MasterPower®
Unlimited power

Home EV Wallbox
P1/P2/P3
S1/S2/S3

User Manual

Content

1. Warranty

Master Battery, S.L. (Hereinafter "*Master*") warrants that Products supplied to Customer pursuant to this Agreement/Contract shall be of merchantable quality and shall meet all applicable safety standards and free from any defect of design, material and workmanship within the warranty period. The warranty period is Twenty-four (24) months since from the delivery date. *Master* warranty does not cover damages resulting from inappropriate storage, incorrect installation, improper operation or bad environment beyond environmental requirement.

Customer gives notice in writing within a period of ten (10) days after Customer has discovered that some or all Products do not comply with the warranty as set out in this warranty. Customer shall provide necessary assistance to *Master* for failure detection. *Master* gives response within a reasonable time of 48 hours. *Master* shall analyze the fault reason and provide technical instruction for Customer to repair Products.

Customer repairs Products and applies for free spare parts from *Master* in case replacements are required. A written claim report about fault description, serial number of Products, photos of Products and applied spare parts must be sent to *Master* for verification. *Master* shall not accept the claim if modifications or reworking have been performed to Products without *Master's* consent. Spare parts are offered for free within the warranty period. Beyond warranty period, spare parts are offered at Customer's cost.

Faulted parts replaced by Customer shall be well stored and packaged with markings of fault description for further disposal by *Master*. The faulted parts after repair and test can be treated as spare part to Customer.

No local service is provided for free and *Master* charges service fee for local service according the following standards: per person per day plus the actual travel costs and material costs. A mutual agreement should be reached before offering local service.

Except as set forth herein, *Master* provides no other warranty, whether express or implied. The warranty applies only to Products which are supplied by *Master*.

2. Safety and Warning

Save these instructions. Read all instruction before installing or using the charger.

1) Keep the charger away from explosive or flammable materials, chemicals, vapors and other hazard objects.
2) Keep the charger socket clean and dry. If it gets dirty, please wipe it with clean dry cloth.
3) Touching the socket core is strictly forbidden when power on.
4) Do not use the charger in case of any device defects, crack, abrasion, bare leakage and so on. Please contact the professional personnel if any of these conditions occurs.
5) Do not attempt to dissemble, repair, refit the charger. If necessary, please contact the professional personnel. Improper operation will result in device damage, electric leakage, etc.
6) In case any abnormal condition happens, please cut off all input and output power supplies immediately.
7) Please protect charging carefully from rain and lightening.
8) Keep children away from the charger.
9) During charging, do not drive the EV. Charge only when the EV is stationary, for hybrid cars, charge only when the engine is switched off.
10) Our packaging materials are environmentally friendly and can be recycled. Please put the packaging in applicable containers to recycle it. Do not dispose of this device with the household waste. It should be taken to a suitable facility for recycling of electrical and electronic devices. For more detailed information about recycling of this device, please contact your local city/town council office or your household waste disposal service.

⚠ Warning ⚠

The input and output voltages of this device are high voltage, which threaten human life safety.

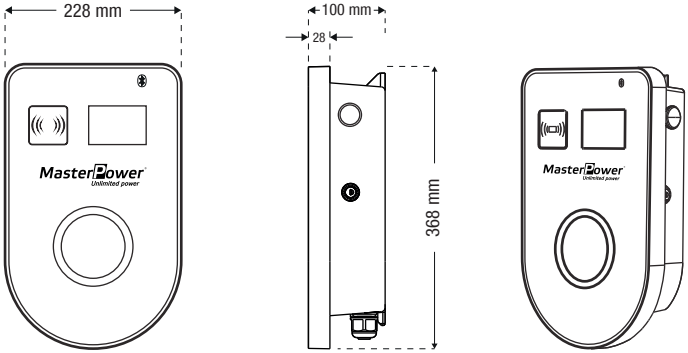
Please strictly observe all warnings on the device and user manual. Unauthorized and non-professional service personnel are forbidden to remove the cover of this device.

3. Introduction

3.1 Product Technical Specifications

Model	MF - EV 7.2kW - P1 / S1	MF - EV 11kW - P2 / S2	MF - EV 22kW - P3 / S3
Technical Features			
Charging Capacity	Up to 7kW	Up to 11kW	Up to 22kW
Input / Output Power	230VAC ± 20% - 50 / 60Hz - 32A - 1 phase	400VAC ± 20% - 50 / 60Hz - 16A - 3 phase	400VAC ± 20% - 50 / 60Hz - 32A - 3 phase
RCD	30Ma RCD Type A and DC 6Ma RCD function		
Standby Power	< 3W		
Measuring Accuracy	1%		
Communication	Bluetooth / WIFI (Optional) APP		
User Interface	LED / LCD (3.5') / RFID (Mifare ISO&IEC 14443A)		
Certificate	CE / EN / IEC 61851-1:2017, EN / IEC 61851-21-2:2018		
Charging Interface	Type 2 cable 5M / SAE J1772	Type 2 cable 5M	Type 2 cable 5M
Special Protection	Over Current Protection, Residual Current Protection, Ground Protection, Surge Protection, Over / Under Voltage Protection, Over / Under Temperature Protection		
Physical Properties			
Warranty	2 years		
Protection	IP54, IK10		
Enclosure	Plastic PC940 / Galvanized steel		
Front Panel	Temper glass		
Special Protection	Over Current Protection, Residual Current Protection, Ground Protection, Surge Protection, Over / Under Voltage Protection, Over / Under Temperature Protection		
Installation	Wall-mount / Pole-mount		
Cooling	Natural cooling		
Operating Temperature	-30°C to +55°C		
Humidity	Max. 95% (non-regulating)		
Product Dimensions	320*230*100 (L*W*H) mm		
Package Dimension	462*302*248 (L*W*H) mm		
Net Weight	4.5Kg	5.1Kg	5.5Kg
Gross Weight	5.5Kg	6.1Kg	6.5Kg

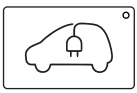
3.2 External Structure



3.3 Package Contents

Unpack the product. Please check and verify following items after receiving the charger:

- Visual inspection on charger's external appearance. If there is any breakage or other damage,please notify the seller immediately.
- Check type and quantity of all accessories as follows. If there is a shortage in the quantity of any item or if any items are missing, please contact the seller at once.

				
	User Manual (x1)	φ6 Expansion Pipe (x6)	M4*40 Screw (x6)	Installation Cardboard (x1)
				
Wallbox (x1)	The holder (x1)	RFID Card (x2)	Key (x2)	

4. Operation Instruction

4.1 Installation Preparation

1) Tools required

Tool Name	Photo	Function
Multimeter		Check electrical connection and electrical parameter
Cross Screwdriver (PH2 x 150mm, PH3 x 250mm)		Tighten the screws
Insulated Torque Wrench		Tighten the bolts
Electric drill		Hole on the wall
Diagonal Pliers		Cut cables

2) Cables & Materials

Name	Specification	Quantity
Power supply cable	Single-phase or three-phase power supply cable	Depend on actual requirement

4.2 Installation Process

1) Installation Notice

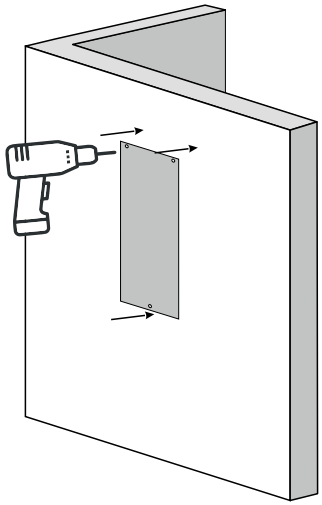
- Electrical devices should only be installed, operated, and maintained by qualified personnel. No responsibility is assumed by the manufacturer for any consequences arising out of the use of this device. A qualified person is one who has certified skills and knowledge related to the construction, installation and operation of this type of electrical device and who has received safety training to recognize and avoid the hazards involved.
- All applicable local, regional, and national regulations must be applied when installing, repairing and maintaining this device.
- RCD of the charger is intergrated 6mA DC, please install a Type A breaker outside.

2) Checks before starting the Installation Process

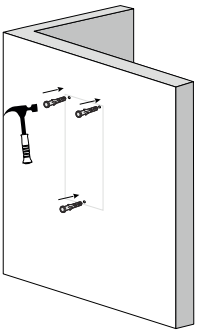
- Ensure the charger's location allows good operational access for normal use and repair & maintenance.
- The AC input components within the premise's power supply are correctly fitted with required protection items prior to installation of the charger.

3) Installation Procedure

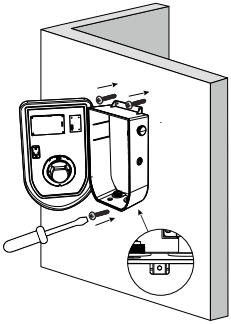
1. Please use a percussion drill to drill holes according to the cardboard positioning.



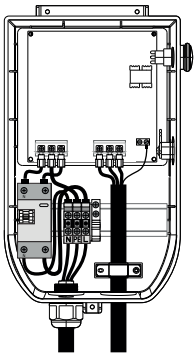
2. Install expansion bolts (3*M6*60mm).



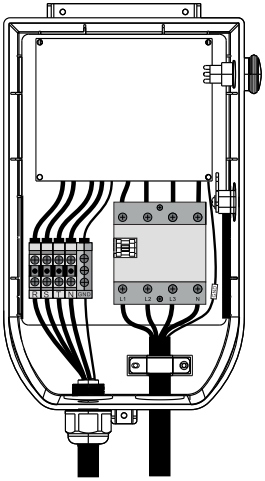
3. Open the cover with the key, fix the charging station with self = tapping screws (3*M5*50mm).



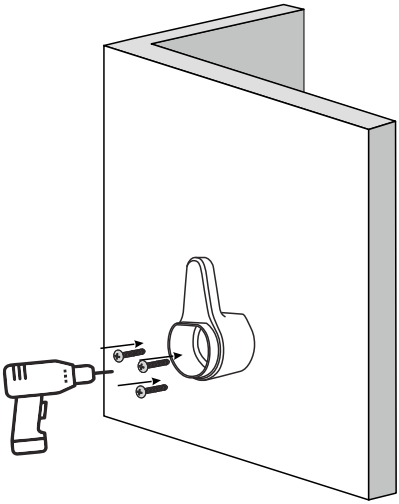
4. Use a cable with a size of 3*6mm^2 (7kW) to connect to the input terminal of the charging station, from left to right, RSTN and GND wire, and then tighten the screw with a screwdriver.



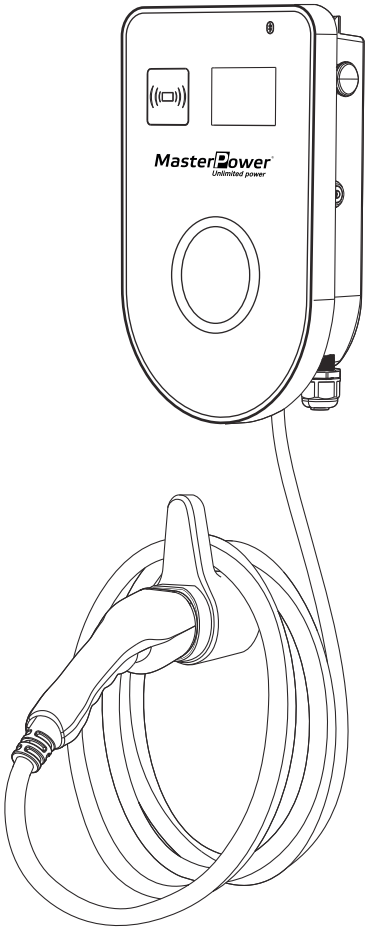
5. Use a cable with a size of 5*4mm^2 (11kW) or 5*6mm^2 (22kW) to connect to the input terminal of the charging station, from left to right, RSTN and GND wire, and then tighten the screw with a screwdriver.



6. Fix the hook on the wall with screws (3*M5*50mm).



7. Lock the cover and start to test and charge.



5. Configuration and Operation

5.1 Power-on Checking

Please check/re-check the following items prior to initial Power-on:

- The charger's location allows good operational access to normal use and repair & maintenance.
- The AC input components within the premise's power supply are fitted correctly with required protection items prior to installation of the charger.
- Double confirm the charger is installed properly.
- No components or other items have been left on the top of the charger.

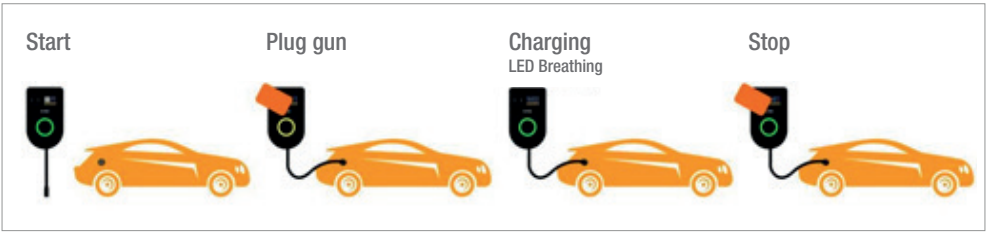
5.2 Start and stop charging station P1/P2/P3 - S1/S2/S3 by your charge card

Start charging

1. Plug charging cable into your car and LED ring turns yellow.
2. Hold your charge card (RFID Card) in front of the reader, marked with icon waiting 3 seconds.
3. P1/P2/P3 - S1/S2/S3 reacts with a beep, LED ring turns green (breathing state) when it starts charging.

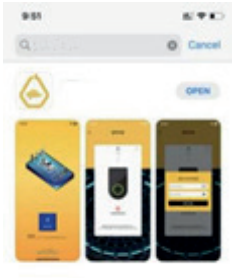
Stop charging

1. Hold your charge card (RFID Card) in front of the reader, marked with icon waiting 3 seconds.
2. P1/P2/P3 - S1/S2/S3 reacts with a beep, LED ring turns green when it stops charging.
3. Unplug charging cable from your car and place the charging cable back into P1/P2/P3 - S1/S2/S3 cable holder.



5.3 Start and stop charging station P1/P2/P3 - S1/S2/S3 by APP (Bluetooth)

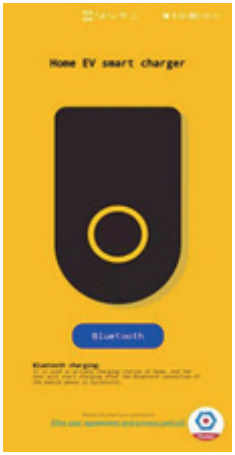
Step 1 - Download the APP “Master EV” from App Store or Google Play.



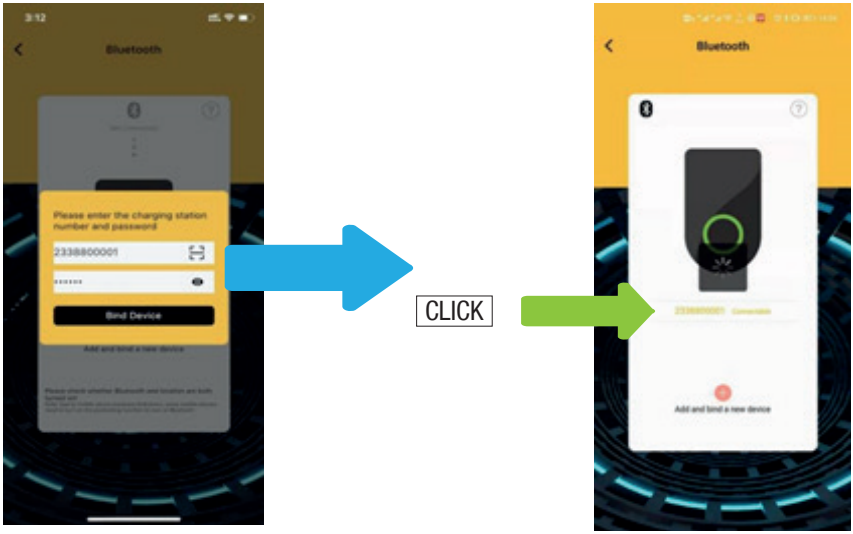
Available on the App Store

GET IT ON Google Play

Step 2 - Click the Bluetooth icon to enter the interface of binding the device.



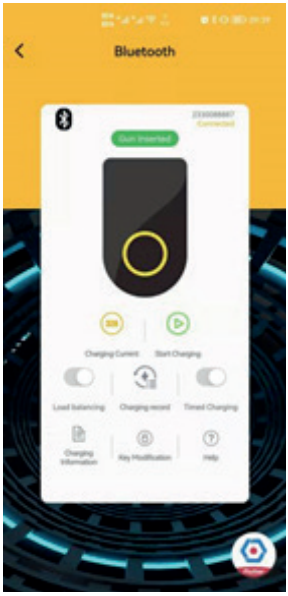
Step 3 - Connect the wallbox.

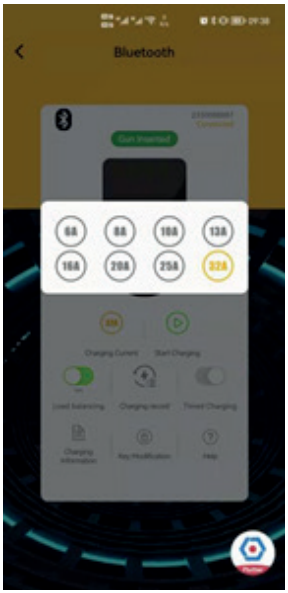


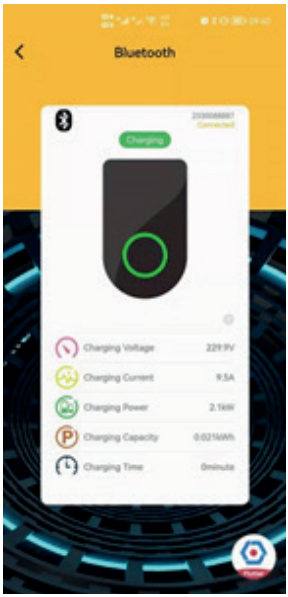
Note:
1. The number is the charging station number that at the bottom right of the LCD display.
2. The initial password is 123456. After the device is successfully connected, the password can be changed.

Note:
1. Make sure there is a display (connectable) behind the device number.
2. Click on the device number, wait for about 10S to enter the next interface.
3. If you do not enter the next interface, please turn off the Bluetooth of your phone and wait for 3S to turn on the Bluetooth of your phone again, and repeat the second step.

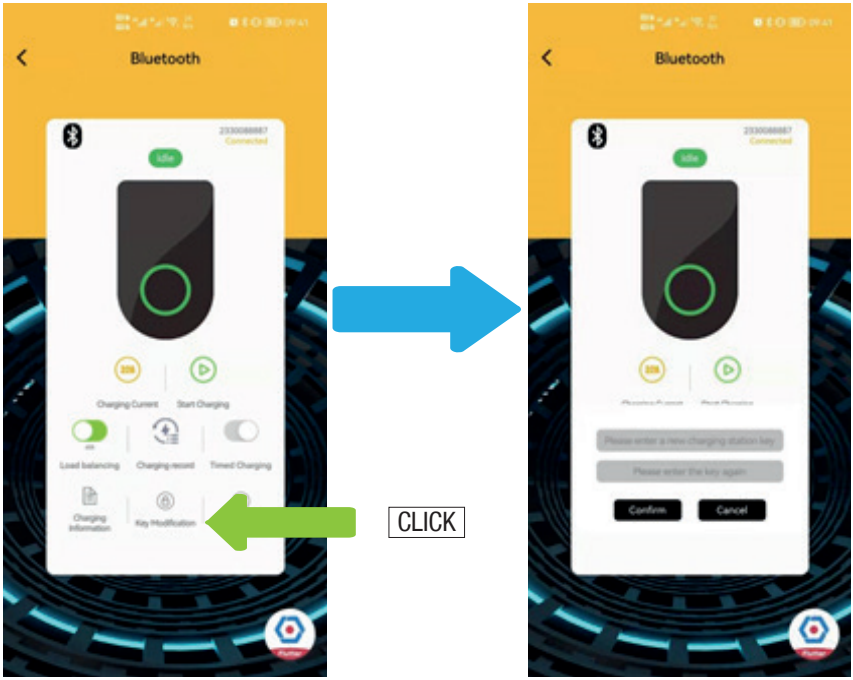
Step 4 - Connect your ev car with the charger gun and start charging.





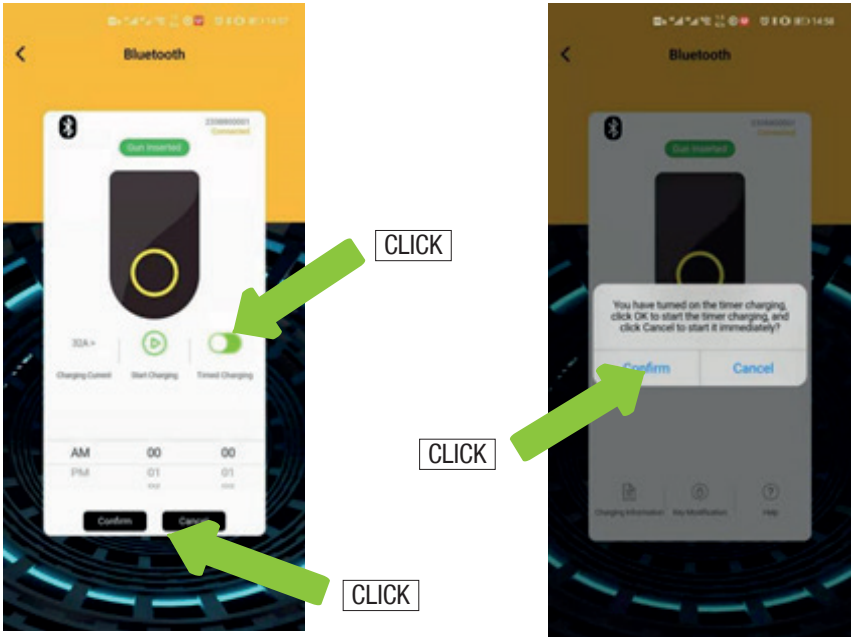


Step 5 - Modify the charging station key P1/P2/P3 - S1/S2/S3 by APP (Bluetooth).



Note:
If you forget the modified device password, you can repeatedly quickly press the emergency stop button on the right side of the charging station 4 times (press it down and reset clockwise once, and it will be completed within 3 seconds) to restore the factory settings password.

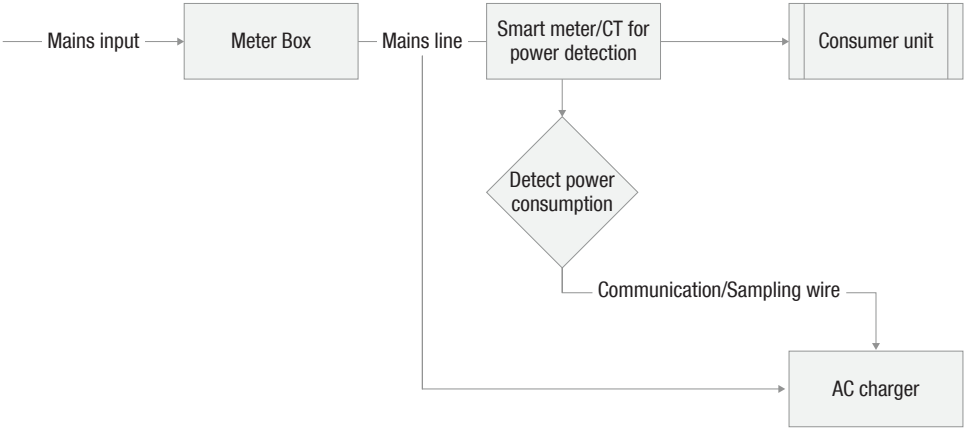
Step 6 - Start charging at the appointment time P1/P2/P3 - S1/S2/S3 by APP (Bluetooth)



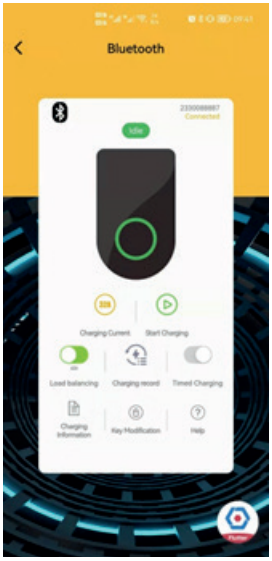
Note:
1. Click the set time button and select the time to start charging.
2. Click the button to start charging, and confirm to start charging at a predetermined time.

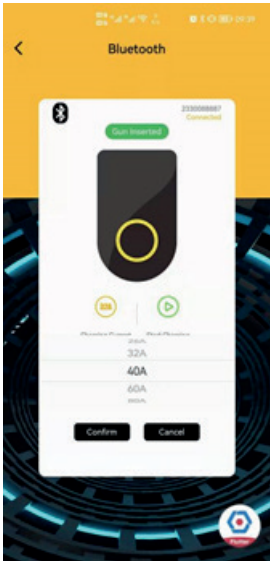
Step 7 - Load balancing setting P1/P2/P3 - S1/S2/S3 by APP (Bluetooth)

Load balancing needs a power-sampling device on the incoming mains supply cables, which could be a power meter or a current transducer and normally located in the meter box.

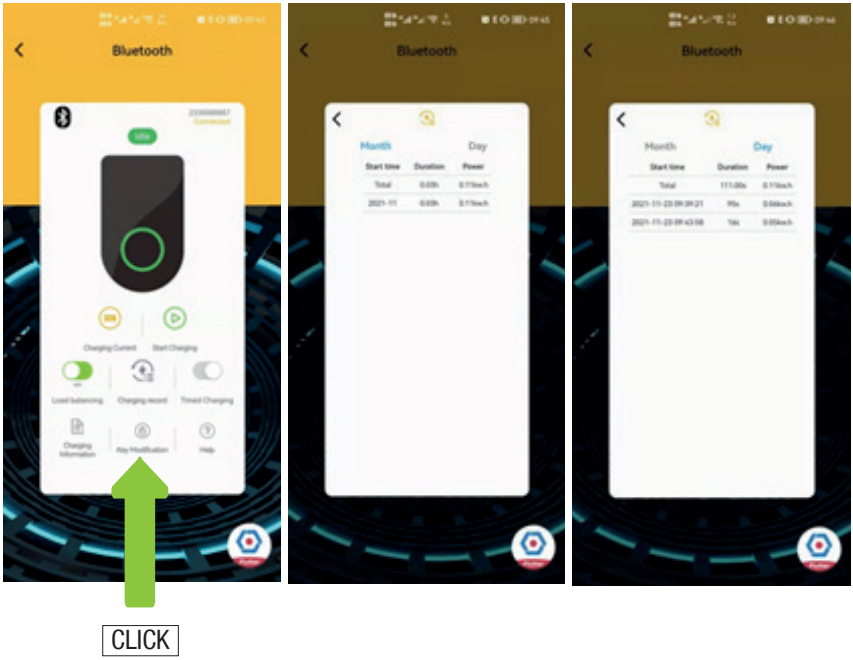


Set your maximum overload current through the APP according to the fuse capacity of your household's total incoming line.





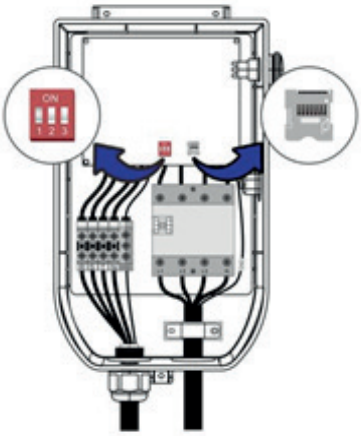
Step 8 - Charging history view P1/P2/P3 - S1/S2/S3 by APP (Bluetooth)



By viewing the charging history, you can clearly understand the daily or monthly charging time and charge level of your charging station.

6. Set up and update

6.1 Mode setting for maximum charging current (Only for 22kW)

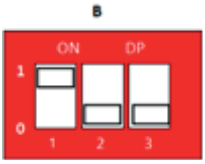


MAX 16A 11kW

MAX 32A 22kW

6.2 External enabling/disabling of the Wallbox

The Wallbox can be set to plug and play charging, dial the code switch No. 1 upwards as shown in the picture on the left.



6.3 Firmware version upgrade

This product can update the firmware software of the product through the Micro SD Card. The user puts the firmware that needs to be updated into the Micro SD Card through the computer, and then powers off the charging station, and inserts the Micro SD Card into the SD card slot as shown above. Restart the charging station. When the software version in the lower right corner of the LCD display is updated, it means that the firmware of the charging station has been updated. Then remove the Micro SD Card.

7. Troubleshooting

7.1 Indicator Status

What you see	What it means	What to do
 LED ring off or green	P1/P2/P3 - S1/S2/S3 is ready for use.	Plug P1/P2/P3 - S1/S2/S3 charging cable into the car.
LED ring yellow	P1/P2/P3 - S1/S2/S3 charging cable connected the car successfully.	Hold your charge card (RFID Card) in front of the reader.
 LED ring green breathing	P1/P2/P3 - S1/S2/S3 is charging the car.	The car is charging.
 LED ring green	The car is fully charged.	Unplug charging cable from your car and place the charging cable back into P1/P2/P3 - S1/S2/S3 cable holder.
 LED ring red	P1/P2/P3 - S1/S2/S3 is experiencing an error.	Check the troubleshooting chapter in this manual for solutions.

7.2 Fault Code and Resolution (LCD display)

Display indication

When a problem occurs, error messages are often shown on the display. With this information you can quickly identify and investigate the problem.

Fault names	Possible reason	Troubleshooting suggestion
Over voltage	AC input voltage may be too high	1. Check the input voltage from background monitoring data 2. If the voltage is over 480Vac in short time, wait till power grid recover to normal voltage range or Power off and restart 3. If the fault can not be removed, please contact to us
Under voltage	AC input voltage may be too low	1. Check the input voltage from background monitoring data 2. If the voltage is under 140Vac in short time, wait till power grid recover to normal voltage range or Power off and restart 3. If the fault can not be removed, please contact to us
Over current	AC input current may be too big	1. Shut off distribution cabinet leakage/over current protection switch immediately 2. Check whether there is low resistance connection between two AC output wires 3. Eliminate above reasons, connect on power again, if the fault keep on, please contact to us
EPO fault	The emergency stop button is pressed	1. Reset emergency stop button (On the right side of the charging station)
Over Leakage	Leakage current to earth may be too high	1. Shut off distribution cabinet leakage/over current protection switch immediately 2. Check whether there is broken of AC output wires or low resistance connection to earth 3. Eliminate above reasons,connect on power again, if the fault keep on, please contact to us
NE fault	Input/output imperfect earth or inverse connection for L/N wires	1. Shut off distribution cabinet leakage/over current protection switch immediately 2. Check AC input/output wires if be normal, or if inverse connection input with L/N wires 3. Eliminate above reasons,connect on power again, if the fault keep on, please contact to us

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