Green Cell

HabuDen
Charging Point for Electric Vehicles
Installation Guide
Service Guide

For: EVGC021A2250, EVGC021A2275, EVGC021B2250, EVGC021B2275

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2. Table of contents

3. Introduction

HabuDen is a high-tech smart charging point with a maximum power of 22 kW to fit all EVs with a Type 2 connector. WiFi and Bluetooth communication guarantees charging control via the intuitive GC App. In addition, the charging point's slim design makes it occupy a minimum of space at the installation site.

4. Certification of proper installation

https://docs.greencell.global/manuals/EVGC02/GC-HabuDen-Installation-Certificate.pdf

Certification of proper installation

I certify that the charging station with the serial number:

.....

located at.....has been installed in accordance with the

manufacturer's installation instructions by an authorized electrician with the authorization number .....

Name and address of the entity performing the installation of the device:

.....

.....

Name and surname of the person authorized to issue the certificate:

place, date signature

5. Safety Principles

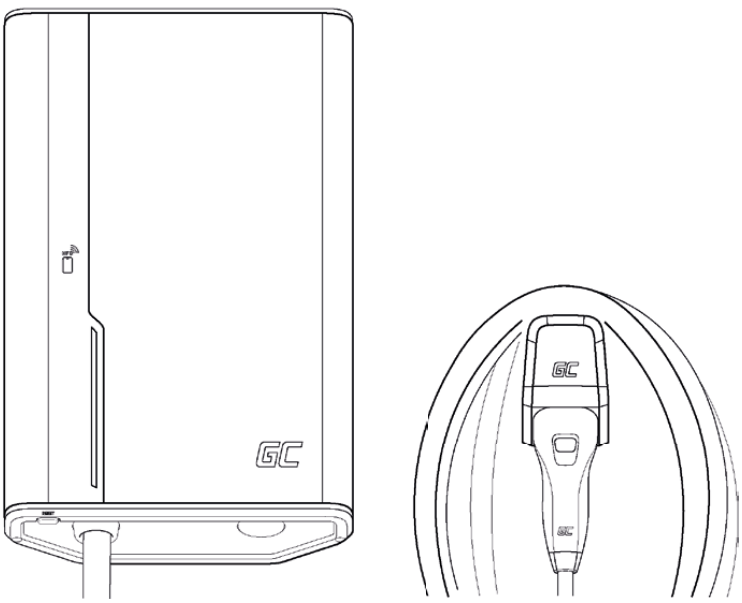
SAFETY RULES
Caution is required while using and disposing of the device. incorrect usage and not following the guidelines below may pose a threat to life or health and property.

Note: The charging point is not equipped with an emergency circuit breaker. It is required to install a residual current circuit breaker Type A 30mA (RCD A) and a MCB Curve C, limitation class 3, short-circuit capacity 6kA 40A overcurrent circuit breaker in the power network before installing HabuDen.*

* HabuDen is already equipped with RDC-DD (Residual Direct Current Detecting Device) conforming to IEC62955.

Note: EV supply equipment is not able to exchange information with installation regarding the request and presence for ventilation.

/ General precautions
- Carefully read all of the following precautions before using the device.
- The device is intended for use only with electric vehicles with a Type 2 connector.
- The power limit set for the device must match the power supply network parameters.
- The device can be used in locations with non-restricted access.
- The device can be used by ordinary persons.
- Make sure that the input voltage, frequency and other parameters of the device comply with specification of your vehicle and the power grid before the device is powered on.



- Use and store the device in temperature range -25 °C to 40 °C (-13 °F to 104 °F).
- Do not install the device where it is exposed to fire or extreme temperatures and avoid places with direct sunlight for long hours. If the device is exposed to strong sunlight or heat for a long period of time, its temperature may exceed the permitted operating range.
- Protect the device from excessive dust and fumes.
- Keep the device away from flammable materials and gases or explosive materials.
- Always keep the type 2 connector completely dry and clean
- Do not put any objects or parts of your body into the device.
- Do not operate the device with wet hands.
- Do not use the charging cable with an extension cable or an adapter.
- It is required that the electrical installation you use for charging your EV is inspected by an electrician.
- Keep the device away from children and animals.
- Persons with reduced capabilities or lack of experience and knowledge must be supervised or previously instructed before using this device.
- Use the device in accordance with general safety rules and safety requirements for working with electrical equipment applicable to a given country or region.
- Make sure you know what to do in case of accidents involving electricity and what to do in case of fire.
- Use the device in accordance with local requirements and limitations.
- When installing, using, maintaining and servicing the device, observe local environmental protection and waste disposal regulations to avoid environmental pollution.
- Follow health and safety regulations when installing, using, maintaining and servicing the device

/ Mounting precautions

- It is recommended that the device be installed by an electrician with the appropriate qualifications and certificates.
- Use insulated tools when mounting the device and proper safety precautions
- Strictly follow the device instructions and applicable norms and standards.
- Report to your supervisor any accident that occurs.

/ General criteria for the site selection

- The device is constructed for the indoor and outdoor area, it can be used in locations with non-restricted access. Accordingly, it is necessary to ensure the correct set-up requirements and the protection of the device at the installation site. The following criteria must be taken into account when selecting a location:
- Take into account the local electrical installation regulations, fire prevention measures and accident prevention regulations as well as emergency routes at this site.
- The device must only be installed in stationary applications: on walls, poles or equivalent positions, and it must be permanently connected.
- Mount the device so that it is not located in the direct flow of passersby and so that no one can trip over connected charging cables and so that the charging cable does not cover or cross passing pedestrian and motorized traffic.
- Install the device in such a way that it can be used by people with disabilities.
- Do not install the device at locations where it is exposed to ammonia or ammonia gas (e.g., in or at stables).
- The mounting surface must be sufficiently stable in order to withstand the mechanical forces.
- Do not install the device at locations where falling objects could damage the device (e.g., hung up ladders or automobile tires).
- The device must not be exposed to direct spray water (e.g., neighboring manual car wash facility, high-pressure cleaner, garden hose).
- The device should be protected against direct rain as far as possible to prevent icing, hail damage or similar.
- If possible, the device should be mounted away from direct sunlight.
- Install the device outside the potentially explosive zone.
- Observe the internationally valid installation standards (e.g., IEC 60364-1 and IEC 60364-5-52) and comply with the nationally applicable installation standards and regulations.

Note: If the device is installed in a location where it is not protected from the rain, always hang the cable on the holder included in the set. Remember to keep the connector in proper orientation (see the Figure 1), as it covers pins from rain drops, ensures quicker evaporation of moisture and prevents corrosion.

Figure 1

/ Operating precautions

- Check for any damage to the packaging and the device that may have occurred during shipping. Do not use the device if you notice any damage to it. In such cases, contact the manufacturer's warranty service.
- Do not use any sharp objects to open the packaging. This may damage the device.
- Do not leave the packaging or its components near children. The packaging components in the hands of children may lead to choking.
- Regularly check the device for visible damage to the structure that may pose a risk of electric shock when working with a defective charging station.
- Before charging, make sure that the device is not damaged and the connector is dry and clean.
- Connect the device only to a correctly installed and properly grounded power supply network.
- Never open the device housing on your own. Touching live parts may be lethal.
- To avoid exposure to electric shocks, never unplug the type 2 connector while it is under load. Stop the charging process in the vehicle first before disconnecting the charging cable.
- Never use the device with a cable tangled or coiled. This may lead to overheating. If this happens, do not touch the cable with your bare hands.
- Do not use the device if it is visibly damaged or suspected of being damaged, or if it indicates any critical malfunction.
- The device shall not be used if it fails to operate correctly in accordance with the instructions. In such case, seek advice from the manufacturer, responsible vendor or an electrician.
- If you discover damage to the device during operation, stop the charging process in the vehicle first. Then, unplug the cable from the vehicle.
- If the device is damaged, it can be repaired only by the manufacturer.
- Unauthorized modification or interference with the construction, electronics or software of the device is prohibited.
- Failure to comply with any of the above precautions will void the warranty and may result in damage to the device, the electrical system or the vehicle.
- Improper use of the device by not following any of the above precautions may result in fire, and in extreme cases, may

lead to loss of health or life as a result of electric shock.
- The manufacturer is not responsible for property damage, loss of health or life in case of failure to comply with any of the above precautions.

At the end of its useful life, do not dispose of this product with your normal household waste. For proper treatment, recovery and recycling, take it to a designated collection point.

The section "Fire Precautions" refers to the requirements of the Office of Technical Inspection in Poland

/Fire Precautions
If you notice a fire, immediately alert the occupants of the danger zone and call the fire department (phone 112).
In the event of a fire, perform the following actions:
- disconnect the HabuDen and, if possible, other electrical equipment,
- notify the State Fire Service,
- notify people in the vicinity of the fire to evacuate,
- start extinguishing the fire with fire extinguishing agents.

Note: Live electrical equipment must not be extinguished with water, foam or other solutions containing water due to the risk of electric shock. Powder, snow or sand extinguishers can be used to extinguish them.

Maintenance and cleaning
Follow these instructions to keep your device clean and safe:
- Before cleaning and maintenance, unplug or switch off the fuse connected to the device.
- Clean only the outside of the device.
- Use slightly moist or antistatic cloth.
- Do not use any detergents or chemicals to clean the device.
- Always keep the connector dry and clean. If it is wet, let it dry completely before use.

6. Technical specification

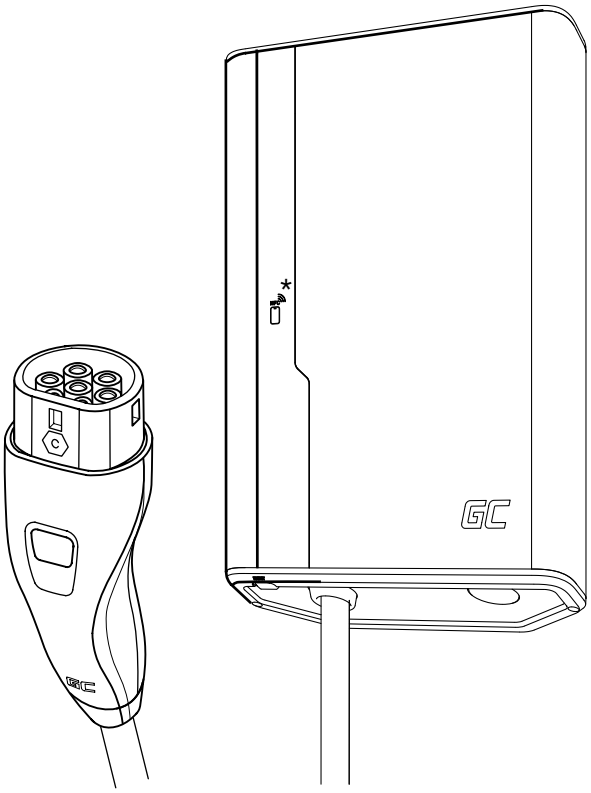
Name	HabuDen
Model	EVGC02
Electrical data	
Voltage	230 V (1-phase) 400 V (3-phase)
Rated current	32 A (Max.)
Max. charge current settings	6 A / 8 A / 10 A / 13 A / 16 A / 20 A / 25 A / 32 A
Rated frequency	50-60 Hz
Total power	22 kW
Overvoltage category	III
Rated residual operating current	6 mA DC
Residual non-operating current	3 mA DC
Residual current circuit breaker	Built in RDC-DD 6mA DC* * RCD A must be additionally installed
Earthing/grounding system	TT/ TN-C-S/ TN-S/ IT
Connectivity	Wi-Fi 2.4GHz, Bluetooth
Appliance class	Class II equipment with functional grounding
Low-voltage electrical installation	AEVCS (low voltage switchgear and controlgear assembly for electric vehicles charging stations)
Rated impulse withstand voltage	4kV
Rated diversity factor (RDF)	1
Overcurrent circuit breaker	MCB 40A curve C, limitation class 3, 10kA short-circuit capacity must be additionally installed
Physical Properties	
Charging point module dimensions (mm)	338 x 211 x 73
Cable length	5 m (EVGC021A2250, EVGC021B2250) / 7.5 m (EVGC021A2275, EVGC021B2275)

Weight	5.51 kg (with 5 m cable) 6.72 kg (with 7.5 m cable)
Environmental conditions	
Operating temperature	-25–40 °C (-13–104 °F)
Protection Grade	High mechanical resistance
Protection against water and dust	IP54
Impact resistance	IK10
Storage and transportation temperature	-25–40 °C (-13–104 °F)
Altitude	< 2000 m
Humidity	Outdoor: 5-95% non-condensing
Standards	
Conformity with	EN IEC 61851-1:2019 IEC 61851-21-2:2018, IEC 62196-1:2014 IEC 62196-2:2016 ETSI EN 301 489-17 V3.3.0; ETSI EN 301 489-3 V2.2.0:2021 ETSI EN 300 328 Wi-Fi ETSI EN 300 330 V2.1.1 2017 ETSI EN 300 220-2 V3.2.1 2018 RED Directive 2014/53/ EU and RoHS Directive 2011/65/ EU
Output (vehicle connector)	Type 2
EV charging mode	Mode 3
EMC classification	Environment B

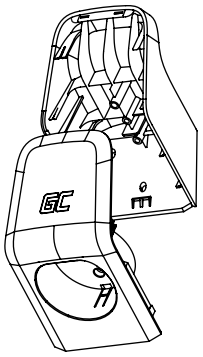
7. Installation instructions

01

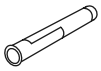
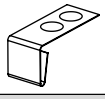
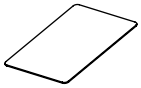
Presentation of the contents of the box



Wallbox with type 2 plug



Holder body parts

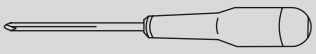
4 × 	screw 5×80, PZ2 head with foam washer installed
4 × 	dowel 8×65
3 × 	screw 4.5×40, PZ2 head
3 × 	dowel 6×30
2 × 	screw ST2.9×13
	lock spring for holder
	additional wallbox cable gasket
	NFC card*

*optional, depends on version

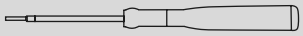
02

List of required tools

Tools with 1000V rating

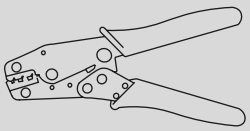


PZ2 screwdriver

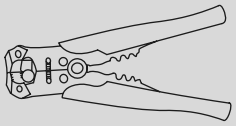


PH1 screwdriver

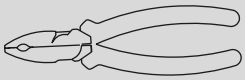
2,5 mm flat head screwdriver



Wire crimper



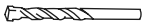
Wire stripper



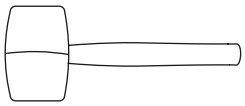
Pliers

Tools without 1000V rating

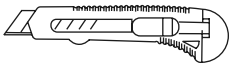
Concrete drill 8 mm



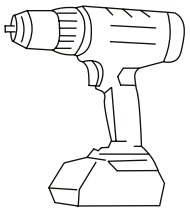
Concrete drill 6 mm



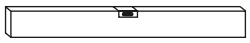
Hammer



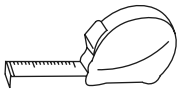
Knife



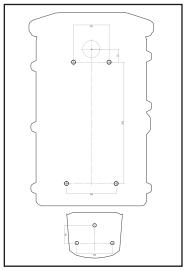
Power drill



Spirit level



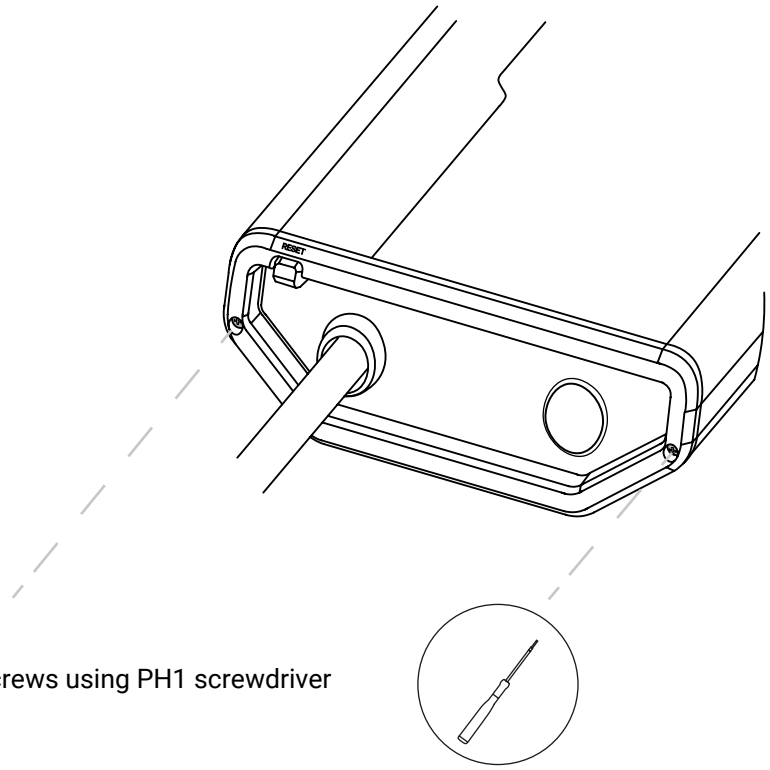
Measuring tape



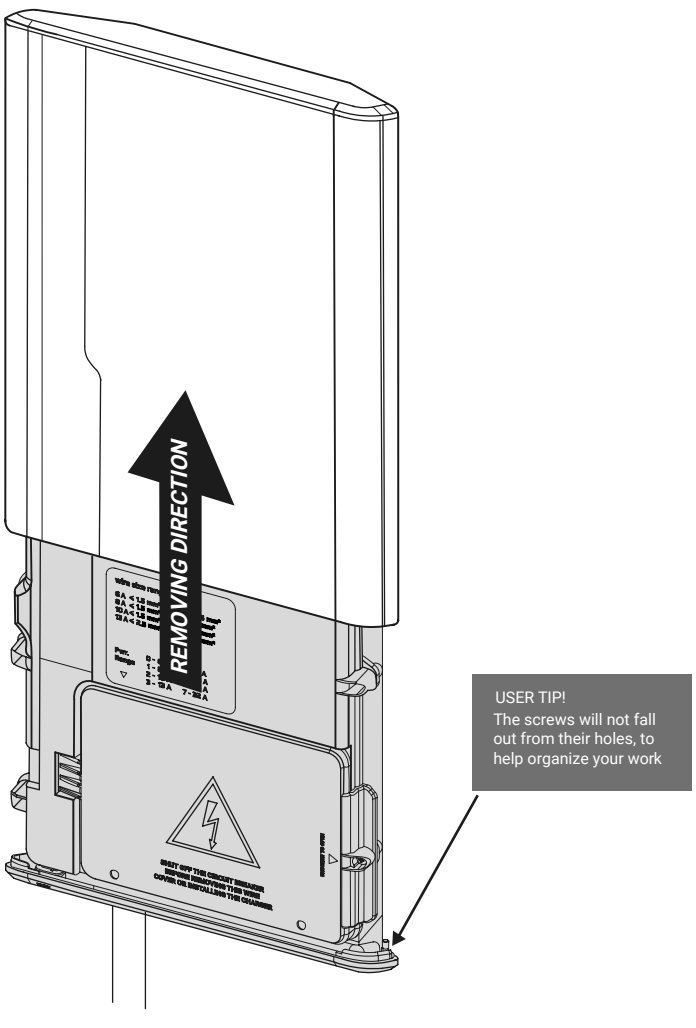
Cardboard template from the box

03

Aluminum shell removing



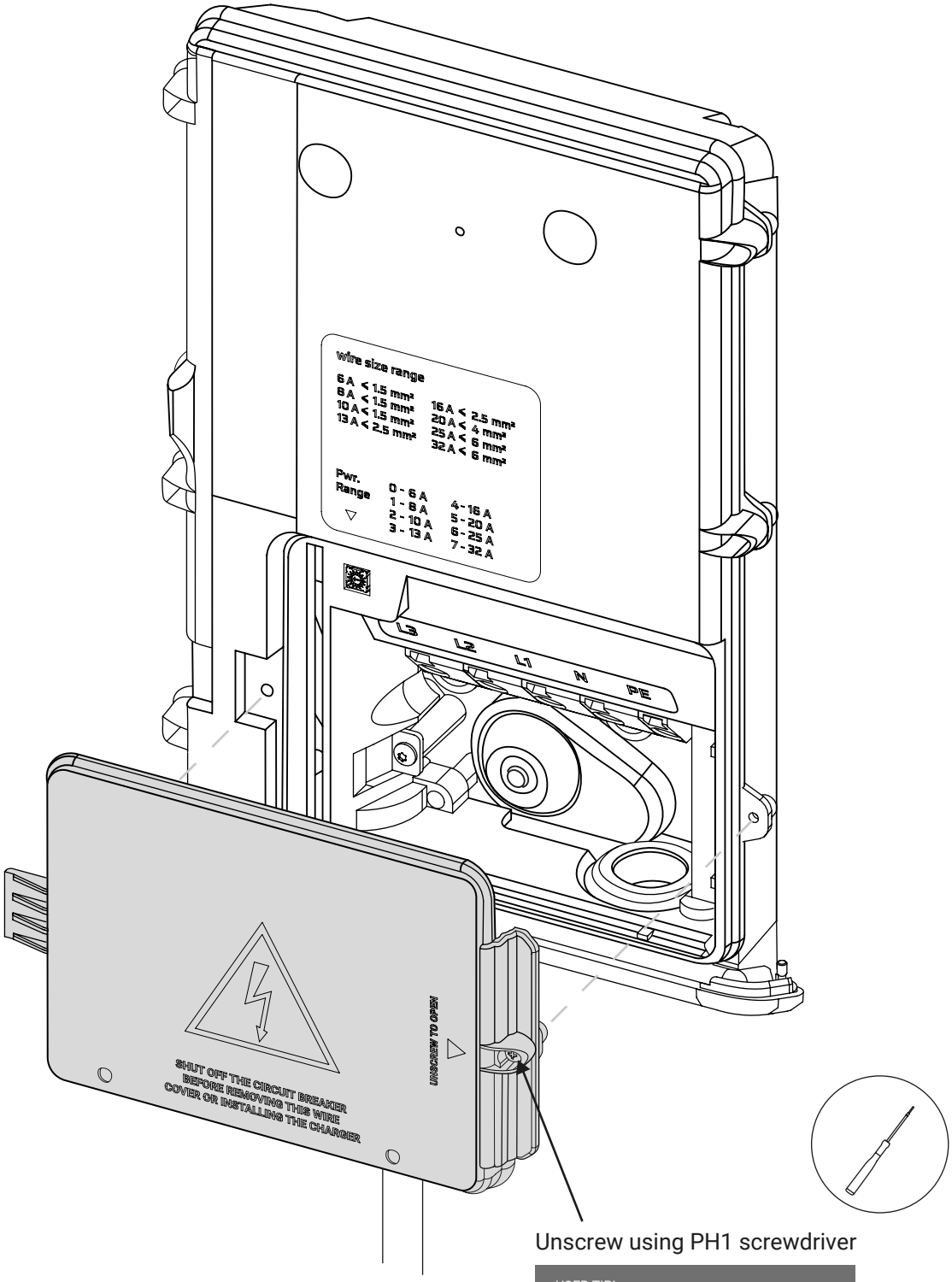
Unscrew two screws using PH1 screwdriver



Remove Aluminium Shell from charger main body

04

Flap removing



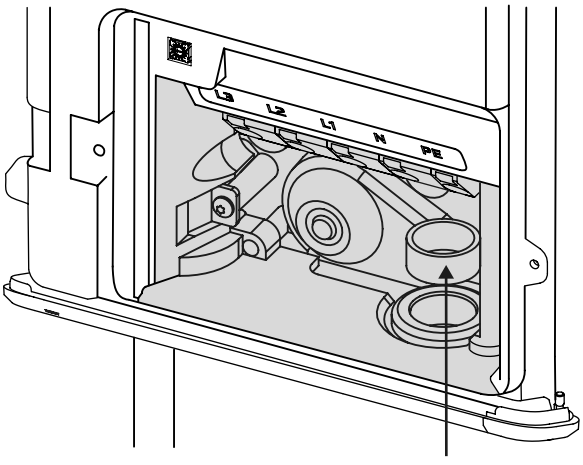
Unscrew using PH1 screwdriver

USER TIP!
The screws will not fall out from their holes, to help organize your work

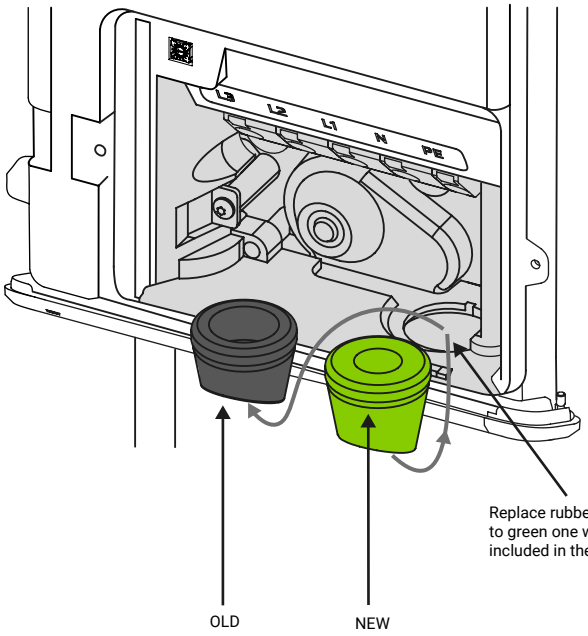
05

Wiring option

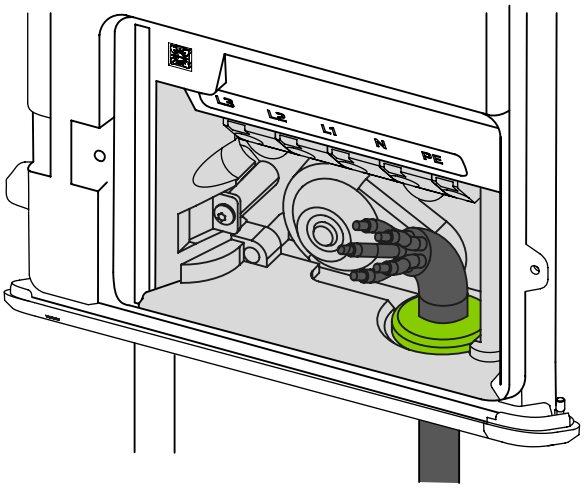
POWER CABLE FROM BOTTOM



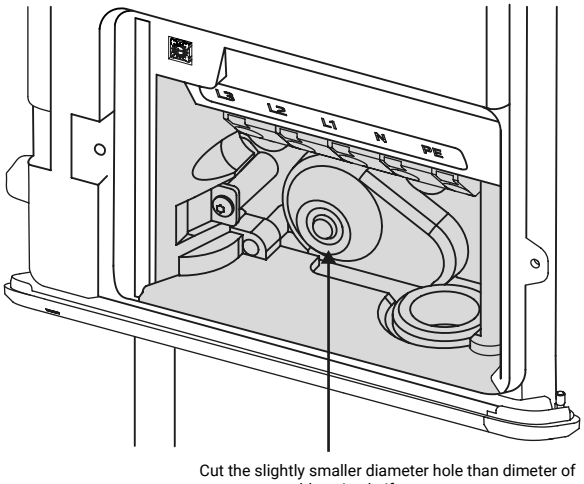
Remove plastic ring using flat screwdriver



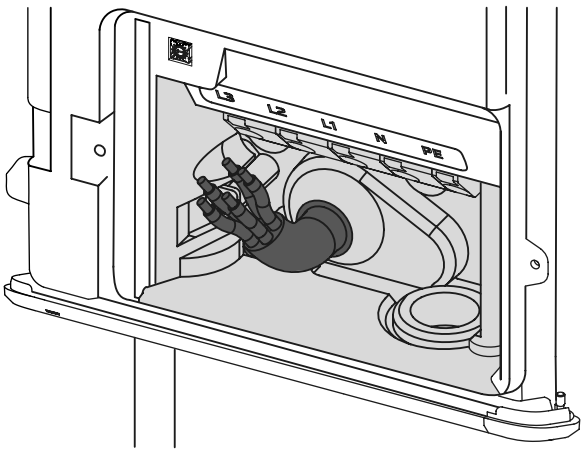
Replace rubber gasket to green one with hole, included in the box



POWER CABLE FROM BACK

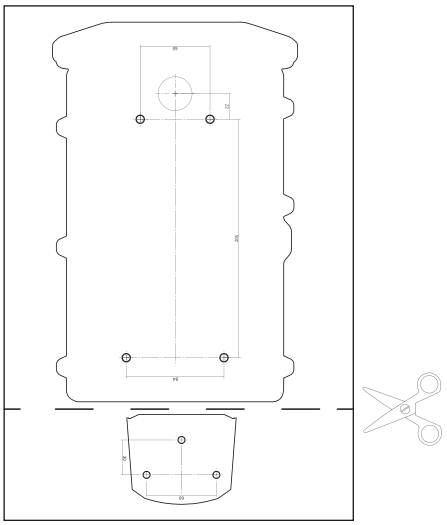


Cut the slightly smaller diameter hole than dimeter of your power cable using knife



06

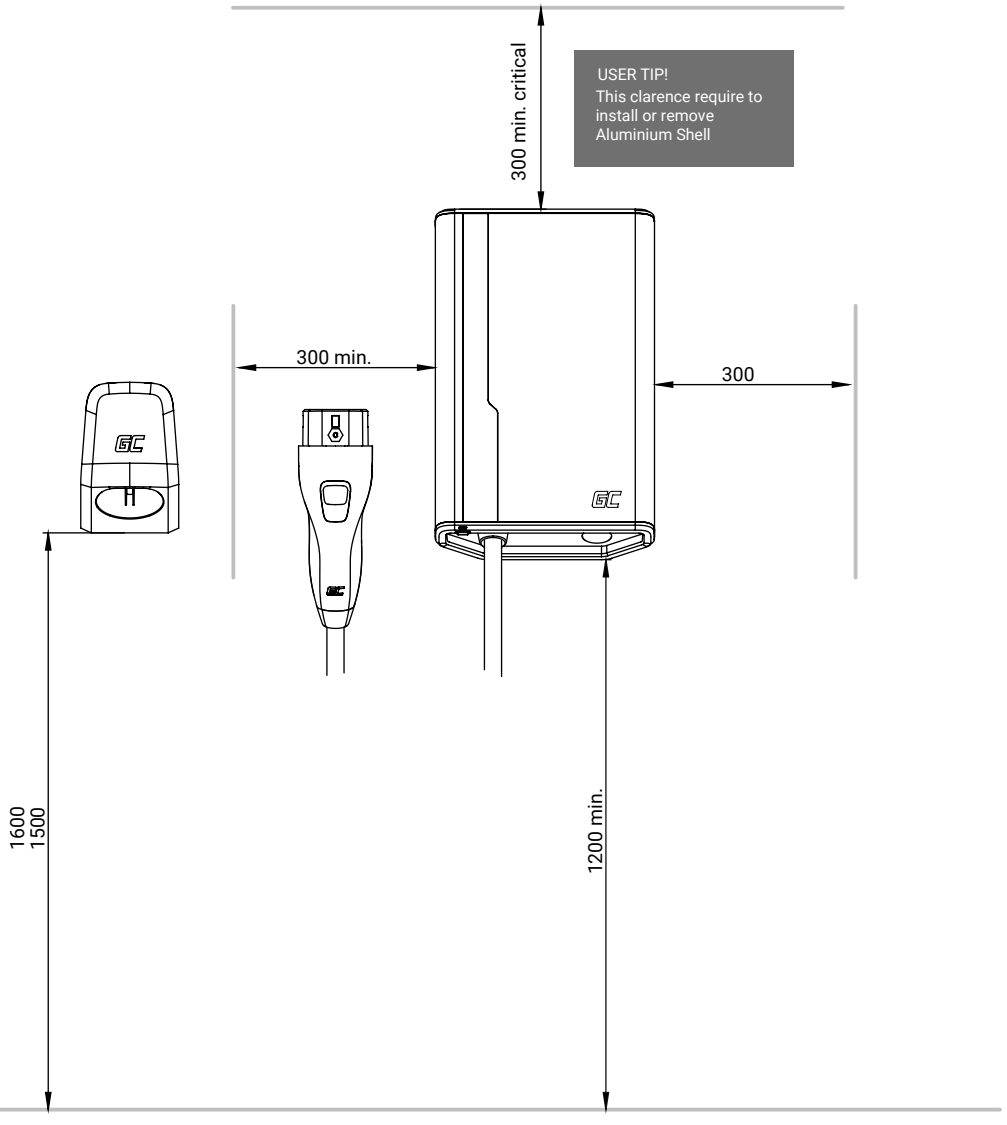
Mounting on the wall



Use a cardboard template and spirit level for drilling mounting holes. Pay attention to using the correct size bit, premised on the template. Put the dowel in holes using a hammer.

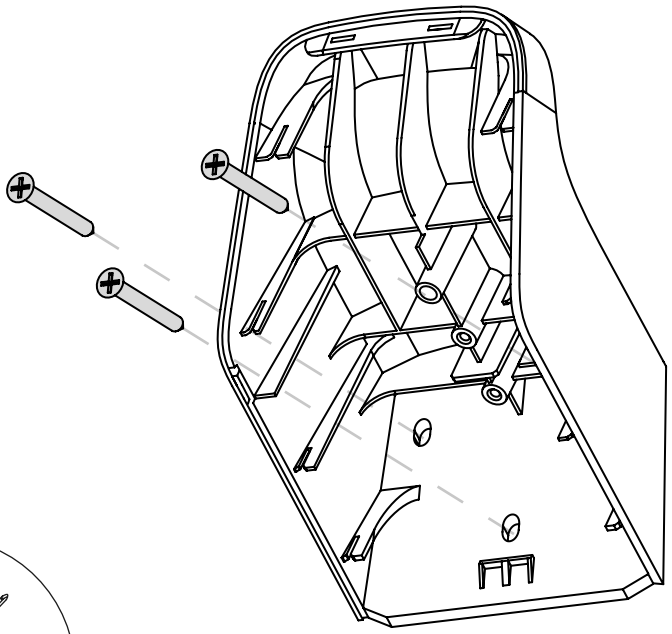
ATTENTION
Your wall must be at least 80 mm thick

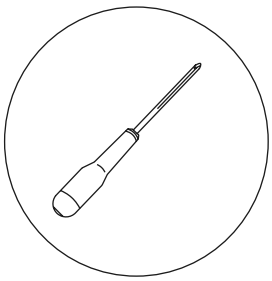
INSTALLATION CLEARANCES



07

Hanging the holder main body

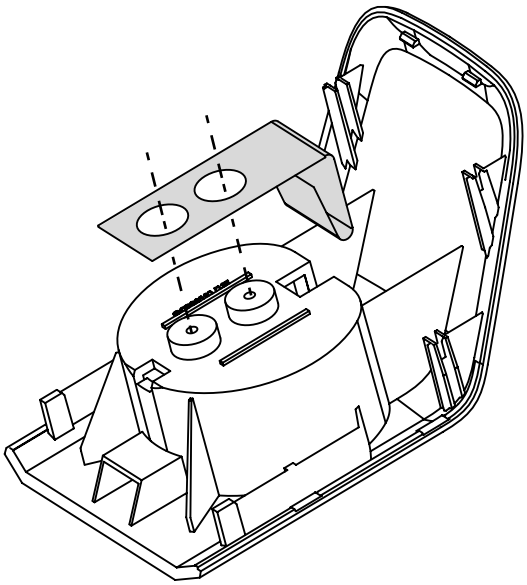




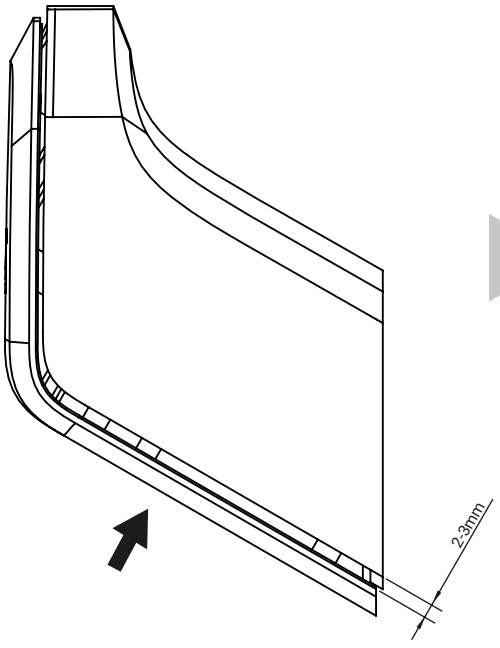
Use screw 4.5x40 with PZ2 screwdriver

08

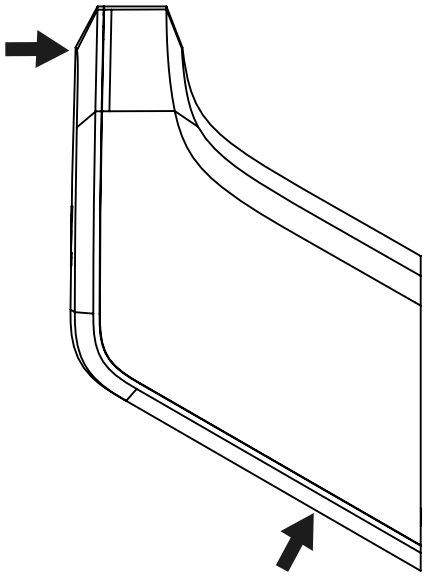
Holder front body mounting



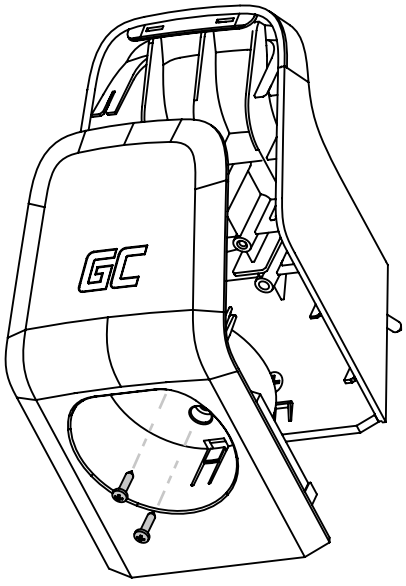
Insert the spring



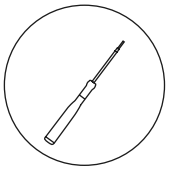
Align ribs without applying any force up to 2-3 mm gap between parts in showing directions



Press the parts together on top and bottom until gap will be closed and until you stop hearing clicks

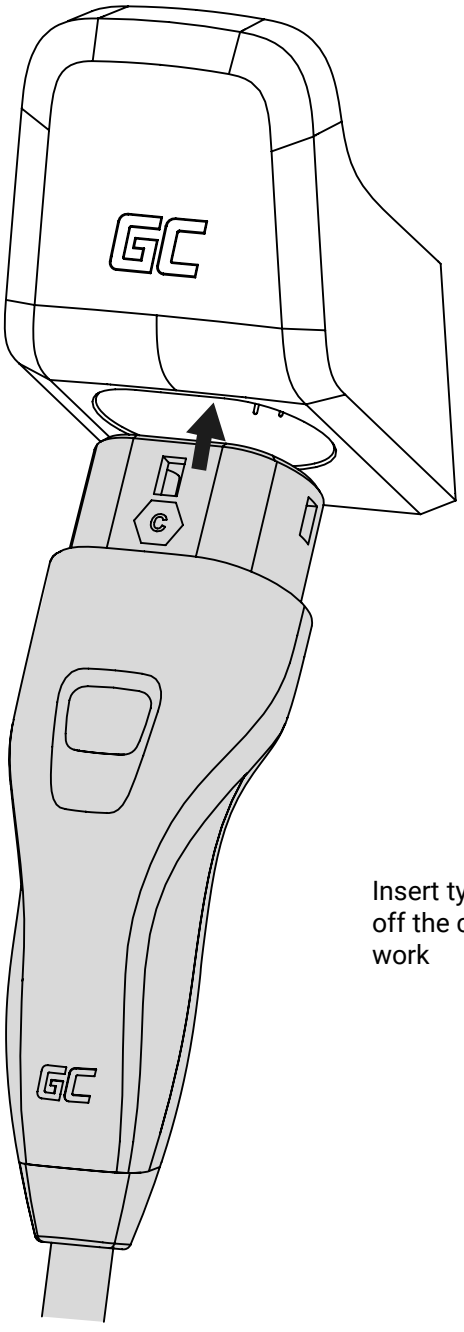


Secure holder with 2 screws using PH1 screwdriver



09

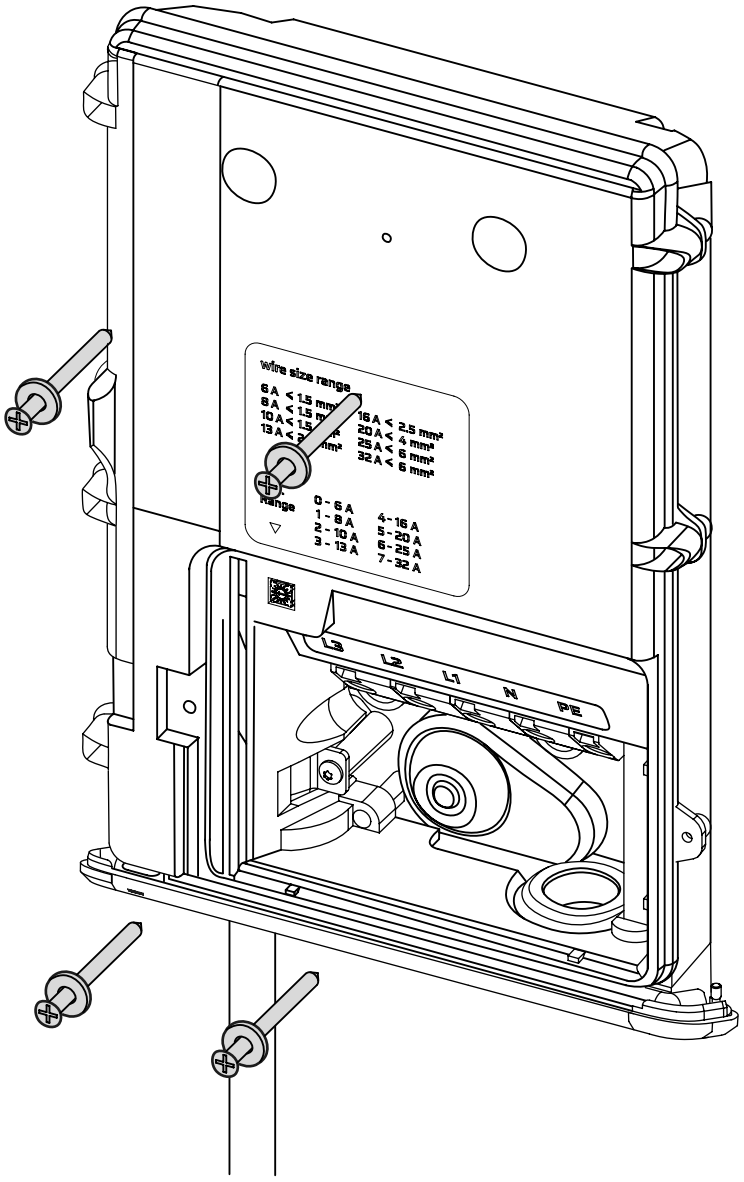
Hang the Type 2 Plug



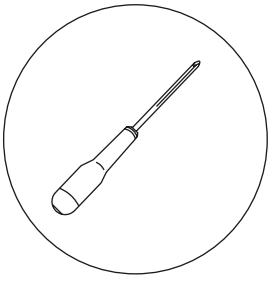
Insert type 2 plug into holder and hang off the cable on holder to organize your work

10

Hanging the wallbox

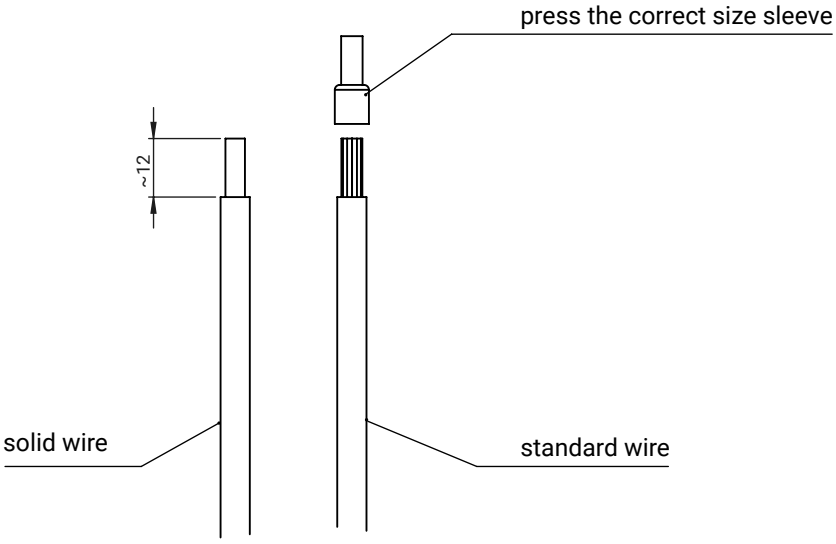


Secure the charger to the wall using four included screws with **foam washer**. Use PZ2 screwdriver.

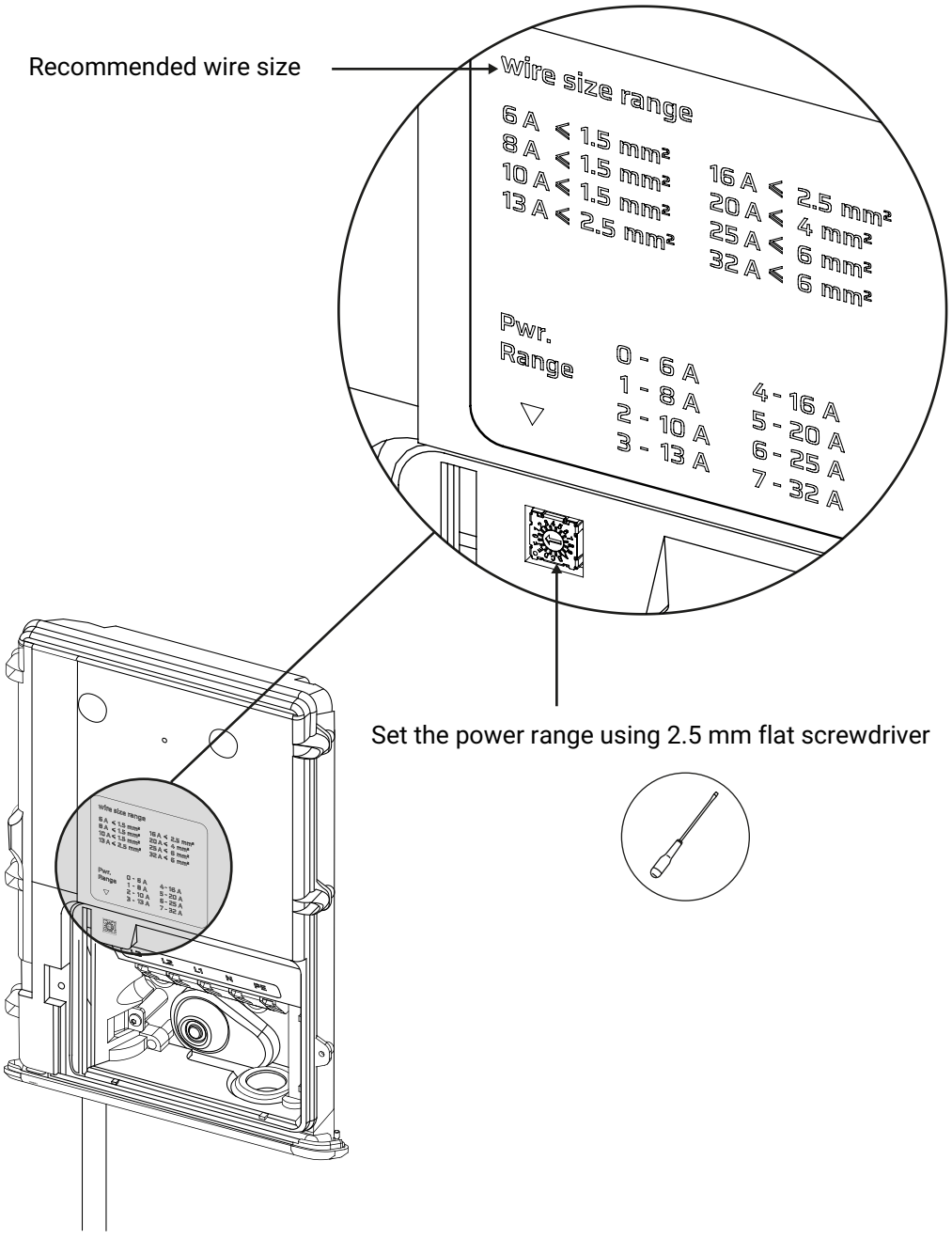


11

Wire preparing

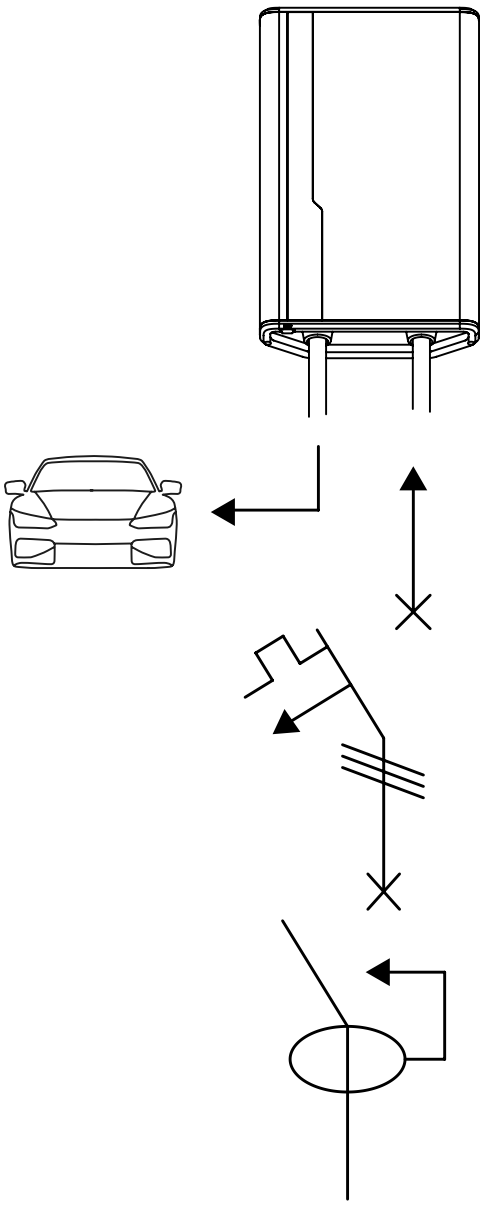


Selecting the current value



12

Supply connection options



Mains power source

Habuden is equipped with RCD-DD (residual direct current detecting device) conforming to IEC62955.

The charger is not equipped with with an emergency breaker. It is required to install a residual current circuit breaker Type A 30mA (RCD A) and a MCB Curve C limitation class 3, short-circuit capacity 10kA 40A overcurrent circuit breaker int the power network before installing HabuDen.

MCB/C32A/10kA

1. Circuit Breaker (MCB C 32A 10kV):
It should be selected according to the maximum charging current of the Habuden. It is recommended to install a 32A protection with C characteristics. If the device is set to a lower current value, it is correct to install a protection with a lower current value.

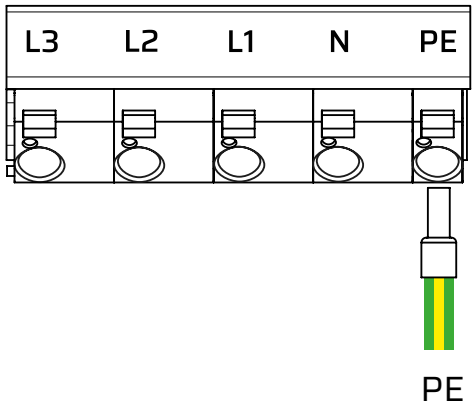
RCD/Type A/30mA/40A

2. Residual Current Device (RCD A 30mA 40A):
A residual current device with a sensitivity of 30mA, A characteristics, and a current rating of 40A.

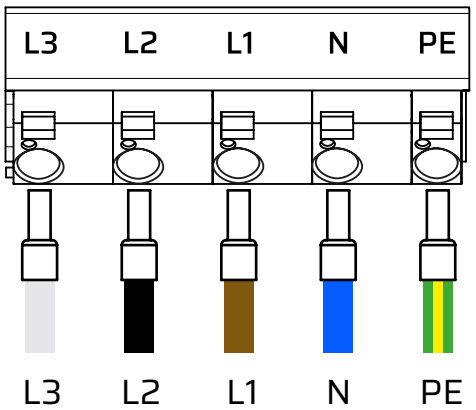
12

Supply connection options

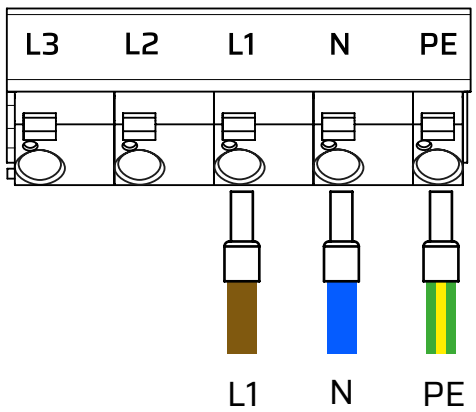
ground



3-phase



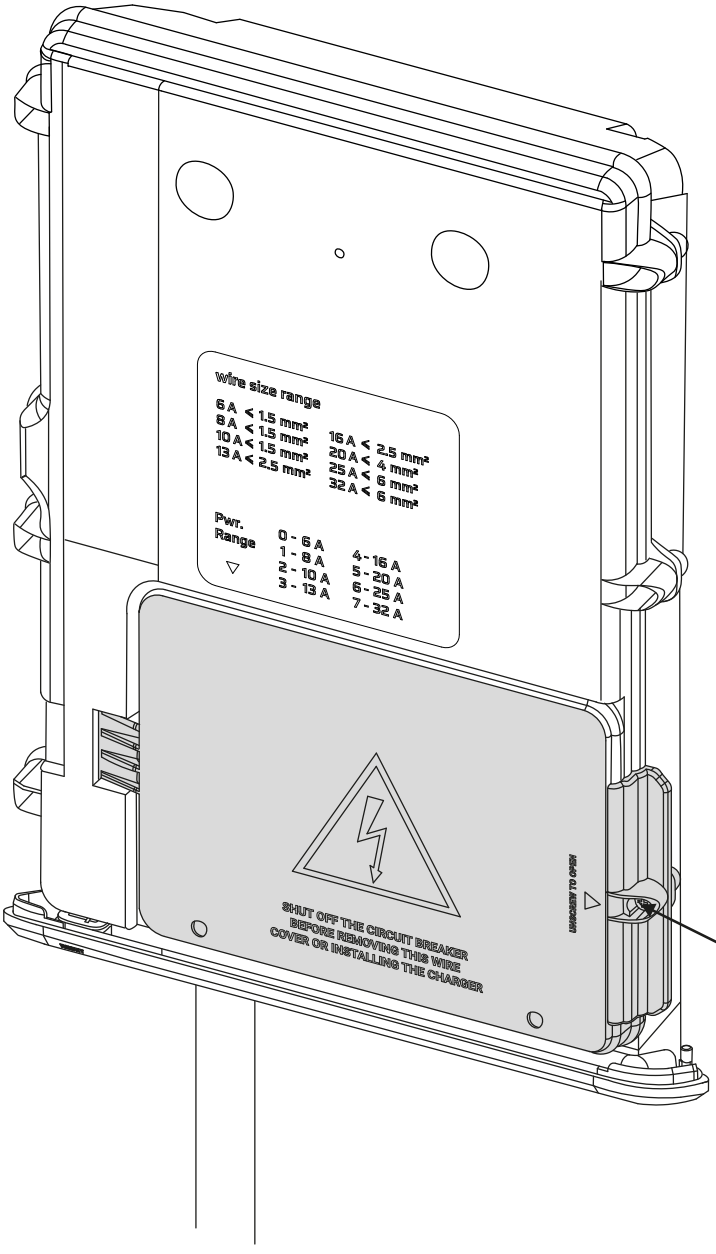
1-phase



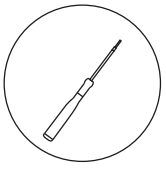
POWER CABLE

13

Flap closing

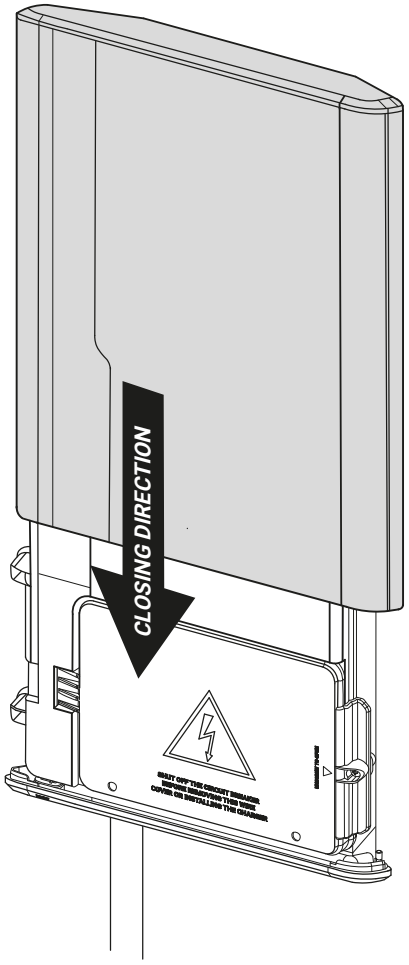


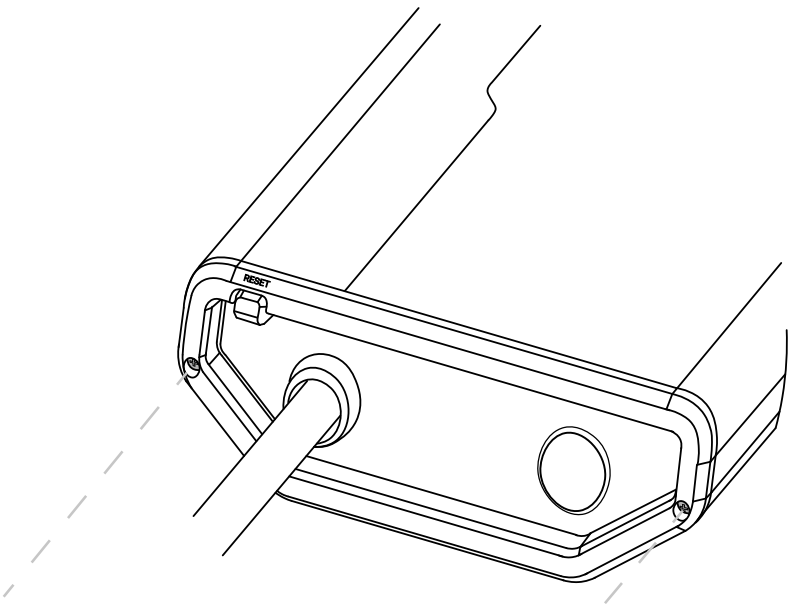
Secure the lid using screw.
Tighten using PH1 screwdriver.



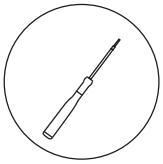
14

Installing the aluminum shell





Unscrew using PH1 screwdriver



8. Device configuration

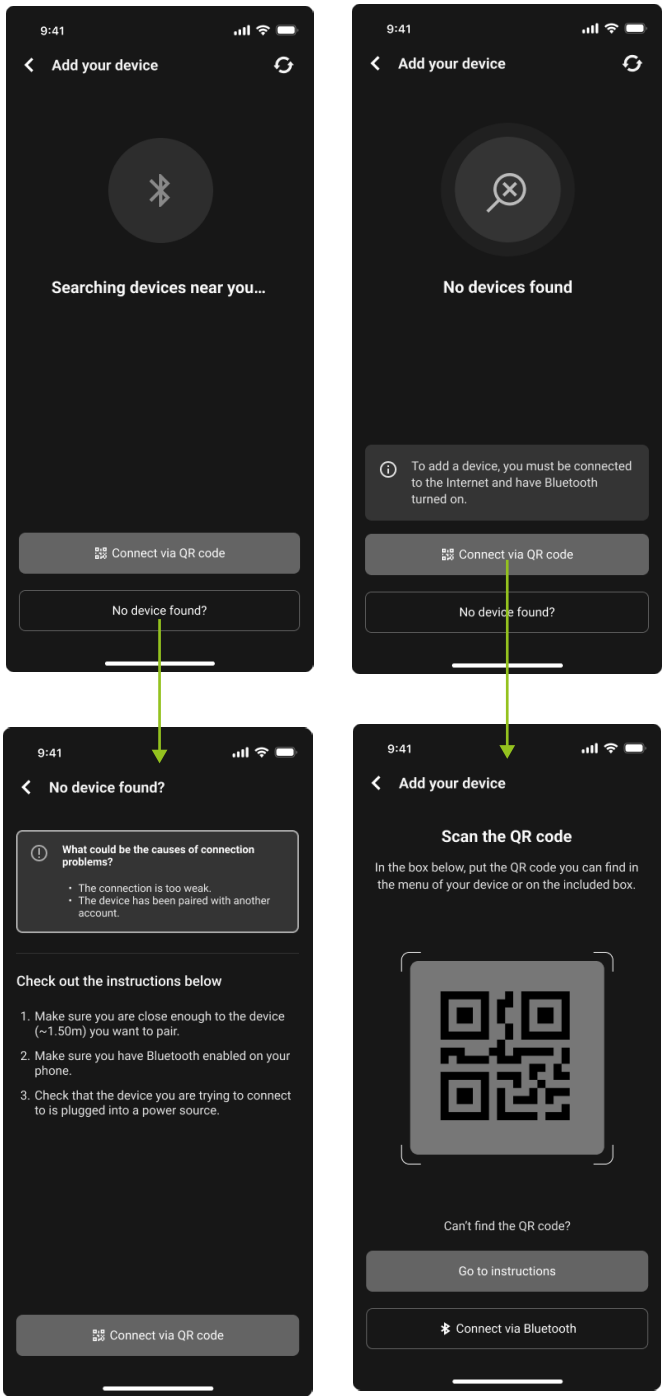
First connection to the application.

To fully use the HabuDen charger, you must connect to the mobile application. GC App will allow you to configure your device.

Download the app from Google Play or Apple Store.

GET IT ON Google Play

Download on the App Store



Pairing with mobile app (GC App)

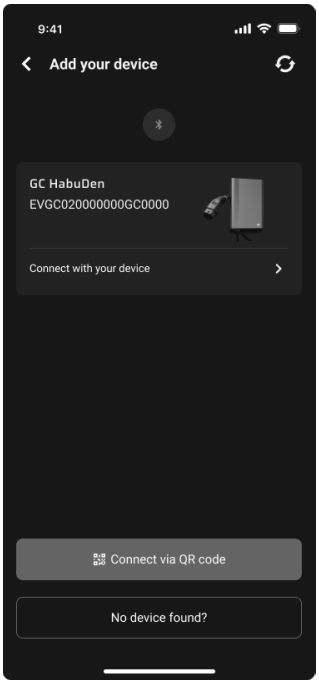
Device can be paired via Bluetooth and QR code.

> ⚠ HabuDen is ready to pair via Bluetooth for 2 minutes. After 2 minutes, pairing with the device will no longer be possible.

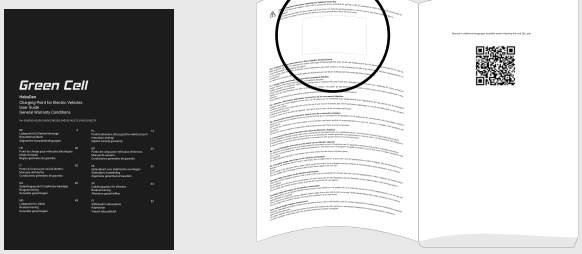
To be able to pair with your device again, please reset it.
Hold down the button located at the bottom of the device housing for about 10 seconds, wait for the light signal and start pairing again.

After searching for the device via Bluetooth or scanning the QR code, the device will be visible in the list and ready to connect.

Follow the instructions below:
• Select your device to connect - connecting to the device may take a few minutes.



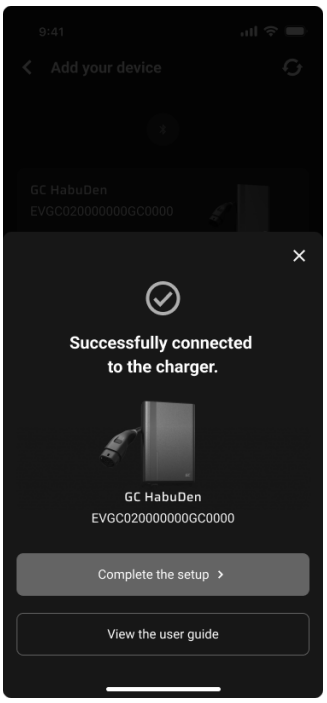
Enter the six-digit access code found on page 2 of the user manual.

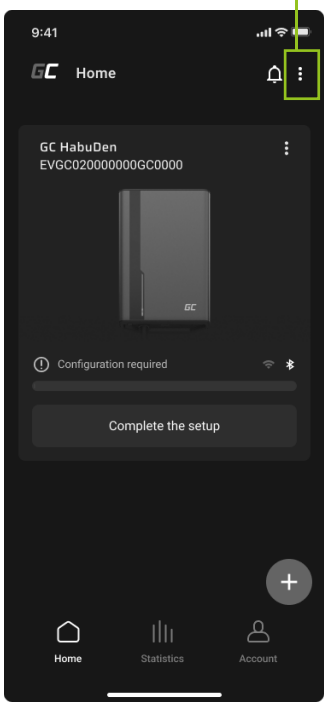


If errors occur while connecting to the device, follow the instructions below.

Complete removal of the device.

• Go to your device's advanced settings in the app.
• Select the *Restore factory settings*.
• Select *Remove device*.
• Go to your smartphone's Bluetooth settings.
• Choose the list of paired devices and select HabuDen (device serial number).
• Select *Forget this device* or *Remove the pair*.
• Reset HabuDen and wait for the light signal.
• Reconnect to your device via Bluetooth.



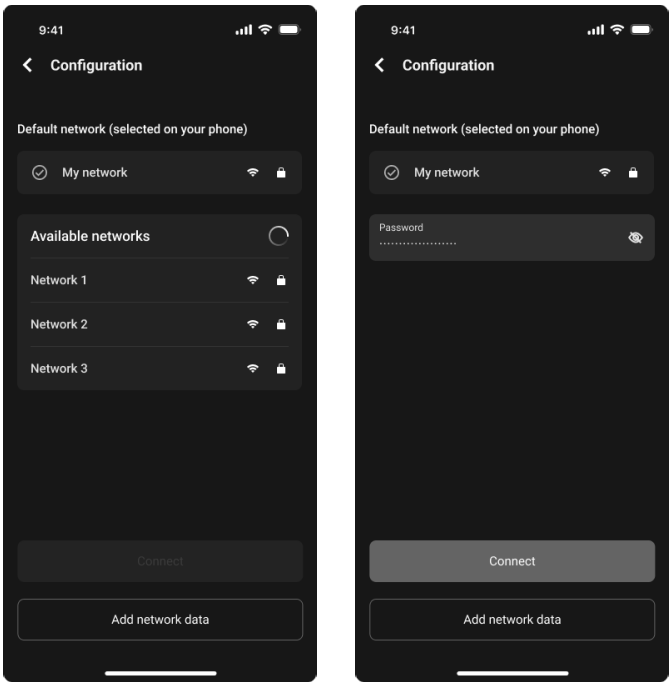


For the HabuDen device to function properly, you must complete the device configuration.

Select Complete the setup and connect to an available Wifi network.

You can select one of the available networks shown on the screen or enter Wi-Fi credentials.

Attention! To have remote access to the charger using the GC App, the Wi-Fi network must be connected to the Internet.

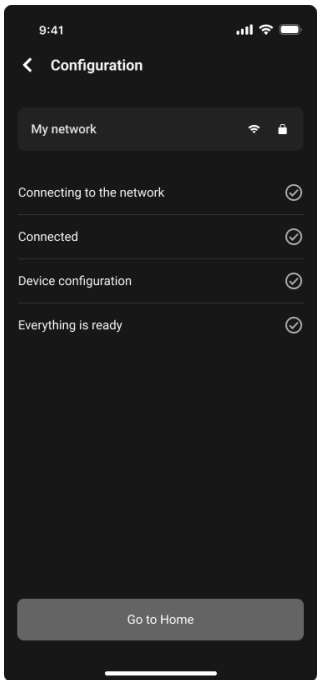


Enter the local network password and select “Connect”

Follow the on-screen instructions when setting up your device. Configuring the device may take several minutes.

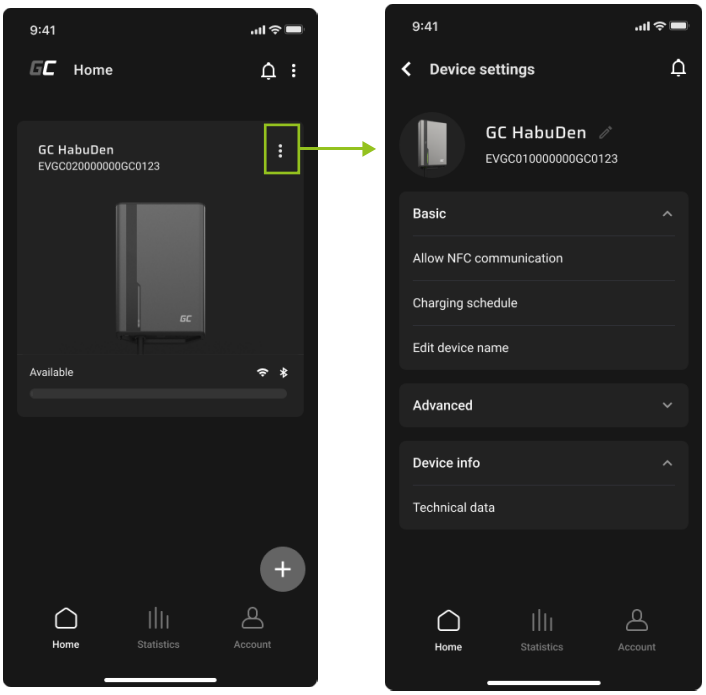
After confirmation, configuration is complete and the charger is fully ready for use.

If there are any configuration errors, follow the instructions: Complete removal of the device. (strona)



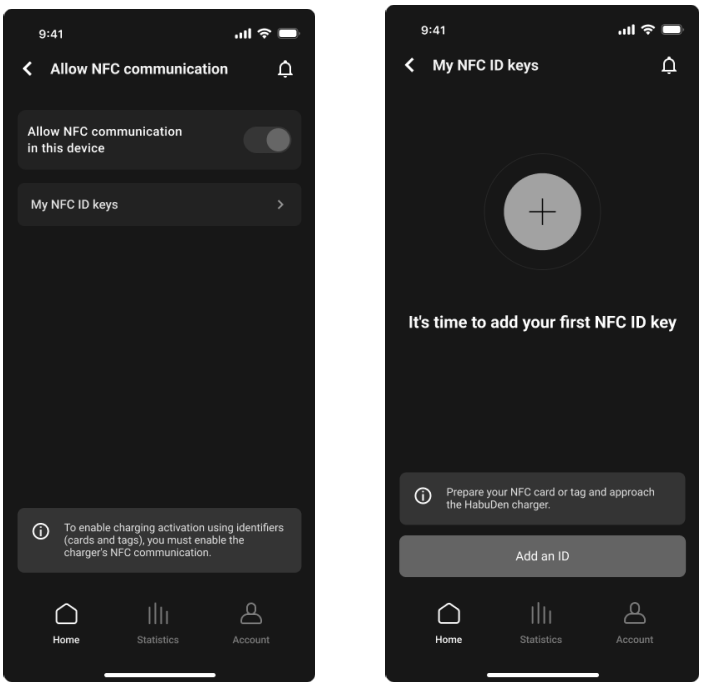
To add a card or NFC tag, go to the basic settings of the HabuDen device.

Select Allow NFC communication.

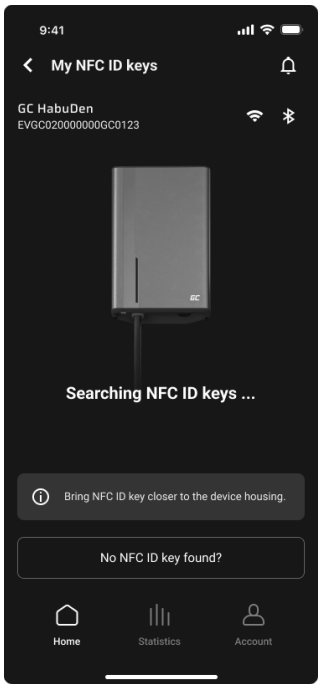


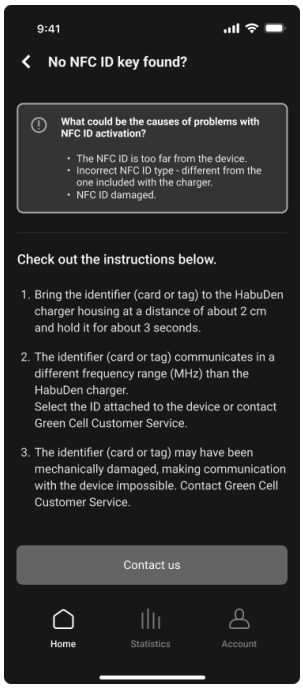
To add a card or NFC tag, go to the basic settings of the HabuDen device.

• *Select Allow NFC communication in this device.*
• Prepare your NFC card or tag
• Select Ad an ID
• Look at the light signal on the device
• Place the NFC card or tag on the indicated place on the device housing.

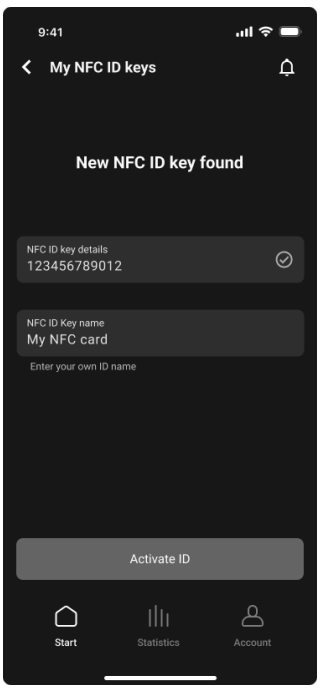


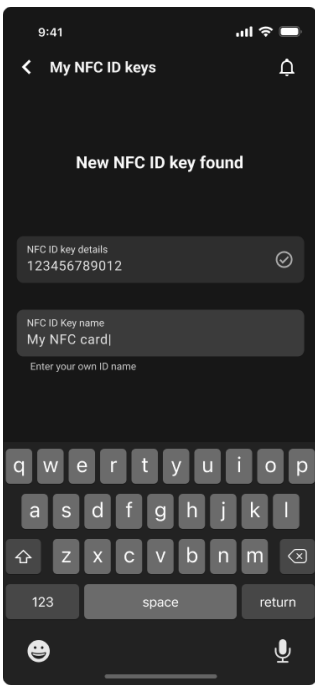
If errors occur when adding the NFC ID, refer to the instructions in the GC App.





Enter the name of your NFC card or tag and select *Activate ID*.





9. SERVICE GUIDELINES FOR REPAIRS/REPLACEMENT OF STATION COMPONENTS

- All service operations should be performed only by qualified personnel.
- Do not attempt to repair the Habuden on your own.
- Removing the plastic cover of the Habuden station exposes you to the risk of electric shock!
- Before commencing any service work, the power supply to the charging station must be turned off at the power source (distribution board/connection point) and secured against accidental reactivation!
- Before starting service work, it is advisable to take photos of the condition before commencing the work and to document the condition of the device after completing the service work. Photos should be attached to the repair/service report.
- Damaged components can only be replaced with new, unused components with identical nominal and technical specifications.
- During the warranty period, only the manufacturer or an authorized entity is allowed to replace components and repair the station.
- Upon completion of repair work, the functionality of the station must be checked according to points A1-A6 of this manual, and this must be confirmed with an appropriate report.

10.1 PERIODIC TECHNICAL INSPECTION OF THE STATION

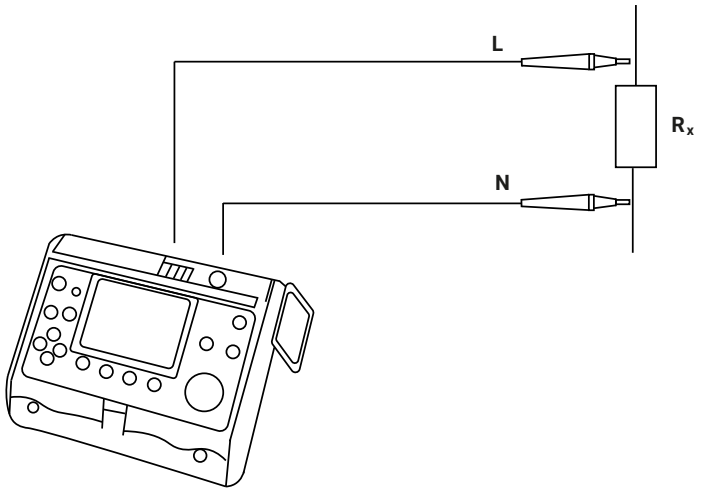
RISK OF ELECTRIC SHOCK!!! Turn off the power supply to the charging station at the distribution board/connection point and secure it against accidental re-energization before starting any work.

	Test name	Frequency
A1	External Visual Inspection	At least once a year
A2	Measurement of the Continuity of Protective and Equipotential Bonding Conductors	Once a year
A3	Insulation Resistance Test of Cables	Once a year
A4	Measurement of the Operational Ground Resistance of the Station	Once a year
A5	Measurement of the Effectiveness of Protection Against Electric Shock	Once a year
A6	Verification of the Correct Operation of Residual Current Devices	Once a year

All service operations should be performed only by qualified personnel. Do not attempt to repair the Habuden charging station on your own. Opening or removing covers of the Habuden charging station exposes you to the risk of electric shock!
It is recommended to conduct an annual technical inspection of the charging station, covering points A1-A6. After each service operation, a service report must be prepared.

A1 Visual inspection of the station and installation site
Perform a visual assessment of the station and the installation site, along with the surroundings, to detect any mechanical damages, irregularities and hazards. The inspection should be carried out in light conditions that guarantee the detection of potential damages and from a distance that allows for the proper assessment of the inspected object. Perform a visual assessment of the technical condition of the charging cable - plug/cable. Evaluate the insulation condition along the entire length of the cables and the technical condition of the connector (pins and housing).
Result is pass if no damage has been found and condition of the device is satisfactory.
Result is fail if the condition is unsatisfactory or the device is damaged . Device should be repaired or temporarily decommissioned.

A2 Measurement of continuity of protective and equipotential bonding conductors
According to the standard requirements, it is necessary to perform an electrical continuity measurement for protective conductors in main and supplementary equipotential bonding connections, and live conductors in the case of ring circuits. According to the PN-EN 61557-4 standard, the continuity measurement should be performed with a current of 200 mA or more. Additionally, with the meter terminals open, the voltage should be in the range of 4... 24 V. The required measurement accuracy should be better than 30%.



The method for performing continuity measurements of conductors is shown in the above figure. The measurement is performed with direct current. The continuity condition is considered met if the resistance of the entire single equipotential bonding or protective connection (conductors and their connections) does not exceed 1.0 Ω.

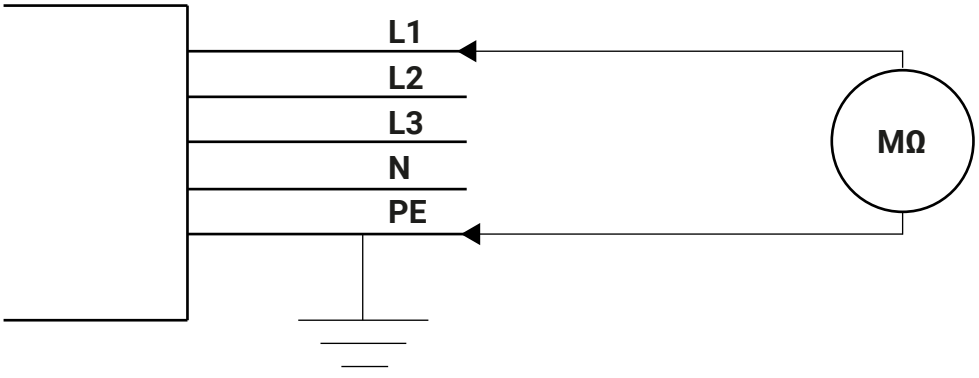
A3 Insulation resistance testing of conductors
Insulation resistance should be measured between active conductors and the protective conductor connected to the grounding system. For this measurement, the active conductors can be connected together. Measurements should also be made between (non-grounded) protective conductors and earth. The test voltage depends on the nominal circuit voltage and is provided in the table below. Additionally, minimum insulation resistance values for individual circuits are provided.

- Test Voltage: Dependent on nominal circuit voltage (as per the table below)
- Minimum Insulation Resistance Values: Provided for respective circuits

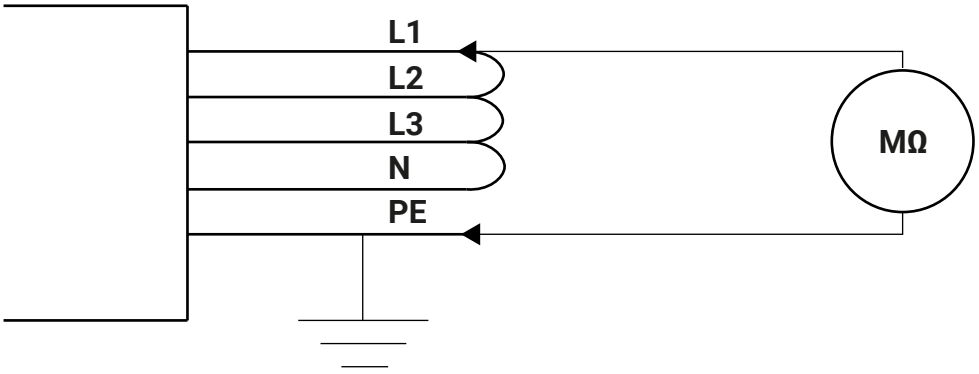
Nominal circuit voltage	DC test voltage (V)	Insulation resistance (MΩ)
SELV and PELV	250	≥ 0,5
Up to 500 V inclusive, including FELV	500	≥ 1,0

Please note: Active conductors can be connected together for testing purposes
If there is a possibility that surge protective devices (SPDs) or other devices may influence the measurement result or could be damaged, such devices should be disconnected before conducting insulation resistance testing. If disconnecting such devices is not possible (e.g., SPDs integrated into fixed socket outlets), then for that circuit, the test voltage should be reduced to 250 V DC. However, the insulation resistance should still be at least 1 MΩ.

Insulation resistance measurements of the electrical installation PN-HD 60364-6



Insulation resistance measurements of the electrical installation PN-HD 60364-6



A4 Measurement of Station's Earth Resistance
The most commonly used method for measuring earth resistance is a technical method often referred to as the „fall of potential" method.
To conduct the measurement, two additional auxiliary electrodes are placed. These electrodes are positioned in a single line. The acceptance criterion for the measurement results is R ≤ 10 Ω. Before disconnecting the test connector, it is necessary to check with a clamp meter if current is flowing through this connector. In such a case, disconnecting the connector poses a risk to both the person conducting the measurements and other users of the installation!

A5 Measurement of protective earthing effectiveness
For TN systems according to the requirements of standard PN-HD 60364-4-41, the following condition should be met: ZS × Ia ≤ UO where:
- ZS is the loop impedance,
- Ia is the current causing automatic disconnection within the time specified in the table below, with considerations as described in PN-HD 60364-4-41,
- UO is the nominal AC or DC voltage referenced to earth.

Nominal Voltage Uo (V)	Maximum Disconnection Time (s) for Final Circuits ≤ 32 A	Maximum Disconnection Time (s) for Distribution Circuits and Circuits Protected by Overcurrent Circuit Breakers > 32 A
120	0.8	5
230	0.4	5
400	0.2	5

Note 1: Disconnection may be required for reasons other than protective earthing.

For distribution circuits and circuits protected by overcurrent circuit breakers with currents above 32 A, the maximum allowable disconnection time is 5 s. According to standard EN 61557-3, measurements of loop impedance should be performed with a measurement error of less than 30%.

A6 Verification of Residual Current Devices (RCDs) Operation
The effectiveness of automatic disconnection using RCDs should be verified in accordance with PN-EN 61557-6. The measurement should be performed based on the station's version, considering the type of installed RCD (Type A or B) and a residual current of 30 mA. Protection effectiveness is considered satisfactory if the RCD trips at the current value of 30 mA or lower, with a maximum disconnection time of 0.3 seconds.

10.2. Repair guidelines:

10.2.1 Replacement of type 2 cable.
Repair or replacement of integrated type 2 cable is strictly prohibited. In case the damaged type 2 cable contact the manufacturer in order to replace the damaged component.

10.2.2 Replacement of input power cable
In case of damaged power input cable follow guidelines:
1. Disconnect power supply.
2. Remove aluminum cover by unscrewing screws on the bottom of the charger. Unscrew the screw from the semi transparent lid. Remove cables from individual terminals.
3. Replace damaged cable.
4. Assemble everything in reverse order.

5. Perform a set of periodic tests to ensure that assembly has been performed correctly.

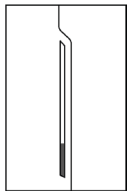
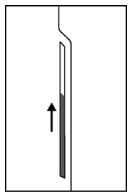
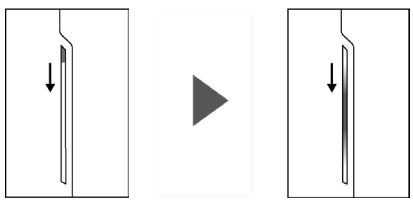
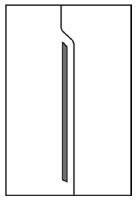
10.2.3 Replacement of controller board and power board.
In case of station failure and the need to replace the controller/control board, this must be reported immediately to the station owner. The station must be dismantled and returned to the manufacturer.

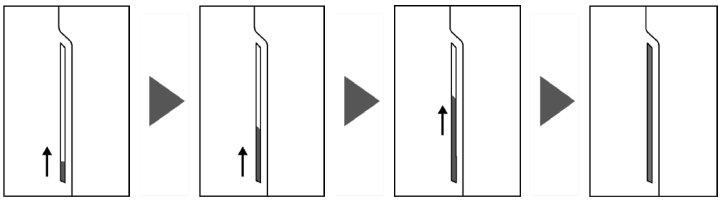
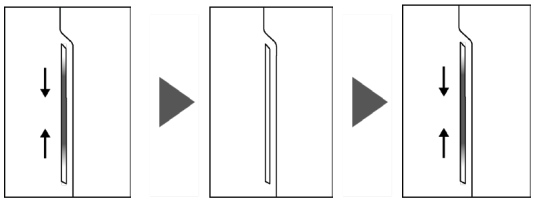
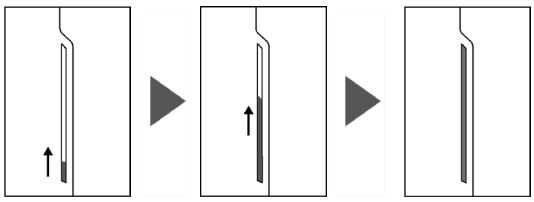
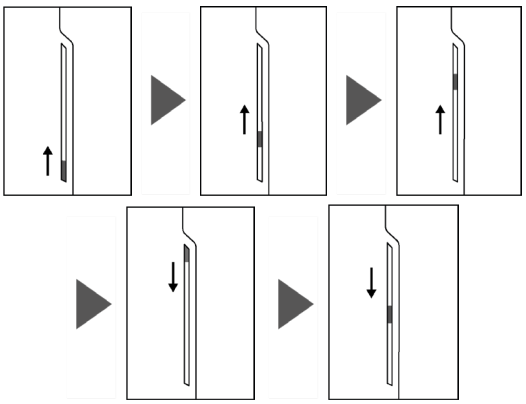
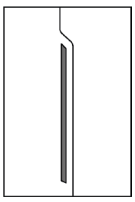
10.2.4 Description of basic service tasks
1. Check the external side of the charging station:
a. Verify if the led strip is working correctly.
b. Inspect if the casing is undamaged.
c. Check cables with wires, sockets, pins in connectors, on the connection type.
d. Verify the mounting of the station to the ground/wall.
e. Clean the charging station externally.
2. Verify the operation of the charging station:
a. Check if the station is powered on by looking at the charging indicator.
b. Check the operation of RFID readers (if present) during identification by closing in RFID card - watch led strip for reaction
3. Measure the grounding resistance in charging cables/sockets.

All maintenance and service work should only be performed by qualified personnel. Any replacement of charging station components is permitted only by authorized service personnel.

11. Troubleshooting

LED indications

	Green LED
1 **Startup**	
2 **Standby**	
3 **Connected correctly**	
4 **Charging**	
5 **Charging complete**	

6 **Firmware update**	
7 **Pairing mode**	
Red LED	
8 **Connection error**	
9 **Warning**	
10 **Fatal error**	

EN / LED indications

LED indication	Explanation	What to do
1	**Startup** Green LED animation plays from top to bottom for 2 s, then transitions into Standby. This animation plays: - when the charger is connected to power - when the charger is restarted without an error	• Wait for the charger to get ready
2	**Standby** Lower part of LED strip is illuminated in green. The charger is ready for user action.	• You can open the vehicle's charging port flap (in Teslas) and/or plug the connector in

	With NFC enabled: authorization – waiting for card/device.	• Authorize with card/device
3	**Connected correctly** The green LED animation plays from bottom to top for 1 s. This animation plays when the charger is correctly connected to the EV.	• Wait for the device to start charging your EV
	With NFC enabled: authorization – card/device accepted; pairing mode – card/device paired.	• Wait for the device to start charging your EV
4	**Charging** The green gradient LED animation plays from top to bottom and then it repeats. Animation speed corresponds to the charging power – the higher the power the faster the animation stream. This animation plays during the charging process.	• You can adjust charging parameters in the app or/ and leave the device in safe conditions to charge your EV
5	**Charging complete** The entire LED stripe lights up green. This animation plays when the EV is fully charged.	• Unplug the connector from your EV
6	**Firmware update** Note: Information about the update is displayed in the app. When the charger is in use, the update will be performed when the charging process is ended. The green LED animation pulsates from bottom to top filling Led stripe. This animation plays during the firmware update process	• Wait for the firmware update to be performed (information about necessary update is displayed in the app) • If the update is completed successfully, green LED lights up – you can use the device • If the update is completed unsuccessfully, red LED lights up – check the app for details
7	**Pairing mode** With NFC enabled: pairing mode – waiting for card/device. The green gradient LED animation plays from center to top and bottom and then it repeats.	• Touch the NFC card to the reader on the charging point until it is paired.
8	**Connection error** The red LED animation plays from bottom to top and fades. It repeats until EV is unplugged. This animation plays if there is some problem with the connected EV. With NFC enabled: authorization – card/device declined	• Unplug the connector from your EV and plug it in again • If the problem repeats, contact the manufacturer's customer support: support@greencell.global • Try again, follow instructions in the app or contact manufacturer's customer support: support@ greencell.global
9	**Warning** The red LED light bounces top to bottom until the cause of the warning is resolved.	• If this happens during charging, disconnect the charger from your EV. If red LED light is still on - restart the charger by pushing reset button for 5 seconds • Check the app for details of what happened and what to do and contact manufacturer's customer support: support@greencell.global
10	**Fatal error** The entire LED strip blinks red. This animation plays when the charger cannot be used and needs to be diagnosed and repaired.	• If this happens during charging, disconnect the charger from your EV • Check the app for details of what happened and contact an electrician or manufacturer's customer support: support@greencell.global

12. Contact and technical support

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