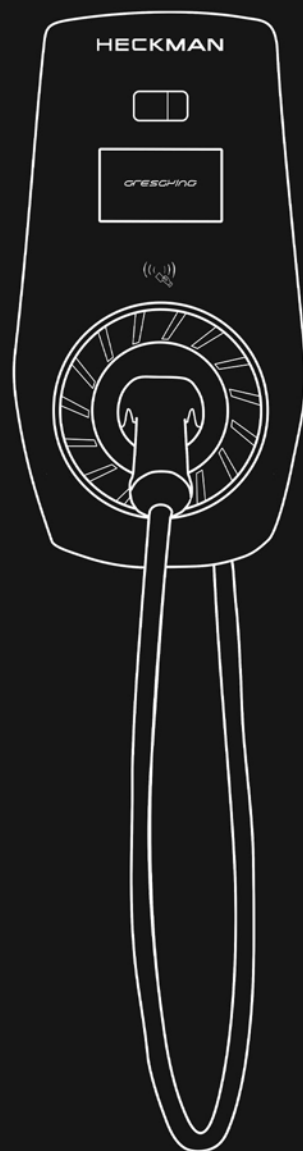


GRESCING



INSTRUKCJA OBSŁUGI

**Turbo wallbox
H1-EU22-C**

DISCLAIMER

Please strictly follow and carry out the directions, instructions and safety precautions in this User Manual, otherwise any warranty provisions will be cancelled and that GRESGYING can reject any and claims for compensation with any injuries/damage or incidents.



Certificated by TÜV

Content

1. About this document 3

 1.1. Function of this document 3

 1.2. Applicable group 3

 1.3. Related document 3

 1.4. Safety 3

2. Description 4

 2.1. Introduction 4

 2.2. Outside overview 5

 2.3. Technical data 6

3. Installation 7

 3.1. Installation preparation 8

 3.2. Installation procedure 9

4. Configuration 10

 4.1. Get the eurOps App 10

 4.2. App configuration 10

5. Use 18

6. Maintenance 22

Appendix A-System Schematic 26

1. About this document

1.1. Function of this document

This document is only applicable for this EVSE (Turbo Wallbox), including the variants and options listed in section §2.3. The EVSE in this document is referred to as the charger.

This document is a manual to do the following tasks:

- Installation
- Commissioning
- Maintenance

1.2. Applicable group

- Authorized installation engineer
- Authorized commissioning engineer

1.3. Related document

Related document	Applicable group
Quick Installation Guide	Installation engineer

1.4. Safety

Make sure that you know all the instructions of this manual before installation

- Do the steps in the procedures properly and in the correct process.
- The product must only be installed by a qualified engineer in accordance with the Quick Installation Manual.
- Never use an adapter between the EV socket and the charging connector.
- Improper use may create a risk of personal injury.
- The operator is responsible for informing users of the compatibility of any charger

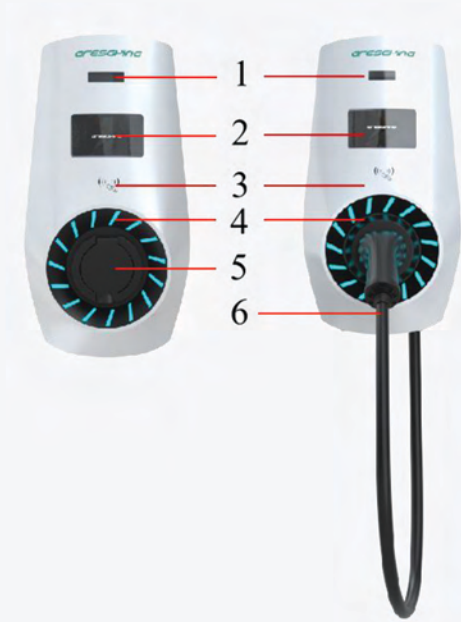
2. Description

2.1. Introduction

The EV Charger (Turbo Wallbox) is an AC charging station that you can use to charge an EV. Turbo Wallbox offers a customized, user-friendly, smart charging solution. The charger can connect to Open Charge Point Protocol platform via WiFi, LAN or 4G.

2.2. Outside overview

The illustration shows the Turbo Wallbox model with screen, MID meter.



No.	Part	Function
1	MID meter window	Meter-reading
2	LCD display	Display charging data (power, time, status etc.)
3	RFID reader	Read the RDIF card number
4	LED Indicator	Show the status of charger
5	Type 2 socket	To connect the EV charge cable
6	Type 2 connector	To connect the EV

2.3. Technical data

Model	H1-EU22-C
Grid connection	3P + N + PE
Input voltage	400/415V AC±10%
Frequency	50/60 Hz
Output current	32A
Output power	22kW
Connector type	Case C: Type 2 cable
IP rating	Case C: IP65
IK rating	IK08
Operating Temperature	-30°C~50°C
Storage Temperature	-30°C~85°C
Operating Humidity	5%~95%RH (no condensation)
Attitude	≤2000m
Installation method	Wall-mount; Column-mount (optional)
Dimension (W*D*H)	240mm × 145mm × 460mm
Column Dimension (W*D*H)	165mm × 115mm × 1450mm
Communication Protocol	OCPP1.6J
User identification	Online: APP, RFID, QR code (optional) Offline: RFID, Plug & play
Extra feature	Load Management (optional)

3. Installation

Installation precautions:

- Do not install the equipment in areas with strong vibrations or strong electromagnetic interference.
- Installation must be carried out by skilled technicians only.
- Before installation, disconnect the power supply to ensure the charger's input lines are not live.
- Do not perform any live operations during installation. It is prohibited to install or remove cables while they are live. Contact between cable cores and conductors can produce arcs or sparks, which can cause fire or personal injury.
- Before installing or removing power cables, disconnect the equipment itself and the upstream and downstream switches.
- When installing the equipment, use a screwdriver with the appropriate torque range to tighten the screws. Ensure the screwdriver is not tilted, and the torque value error does not exceed the specified 10%.
- During operations, prevent foreign objects from entering the equipment, as this may cause short circuits, equipment damage, reduced power supply, or personal injury.
- Use specialized insulated tools to avoid electric shock or short circuit. The insulation voltage rating must comply with local laws, regulations, standards, and norms.
- Use cables that meet local regulations and ensure the cable insulation is intact.
- Before making electrical connections, ensure the equipment is undamaged to prevent electric shock or fire.
- If the power cable is too short, replace it with a new one. Do not splice or solder connections in the power cable.
- Do not power on the equipment until installation is complete and verified by a professional.

3.1. Installation preparation

Required AC power supply information

The following information is the recommended

Rated power of EVSE	Cable cross section	Cable terminal
22kW	5*6 mm ² ~5*10 mm ² (Copper wire)	E6010*5

Required tools

The following information is the recommended

Installation method	Tools
Wall-mount	Impact drills (φ10) *1, torque screwdriver, cross*1, wire stripper*1, crimping pliers*1
Column-mount	screwdriver, cross*1, wire stripper*1, crimping pliers*1, M8 socket wrench

* Please carry personal protective equipment in accordance with local regulations.



3.1. Installation procedure

Installation can be wall-mounted or pole-mounted. For detailed installation steps, please refer to the Quick Installation Guide in the packaging.

4. Configuration

4.1. Get the eurOps App

Please download eurOps App for full control, adjusting settings and enabling Device load management.



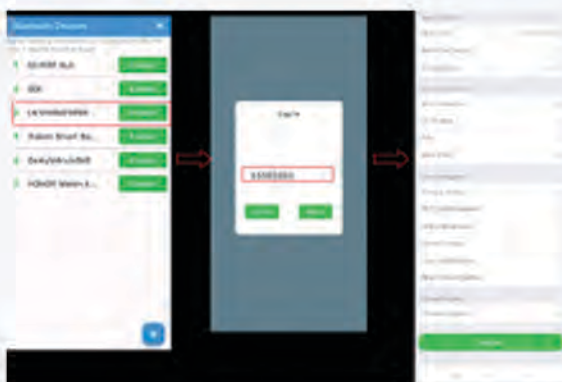
eurOps



4.2. App configuration

4.2.1. Sign-in the charger

Open eurOps, find the SN serial number on the charger's nameplate in the device list, click "Connect", and enter the default password 88888888. (You will be prompted to change the password on first login.)



4.2.2. Homepage



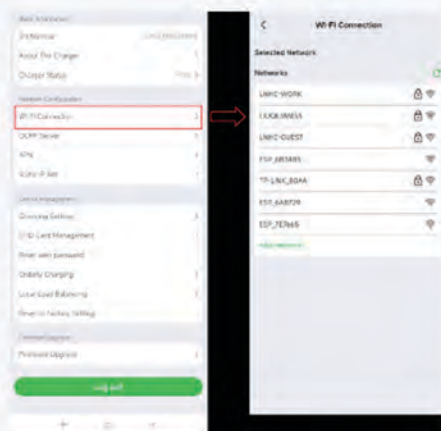
No.	Item	Function
1	Charger ID (SN Serial Number)	Displays the charger's serial number
2	Basic Charger Information	Displays the product model, serial number, manufacturer name, rated power, etc.
3	Current Operating Status and Information	Displays the charger's status, voltage, current, power, energy value, network connection status, and fault records
4	Wi-Fi Connection Configuration	Configures wireless connection via Wi-Fi options
5	OCPP Server Configuration	Connects the charger to a specified platform via network
6	APN Configuration	Enables the 4G module to connect to the network
7	Static IP Settings	Configures ordered charging, sets static IP enable switch status, gateway IP, and network mask
8	Charging Mode Settings	Sets offline and online charging modes

No.	Item	Function
9	RFID Card Management	Starts or stops charging using RFID
10	Reset Web Password	Resets the web password
11	Ordered Charging Configuration	Sets the number of phases and phase, main controller IP, port number, and switch
12	Local Load Balancing Configuration	Configures load balancing parameters, including maximum power provided by the grid, safety power percentage (default is 10%), and whether to use the electric meter
13	Restore Factory Settings	Resets the charger to factory default settings
14	Firmware Upgrade	Upgrades the control board and power board firmware versions of the charger

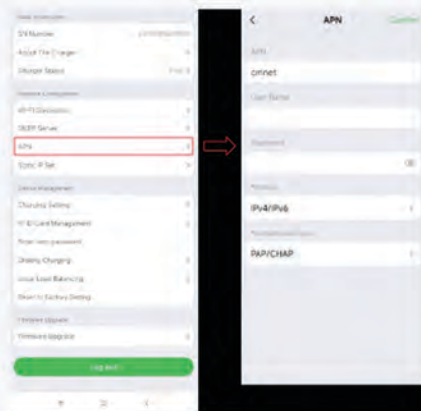
4.2.3. Setting

(1) Network connection

The Wi-Fi connection interface is shown below. Click on the Wi-Fi name, enter the password, and then click confirm to connect. For LAN networking, connect the charger to a network cable.



When the charger connects to the network using 4G, the APN needs to be configured for the 4G module to connect properly. The APN name, username, and password are provided by the network operator. The configuration interface is shown below.



(2) OCPP Server Configuration

Connect the charger to a specified platform via network.

Configuration can be done in the APP's OCPP server option.

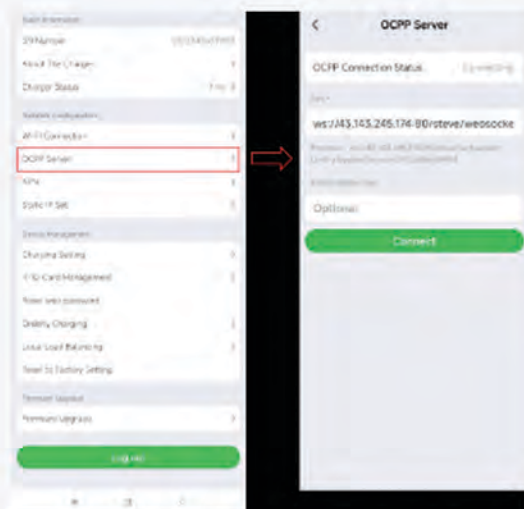
Specific configuration information must follow the requirements of the designated platform. The default port for ws connection is 80, and for wss connection is 443.

For instance:

`ws://your.platform.com:80/webSocket/yourDeviceSN`

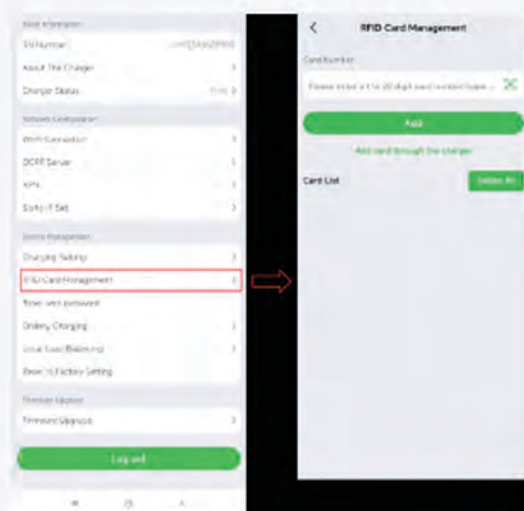
After successfully setting the OCPP server path, click connect.

You will be prompted to restart the device. After restarting, you can log in to the APP again to check if the platform connection is successful in the OCPP server option.



(3) RFID Card Management

Bind RFID cards to the charger via the APP. After binding, you can start or stop the charger using the RFID cards. Each charger comes with two RFID cards.



Bind RFID card:

There are two methods to add RFID card.

- Enter the card number and click “Add”.
- Click “Add a Card through the Charger”, the charger will enter card installation mode.

(4) Local load balancing

- Set the charger connected to the meter as the main charger. Other chargers in the same local area network will register with the main charger. The main charger is responsible for load balancing power calculation and setting the charging power of other AC chargers.

- Set the load balancing parameters.
- Enable the meter. To enable load balancing calculations in the grid, the user needs to manually set this



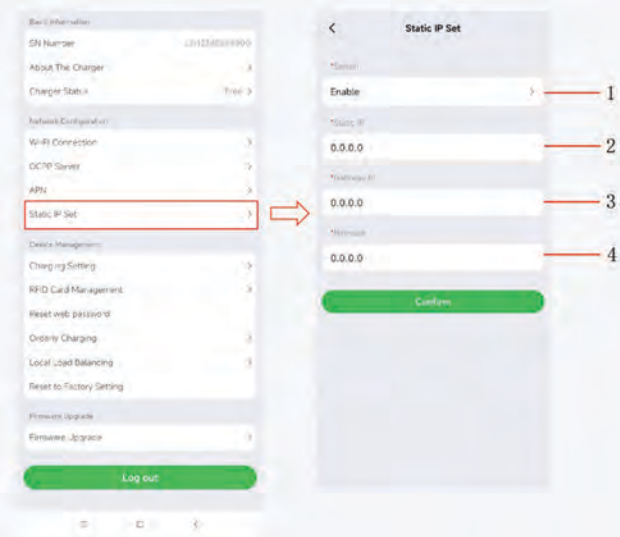
No.	Description
1	Maximum power provided by the grid, including the charger or other loads
2	Total number of chargers participating in load balancing in the local area network
3	Safety power percentage reserved when calculating load balancing power, default is 10%
4	Whether to use the power detected by the meter to dynamically adjust the charger's power during load balancing, meter is disabled by default

(5) Dynamic load management (DLM) configuration

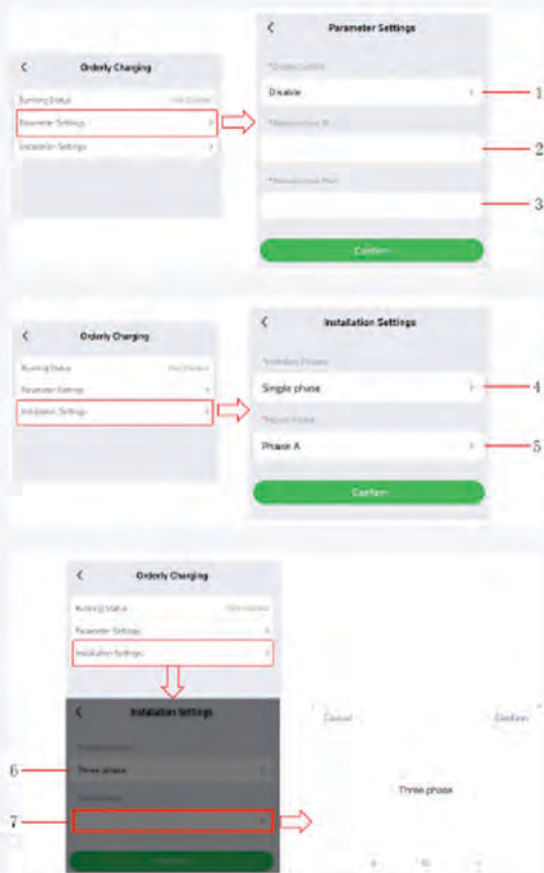
Note:

This feature only can be configured with a DLM device

When configuring DLM feature, set a static IP first, which will be used as the charger's device IP to connect to the network. Then proceed with ordered charging configuration.



No.	Function
1	Static IP enable switch
2	IP to be set (when ordered charging, it must not be the same as other devices' IP)
3	Gateway IP (when ordered charging, it must be the same as the ordered charging controller gateway)
4	Network mask (when ordered charging, it must be the same as the ordered charging controller network mask)



No.	Function
1	DLM feature switch
2	DLM device host IP
3	DLM device host port
4	Set 7kW AC chargers to single phase
5	Set the phase of the 7kW AC charger to match the
6	Set 11/22kW AC chargers to three-phase
7	Set the phase of the 11/22kW AC charger's input cable to match the actual phase

5. Use

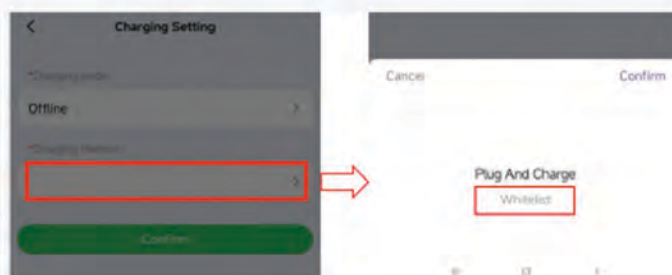
Note:

Please strictly inspect the charger as following before use.

- Please read the safety instructions carefully before using the Turbo Wallbox.
- Ensure the Turbo Wallbox is free of cracks, damage, or other abnormalities.
- Make sure the charging gun head and vehicle charging port are free of liquids and other foreign objects.

(1) White list RFID charging

1) Set the Turbo Wallbox to whitelist mode in offline mode on the mobile app.



2) Set the Turbo Wallbox to whitelist mode in offline mode on the mobile app.

3) Add the necessary card numbers through the RFID card management in the app.

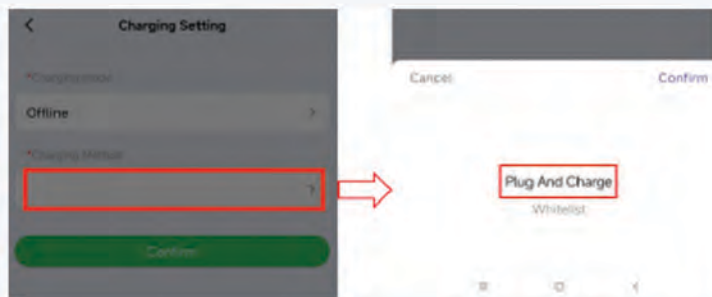
4) Connect the vehicle charging port to the Turbo Wallbox socket or the charging gun head.

5) Place the RFID card on the RFID card swipe area of the Turbo Wallbox. The indicator light will display a blue flowing light, indicating the vehicle is charging.

6) After charging is complete, the Turbo Wallbox indicator light will be solid blue. Swipe the card to stop charging and disconnect the vehicle from the Turbo Wallbox.

(2) Plug & play

1) Set the Turbo Wallbox to plug and charge mode in offline mode on the mobile app



- 2) Connect the vehicle to the Turbo Wallbox to start charging.
- 3) After charging is complete, the Turbo Wallbox indicator light will be solid blue. Disconnect the vehicle from the Turbo Wallbox to stop charging.

(3) OCPP Platform Authorized Charging

- 1) Connect the vehicle charging port to the Turbo Wallbox socket or the charging gun head.
- 2) When the Turbo Wallbox is connected to the OCPP platform, you can start charging remotely through the platform or by swiping a registered RFID card. If the Turbo Wallbox is not connected to the platform, use a previously authorized RFID card to start charging.
- 3) After charging is complete, the Turbo Wallbox indicator light will be solid blue. Stop charging through the OCPP platform or by swiping the card, and disconnect the vehicle from the Turbo Wallbox.

(4) LED indicator and display

1) LED indicator

Color	Status	Description
 Green	Blinking	Charger standby
	Solid	Charger preparing
	Waterfall	Disconnected from OCPP platform (displayed only in standby mode)
 Blue	Blinking	The charger has been reserved
	Solid	Charging session complete
	Waterfall	Charging
 Yellow	Slowly Blinking	OCPP platform connected, authorization failed
	Quickly Blinking	OCPP platform not connected, authorization failed
	Solid	Unavailable or upgrading
 Red	Solid	Fault

2) Display Interface

No.	Interface	Description
1		Startup page
2		Standby page
3		Preparing page

No.	Interface	Description
4		Charging page
5		Charging session complete page
6		Reserved page
7		Fault page
8		Unavaible page
9		Card Binding page
10		Factory Reset page
11		Firmware Update page

6. Maintenance

6.1. Maintenance

Note:

- The Turbo Wallbox does not require special maintenance.
- It is recommended to inspect and clean the outer shell and accessories every 6 months.
- Check the Turbo Wallbox and cables for any damage.
- To prevent debris, dust, and dirt from accumulating on or around the device, wipe the surface with a soft cloth. For stubborn stains, use an alcohol-based cleaner.
- Regularly check the internal electrical connection bolts of the Turbo Wallbox for looseness. The recommended inspection interval is every 3 months.
- In the event of heavy rain or water accumulation, which may damage the Turbo Wallbox, immediately cut off the power and stop using the device.
- Do not use corrosive chemical cleaners, glass cleaners, or organic solvents.

No.	Fault code	Cause	Troubleshooting
1	Mains over voltage	Unstable grid voltage	Wait for grid voltage to stabilize
2	Mains under voltage	Unstable grid voltage	Wait for grid voltage to stabilize
3	Phase loss	Unstable three-phase power connection	Have a qualified professional inspect the electrical connections
4	LN reverse	Incorrect connection of live and neutral wires	Check if live and neutral wires are reversed
5	Ground failure	No ground connection or unreliable ground (e.g., distance too far, excessive load)	Have a qualified professional inspect the electrical connections
6	Power down	Power outage	If this fault occurs while the device is on, contact technical support

7	Over temperature	High ambient temperature or prolonged high-intensity charging	The charger will automatically recover when the temperature drops
8	Leakage current	Charger or vehicle insulation failure	Have a qualified professional inspect the electrical connections
9	CP voltage abnormal	Poor contact between the gun wire and the gun head	Check if the connections are secure
10	Load current over	Vehicle not set to standard current or AC output short circuit	Contact vehicle technical support or check for any foreign objects in the gun wire or socket
11	PP signal disconnect	Poor contact or incomplete insertion of the gun wire, non-standard gun wire, or parameter mismatch	Contact technical support or check for any foreign objects in the connector or socket
12	PP signal abnormal		
13	Electronic lock failure	Incomplete insertion of the gun wire, foreign objects in the socket, or lock failure	Check for foreign objects, ensure connections are secure, or contact technical support
14	PEM failure	Unstable grid or unreliable ground connection	Wait for grid power to stabilize or have a qualified professional inspect the electrical connections
15	Internal error	Main relay failure or sticking	Contact technical support
16	Power board and control board communication error	Control board or power board not functioning properly	
17	Electric meter abnormal	Meter failure	
18	Sensor fault	Temperature sensor failure	

7. Additional Features

Load balancing

Load balancing

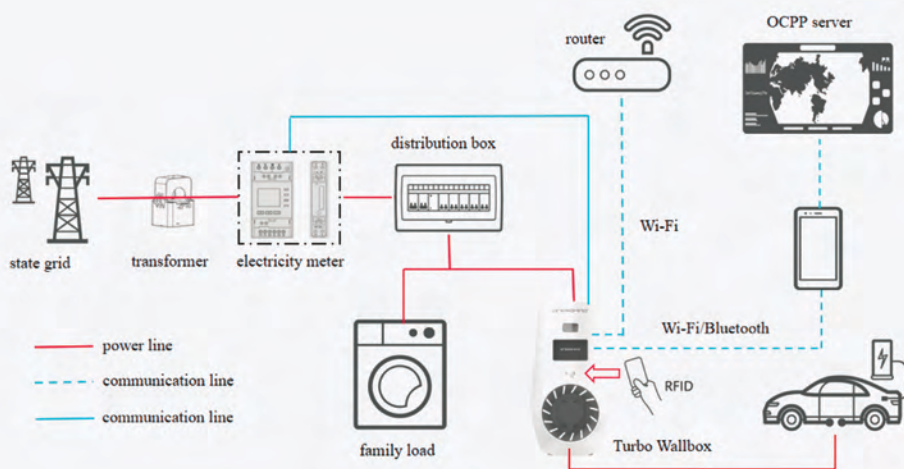
The optional load balancing management function supports local networking of multiple chargers and local load balancing management. When multiple chargers are networked, one charger can be set as the master, and others as slaves. After setting the master charger, it can automatically allocate power to all networked chargers.

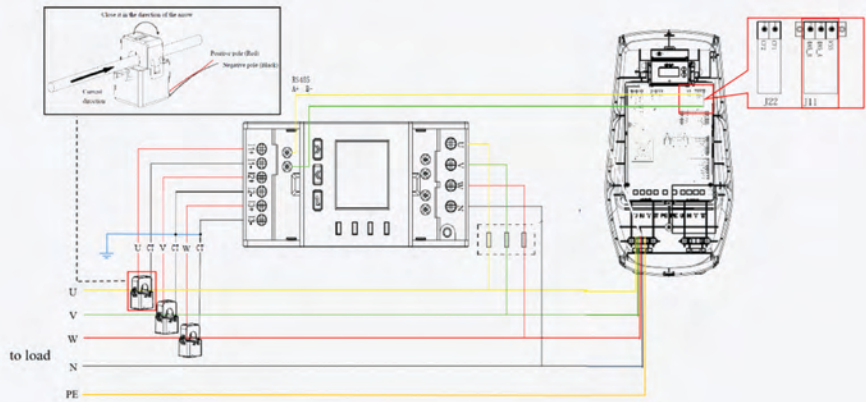
When implementing the local load balancing management function, customers need to determine the management range. Install meters and transformers in appropriate locations within the determined management range (within 1000m of the chargers).

Note:

Ensure the correct installation of transformers or voltage lines when installing meters. Incorrect installation may cause the charger to operate at maximum power, leading to circuit breaker tripping.

The following is a schematic diagram of the network configuration, where the meter connects to the charger and connects to the OCPP platform via Wi-Fi. You can set load balancing management parameters through the app or platform.





Charger Removal

When removing and disposing of the charger, follow local laws strictly. To remove the charger, follow the installation steps in reverse order.

Note:

Before removing the charger, cut off the power and ensure all equipment has stopped operating. Post warning signs to prevent accidental power supply.



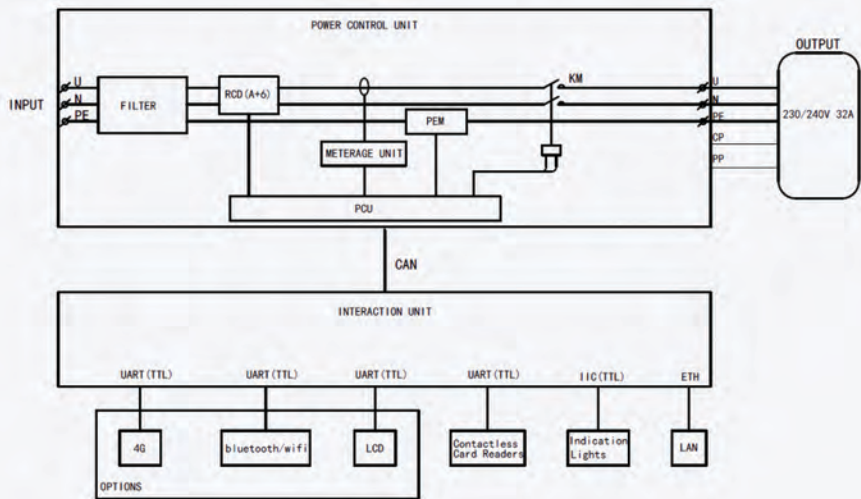
Do not dispose of the charger with household waste. Dispose of the charger at a local electronic equipment collection point for recycling to avoid negative environmental impact. Contact your local government to find the nearest collection point.



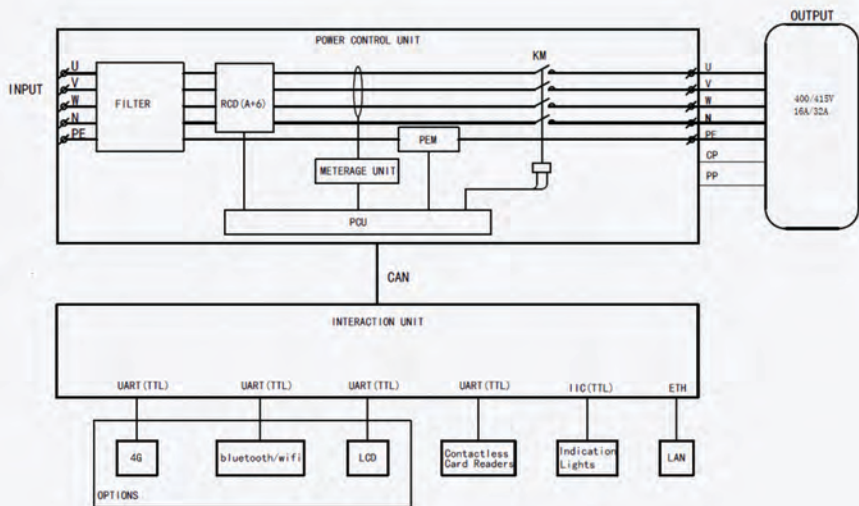
Recycling materials can save raw materials and energy, making a significant contribution to environmental protection.

Appendix A-System Schematic

7kW Turbo Wallbox System Schematic:



11/22kW Turbo Wallbox System Schematic:



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Notatki serwisowe

