Public Electric Vehicle Charging station

HomeBox Slim

Installation Manual
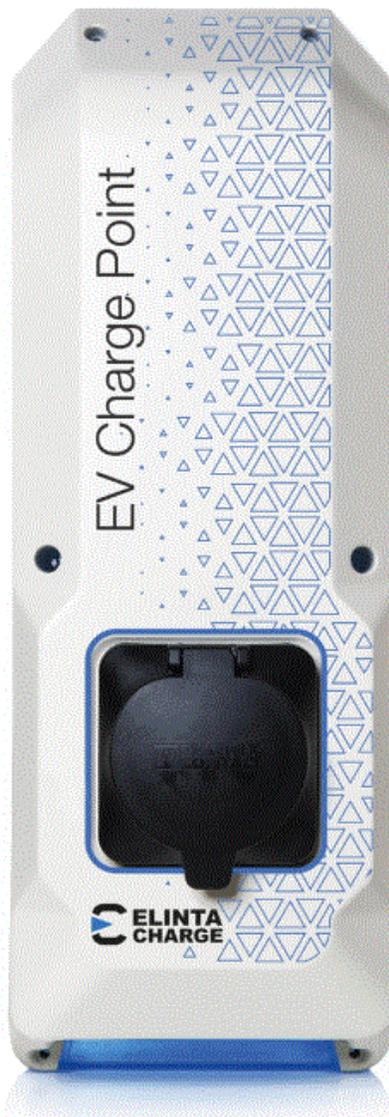
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Chapter 1
INTRODUCTION

1.1   Purpose of the Manual

This manual provides information about the installation process of the charging station HomeBox Slim and HomeBox Slim Plus. This document is designed for engineers and electricians who possess a general knowledge of electrical installation.

1.2   Qualified Personnel

The product described in this document may be installed only by personnel qualified for the specific task in accordance with the relevant documentation, in particular, its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with this product.

1.3   Symbol Usage

Prohibited   Indicates information about what is strictly Prohibited.

Danger   Indicates information about safety practices which, if not followed, may result in serious injury or death.

Keep Note   Indicates helpful information for installation or usage, but does not contain personnel or equipment safety related information.

Provide good Grounding   Indicates information about where good Earthing must be provided.

1.4   High Voltage Warning

Incorrect connections may cause electric shock.

Do not touch live electrical parts.

The improper connection of the equipment grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded.

It is recommended that your HomeBox Slim be installed by a licensed electrician. To avoid serious injury or death,   installation must be in accordance with the manufacturer's installation instructions and must comply with all local codes.

1.5   Important Safety Instructions

Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.

Do not use this product if the EV cable is damaged, or there is any other sign of Charging station damage.

Read this manual thoroughly and make sure you understand the procedures before you attempt to install this equipment. The purpose of this manual is to provide you with the information necessary to safely install and troubleshoot this equipment. Keep this manual for future reference.

1.6   Definitions

AC -   (Alternating Current): A charge of electricity that regularly changes direction.

kW -   (Alternating Current): A charge of electricity that regularly changes direction.

A / mA -   The strength of an electric current measured in amperes or milliamperes

kWh -   A unit of energy equivalent to the energy transferred in one hour by one thousand watts of power. Electric car batteries are typically measured in kilowatt hours

EVSE -   (Electric Vehicle Supply Equipment): Infrastructure designed to supply power to EVs.

Residual Current Monitoring and means the monitoring of residual currents in electrical systems.

RCD -   A residual current device monitors your wiring installation permanently to detect any leaking current.

Shutter Socket -   Socket type which prevents inserting charging cable, while charging station is not activated.

IEC 62196 -   Also known as the Mennekes, it is a type of connectors that is used to charge Electric Vehicles in Europe.

Schuko -   Europlug (CEE 7/16) and CEE 7/17. Commonly found across Europe for 230V appliance.

Typa A RCD -   Type A RCDs detect residual sinusoidal alternating currents. Type A RCDs are suitable for general use and cover most of the applications in practice.

Typa B RCD -   Type B RCD are intended to be used for loads with three-phase rectifier, such as variable speed drives, PV system, EV charging station and medical equipment.

1.7 Moving, Transporting and Storage instructions

It is recommended to store charging station indoors and in a non humid environment, keeping it in its original packaging until it is ready to be installed. Storage temperature should be between –30 °C and +60 °C

Chapter 2
PREPARATION

2.1   Site Selection

Selecting a site for HomeBox Slim installation will likely require consideration of a combination of factors. While every site is unique and every HomeBox Slim host has priorities for installation. Some of the most common design elements to look for:

Power Rating of Charging Station

Proximity to Power Distribution Box
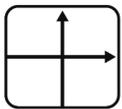
Available Parking Space

Difficulty of Installation

Visibility of the Charger

Pedestrian Trip Hazard

Available Network Communications

Integration to Charging Platforms

**Power Rating of Charging Station** - Connecting the Charging station to a power source will require evaluation of existing electrical capacity. Sometimes greater power charging stations are unnecessary for the selected location. Such as: workplaces, where people tend to stay the whole workday and bigger power charging station will not be beneficial. When choosing between charging station, power considers two parts: the electrical system at the location of the EVSE installation, and electrical cabinets, panels, and circuitry will need to accommodate the anticipated additional load.

Proximity to Power Distribution Box - Installing the Charging station close to the required power source reduces the need for cutting, trenching, and drilling to add new conduits to reach the EVSE. Additionally, the cost of installation can be reduced if the existing conduit has adequate capacity for EVSE
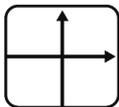
Available Parking Space - In addition to standard parking space considerations, make sure to accommodate extra space for charging station
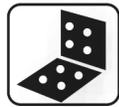
Difficulty of Installation - Consider most easiest approach for installation. Select such location, where least labor would be necessary for installation.

Visibility of the Charger - Location of installation should be considered with visibility of charger in mind.

Pedestrian Trip Hazard - Charging station and charging cables should not interfere with pedestrians routes and cause to be a tripping hazard

Available Network Communications - Charging stations are much more with internet communication: mobile phone apps, payment solutions, charging reservations - all these features are available with internet connectivity. When choosing a location for the charging station: make sure there are possibilities to share a network with charging station. Chargers usually accept all the most popular communication types: Wi-Fi, LAN, or GSM/4G.

Integration to Charging Platforms - The most charging stations have integrated payment solutions. Whether in a residential or public areas, the charging station will need to communicate with the back-end system in order to provide a payment gateway. We recommend using Elios platform for full user satisfaction

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## 2.2   Electrical Requirements

Make sure to follow these electrical installation requirements. Failure to do so may cause equipment damage or personal injuries

This Charging station was designed to work with TNC-S; TNS or TT Power supply systems.

TNC-S

TNS

T T
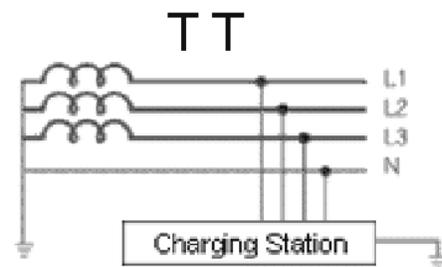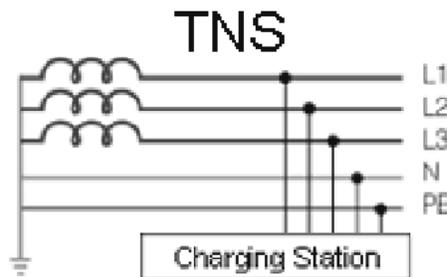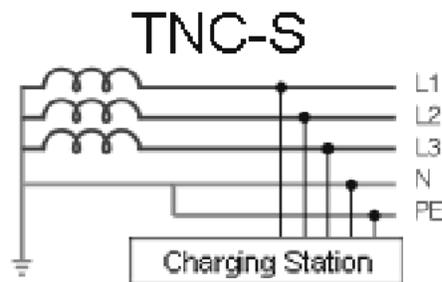
Make sure grounding resistance is no greater than 10 Ω

Do NOT install charging station with TNC or IT power supply systems.

2.3   Wiring Recommendations

Recommended calculated values for HomeBox Slim charging station wires: (When calculated cable length Max: 50 meters; Power factor (cosφ): 0,95; voltage drop (%): 7%; Cabling method: Four single core copper wire in the pipe (three-phase)):

Total Charger Power (kW)	Amperage per Phase (A)	Recommended cross-section (mm^2)
3,7 kW	16 A	3 x 2,5 mm^2
7,4 kW	32 A	3 x 6 mm^2
11 kW	16 A	5 x 2,5 mm^2
22 kW	32 A	5 x 6 mm^2

Keep in mind that these values are only recommendations, each installation is different and cable cross-section each time should be calculated individually.

Warning: failure to select the correct cable cross-section may cause equipment damage or electrical fire.

When using TNS and TNC-S systems, it is recommended to use 5 single-core copper wires. When using TT system with separate grounding, make sure that the grounding cable cross-section matches the power supply cable cross-section.

The absolute maximum cable cross-section must be no greater than 6 mm2. The thicker cable will not fit the cable terminals inside the charging station.

Chapter 3
INSTALLATION

3.1   Charging Station Overview

HomeBox Slim is designed to be used at home or office with top industry quality, ensuring long life and high reliability. HomeBox Slim is a simple and cost effective solution for Mode 3, charging up to 22 kW. HomeBox Slim can be used in garages, parking lots and other private areas.

There are four major HomeBox Slim configurations:

- HomeBox Slim - Standard version with 62196-2 socket.
- HomeBox Slim Plus - Instead 62196-2 socket - Type 2 cable.
- HomeBox Slim GO - With CEE 32 or CEE 16 supply cable.
- HomeBox Slim GO Plus - With CEE and Type 2 cable.

Slim   Slim Plus   Slim GO   Slim GO Plus

Charging Station **HomeBox Slim** technical specification:

Weight: **5,5 kg**
Dimensions: **440 x 160 x 130 mm**
Phase Count: **1 or 3**
Operating Voltage: **230 / 400 V/AC**
Maximum Power: **22 kW**
Impact protection rating: **IK08**
IP class: **IP54**
Temperature range: **-30 °C to +50 °**
LED charging indicator: **YES**
Smart Energy Meter: **YES, MID**
RFID user control: **YES**
Internet communication: **Optional***
Communication type: **GSM/LAN/WiFi**
Dynamic Load Management: **Optional***
DC leakage detection: **Optional***
RCD type B: **Optional***
RCD trip reset: **Optional***
Payment terminal: **Optional***
Back-end management: **YES Elios.Cloud**
Mobile application: **YES**
UV resistant: **YES**
CE certificate: **YES**

* - optional features are not present in standard unit configuration

EC DECLARATION OF CONFORMITY

Manufacturer: Elinta Charge UAB
Address: Terminalo str. 3, Biruliskes, LT-54469 Kaunas district, Lithuania

Herewith declares that socket-outlet board, stationary system with type markings

CityCharge V2, CityCharge Mini, HomeBox, HomeBox Mini, HomeBox Slim series

Trade mark   Elinta Charge

Are in conformity with the provisions of the following EC directives:

Low Voltage Directive (LVD) 2014/35/EU
Electromagnetic Compatibility Directive (EMC) 2014/30/EU
Radio Equipment Directive (RED) 2014/53/EU
RoHS 2011/65/EU

And that the following harmonized or national standards have been applied:

EN 61439-1:2011
EN 61439-3:2012
EN 50160:2010/A1:2015
IEC 61439-7:2014

Electromagnetic Compatibility (EMC)
EN 55022:2010
IEC 61000-3-2:2006
IEC 61000-3-3:2008
IEC 61000-3-12:2011
IEC 61000-4-4:2004
IEC 61000-4-5:2014
IEC 61000-4-6:2014
IEC 61000-6-3:2007/A1:2011/AC:2012

**Operation, communication and connection according to IEC 61851-1:2017, IEC 61851-22 and IEC 62196.**

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CEO _____ Ignas Mikutis

June 2018

Depending on the optional extras, the charger comes equipped with RFID authorization, cable lock, RGB status LED, 4G/GSM modem:
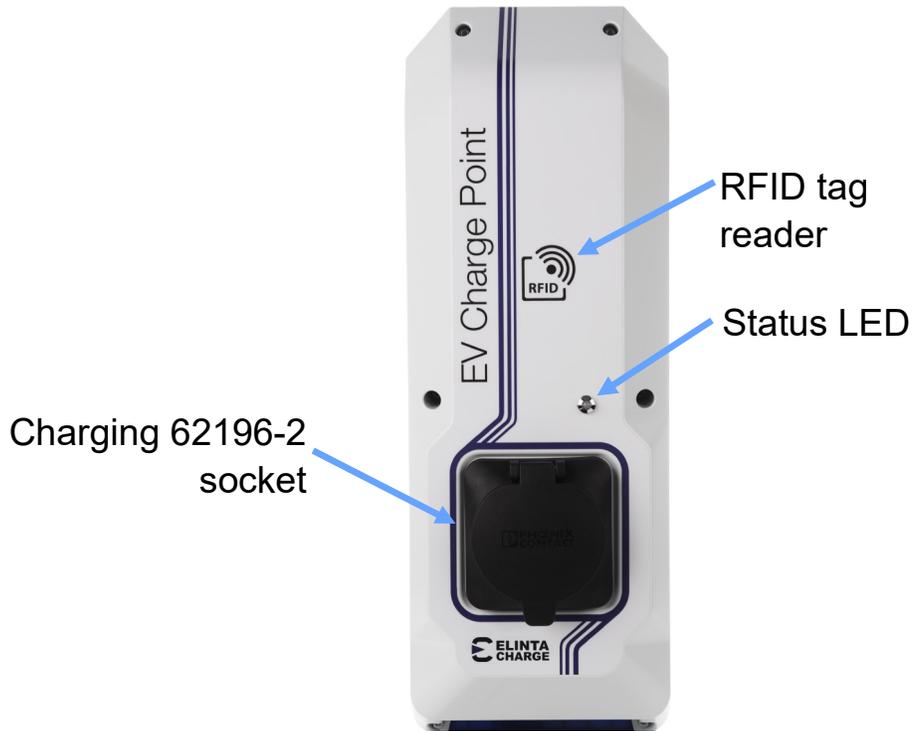
Charging station HomeBox Slim comes in a compact package. Measuring width just over 160 mm, thickness 130 mm, and height of 440 mm.
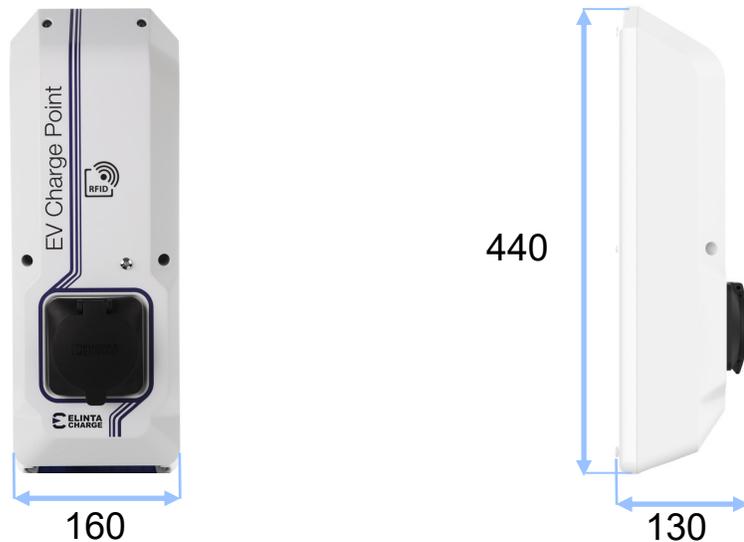
3.2   Standard Unit and Optional Extras

The HomeBox Slim charging station is available with many optional extras. The standard unit comes equipped with 62196-2 charging socket without RFID authorization and without the cable lock for the socket. Status RGB LED indicator is standard for all HomeBox Slim units.

RFID - this option allows to charge only when the user is authorized to do so. Chargers with RFID option come with a cable lock. After authorization, the cable is locked by the socket. The cable remains locked until the user swipes an RFID card/tag on the charging sta-

TYPE B RCD - Standard HomeBox Slim comes with Type A residual current devices:

Type: A. These RCD type A ensures:

- The control and isolation of electrical circuits.
- The protection of persons against direct and indirect contacts.
- The protection of installations against insulation faults Type A RCD means that tripping is ensured for sinusoidal, alternating residual currents, as well as for pulsed DC residual currents, whether they be quickly applied or slowly increased.

Many European countries have a law that applies to EVSE installation and requires to meet the requirements of IEC62955 (Residual direct current detecting device (RDC-DD) to be used for mode 3 charging of electric vehicles). In this case RCD type A is not enough and must be switched over to Type B.

RCM - (residual current monitoring) - Intelligent Residual Direct Current Sensor will detect an unsafe DC residual current and disconnect the supply to the EV. The system will try to continue charging if the leakage does not persist. The sensor complies with IEC61851-1:2017 and is certified by TÜV Rheinlandfor. This solution can be used as a cheaper alternative for Type B RCD.

Shut socket - HomeBox Slim with shutter 62196-2 socket. This shutter protects against foreign objects entering the socket. The socket allows plugging only 62196 charging cable and no other cable or object.

DLM - (dynamic load management) - balances energy consumption between your electric vehicle, charging station and other devices on site. Elinta charge HomeBox Slim equipped with additional smart energy meter, which is mounted on the power distribution cabinet and is used to measure the power consumption of the building, and a reserve is allocated to the charging station to charge the electric vehicle.

Two DLM options are available:
- Home (for buildings with up to 80 A power supply input)
- Business (for buildings with up to 300 A power supply input)

The business DLM system comes with extra equipment: 3 pcs of current transformers which must be installed in the main distribution power box for current measurements, while the home version does not use these current transformers.

The home version of the DLM is suitable for balancing power for one charging station, while the business version can balance power for multiple charging stations. The home version of DLM does not require an active internet connection, while business DLM must be provided with internet connectivity.

Power output - We are offering single phase as well as three phase option for the HomeBox Slim. For power output available, see the table below:

Power Output (kW)	Phase Count	Current (A)
3,7	Single-phase	16
7,4	Single-phase	32
11	Three-phase	16
22	Three-phase	32

Communication Types - For a complete user experience: software up-dates, back-end system, full charging control, it is recommended to choose the HomeBox Slim with one of the three communication options:

- LAN
- Wi-Fi
- GSM/4G

Lan - communication uses ethernet cable - it is the most reliable communication type. Ensure that your home network works with DHCP protocol which allows the charger to automatically select the IP address.

Wi-Fi - easy to set-up. If connection strength is sufficient the charger can use the home Wi-Fi router for connectivity.

GSM/4G - best solution in remote locations where LAN or Wi-Fi connectivity is not possible. If using your own SIM card, make sure that the SIM card does not have PIN code set. The SIM card should have up to 200 megabytes of data allowance per month.

For your convenience, Elinta Charge offers a prepaid SIM card for data transfer. The SIM card needs to be supplemented every 2 years.

3.3   Charging Station Unpacking

The Charging station comes packed in a carton box. Store the charging station in a non-humid environment until installation day.

After removing the Charging station from the package, save the carton box for all the warranty period in case there would be needed to send the charger back for repairs.

Standard package includes:
- Charging Station HomeBox Slim - 1 pcs.
- Circuit breaker 3p 32A - 1 pcs.
- Residual current device 40A 30mA - 1 pcs.
- Mounting template for drilling - 1 pcs.
- Mounting bolts - 4 pcs.
- Cable Sealant PG21 - 1 pcs.

Additionally if the RFID version is selected:
- RFID cards - 10 pcs.

Additionally if the LAN/WI-FI/GSM version is selected:
- RFID tags - 10 pcs.

**If option Dynamic Load Management for Home selected:**
- Smart energy meter - 1 pcs.
- Smart energy meter cables for connection - 1 pcs.

If option Dynamic Load Management for Business selected:
- Smart energy meter - 1 pcs.
- Smart energy meter cables for connection - 1 pcs.
- Current measuring transformers - 3 pcs.

## 3.4   Preparation For Installation

Take out the charging station from the package. Unscrew x6 screws from the charging station housing:
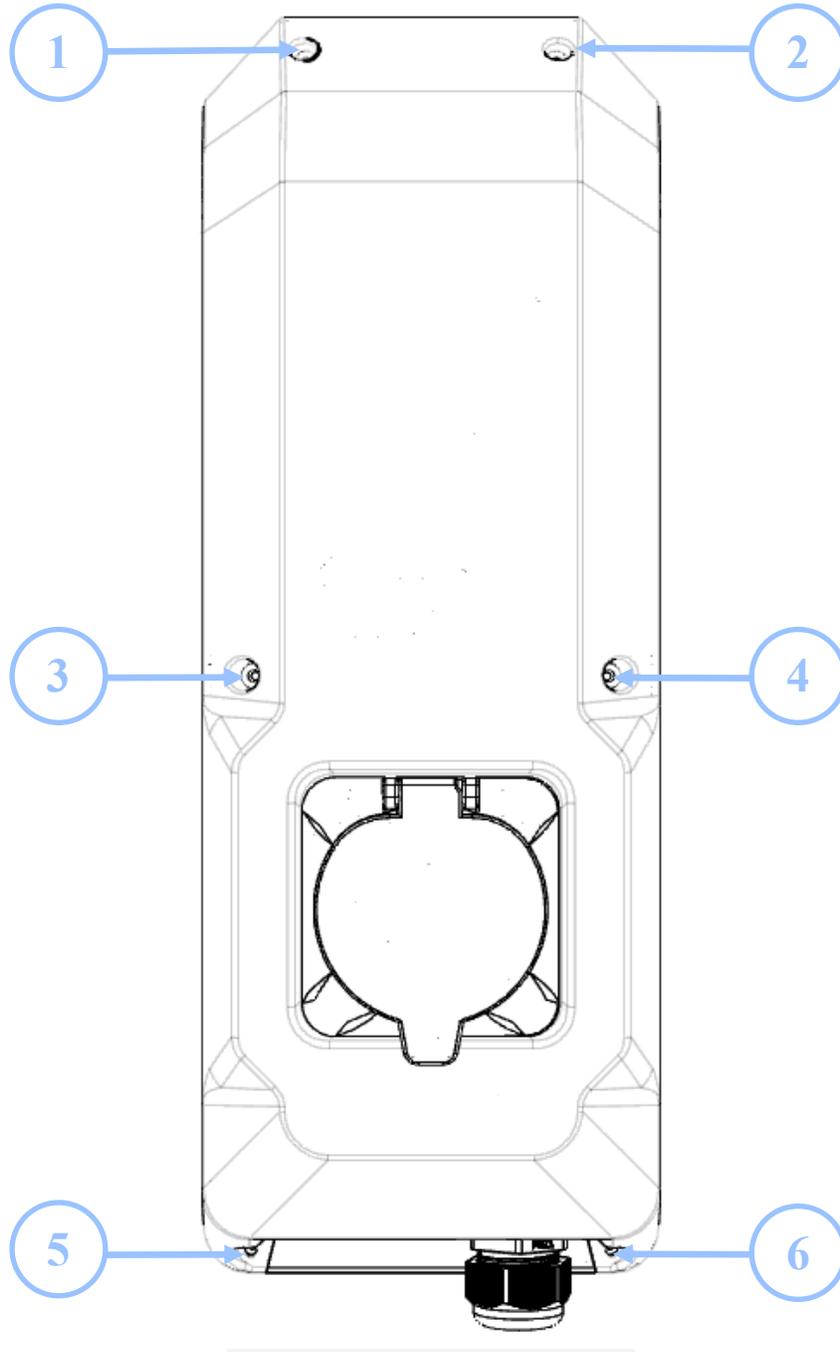
Lift the HomeBox Slim cover up. Carefully, while holding both sides, lift and place the charging station to the safe place.

🛇 Do not allow the HomeBox Slim cover to hang by the wires.
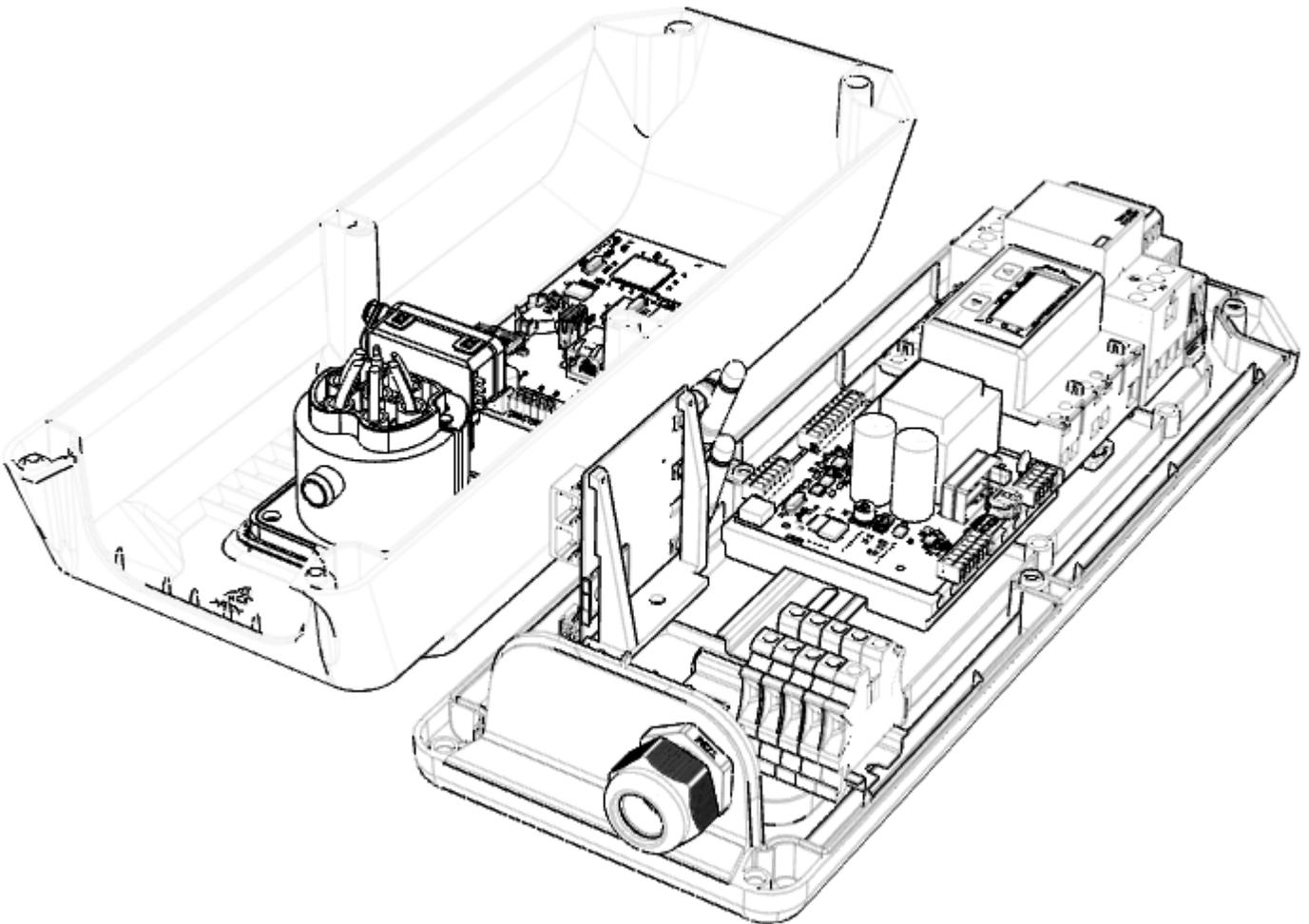
3.5 HomeBox Slim Internal Structure

RFID module
Optional*

LAN module
Optional*

Wi-Fi module
Optional*

Cable lock

62196-2 socket

Power supply

Contactor

Energy
meter

Charge
Controller

Wire
terminals

GSM modem
Optional*

Wire sealant
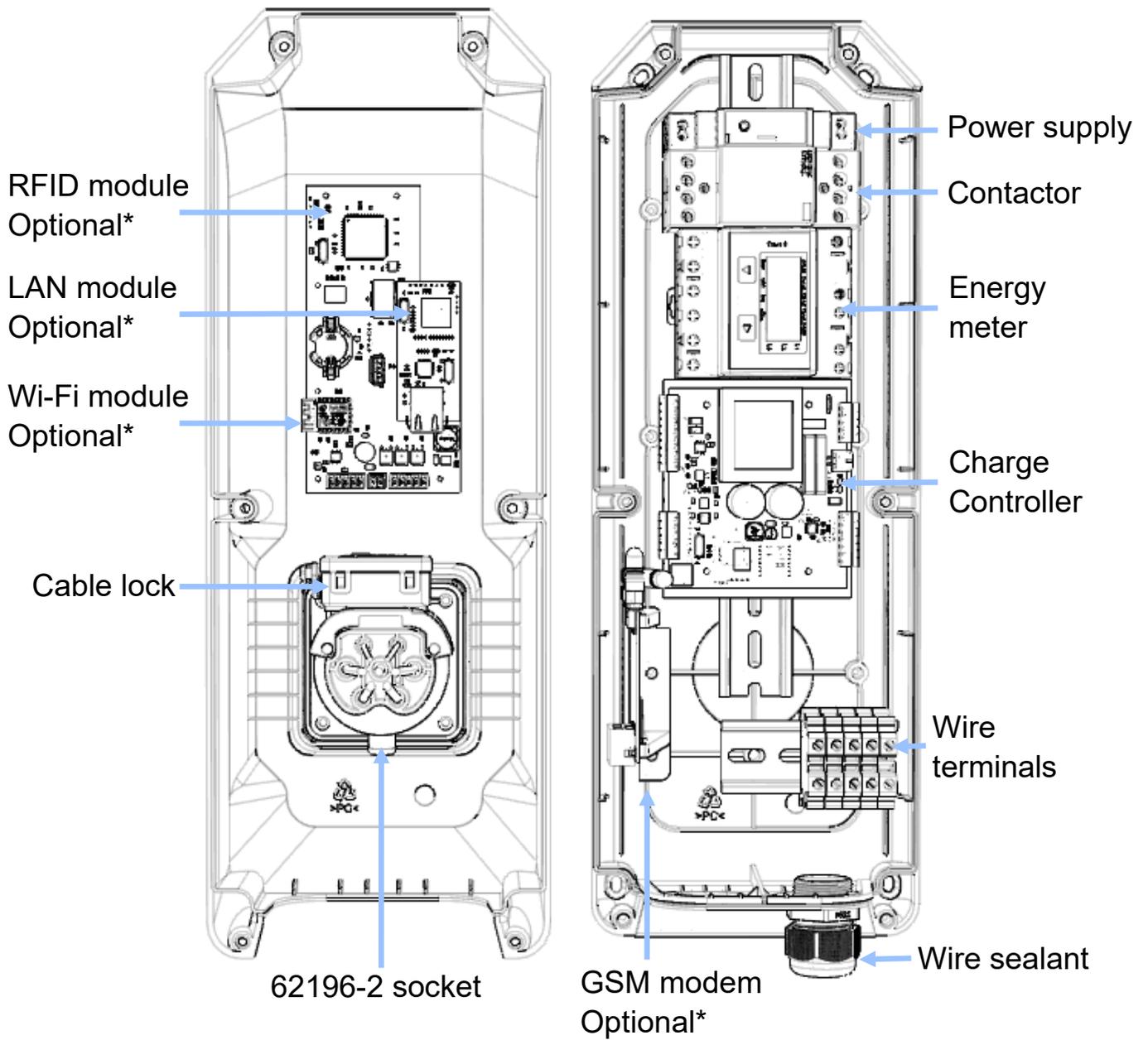
3.6   Wall mounting

Tools needed to mount the charging station on the wall:

- Drill
- 6 mm concrete drill bit
- Level

1. From the HomeBox Slim package, take out the mounting template.
2. In your desired installation location, place the mounting template on the wall.
3. Using the level, check if the mounting template is in a horizontal position.
4. Using a 6 mm drill bit, drill through the mounting template into the wall.
5. Plug the wall anchors into the wall.
6. Place the HomeBox Slim on the wall and check that the drilled holes correspond to the holes of the HomeBox Slim.
7. Tighten the HomeBox Slim with the screws provided.

3.7   Installation Of Protection Devices

The HomeBox Slim charging station comes with all the necessary safety   devices: Three phase 32 Amp circuit breaker and a residual current device (RCD 40 Amp; 30mA).

Circuit breaker   RCD

Because of the small HomeBox Slim package, these safety devices must be installed inside a separate power distribution box.

This work must be performed by a professional electrician. Working with mains voltage is extremely dangerous and can be deadly.

For standard unit installation, at least 7 module spaces is necessary inside the power distribution box.

For charger with the DLM option: 11 module spaces is necessary inside the power distribution box.

3.8   Connection Diagram (With DLM)

In this connection diagram, the dashed lines show that the protection devices and the energy meter must be installed inside the power distribution box. The smart energy meter must be installed on the input line of the building, measuring the total consumption of the building. The smart energy meter and the charging station must be connected by the twisted pair wire.
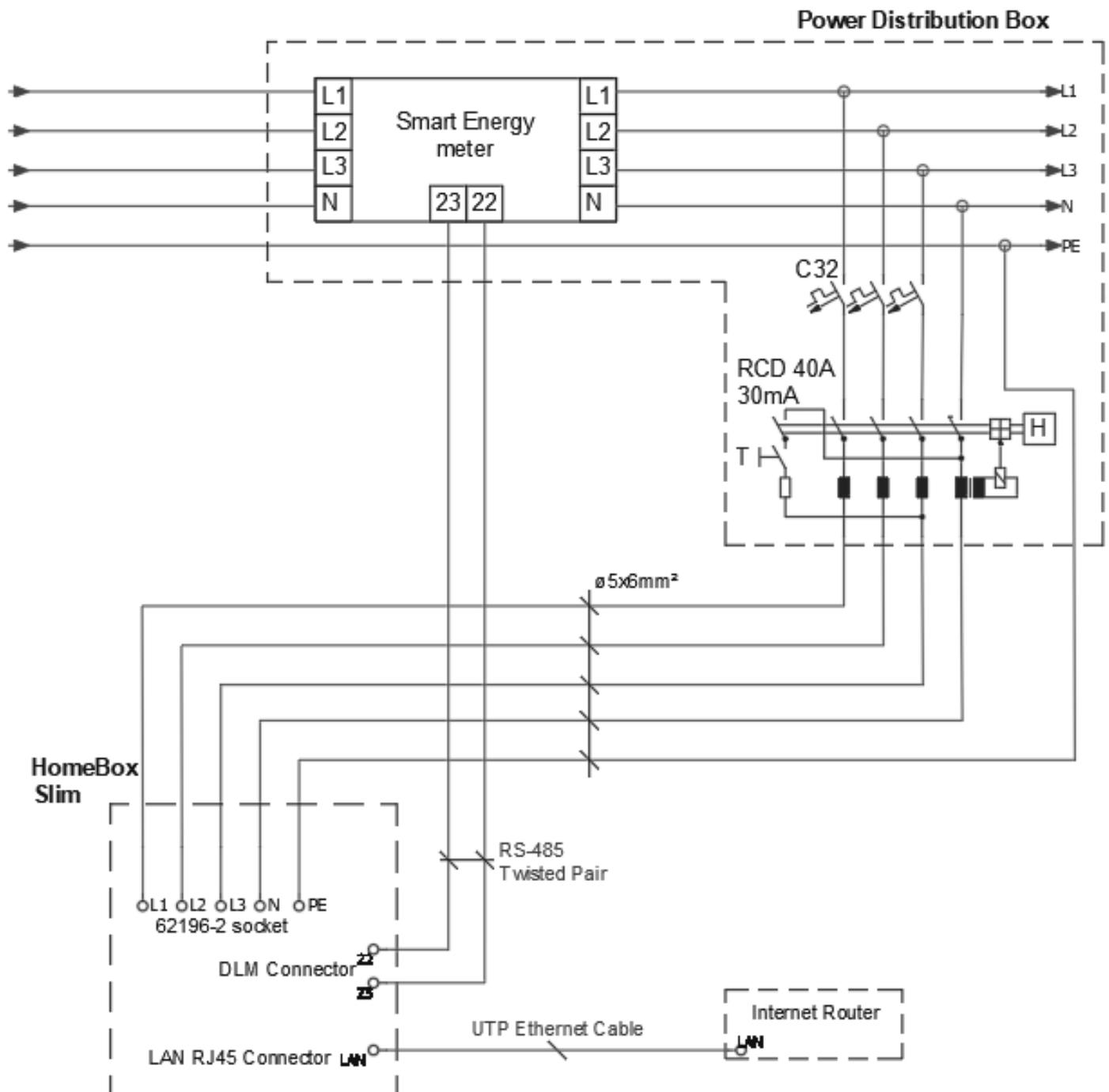
3.9 Power Cable Introduction

The HomeBox Slim charging station accepts a power supply cable from the bottom of the housing. When introducing the power supply cable into the charging station, make sure to use the given grommet (cable sealer) in order to protect the charging station from the humid environment.

⚡ **Danger:** Before the power cable connection, make sure that there is no power running through the Power Supply cable.

Connect the Power Supply Cable three phases L1; L2; L3 to three separate wire terminals. (Grey color wire terminal)

Connect the Power Supply Cable neutral wire (N) to the blue wire terminal.

Connect the Power Supply Cable Earth wire (PE) to the green-yellow wire terminal.
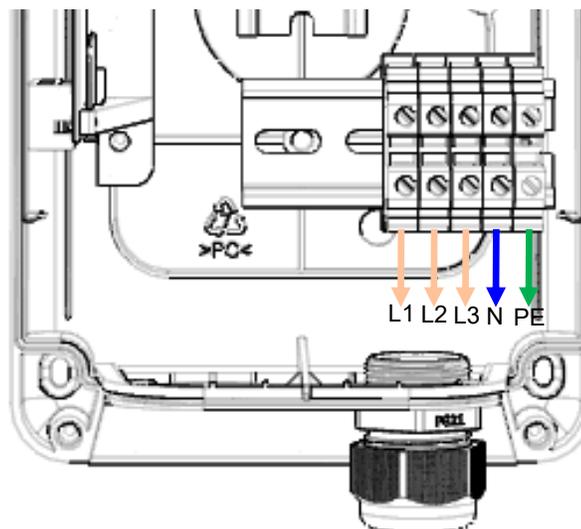
❗ **Note:** For single phase connection, connect: L1; N; PE

3.10   LAN Cable Connection (optional)

Danger: Before connecting the LAN cable, make sure that there is no power running through the Power Supply cable. Switch off the power to the Charging Station.

If the HomeBox Slim charging station is equipped with a LAN option, make sure you follow these procedures to route the cable correctly in the charging station.

RJ45 Connector
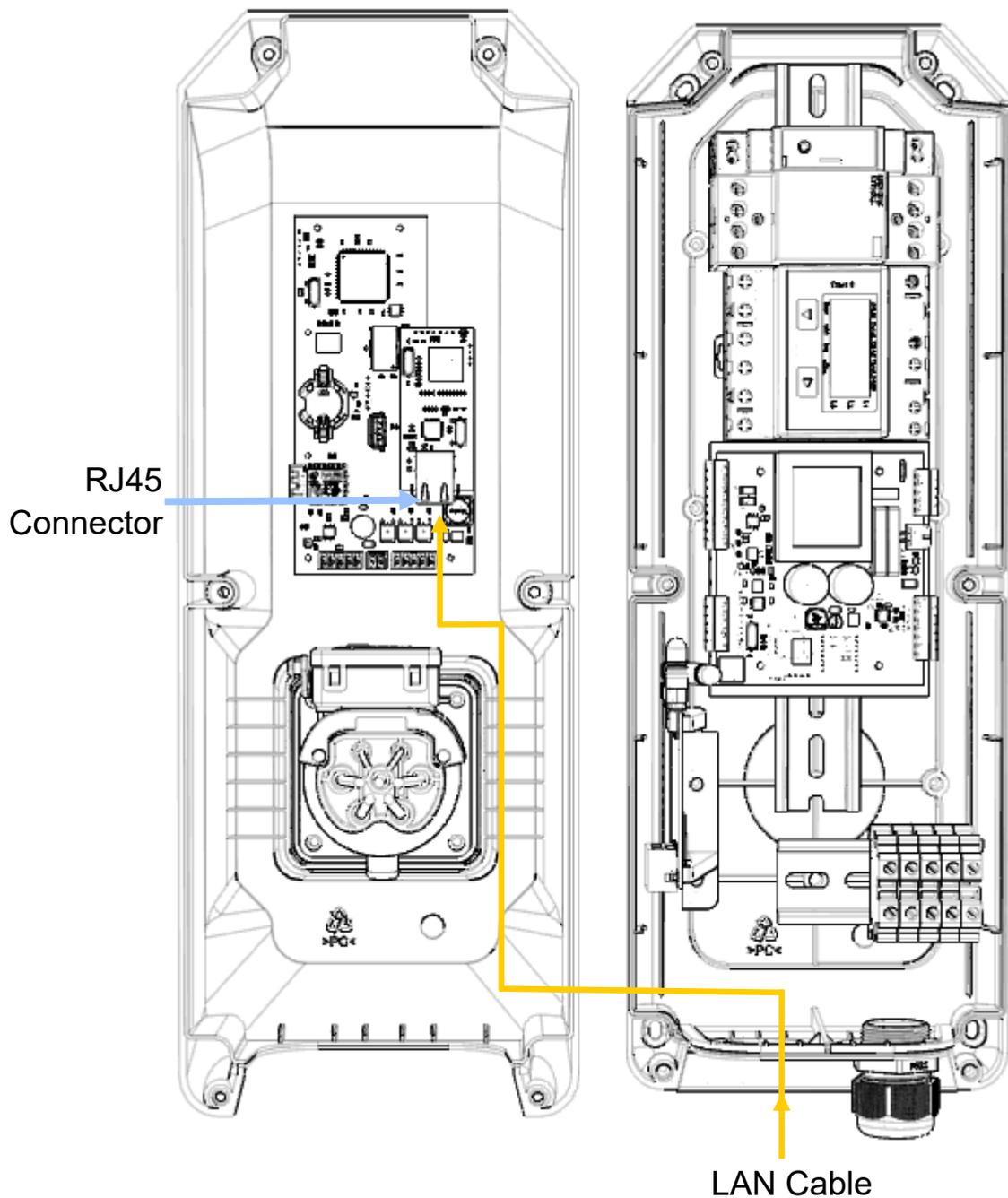
LAN Cable

1. Make sure that LAN cable routing does not disturb the cable lock or any other internal charger component. Use zip ties to tie the LAN cables to existing charging station cables.

Use the separate grommet for LAN cable introduction into the charging station.

2. Make sure that the cable does not disturb the operation of Circuit breakers, RCD, or cable locks of the station. Use cable ties for secure mounting.

3. Connect UTP Ethernet cable using RJ45 connector to the connector located on the charger Mainboard.

4. Make sure that the device providing internet to the charging station (router) is in DHCP mode and the charging station can access the internet.

3.11   Wi-Fi Set-Up (optional)

If the HomeBox Slim charging station comes with Wi-Fi option, make sure to follow these procedures to correctly set up the Wi-Fi correctly:

1. Switch off the Power supply.

2. Locate DIP switches on the RFID board.

3. Set DIP switches to the following:
1 - **on**; 2 - **on**; 3 - **off**; 4 - **on**

4. Turn on the Power supply.

5. In order to configure the charger, you will need a WiFi-enabled device. When the charger is turned on, search for WiFi networks until you see CC Config XXXX
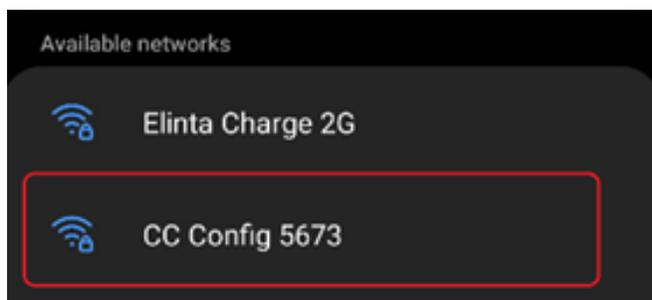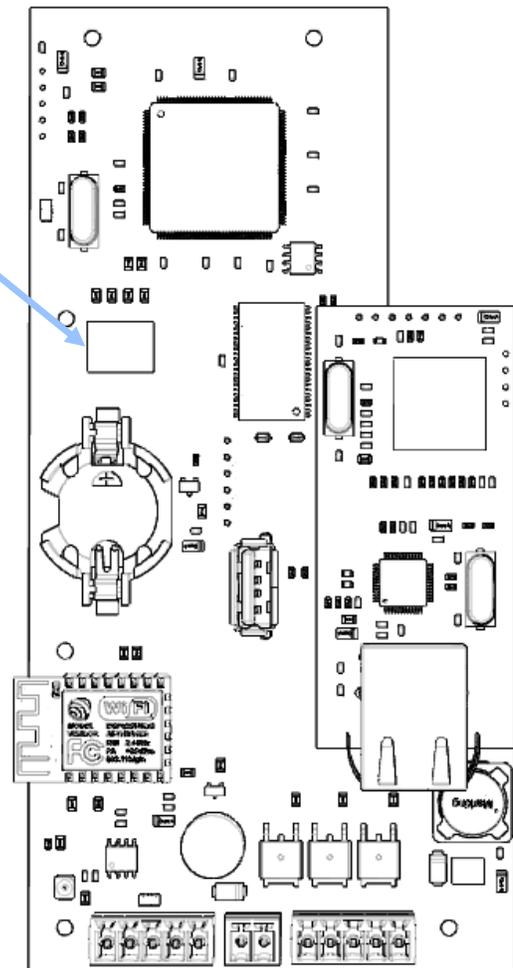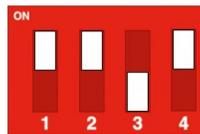

6. Connect to the network using the password: elioscitycharge:
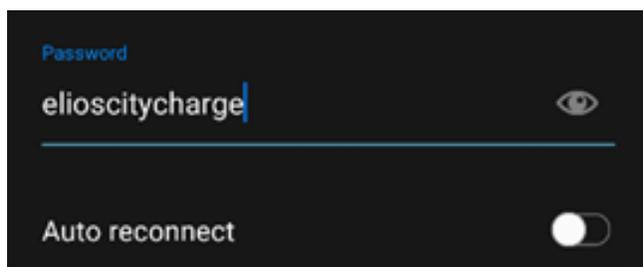
7. Go to configuration website via IP address 192.168.4.1 or Manage router:
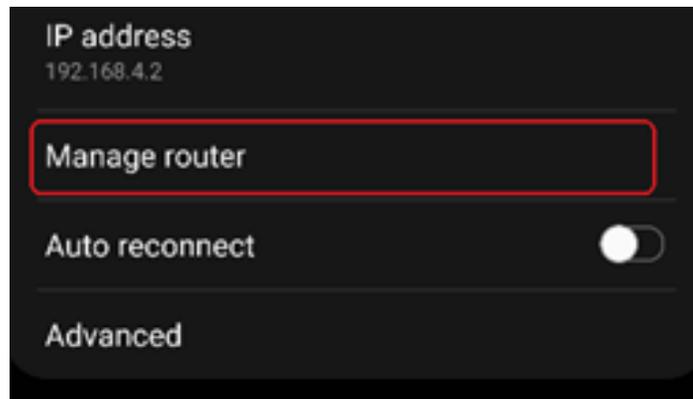
8. Connect to webpage with same elioscitycharge password:
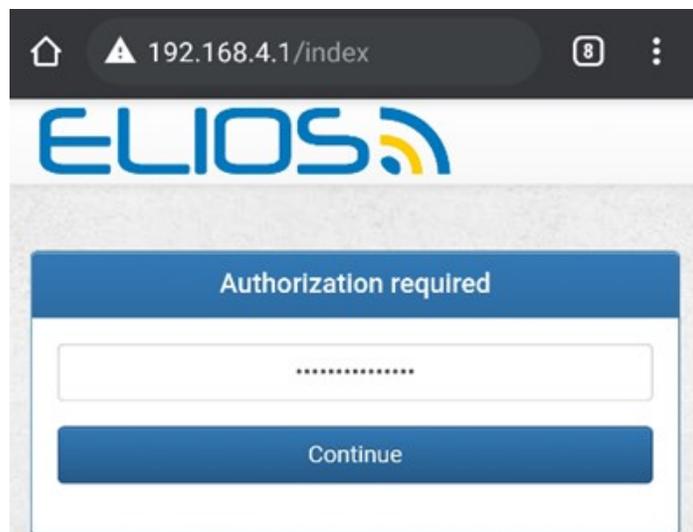
9. Go to the Online tab and you will find two windows: SSID and Password
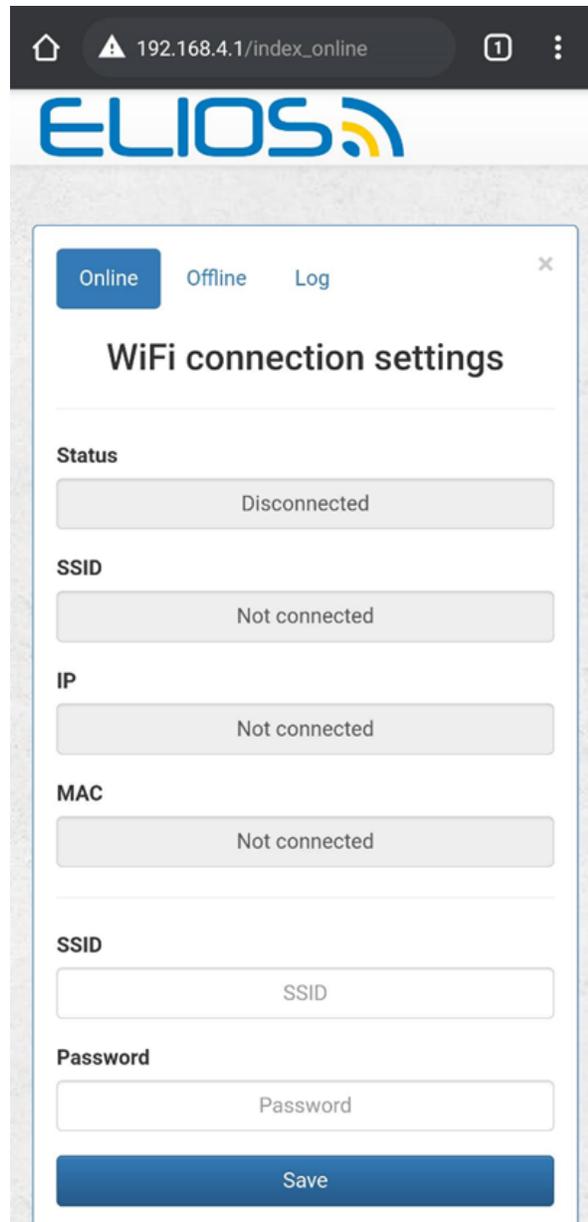
10. Enter your WiFi network name (SSID) and password. Elinta Charge WiFi can accept only 2.4 GHz WiFi network (5 GHz WiFi network is not acceptable).

11. Click the Save button. If the configuration was saved successfully, you will see the message "Configuration set successfully!":
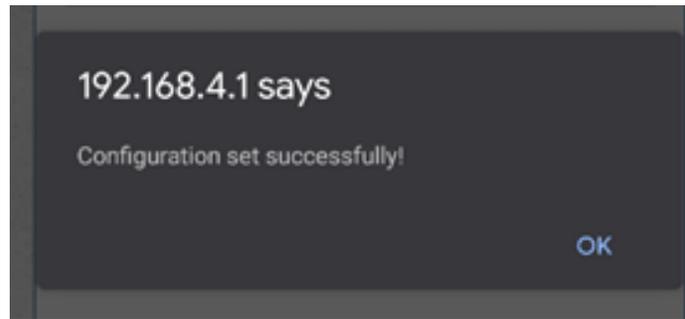
12. You can check your SSID and Password in Log tab:
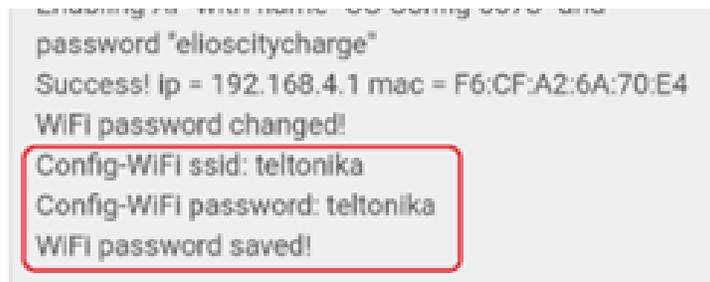
13. Turn off the power supply for the charging station.

14. Set DIP switch to the following configuration: 1-OFF, 2-OFF, 3-OFF, 4-ON.

15. Turn on the power supply. After a successful connection to the WiFi network, CC Config XXXX will be hidden automatically.

3.12 GSM Modem Settings And Setup (optional)

The HomeBox Slim charging station supports multiple communication types: LAN, Wi-Fi, GSM/3G/4G. The charging station can be installed in a remote location and has a good communication speed via the mobile network.

If the HomeBox Slim is selected with the GSM/3G/4G option, the additional device is installed in the charging station: Teltonika RUT240 modem:

GSM modem
Optional*
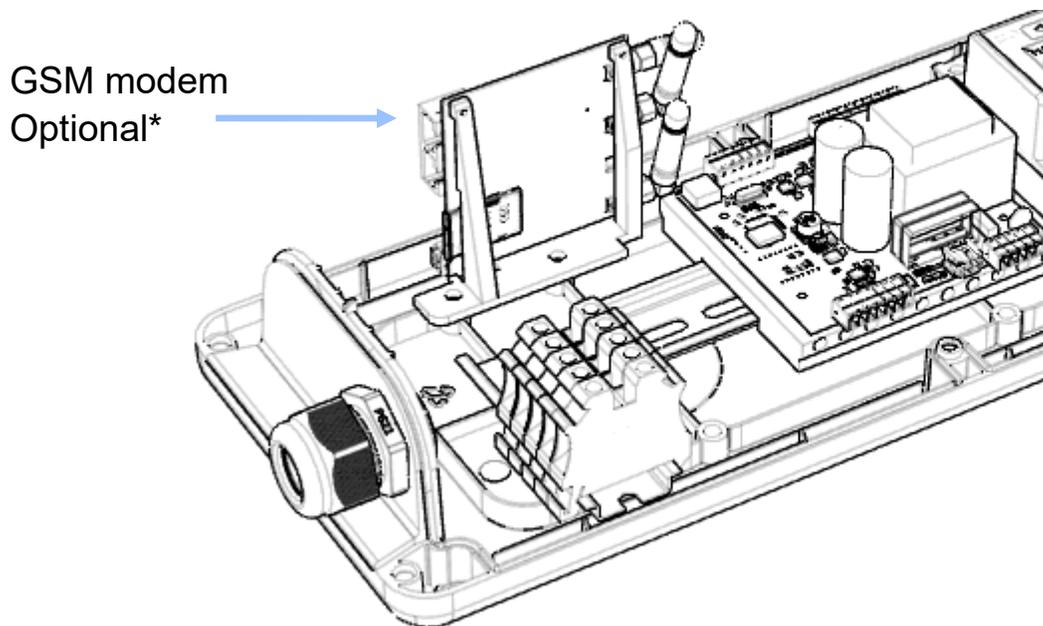
The RUT240 modem is a compact industrial 4G (LTE) router equipped with 2x Ethernet ports and Wi-Fi:

To set up the station for operation with GSM/3G/4G communication, the card SIM must first be inserted into the modem:

1. Using a sharp object, push the SIM card tray release button.
2. Take out the SIM card tray.
3. Put the SIM card into the tray.
4. Push SIM card tray into the modem.

Make sure there is no PIN set on the SIM card. SIM card should have a data allowance of up to 200 megabytes per month.
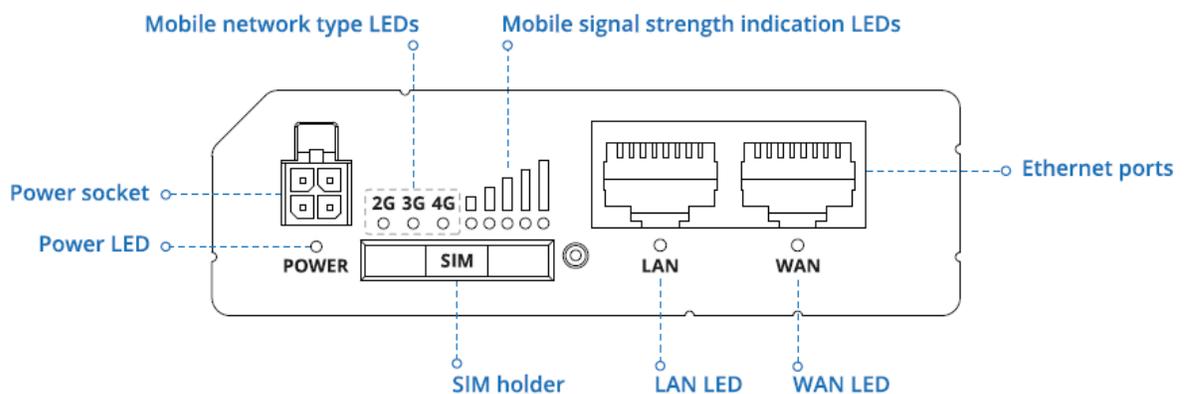
Successful insertion of the SIM card and communication should be confirmed by the LEDs indicating cellular signal strength and cellular type. The modem will flash to indicate which mode it is operating in: 2G/3G or 4G.

3.13   Alternative LAN Connection

The Charging stations, which come with GSM/3G/4G communication modem, can, alternatively, be connected using Ethernet/LAN cable.

Simply plug the Ethernet/ LAN cable into the WAN port on the modem. WAN LED should light up and start flashing, indicating that communication has started.
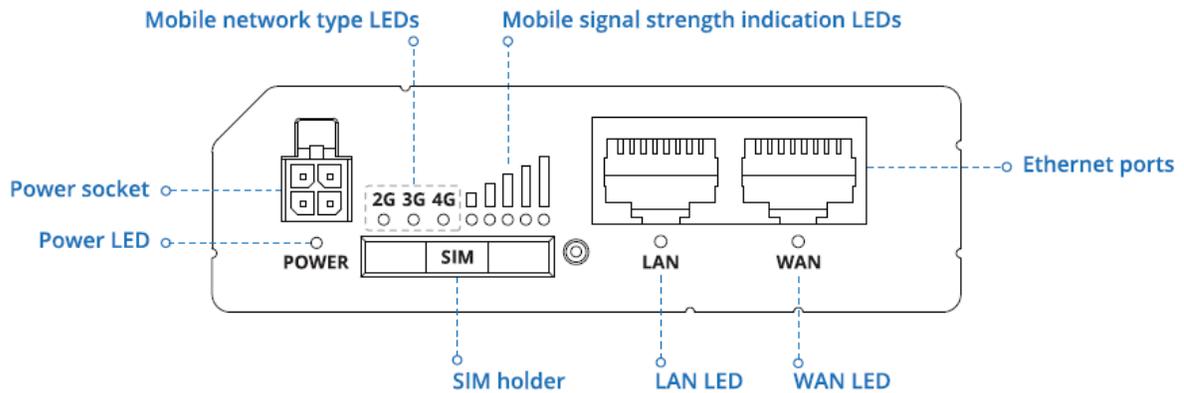
🚫 **DO NOT press** the "reset button" on the modem. The HomeBox Slim is shipped fully configured for use. Pressing the "Reset" button will erase all configuration settings.
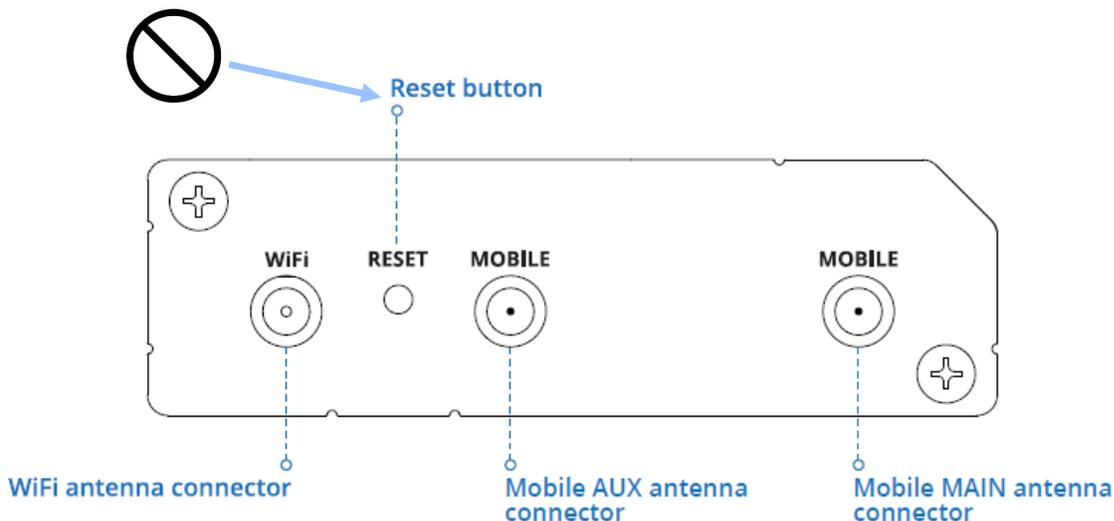
3.14 Dynamic Load Management Wiring (optional)

Danger: Before Dynamic Load Management connection, make sure that there is no power running through the Power Supply cable. Switch off the power to the Charging Station.

Dynamic Load Management (DLM) requires extra cabling between a smart energy meter and a charging station. For Dynamic Load Management system, use the standard UTP Ethernet cable:

1. Install the given Smart Energy meter into your building power distribution box.

2. Connect Smart Energy meter Data Line 22 to charger Black Wire and Data Line 23 to Red Wire.
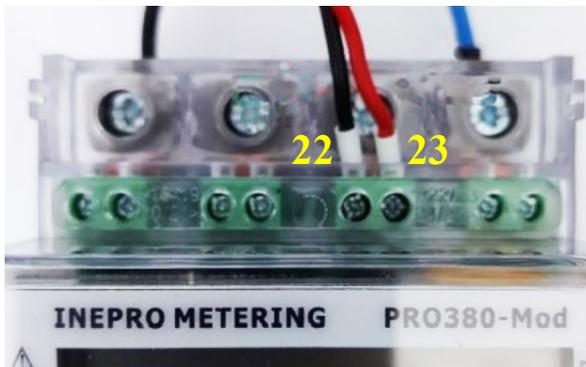
Connect Two data wires to the loose connection located near the power terminal.
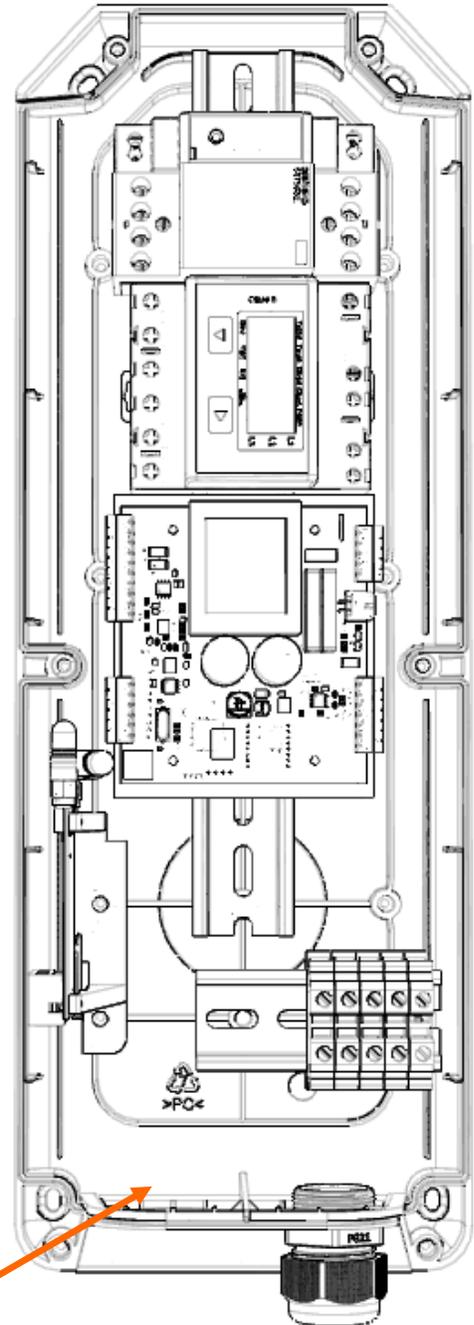
Chapter 4
INITIAL STARTUP

4.1 First Time Start-UP

STEP 1: Turn on the Circuit Breaker and the RCD to power ON the charging station.

STEP 2: Charging station LED should be blank for approx. 10 seconds.

RGB LED

STEP 3: The LED should briefly light up green for approx. 1-2 seconds.

STEP 4: LED should light up in RED color for brief moment:

STEP 5: The sequence ends and LED remains to shine in Green color:

STEP 6: The charging station is now ready to be used.

4.2 Using The Charging Station

In standby mode, the charger LED remains green.

STEP 1: Place the RFID tag at the location marked with the RFD symbol:

Put RFID here

STEP 2: The charging station LED starts to blink in green color.

STEP 3: Connect your charging station to the EV with a cable. After connecting the cable, the charging station will lock the charging cable and start charging. The LED on the charging station will change color to blue:

STEP 4: When the EV reaches full charge, the LED starts flashing green:

STEP 5: To end the charging process: Place the RFID tag on the location marked with the RFD symbol. The charging station unlocks the charging cable and LED changes back to green.

Chapter 5
SETTINGS AND TESTING

5.1 Changing The HomeBox Slim Power Output

The HomeBox Slim charging station has the option of changing the charging power output of the Type 2 socket. This can be useful if you made a mistake when buying a charging station and bought one that was too powerful - the circuit breaker on your power box will trip when the electric car is charging.
The correct way to solve this problem would be to increase the input power, but sometimes it is sufficient to simply reduce the output power of the charging station, which increases the charging time without changing the input power.

The power of the charging station can be reduced by following these steps:

1. Turn off the power to the charging station input.
2. Loosen the 6 enclosure screws and open the station enclosure.
3. Locate the rotary switch on the charge controller (top left) and use a flat-blade screwdriver to set the desired position:

Note: For most HomeBox Slim chargers that can be activated via RFID or internet/app, the knob must be set to 0, as these chargers are equipped with a mainboard that tells the charge controller the power limits. If you set the rotary knob to a value other than 0, the charger will no longer be functional.
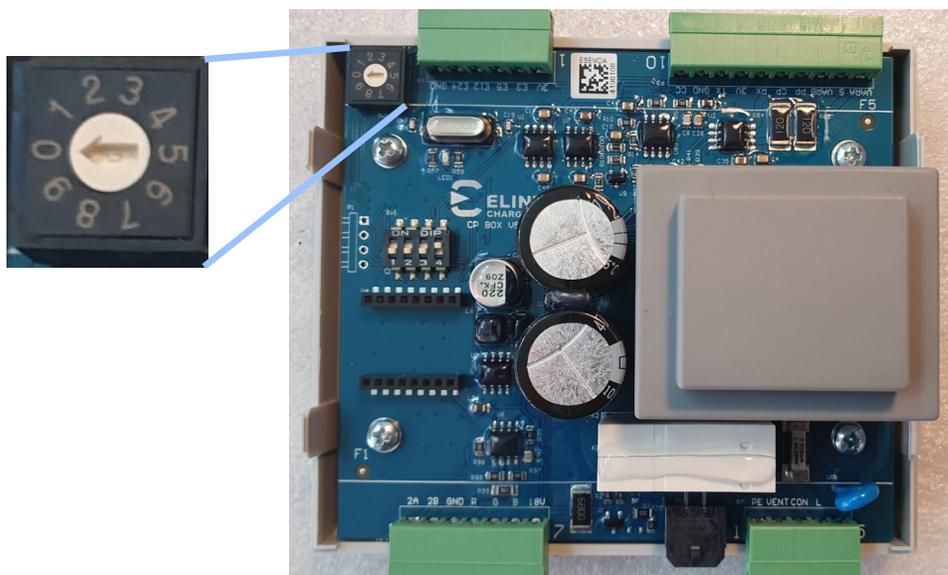
If your HomeBox Slim comes with this MainBoard **DO NOT** adjust the knob on the charger controller
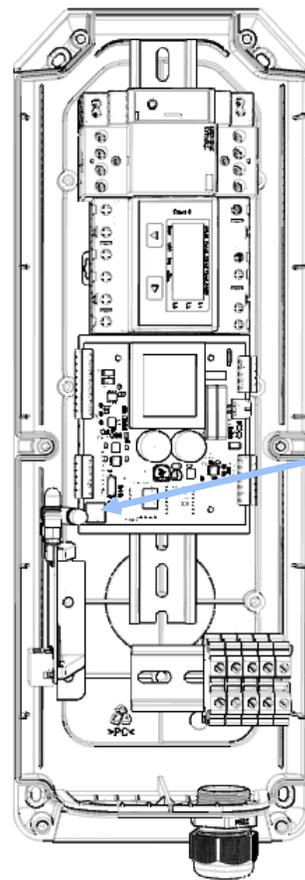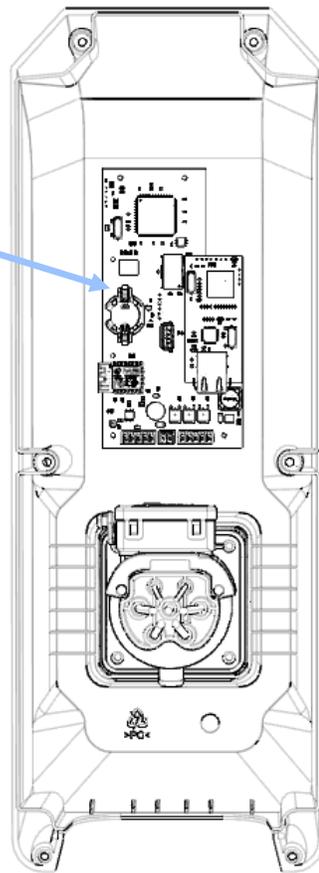
Knob For Power Adjustment

Using the rotating switch these currents and power outputs can be selected:

Switch position	Current (A)	Power (kW) @ 1 phase	Power (kW) @ 3 phase
0	Use power settings from the Mainboard		
1	6 A	1.4	4.2
2	8 A	1.8	5.5
3	10 A	2.3	6.9
4	13 A	3	9
5	16 A	3.7	11
6	20 A	4.6	13.8
7	25 A	5.8	17
8	28 A	6.4	19
9	32 A	7.4	22

🚫 Never change the charging power to the higher side. Do not exceed the designated power.

5.2   RCD Type B (optional)

The standard HomeBox Slim comes with residual current devices Type: A.

These RCD type A ensures:
The control and isolation of electrical circuits.
The protection of persons against direct and indirect contacts.
The protection of installations against insulation faults.
Type A RCD means that tripping is ensured for sinusoidal, alternating residual currents, as well as for pulsed DC residual currents, whether they be quickly applied or slowly increased.

Many European countries have a law which applies to EVSE installation and require to meet requirements of IEC62955 (Residual   direct current detecting device (RDC-DD) to be used for mode 3 charging of electric vehicles). In this case RCD type A is not enough and must be switched over to Type B.

As a cheaper alternative, residual current sensing rings can be used, which when used together with Type A RCD acts similar to Type B RCD.

5.5 Dynamic Load Management Setup offline (optional)

If the HomeBox Slim charging station comes with offline DLM option, make sure to follow these procedures to correctly set up the DLM correctly:

1. Switch off the Power supply.

2. Locate DIP switches on the RFID board.

3. Set DIP switches to the following:
1 - **on**; 2 - **on**; 3 - **on**; 4 - **off**

4. Turn on the Power supply.

5. In order to configure the charger, you will need a WiFi-enabled device. When the charger is turned on, search for WiFi networks until you see CC Config XXXX
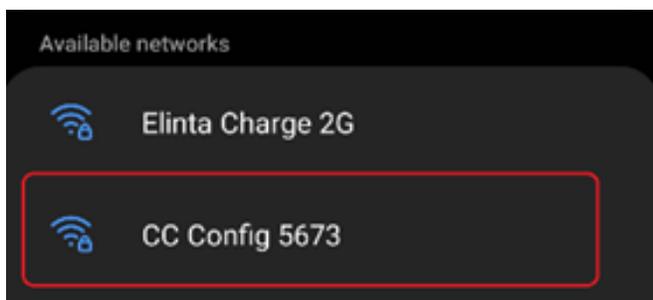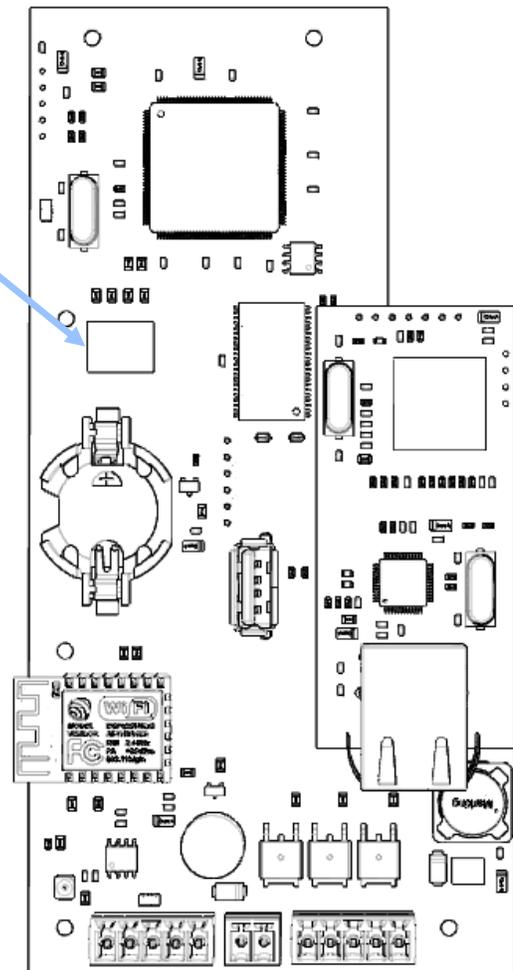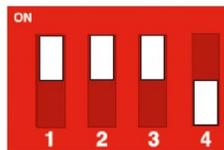
6. Connect to the network using the password: elioscitycharge:
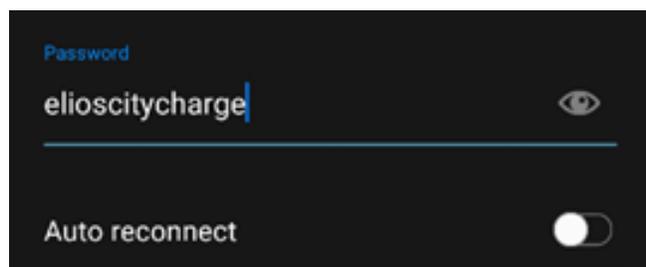
7. Go to configuration website via IP address 192.168.4.1 or Manage router:
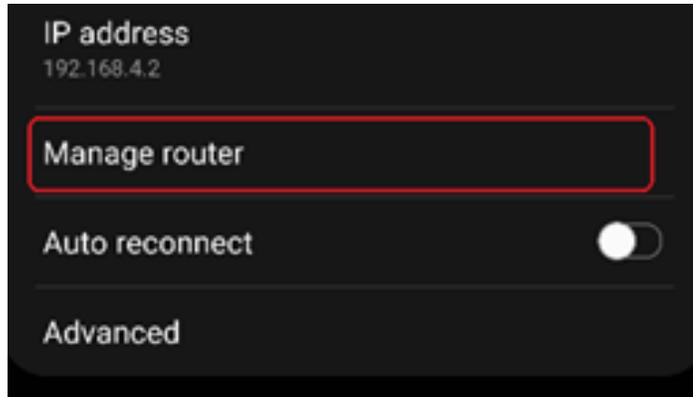
8. Connect to webpage with same elioscitycharge password:
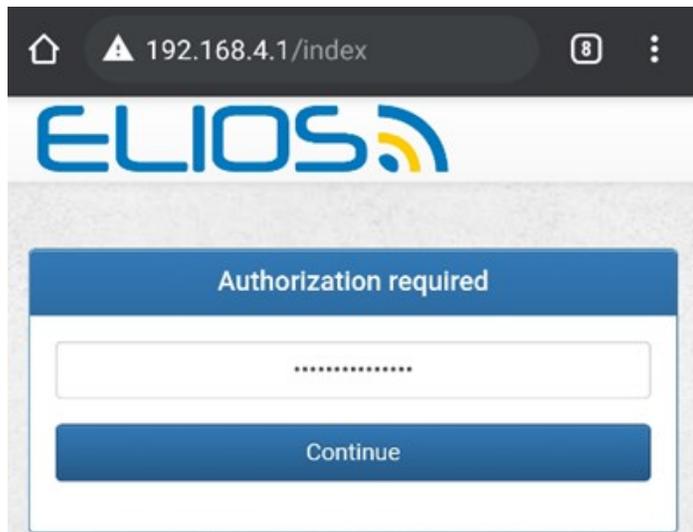
Go to the Offline tab and make the following settings as described in "**Dynamic Load Management Setup (online)**":

Maximum power (dynamic input) - rating of the building circuit breaker. Maximum current allowed to flow through the circuit breaker.

Maximum power (dynamic reserve) - current reserve left for sudden current peaks when using household appliances. We recommend leaving about 10% of the total building power as reserve.

9. Set DIP switch to the following configuration: 1-OFF, 2-OFF, 3-OFF, 4-ON.
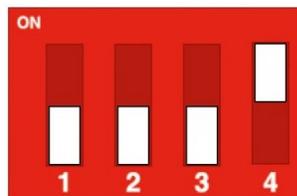
5.3 RCD Type A and Type B Testing

The HomeBox Slim charging station uses a residual current protection relay made by "Siemens". The manufacturer recommends testing this relay every three months. Testing of the residual current protection relay is carried out in the following order:

1. If the electric car is charging, stop charging it.
2. Disconnect the charging cable from the electric vehicle and from the charging station.
3. Switch off the HomeBox Slim circuit breaker located in the main distribution box.
4. Press the "Test" button on the residual current device (RCD).
5. If the test is successful, the lever of the residual current device (RCD) must go to the "Down" position.
6. Turn on the lever of the residual current device (RCD).
7. Switch on the circuit breaker of the HomeBox Slim.
8. The station can continue to be used.

Test Button
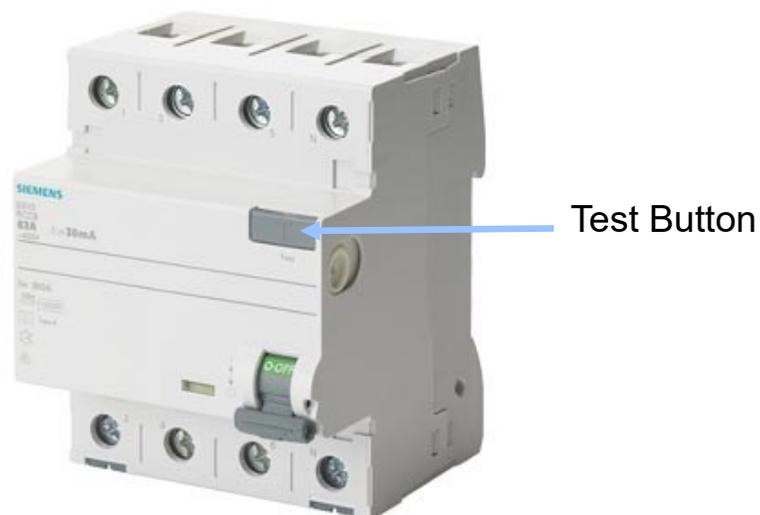
⚠ If RCD lever did not lower to the down position during testing, this is a sign that the RCD is not working and needs to be replaced. Contact us if this is the case.

5.4 Dynamic Load Management Setup online (optional)

Log in to your administrative elios.cloud website:
1. Go to the Stations tab.
2. Select the station whose power you want to regulate.
3. Go to the Edit tab.
4. At the bottom of the page, configure these settings:

Balance Mode	LOCAL DYNAMIC MASTER ▼
Minimum power (STATION)	0
Maximum power (STATION)	16
Minimum power (SOCKET)	6
Maximum power (SOCKET)	16
Maximum power (DYNAMIC INPUT)	32
Maximum power (DYNAMIC RESERVE)	13

Balance Mode - how the charger balances power: If selected: None - charger does not balance power at all. Group - charger only balances between its outlets. It does not take into account the exact power consumption. If two cars are plugged in, the power is split in half.
Local Dynamic Master - a charger balances power based on the building's power consumption. **Local Dynamic Slave** - uses settings from **Local Dynamic Master** (for different chargers) Multiple chargers can balance power depending on the building's power consumption.
Minimum power (station) - minimum amperage that may be used by the station.
Maximum power (station) - maximum amperage that may be used by the station.
Minimum power (outlet) - minimum amperage that may be used by the outlet.

Maximum power (socket) - maximum amperage which is allowed to use by the socket.

Maximum power (dynamic input) - Building's circuit breaker nominal. Max amperage which is allowed to flow through circuit breaker.

Maximum power (dynamic reserve) - Amperage reserve left for sudden current spikes, when using home appliances. We recommend to leave approx. 10% total building power for reserve.

Balance Mode	LOCAL DYNAMIC MASTER ▼
Minimum power (STATION)	0
Maximum power (STATION)	16
Minimum power (SOCKET)	6
Maximum power (SOCKET)	16
Maximum power (DYNAMIC INPUT)	32
Maximum power (DYNAMIC RESERVE)	13

By this example the charging station is allowed to use:

Building power (32 A) - dynamic reserve (13 A) = 19 A max. But the maximum outlet current is 16 A. If the house uses 10 A, then the max current is: 32-13-10 = 9 A. The car is being charged at 9 A. If the power is less than the minimum power (socket), the charger will not work at all.

Chapter 6
TROUBLESHOOTING

The table below lists the most common solutions to problems

Charging station HomeBox Slim Troubleshooting Table			
#	Problem	Possible cause	Troubleshooting
1	Charging station not working. The LED is not shining.	No power to charging station. Or RCD / MCB tripped inside the main distribution box.	Open power distribution box. Check that none of the circuit breakers or residual current devices have tripped.
2	It is possible to activate the charging station, but the charging process does not start.	Cable not plugged in all the way. Car doors open, car not locked, or key left in the ignition.	Check that the cable connection to the car and to the station is secured. Check that the car is locked and that the key is not in the ignition lock.
3	The charging process cannot be completed. The cable is locked.	Charger has lost communication with the server or the user is using the wrong RFID tag to stop charging.	If the LED RED is lit after the RFID tag has been swiped, this means that an incorrect RFID tag is being used.
4	Charging station constantly loses connection to the server	Poor signal/ connection strength	Depending on the communication chosen. The problem could be a poor signal from Wi-Fi or GSM. Check the signal strength. If signal is bad, place booster for the Wi-Fi.

The table below lists the most common solutions to problems

Charging station CityCharge V2 Troubleshooting Table			
#	Problem	Possible cause	Troubleshooting
5	When attempting to start the charge, the station shuts down.	Faulty EV charging cable or electric vehicle.	A faulty EV charging cable or outlet may be responsible for tripping RCD. RCD should be reset manually inside the power distribution box
6	Charging takes long time to complete	Reduced charging current	If the charger's performance appears reduced compared to previous use, it may be due to reduced power. Check the charger configuration. If possible, try the charging station with a different EV. If the problem persists, contact technical support at Elinta Charge.
7	Charging station LED flashes red. EV cannot be charged.	Charging station had a fault	Check charging log of charging station. Try restarting the charging station. If the problem persists, contact the support team at Elinta Charge.

Chapter 7
WARRANTY

7.1 Warranty Rules and Conditions

1. Elinta Charge guarantees the high quality of the HomeBox Slim charging station.
2. Elinta Charge will repair or replace, free of charge, any defect caused by the manufacturer's fault during the warranty period.
3. All warranty conditions apply in accordance with consumer protection laws.
4. Before using the product, read these warranty terms carefully and make sure you comply with them.
5. Keep the invoice or check as proof of purchase during the warranty period of the device.
6. Elinta Charge provides a 24-month warranty from the date of purchase.
7. Up to 60 months (total) of warranty coverage is available at an additional charge.
8. All non-functioning chargers (or parts) are considered the property of Elinta Charge and must be returned to Elinta Charge when replacement chargers (or parts) come in for replacement.
9. The warranty is valid when installed by a certified electrician who has installed the charger in accordance with these installation instructions.

7.2 Warranty Does Not Apply:

1. For installation works: power cable routing, equipment installation, station mounting.
2. If the equipment is not installed in accordance with the manufacturer's user manual
3. For parts which longevity depends on the intensity of operation (fuses, gaskets and other naturally wearing parts), unless the manufacturer and / or seller is responsible for the failure of these parts.
4. For glass, plastic / aluminium housing and signs of natural wear of its parts.

4. For damage caused by unauthorized acts, incidents, vandalism.
5. For damage caused by factors beyond the control of the manu-facturer and / or the seller.
6. For damage caused by natural disasters.

7.3 Not Included Into The Warranty:

1. Periodic maintenance.
2. User training on how to use the product.
3. Equipment replacement, modification when equipment is being changed due to changing operating conditions (integration or changing components).
4. Fixing Faults in power input circuit.

7.4 In Case of Breakdown

1. Turn off the charging station and do not use it.
2. Note the serial number of the station from the sticker. The label is located on the bottom of the station.
3. Contact the technical service Elinta Charge, tel. +370 653 66633 or +370 615 71604 or support@elintacharge.com.
4. When registering a fault, have the serial number of the charging station, the device name and a detailed description of the fault ready.

7.5 Final Thoughts

1. If you have any questions regarding on how to use or install the charging station, please contact the company which installed the equipment or the technical service department of Elinta Charge.
2. This document does not restrict the consumer's rights to the warranty when purchased product (equipment) is poor quality.