

Mobile Fast EV Charger Operation Manual

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Please read this manual carefully before using this product !

Overview

This manual mainly introduces the DC charger's peculiarity function, technical parameters and electrical performance etc. The external connection and electrical performance are also detailedly offered. The DC charger is the high voltage, high-power equipment, there may have a certain dangerous nature, please read this manual carefully before using this product.

Reader of this manual

This manual is suitable for the following person to read:

Owner of the electric car, EV lease company, sales, organization agents, car manufacturers, auto-repair shop ect.

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portable fast charger operation manual

1. Model Definition

GT-PQ	45K	450	-12	Auxiliary power supply voltage:12V
				Max output voltage:450V
				Max power:45kW
				Product code:portable quick
				Company CN name in short

2. Overview

Dc charger comply with the CHAdeMO Communication protocols between off-board conductive charger and battery management system and meet the CHAdeMO 0.9 version. The charger may communicate with battery management system (BMS) of the electric car, it may complete charging according to the message of the BMS.

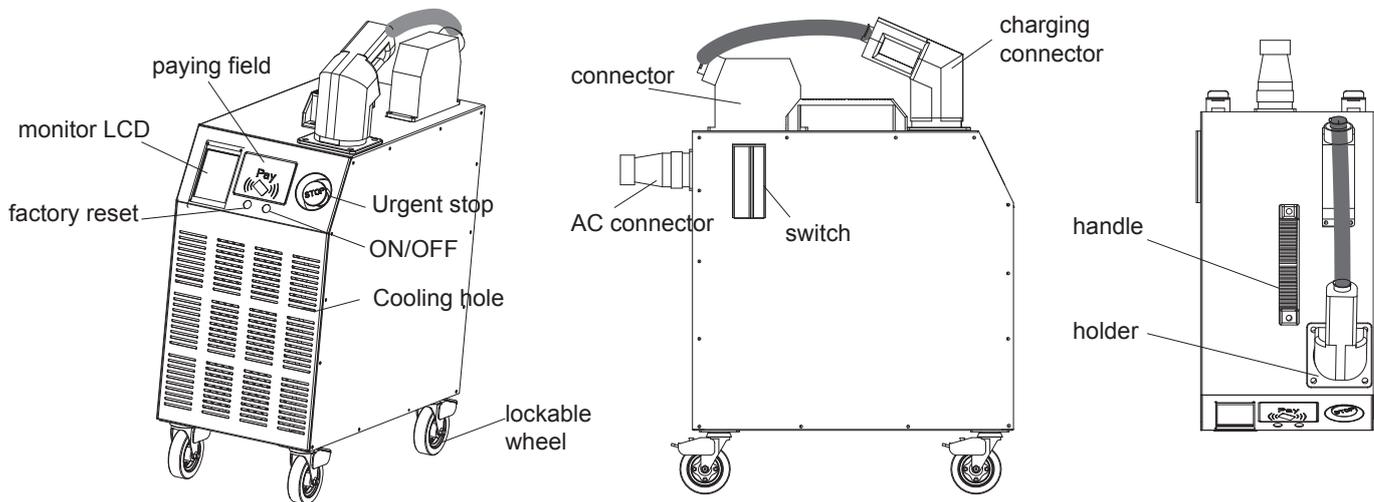


Figure 2-1

3. Operate Condition and requirement

working condition

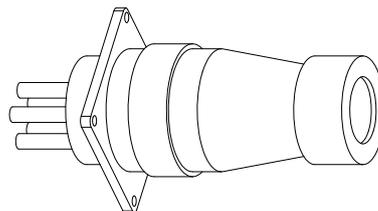
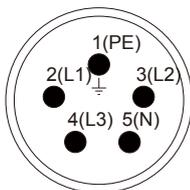
- 1) Prevent the rain, water, avoid direct sunlight ,away from the sources of charger,such us fire source, combustible gas,rain,snow smoke,sand-dust ect.
- 2) Operating temperature:-20°C~45°C
- 3) Operating humidity:5%~95%
- 4) Operating altitude:<=2000m

Safety requirement

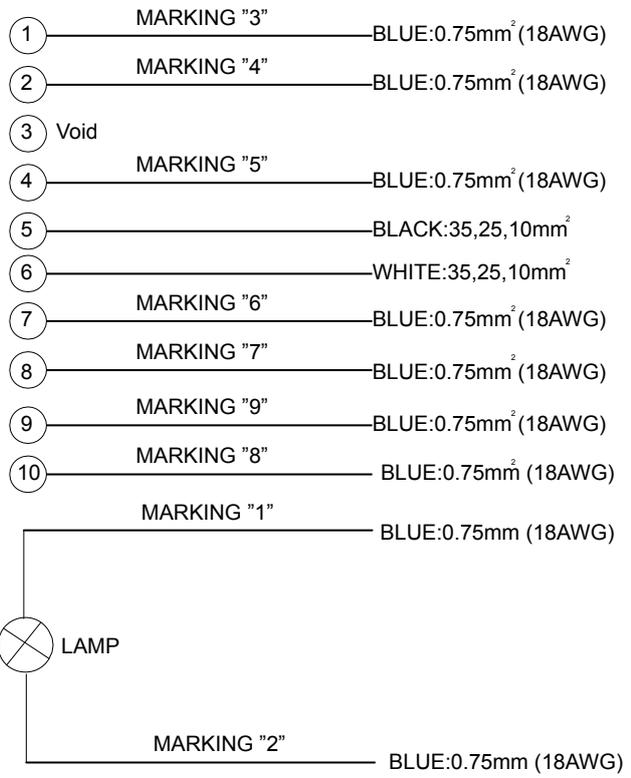
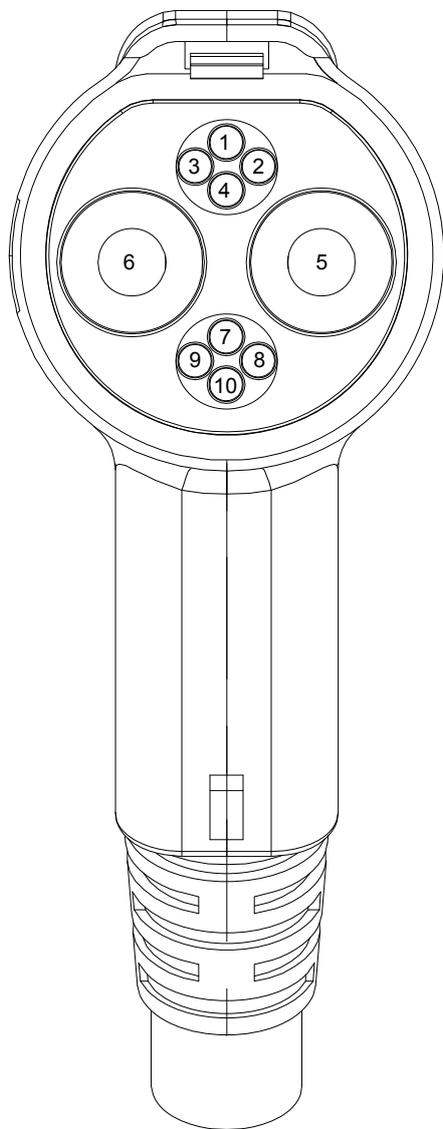
- 1) Distribution power needs to meet the requirement of battery charger power. Wire diameter of AC input cable should be selected appropriately according to the battery charger power. For example, if the battery charger power is 45kW, the phase line should be Chinese standard copper wire with sectional area larger than 16 m² (Awg 5/0), and the ground line should be Chinese standard copper wire with sectional area larger than 4 m² (Awg 11).
- 2) In the external distribution box, the circuit breaker of cable connecting to AC charger should have electric leakage protection function.
- 3) The ground line must be connected, and the grounding performance should be well.
- 4) Before charging the electric car, please be sure to confirm whether the electric car charging voltage rating and auxiliary power voltage match the choice of DC charger model. The power battery voltage of passenger car is usually below 450V and its auxiliary power is 12V. The power battery voltage of electric bus with 6m above is 500V-750V and its auxiliary power is 24V.

3. External interface

- 1) AC three -phase 5 lines input (L1+L2+L3+N,PE) Fire phase lines of fire (L) don' t have sequential requirement and can be connected arbitrarily. Grounding wires (PE/GND) are green-yellow that should not be wrong connected. Voltage range: 380V ± 15%. The interface is as shown in figure 4-1.



2) CHAdeMO connector to charger connection



Charger side interface

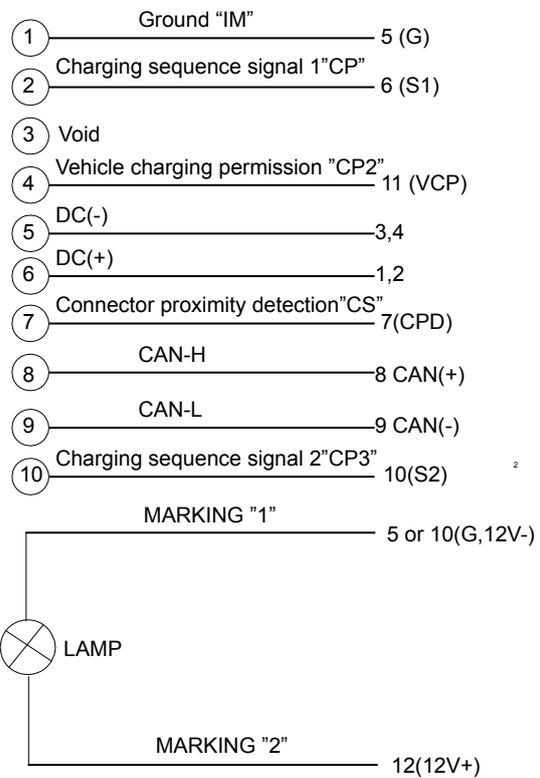
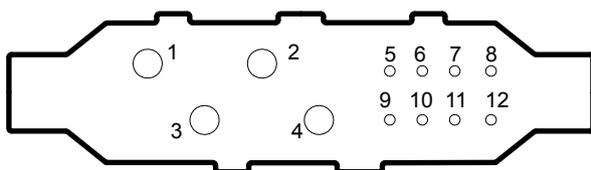


Figure 4-2

4. Function and Features

- 1)The communication board has the high-speed CAN net work can communicate with BMS of the electric car and complete the charger charge control.It used to judge the power battery type of the electric car and obtains the systematic parameter and also obtains the status data of the power battery's voltage,current and temperature in the course of charging and before charging.
- 2)2.8 inches LCD touch screen display with indicator function,which can real-time display the remaining battery power,charging voltage charging current,remaining charging time and the charger's failure state.
- 3)Two buttons complete charge (on/off)can change and set up the charger's parameter.Please refer to the seventh part of the manual (Human-computer interation)
- 4)The charger equipped with emergency stop system,it can cut off the output current at the first time in an emergency.Please check 2-1for reference.
- 5)The air switch can cut off the AC input.Please check 2-1 for reference.
- 6)The connect between AC input charger connector and DC output charger are detachable connector.The user can put the input cable and output cable stored separately.
- 7)The Charger can filling the electricity 30 ~ 45 degrees per hour commonly,general cars can be recharged in 0.5~1 hours and the bus need 2~3.5 hours.
- 8)Please notice that the air duct can not toward to ground or be blocked.As the figure 6-1 for reference.

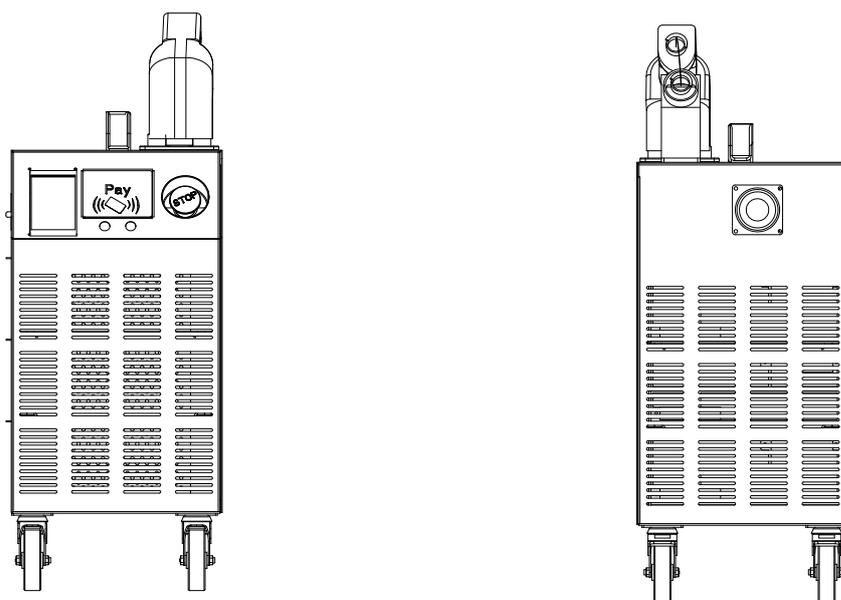


Figure 6-1

5. Human interface

Home Page

ELECTWAY[®] 

Voltage

Current

Elapse

Remain

Transfer

SOC

Status



Setting page

Volt AD **Cur AD**

Cur K **Cur B**

Vol K **Vol B**

Max Cur 

Price

Max Vol 

Modules

6. Specification

		30kW	45kW
Model		MQ30	MQ45
Output voltage		50Vdc~500Vdc	50Vdc~500Vdc
Output current		66A	99A
Input voltage		380V±15%	
Input frequency		50Hz±5%	
APS		12 Vdc	12 Vdc
Frequency		≤0.1%	
Output current accuracy		≤0.1%	
Ripple voltage		≤±0.2% (MAX)	
Efficiency		≥96% (Rated)	
Power factor		≥0.99	
Input current harmonic		≤5%	
Current-unbalance		≤±3%	
Protection		IP23	
Communication		GB,CHAdemo,CCS,Tesla	
Noise		≤65dB	
Operation Temperature		-20℃~45℃	
Working Relative Humidity		RH≤95%	
Insulation Resistance	AC-GND	≥10MΩ	
	DC-GND	≥10MΩ	
	Input to output	≥10MΩ	
Dielectric Voltage withstand	AC-GND	2500VAC, time:1min, Leakage Current≤10mA	
	DC-GND	2500VAC, time:1min, Leakage Current≤10mA	
	Input to output	2500VAC, time:1min, Leakage Current≤10mA	
Dimension		450mm*450mm*240mm	450mm*450mm*240mm
Weight		35kg	45kg

Using procedure and instruction

1) Prepare and check before charging

1. Do not knock down the wooden packing with violence after received the charger, in order to avoid damaging the machine. Check the charger if there is any damaged. It is prohibited to use if there is any breakage.
2. Check the charger if there is any damaged between the AC input cable and DC output cable also check the connection of the charger. Please stop to use if there is any dangerous condition.
3. Read this operation manual carefully. Confirm the model of the charger is matching the electric car.
4. Meet the operating condition and demand of the third section of this manual. Check the charger around 12~20cm whether there is anything block the charger's air duct. Ensure the charger in a ventilation and heat dissipation condition. Avoid using work in direct sunlight, high temperature, rain, splash, snow condition etc.
5. Put the charger in the safe place, both put it in the car (included the car boot) and on the ground directly are prohibited.
6. Put the input switch MCB is "off"
7. Put the charger connector and vehicle battery socket to disconnect
8. Connect the input interface AC 3-phase 5 line input, (ensure to connect the grounding wire). To connect the aerial socket can check the 4-1 for reference. Be sure to according to the serial number splice, for example 1 corresponding (≡). Screw the related locking ring after plugged.
9. Put the input interface MCB is "ON"
10. Plug in the DC connector (as picture 2-1), and then plug the charger connector into quick charge socket. Ensure the charger connector and car charging socket is firm and reliable connection.

2) Starting charging

11. After plugging the charging gun, click on 'start charging' button. In 10 seconds, the communication is successful and it starts charging.

a) If the display shows fault code 'OX**', please refer Appendix A (fault codes) to find the reason.

b) If the module, digital tube shows fault code 'OX**', please refer Appendix B (fault codes) to find the reason.

3) Charging

12. Clicking on the "Settings" button to switch the display interface and set up the charging current. According to the battery management system (BMS), this charger provides the demand for battery voltage. The battery is charged automatically without any manual operation.

13. The electric car is stopped using during charging, and the power should be switched off. Some car models need to open the dashboard to

start charging

14. Please make sure that the connection of gun and vehicle battery charging socket is firm and reliable. During charging, plugging the charging gun is not allowed. Disconnecting AC input cable and DC output cable directly are not allowed. Dragging the charger cable, touching and moving the charger is forbidden.

15. The child and the non-specialized person are not allowed to touch and operate this charger.

4) Ending charging

16. According to the message send from the battery management system (BMS), this charger stops charging automatically.

17. In emergency cases, you can press the “stop button” , and push the input interface - air switch to "off" status to end this charging.

18. If needs to stop charging manually, you can press the "stop charging button". Switch off the air after at least 5 seconds, and then pull out the charging gun. Finally remember to shut off the power.

7. Safety Caution

1) The users of the charger should read this manual carefully before using this charger.

2) The charger is a high voltage equipment which has a certain dangerous nature. The laypeople and juveniles are prohibited to use.

3) The charger should be away from the dangerous. Such as fire, LEL, rain smoke, dust, snow ect.

4) Check the charger around 12~20cm whether there is anything block the charger's air duct. Ensure the charger in a ventilation and heat dissipation condition. Avoid using work in direct sunlight, high temperature, rain, splash, snow condition ect.

5) Put the charger in the safe place, both put it in the car (included the car boot) and on the ground directly are prohibited.

6) Directly unplug the connector is prohibited when it is charging. Both disconnect the ac input cable, dc output cable directly and drag the charger cable, touch, move the charger are prohibited.

7) Remove the charger is prohibited without the consent of the company. If there is any safety accident ,all at your fault.

8. After-sales service plan

1) In the warranty period, if it is the problem by the company manufacture or installation, the company is responsible for free repair or replacement

2)Free maintenance period is 1 year after the completion of the time for delivery. In this period, our company is responsible for the maintenance and debugging of the device if the device has quality problems. Maintenance costs and unqualified parts replacement fee shall be borne by our company.

3)After the product delivered, our company will track the product. And we set up customer file CARDS and complaints hotline to offer satisfied service for the customer.

4)Due to damage of the goods caused by the improper use by customer, our company sales staff will sign the maintenance contracts with customers. According to maintenance contracts, technical maintenance section is responsible for the maintenance task on schedule

5)In addition to the warranty period of after-sales service, our company will be in charge of after the warranty period of equipment maintenance work, but after-sales service fee shall be borne by the buyer

6)After the product delivered, artificial damages such as product appearance, cable, circuit breaker, cable connectors do not belong to warranty service.

7)Customer should be responsible for safety problems caused by dismantle the charger by personally.In the warranty period will not be free after-sales service.

9. ETC

Order Notice

The charger's application and main usage should be understood.Please provide the model,specification or system parameters requirements before buying the charger.Contact the factory engineer if the user has the special technical requirements.

Technical updates.

Electway reserves the right of final explanation, modify and update the information.