the charging station, stop using it immediately and contact a qualified service technician for diagnosis and repair.

The type plate on the side of the charging station housing contains the main technical characteristics of the charging station.

The rating plate contains the following information:

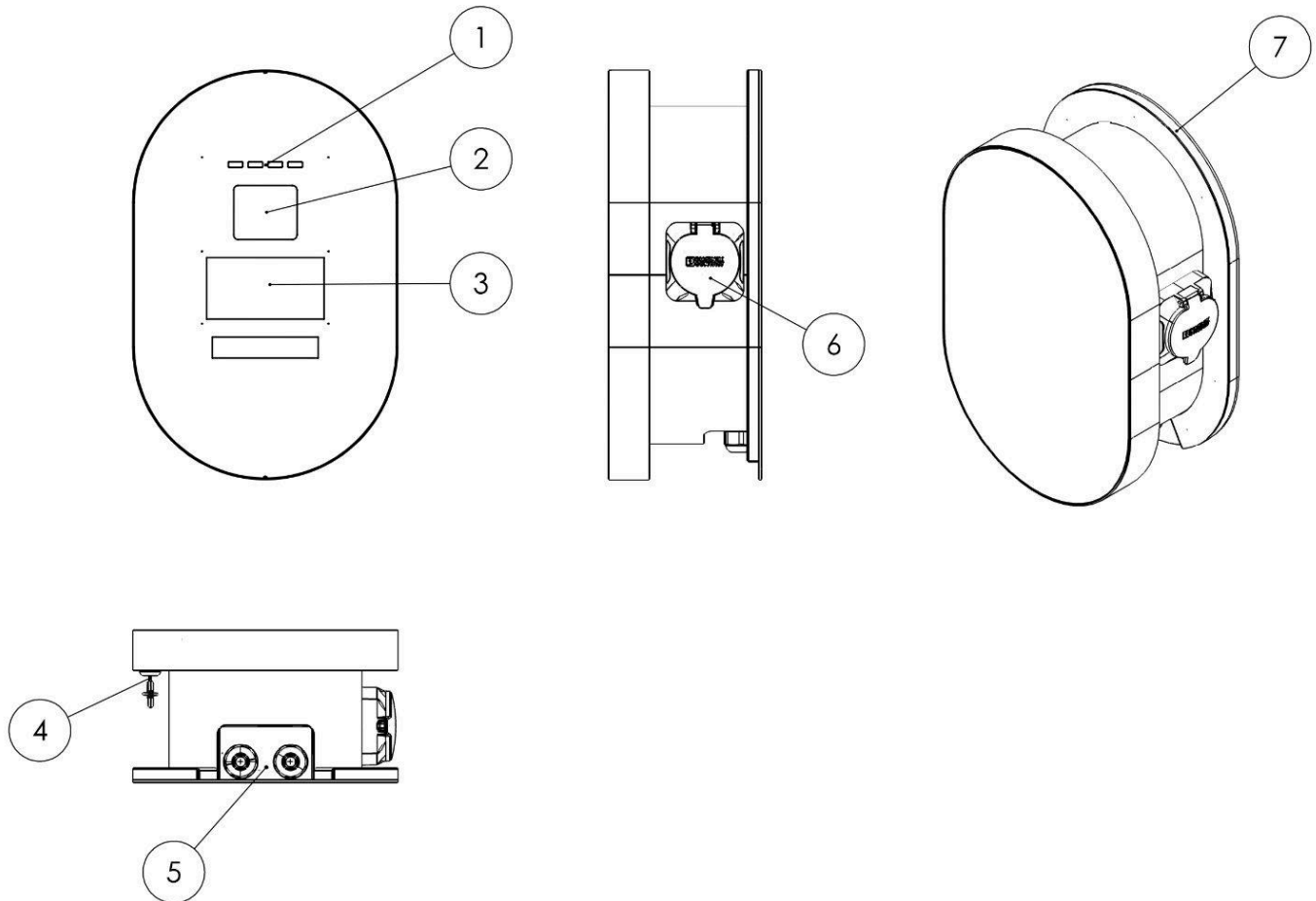


1. Manufacturer
2. Device model
3. Maximum power output
4. Rated current
5. Rated voltage
6. Rated frequency
7. Temperature range
8. Degree of protection
9. Serial number
10. Country of manufacture
11. QR code

## 2.3.1 Exterior view of the Ladergy AC Wallbox charging station

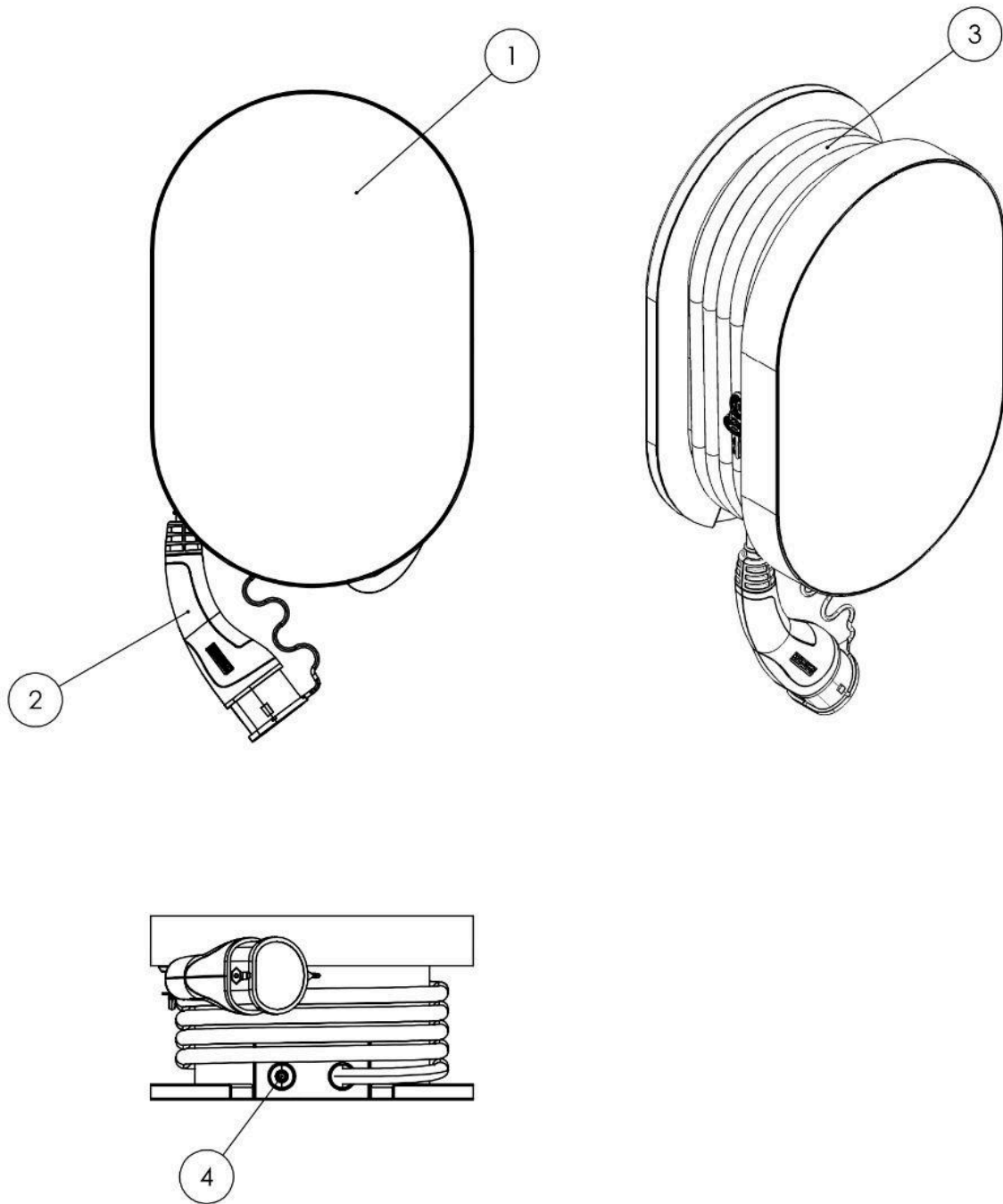
### Option 1:

Charging station with socket



1. Indicators.
2. RFID payment (optional).
3. Matrix display.
4. Locking device.
5. Cable input.
6. Socket (Socket Type 2).
7. Ambilight illumination.

**Option 2:**  
Charging station with cable

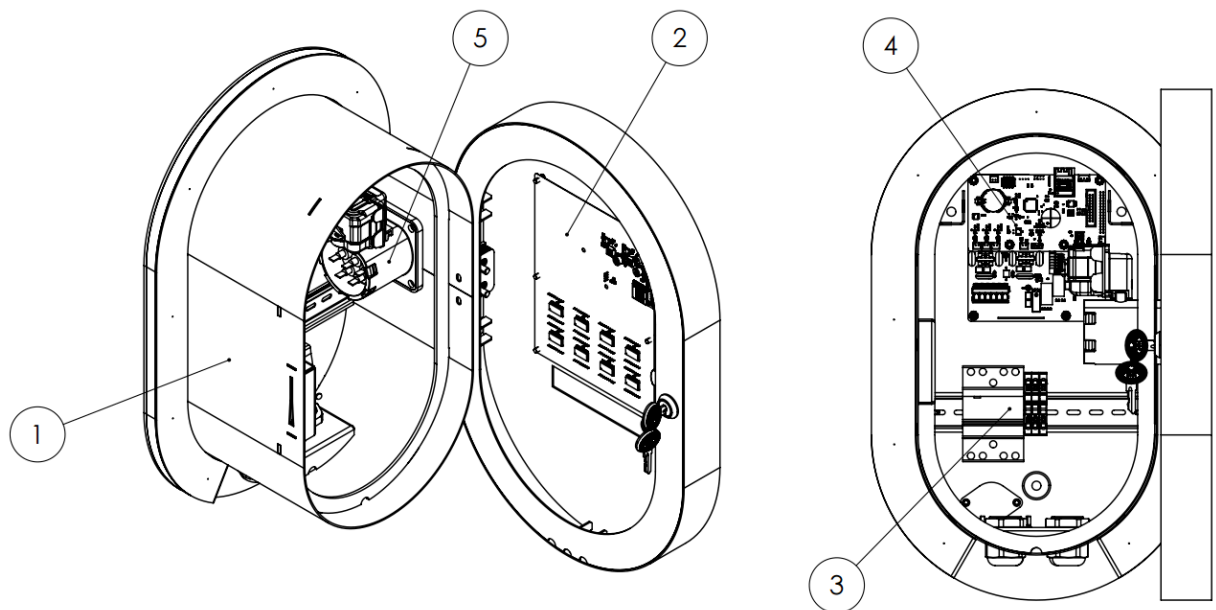


1. Charging station frame.
2. Type 1, Type 2, GB/t AC cable.
3. Cable (5 m - 7 m).
4. Power cable entry point.

### 2.3.2 Inside view of the Ladergy AC Wallbox charging station

The charging station inside consists of switching electronics, control boards and differs only in the assembly option (for a socket or cable).

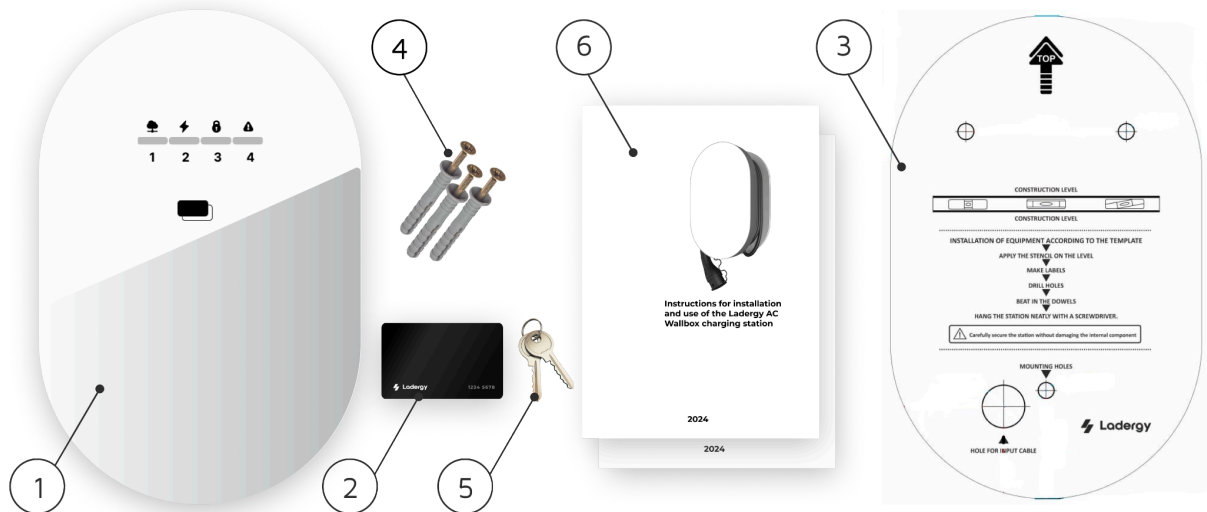
When not in use, the charging cable should be carefully wrapped around the charging station's cable gutter to prevent damage to the equipment and to avoid tripping over the cable.



1. Charging station frame.
2. Indication board.
3. Contactor and switchgear.
4. Main control board.
5. Socket (not included with the cable).

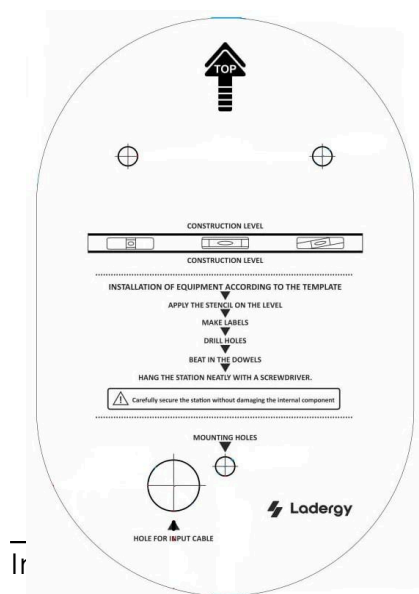
### 3. Installation of the Ladergy AC Wallbox charging station

Before you start installing the charging station, make sure that you have the complete set of accessories included:



1. Ladergy AC Wallbox charging station.
2. RFID card (optional).
3. Template for drilling.
4. Accessories (screws, dowels, plugs, nuts).
5. Two keys to the lock.
6. Instruction manual, technical passport and warranty card.

#### 3.1 Preparing the Ladergy AC Wallbox for wall mounting



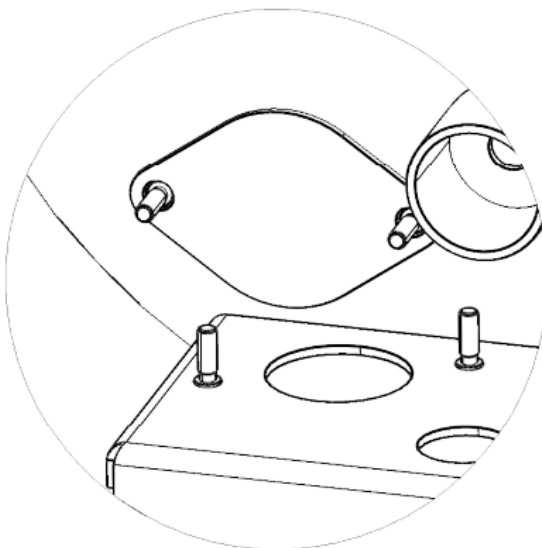
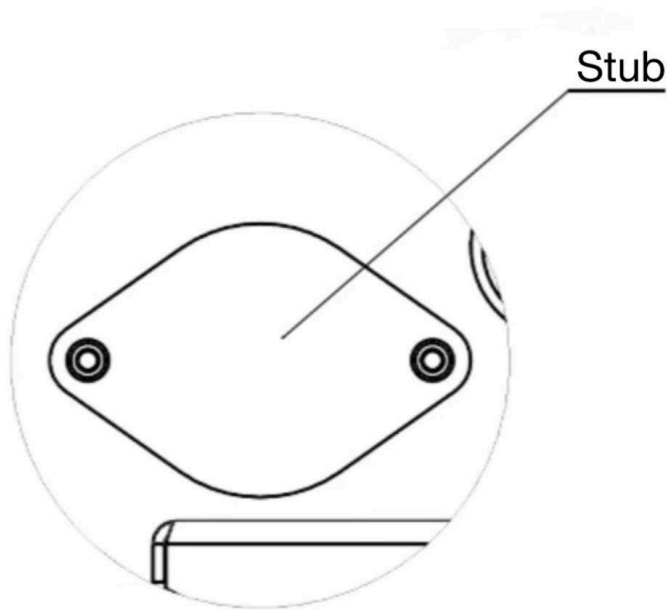
Place the template with the holes on the wall 1 meter 20 cm above the floor level and level it with a bubble level. Make sure the UP arrow on the template points upwards.

Mark the three mounting holes on the wall and drill holes at least 70 mm deep.

## 3.2 Installation of the Ladergy AC Wallbox

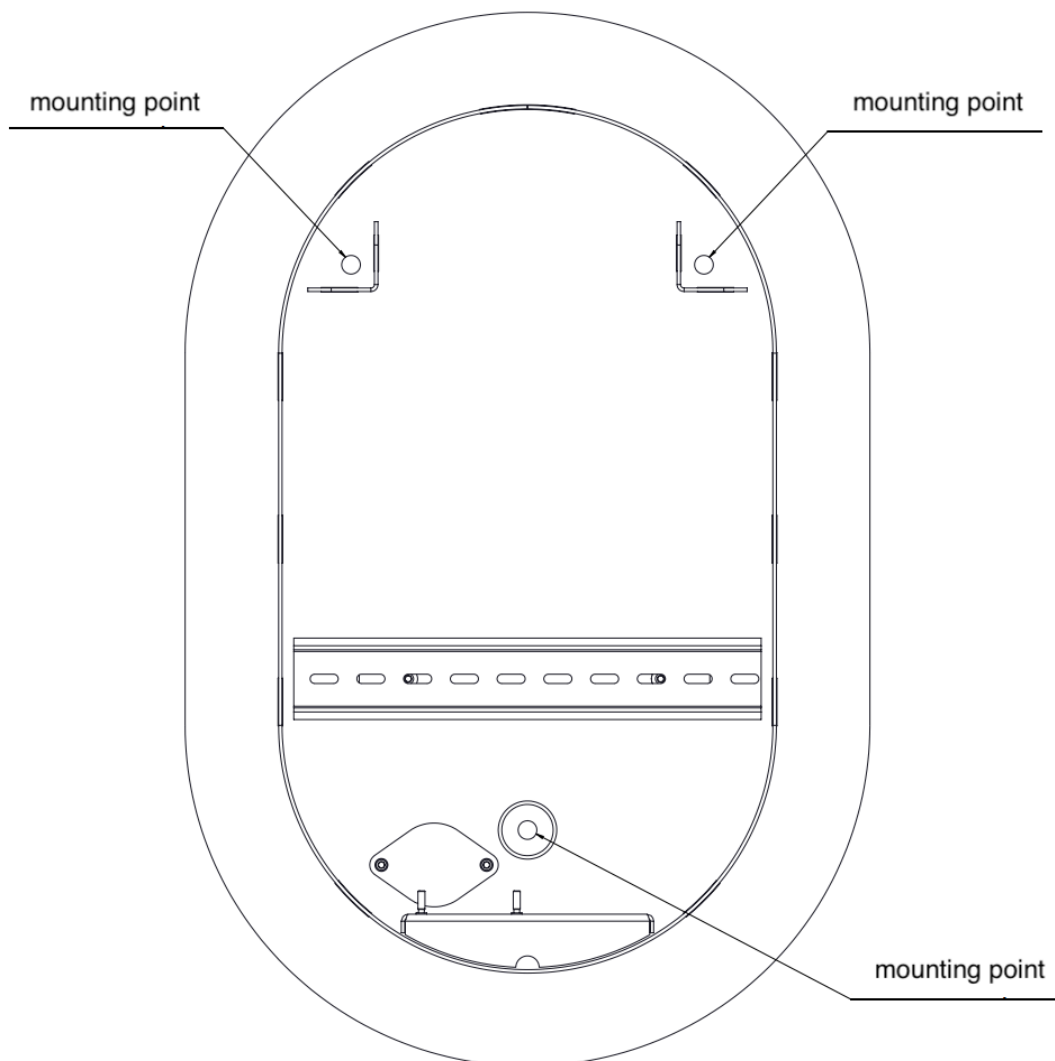
### 3.2.1 Preparing the Ladergy AC Wallbox for cable installation

Select one of the two cable entry options. If the cable is routed through the wall, the wire gland cover remains in place. For flush-mounted installations with the cable coming out of the wall, unscrew the fasteners and move the plug to the bottom, thus closing the bottom hole.



Please note that failure to seal the inlets affects the protection of the charging station against moisture, dust and insects, which may result in a risk of electric shock and damage to the station.

Place the charging station against a wall, making sure that the holes in the wall align with the holes in the station and that the station is firmly seated.



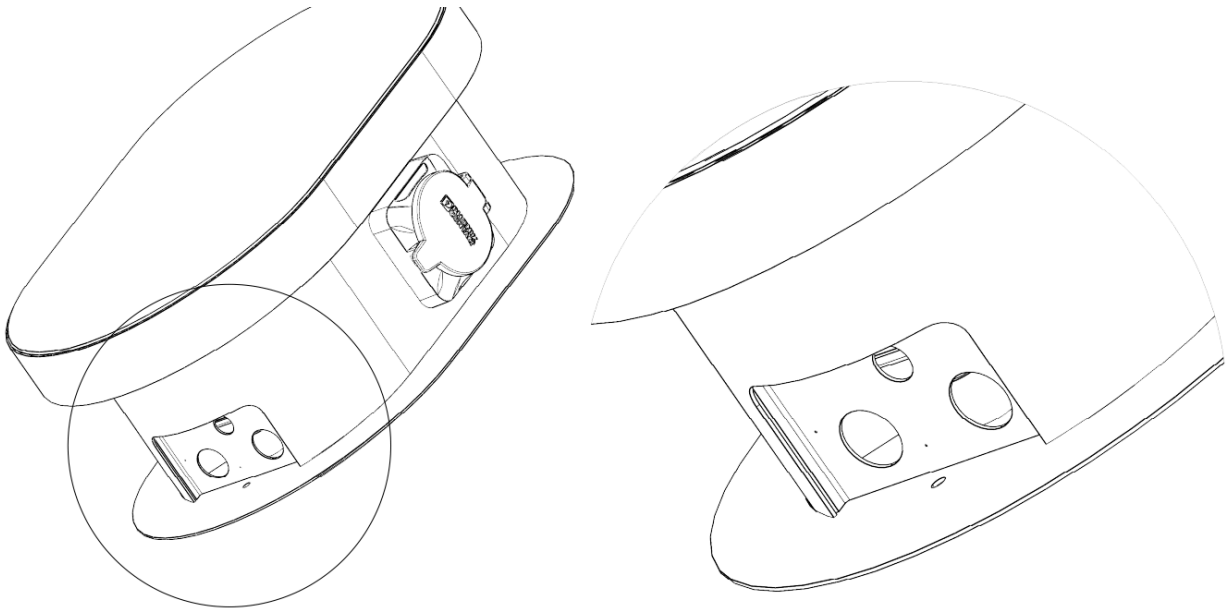
While holding the main assembly in place, insert the three M6 x 50 mm screws together with the 6 mm x 12 mm sealing washers into the previously installed anchors and secure them.

Install the cable glands and route the cables.

Remove the caps from the cable glands and install the seals on the power cable and peripherals (optional).

Insert the power cables from the bottom or back of the charging station through the cable gland.

Ensure that there is sufficient cable length after the seals, then tighten each of the seals in turn.



- Power cable: >180 mm;
- Ethernet cable (optional): > 400 mm.

Power cable: >180 mm;  
Ethernet cable (optional): > 400 mm.

Secure the cable gland by tightening the locking nuts <sup>1</sup>.

### 3.2.2 Installing the power cable

#### **If you are connecting a charging station with an electricity meter:**

Open the door of the charging station.

Remove 50 mm of the main outer cable insulation, then remove 12 mm of the insulation of the PE phase, neutral N and earth conductors.

---

<sup>1</sup> Warning. The use of stranded wires without lugs can lead to incorrect installation, which can cause accelerated aging of electrical components and/or loss of electrical connection.

Make sure that the bending radius of the conductor does not exceed the permissible parameters.

Connect the wires in accordance with the regulations.

Connect the wires **L1** (and **L2** and **L3** for 3-phase version) of the power cable to the terminals **L1, L2, L3** of the electricity meter.

Connect the neutral (**N**) wire of the power supply cable to the neutral terminal **N** located next to the electricity meter.

Connect the **PE** conductor to the PE earth terminal located next to the electricity meter.

### **When connecting a charging station without an electricity meter:**

Open the door of the charging station.

Remove 50 mm of the main outer cable insulation, and then remove 12 mm of the PE phase, neutral N and earth conductor insulation.

Connect the wires L1 (L2 and L3 for 3-phase versions) of the power supply cable to the L1, L2, L3 terminals of the input terminals.

Connect the neutral wire of the power supply cable to the neutral terminal N.

Connect the PE conductor of the power supply cable to the PE ground terminal<sup>2</sup>.

## **4. The principle of operation of the Ladergy AC Wallbox charging station**

### **4.1 Start and stop a charging session**

Make sure the charging station is connected to the mains. Unwind the cable around the charging station body. Plug the charging cable into the vehicle's socket.

Please note that the cable must not be removed during the charging process.

The LED display on the front panel should show the charging process.

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<sup>2</sup> Note. If the charging station is not equipped with pass-through terminals or an electricity meter, strip the individual wires by 15 mm (1-phase charging station) or 10 mm (3-phase charging station).

Then connect the wires of the power cable directly to the connection terminals in the lower center of the power panel according to the color coding indicated.

When the charging process is complete, the charging station automatically switches off the power supply to the vehicle.

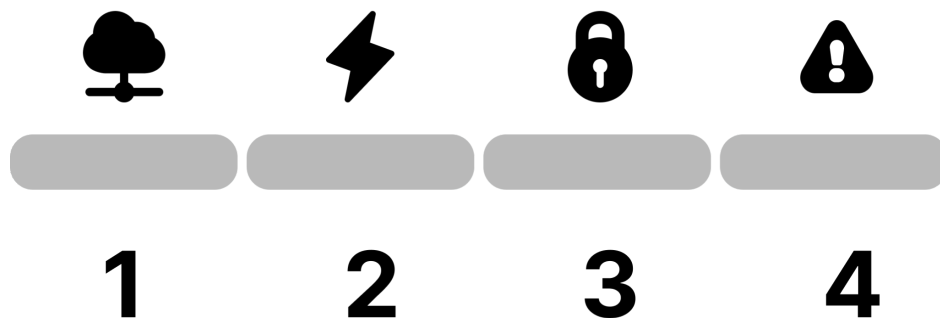
Disconnect the cable from the vehicle connector.

Wind the charging cable back onto the charging station casing.  
The vehicle is now charged.

For a charging station with a socket, the process is the same.

## 4.2 LED indicators and display

There are 4 LED indicators and a dot matrix display on the charging station body, which show the vehicle charging status and the charging status itself. A table of the charging station's display symbols is shown below.



Indicator	Description
1 diode (Wi-Fi)	Lights up continuously white - the device is connected to the Internet
2 diode (Charging)	Glows continuously white - the charging station is connected to the network and the machine is ready for charging
3 diode (Blocked by App)	Alternately glows white - the station is blocked by the application
4 diode (Error)	Lights up alternately - an error has occurred, and the machine cannot start charging (unplug the charging station and repeat the procedure)
End of charging	All four diodes glow white - charging is complete

## 5. Connecting to the Ladergy AC Wallbox charging station via Wi-Fi

To access and use the full functionality of the charging station, follow the instructions in this section:

- the charging station can be connected to any device connected to Wi-Fi (smartphone, laptop, computer);
- functions are available via a web browser;
- the charging station has a local connection only, you must be within range of the charger network or your home Wi-Fi network to access all the functionality of the charging station.

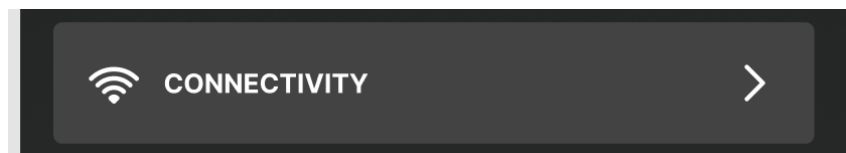
### 5.1 Connecting the Ladergy AC Wallbox charging station to the local network

To connect the charging station to the local network, you need to:

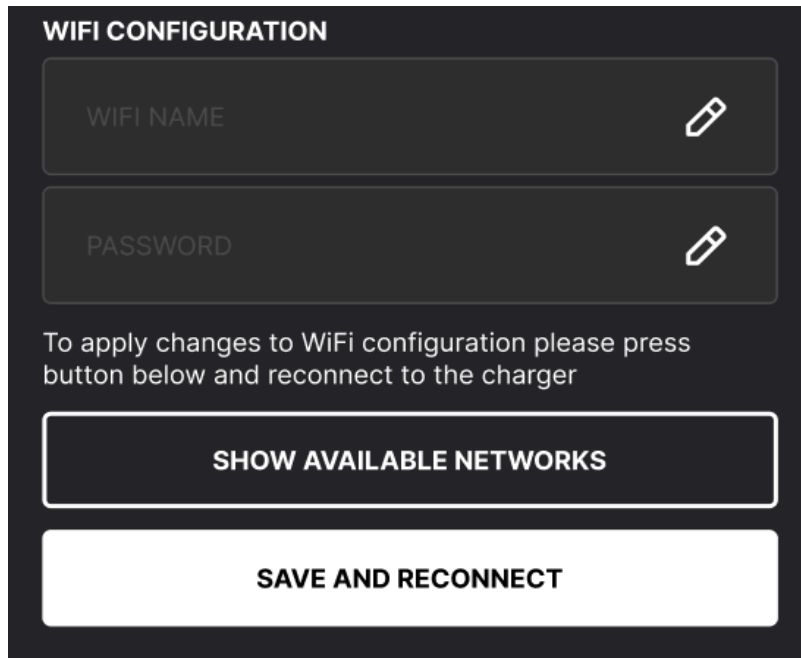
- connect the charging station to the power supply;
- open the Wi-Fi settings on your smartphone or computer;
- select the Wi-Fi network of the LAD charger-#### (where #### is the serial number of your charging station);
- open your web browser and enter the IP address: ladergy.local or 192.168.4.1 in the address bar of the browser, after which you will be able to download the necessary functionality to use the charging station.

### 5.2 Connecting Ladergy AC Wallbox to your home Wi-Fi network

To connect the charger to your home Wi-Fi network, select the CONNECTIVITY button.



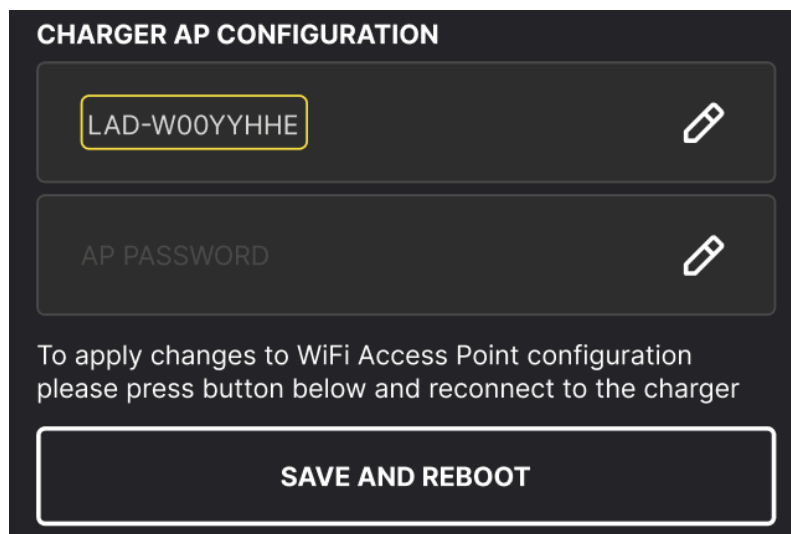
The next step is to: find the required network via the 'Show available networks' button, or manually enter the name of your network and its password. To successfully apply all the data you entered: click on the 'Save and reconnect' button below and reconnect to the charging station.



### 5.3 Customizing the Wi-Fi access point of the Ladergy AC Wallbox charging station

The charging station network name is LAD-#### by default. You can change it to any other network name if necessary.

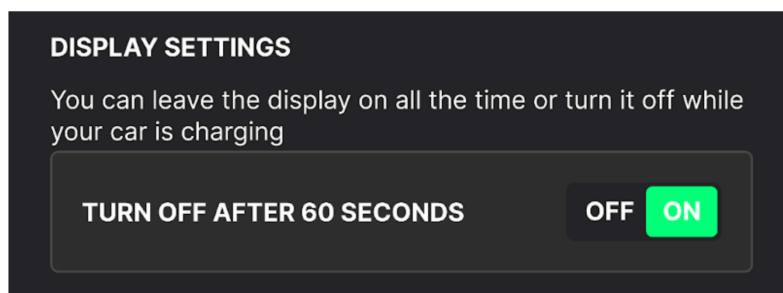
By default, there is no password for the charging station network. Set a password for the charging station network to prevent other users from accessing the network.



To apply the changes to the Wi-Fi access point configuration, click the 'Save and reboot' button and reconnect to the charger to save the AP name and AP password.

## 5.4 Brightness Adjustment Guide for the Ladergy AC Wallbox Charging Station

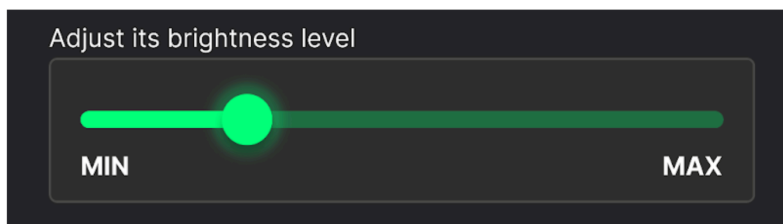
To configure the LED lighting settings for your charging station, go to the **“BACKLIGHT SETTINGS”** section, where you can adjust the brightness of various lighting elements and manage their operation.



In the display settings, you can enable the **automatic display turn-off** option, which turns off the screen 60 seconds after charging starts. This helps to reduce energy consumption and extend the lifespan of the LEDs.

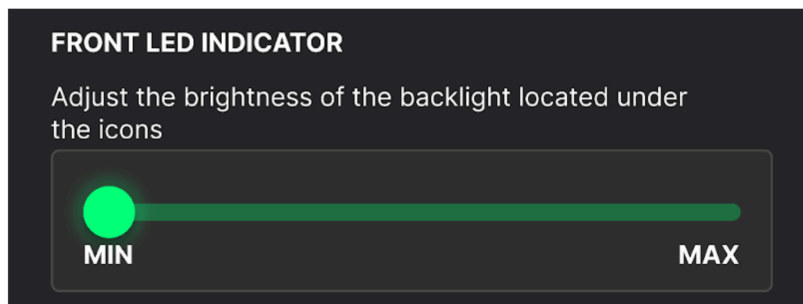
If this option is disabled, the display will remain on for the entire charging process.

You can use a **slider** to adjust the brightness of the display itself, ensuring clear visibility in any lighting conditions.



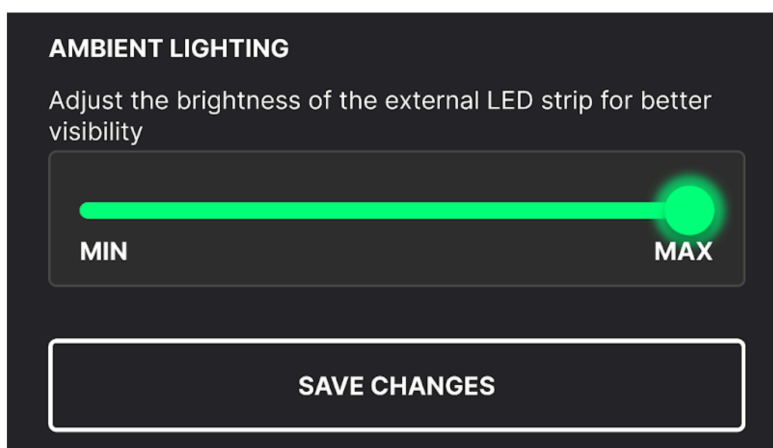
To adjust the brightness of the **front LED indicator** located below the icons, use the corresponding slider.

This slider allows you to increase or decrease the brightness of the indicator lights, making them either more visible or dimmer at night. This is particularly useful for users who want to monitor the charging status without excessive lighting.



In the **“Ambient Lighting”** subsection, you can adjust the brightness level of the external **LED strip**, which enhances the visibility of the charging station in all conditions.

After adjusting the brightness settings, press the **“Save changes”** button to apply and save all modifications. This ensures that your selected parameters remain active until the next update.



This feature allows you to **customize** the lighting of your charging station for maximum comfort and efficiency, adapting to your personal preferences and various usage conditions.

## 6. Setting the maximum current using the DIP switches

The charging station has DIP switches to set the maximum output current to 32A, 24A or 16A.

If local electrical codes require a physical switch to control the maximum current setting, adjust the DIP switch setting:

- make sure that the device is unplugged. Place the charging station on a flat surface with the front cover facing outwards;

- open the charging station lid with the key.
- Locate the DIP switch on the charging station board. The DIP switch is a 4-position switch on the main board<sup>3</sup>.

Configure the DIP switches for 32A, 24A or 16A using the following combination of DIP switch settings:

Maximum output current	Switch1	Switch2	Switch3	Switch4	DIP switch settings
16A	down	down	down	down	
24A	down	down	down	up	
32A	down	up	down	down	

## 7. Instruction for Enabling Remote Access to the Ladergy AC Wallbox Charging Station

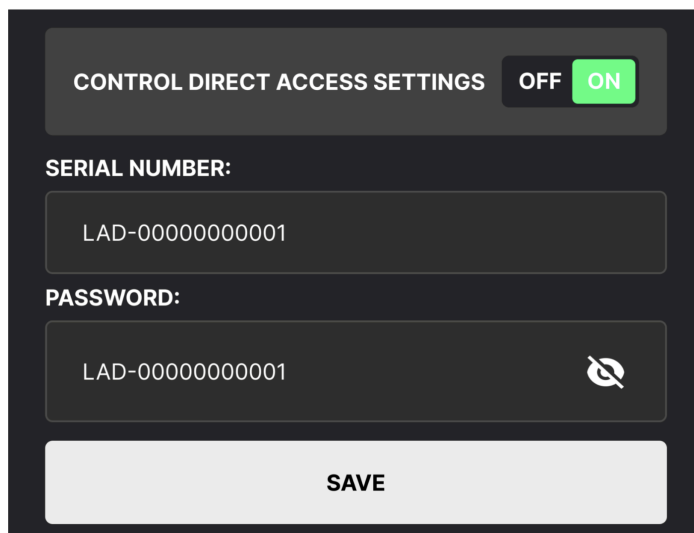
This feature allows you to access the charging station's web application, enabling you to perform individual settings adjustments or system monitoring whenever needed, even when you are away from home.

To use the "Direct Access" mode (remote access), you need to activate it in advance while you are at home, within the range of your home Wi-Fi network.

Activation is done through the main menu of the station's web application, in the "Direct Access" section. You need to switch the **"Control direct access settings"** option to the **ON** position.

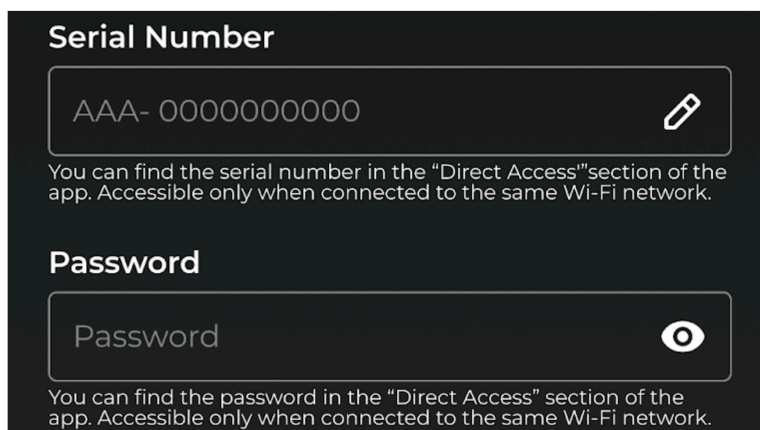
<sup>3</sup> **Warning.** Do not touch live electrical parts. Switch off the power to the charging station before setting the DIP switches. Failure to do so may result in damage or failure of the power supply system and the charging station.

The password for this access is the serial number of your station without spaces, in the format **LAD-00000000001**.

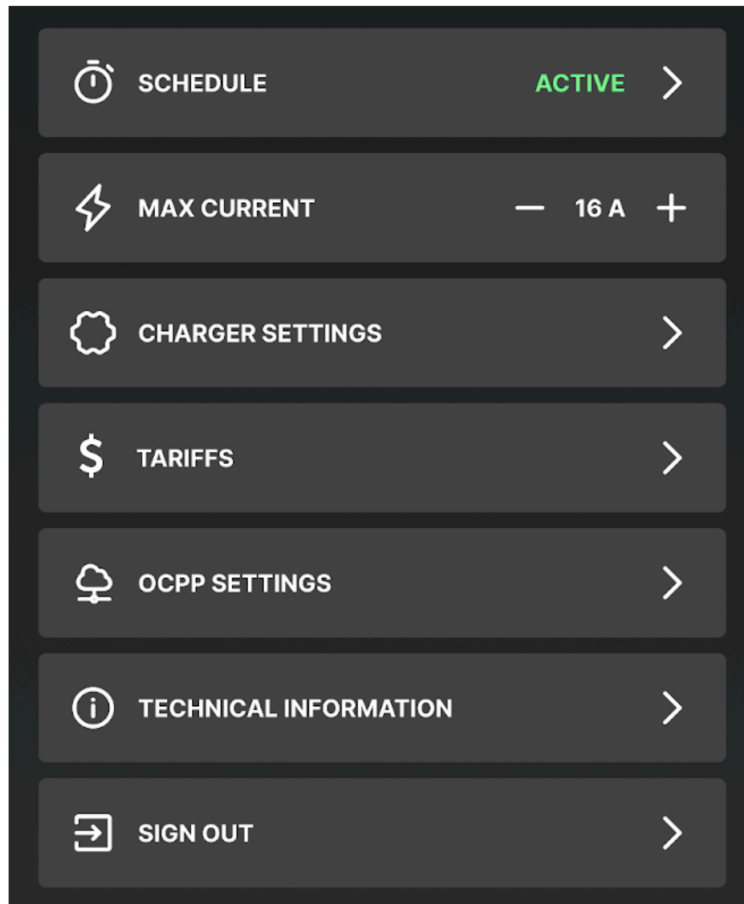


By entering the following address into the address bar of your mobile device's browser: <https://my.ladergy.com/>, you will be redirected to the "Log In" page, where you will only need to fill in two fields: **Serial Number** and **Password**, which you already have.

After entering the serial number and password, press "Log In".



The capabilities of this mode are somewhat limited compared to the standard web application, but they are sufficient to view the main characteristics and statuses of the station:



## 8. Safety instructions for using the Ladergy AC Wallbox charging station

Operation of the charging station is strictly prohibited in the following cases:

- there is damage to the body that compromises the tightness of the internal space of the charging station;
- the electric vehicle charging cable or connector is damaged;
- after a lightning strike to the charging station.

Key warnings for the use of the charging station:

- do not install or use the charging station near flammable, explosive or combustible materials, chemicals, or in areas with high humidity;
- switch off the input switchgear before installing or cleaning the charging station;
- never splash water or any other liquid directly onto the charging station;

- do not attempt to disassemble, repair or modify the charging station - this is not only dangerous for the charging station's performance, but also for your personal safety;
- do not connect the charging station via an extension cord;
- do not insert any foreign objects into the charging station or connector.

## **9. Possible problems and solutions to resolve them**

### **9.1 The charger does not switch on**

This may mean that there is no power to the charging station. Please check the status of the input circuit breaker and make sure that there is power to the charging station.

### **9.2 The charging session has not started**

Possible reasons for canceling the charging session:

- the car is scheduled for charging at a later time;
- the car is fully charged;
- there may be an internal car error, check the car;
- the charging plug is not connected correctly, try reconnecting the charging cable;
- the vehicle connector or connector is dirty, make sure the contact connections are clean and repeat the operation.

### **9.3 The vehicle is not fully charged, the charging time is longer than normal, or the vehicle is only charging at low power**

When the vehicle charging session is almost complete, the charging speed starts to drop.

If the charging station or the electric vehicle battery overheats, the charging power may be reduced for safety reasons.

Check the charging station firmware update. Contact the technical support of the charging station manufacturer.

### **9.4 The charging cable does not disconnect from the vehicle**

The charging session was not completed by the vehicle. Please complete the charging session and try again. Please refer to the

vehicle user manual. Make sure the car is unlocked and the charging connector is unlocked.

## **10. Maintenance of the Ladergy AC Wallbox charging station**

The charging station owner is responsible for the maintenance of the charging station.

Dirt and natural organic matter on the outside of the charging station should be cleaned with a damp, soft cloth (make sure that the input circuit breaker is switched off and the charging station is disconnected from the power supply before starting work).

Check the charging connector for damage, foreign objects or dirt. Clean it if necessary.

Every six months, inspect the charging station and its wiring diagram and tighten all contact connections to ensure reliable connections.

The charging station must be installed in accordance with the applicable electrical installation regulations in your area.

When cleaning the device, use cleaning agents that do not damage the surface of the charging station.

## **11. Storage and disposal of the Ladergy AC Wallbox charging station**

Store the packaged charging station in a clean and dry place, out of the reach of children and animals.

Storage conditions:

- storage temperature  $-30^{\circ}\text{C}$  ...  $+60^{\circ}\text{C}$ ;
- average temperature per day should not exceed  $32^{\circ}\text{C}$ ;
- relative humidity without condensation, max. 80%.

When the charging station is taken out of service, dispose of the device and its packaging in accordance with the applicable local disposal regulations.

Electrical and electronic devices should be disposed of separately from normal municipal solid waste.

Please remember that recycling materials saves raw materials and energy and makes a great contribution to the environment.

## **12. Warranty conditions of the Ladergy AC Wallbox charging station**

The warranty for the charging station is valid for 12 months from the date of purchase, provided that it is used correctly.

The charging station manufacturer is not liable for defects or damage caused by failure to follow the operating and installation instructions, as well as for defects caused by normal wear and tear.

This exclusion of liability applies in particular to:

- incorrect storage, installation or use;
- installation, commissioning or repair by an unqualified electrician;
- use of non-original spare parts;
- use of materials not specified in this manual for installation, operation and maintenance;
- modification of the charging station or its components that may make it or its components incompatible with the intended use;
- inability to provide any relevant documentation for the installation (e.g. commissioning report);
- inability to provide any relevant documentation for the installation (e.g. commissioning report).

The costs associated with the dismantling, installation and transportation of the defective product during the warranty period shall not be reimbursed to the Owner. In the event of an unjustified claim, the costs of diagnostics and examination of the product shall be paid by the Charging Station Owner.

To accept the product for warranty repair/return, it must be fully equipped.

To contact the service center of our company, you can write to the following email: [hello@ladergy.com](mailto:hello@ladergy.com). Failure to maintain the charging station properly will invalidate the warranty, and the manufacturer shall not be held liable for any defects or damages resulting from their use. For more detailed conditions of repair under warranty, please refer to the warranty card.

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