

# Movable EV charger

**Product Specification** 

## **Chapter 1 Overview**

#### 1.1 Introduction

Dear customer, thank you for using the DC charger produced by our company . We sincerely hope that this product can meet your requirements, and look forward to your more valuable comments on the performance and function of the product. We will continue to improve the quality of the product.

## **Chapter 2 Safety instructions**

- 1) Charging operation shall follow the operation instructions provided by us;
- 2) Non-professionals are strictly prohibited to open the charging machine cabinet at will: Do not disassemble or assemble without permission:
- 3) When stopping midway, manually click the button to stop and then pull out the charging connector;
- **4)** It is strictly forbidden to insert and remove the charging connector directly in the charging process, otherwise it will burn out the charging interface head and charger;
- **5)** Any operation unrelated to charging is prohibited in the charging process, and other operations can be carried out only when the charging connector is disconnected from the car and the charger button is clicked to stop.
- 6) Avoid fireworks (open fire) near the charger and pay attention to ventilation;
- **7)** The fuse must be replaced with the same type of product, not with copper, iron wire replacement;
- **8)** There is high voltage in the charger, and any fault should be repaired by professional personnel to avoid danger;

- **9)** The superior circuit breaker and distribution device of the charger shall be selected, installed and operated by professional electrical personnel;
- **10)** In severe weather such as thunderstorms, you are advised to disconnect the power supply. If water accumulates in the charger, contact the personnel of the manufacturer to handle the water before continuing to use the charger.
- 11) The unit weight of the charging interface cable is large, and the long cable is easy to drag force in the actual charging process, which is not conducive to releasing the twisting force, increasing the risk of cable distortion and bulge, and affecting the service life of the product. Therefore, do not pull or twist the charging cable. The cable of the charging interface must be smoothed and not twisted to force the charging interface holder during use.
- **12)** Do not shake the charging interface from side to side when inserting or removing the charging interface. Insert and remove the charging interface vertically.
- **13)** If any of the following conditions occur, please turn off the power in time and notify professional personnel for repair:





- Abnormal sound appears inside the charger;
- Odor or smoke from inside the charger;
- No display or response on the charger screen;
- The charger has an unrecoverable fault alarm;

Note: Before powering on and running, ensure that the equipment shell is effectively connected to the earth, otherwise there may be electric shock risk!

## Chapter 3 Detailed technical parameters

ltem		Parameter	
Input	Voltage range	400±10%Vac; 400Vac(rated)	
	Working frequency	45-65HZ	
	The power factor	≥0.99	
	Input current	0-63A	
	Input cable length	1.5m	
	Power	40KW	
Output	Auxiliary power supply	1	
	Voltage range	200-1000Vdc	
	Maximum current	133A	
	Charging interface	CCS2	
The work environment	Charging cable length	3.5m (Total length of charging cable)	
enviioriineni	Temperature range	-20~50°C;25°C (type)	
	Humidity range	5~90RH%; (non-condensation)	
	The altitude	≤2000M	
	Machine size(L*W*H)	650*230*400mm (Excluding head, handle and casters)	
Dimensions	Packing size(mm)	Stainless box: 800*600*750mm	
Dimensions and protection	Packing/weight	DC charger + Stainless steel box G.W +/- 100 KG	
	IP	IP54	
The human-computer interaction		4.3 "color touch screen	
Charging mode		Reservation charging, Password charging	
Standard		EN61851-1	

# Chapter 4 Package



Stainless steel

## **Chapter 5 Instructions**

### 2.1 Connect cables before power-on

Content	Specification	Reference picture
L1		
L2	10mm²	12
L3		12
PE(Earth wire)	6mm² or 10mm²	000
N(Naught wire)	OHITH OF TOMM'	

- 1) If the customer requests to configure an industrial plug, please use the corresponding industrial socket to power the device;
- 2) The input cable can adopt neutral wire and ground wire, which is one size less than live wire:
- 3) When connecting cables, strictly follow the label above to connect the corresponding circuit breaker position. Do not connect wrong cables;
- 4) When the AC input line of the charger is connected to the circuit breaker, the user circuit breaker and the charger circuit breaker must be in the off state, and then open successively after confirming the connection;
- 5) The user must open the load locking screw to ensure that it is locked and not loose;
- 6) If you encounter the phenomenon of open tripping, do not force the brake to be pushed again. It is necessary to find out the cause before pushing the brake again;
- 7) The grounding cable must be connected to prevent electric shock and safety of human body under the condition of grounding.
- 8) Three phases 4P air switch, 400VAC input
- 9) Wiring diagram, live wire does not distinguish phase sequence, Naught wire and earth wire must be connected

### 2.2 Charging

Please start charging according to the following process.



Step 1: Turn ON the back of the charger to ON



Step 2: Welcome charging interface



Step 3: Plug in the charging connector



Step 4: Enter the start up interface



Step 5: Charging interface



Step 6: Charge finished, charge completed

## 2.3 Routine maintenance table

Check content	Check the method	Maintenance cycle
General operating status and environment of the system	1. Observe whether the components, circuit and device structure of the charger are damaged or deformed; 2. Listen to whether there is any abnormal sound when the charger is running; 3. Check whether the data display on the touch screen is normal. 4. Check whether the switch, contactor, circuit breaker, and fan are normal. 5. Check whether the heat of the charger shell is normal; 6. Observe whether the inlet and outlet air is normal; 7. Check the humidity and dust around the charger. Attention! Intake ventilation must be checked. If the module is not cooled effectively, it will fail due to overheating.	Once every six months
System clean	Check the cleanliness of circuit boards and components;     Check the temperature and dust of the internal charging module. Remove the module and clean it if necessary.	Once every six months to once a year (depending on the dust content of the environment)
Power circuit connection	Check whether the power cable and control cable are damaged, especially whether the skin in contact with the metal surface is cut;     Check whether the insulation bandage of the power cable wiring terminal is off.	Six months after the first commissioning, and then once every six months to a year
Cooling fan maintenance and replacement	Check whether there are cracks in fan blades;     Listen to whether there is abnormal vibration sound when the fan is running;     Replace the fan in time if it is abnormal.	Once a year
Circuit breaker maintenance	Check the corrosion of all metal components regularly (every six months);     Annual inspection of contactor to ensure good mechanical operation.	Once every six months to a year
Safety features	Check the function of emergency stop button and stop button;     Simulated shutdown.	Once every six months to a year

### 2.4 Status and Solutions

Each time the charging is completed or when the device malfunctions, the corresponding status can be viewed through the status code on the display screen.

Status	Status code	Settlement
STOP_APP	1	APP stopped.
STOP_MANUAL	2	Manually stop.
STOP_BMS_LAUNCH	3	BMS automatically stops.
STOP_EMERGENCYSTOP_FAULT	4	Emergency stop malfunction.
STOP_FL_FAULT	5	Lightning protection malfunction.
STOP_DOOR_OPEN_FAULT	6	The access control is open.
STOP_AC_SHORTAGE_VOL_FAU LT	7	Check if the phase voltage of the power grid is lower than 207V.
STOP_AC_OVER_VOL_FAULT	8	Check if the phase voltage of the power grid is higher than 253V.
STOP_METER_COMM_FAULT	9	Electricity meter communication malfunction.
STOP_FUSE_FAULT	10	Fuse failure.
STOP_CARDREADER_FAULT	11	Card reader communication failure.
STOP_PRM_COMM_FAULT	12	DC module communication failure.
STOP_CP_DISCONNECT	13	Check if the charging connector connection is reliable.
STOP_BRM_TIMEOUT	25	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_BCP_TIMEOUT	26	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_BCS_TIMEOUT	27	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_BCL_TIMEOUT	28	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_BST_TIMEOUT	29	Check if the charging connector connection is

		reliable or investigate the cause at the vehicle/ship end.
		Check if the charging connector connection is
STOP_BSD_TIMEOUT	30	reliable or investigate the cause at the vehicle/ship end.
		Check if the charging connector connection is
STOP_BRO_00_TIMEOUT	31	reliable or investigate the cause at the vehicle/ship end.
STOP_BRO_AA_TIMEOUT	32	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_BMS_PAUSE_TIMEOUT	33	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_BMS_MONOMER_VOLT_T OO_HIGH	34	Investigate the reasons at the vehicle/ship end.
STOP_BMS_MONOMER_VOLT_T OO_LOW	35	Investigate the reasons at the vehicle/ship end.
STOP_BMS_SOC_TOO_HIGH	36	Investigate the reasons at the vehicle/ship end.
STOP_BMS_SOC_TOO_LOW	37	Investigate the reasons at the vehicle/ship end.
STOP_OVER_CURRENT	38	Investigate the reasons at the vehicle/ship end.
STOP_BMS_TEMPE_TOO_HIGH	39	Investigate the reasons at the vehicle/ship end.
STOP_BMS_INSULATION_FAULT	40	Investigate the reasons at the vehicle/ship end.
STOP_BMS_GUN_FAULT	41	Investigate the reasons at the vehicle/ship end.
STOP_BST_INSULATION_FAULT	42	Check the DC bus at the vehicle/ship end.
STOP_BST_GUN_OVER_TEMPER ATURE	43	Over temperature protection, try again after the equipment cools down.
STOP_BST_BMS_COMPONENT_O VER_TEMPERATURE	44	Over temperature protection, try again after the equipment cools down.
STOP_BST_GUN_FAULT	45	Check if the charging connector connection is reliable.
STOP_BST_BATTERY_OVER_TE MPERATURE	46	Investigate the reasons at the vehicle/ship end.
STOP_BST_OTHER_FAULT	47	Investigate the reasons at the vehicle/ship end.
STOP_BST_CP2_VOLTAGE_FAUL T	48	Investigate the reasons at the vehicle/ship end.
STOP_BST_HIGE_VOLTAGE_REL AY_FAULT	49	High voltage relay malfunction
STOP_BST_OVER_CURRENT_ER ROR	50	Check the output of the power module, the output current is too high.
STOP_BST_VOLTAGE_ABNORM AL	51	Check the output of the power module, the output voltage is abnormal.
STOP_BMS_LIANLIAN	52	Check the condition of the output relay.
		II.

STOP_DC_GUN_FAULT	53	Check the condition of the output relay.
STOP_INSULATION_FAULT	55	Check the insulation status of the entire DC busbar at the pile and vehicle/ship ends.
STOP_ASSIGNMENT_TIMEOUT	57	Resource allocation timeout.
STOP_OUTVOL_HIGHER_THAN_ 10V	60	The external voltage is higher than 10V.
STOP_VOL_CAP_FAULT	61	Abnormal insulation detection voltage.
STOP_DISCHARGE_VOL_APPRO ACH_60V_TIMEOUT	62	The discharge has exceeded the time limit.
STOP_PRM_VOL_BOOST_TIMEO UT	63	Check the power module.
STOP_BMS_REVERSE_CONNECT	64	Check the cause of the vehicle/ship end and whether the battery is reversed.
STOP_BARRARY_VOLTAGE_FAU LT	65	Check the cause of the vehicle/ship end, abnormal battery voltage.
STOP_OVER_SETVOL	66	Verify whether the required voltage of the vehicle exceeds 1000V.
STOP_OVER_MODEL_SETTINGV OL	67	Verify whether the required voltage of the vehicle exceeds 1000V.
STOP_NO_CUR_FAULT	70	Investigate the reasons at the vehicle/ship end.
STOP_BY_CARD	72	Card swiping stopped.
STOP_OVER_CUR	73	Overcurrent stopped.
STOP_BHM_TIMEOUT	80	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_BHM_NO_Timeout	81	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_Current Demand_TIMEOUT	82	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_Session Setup_TIMEOUT	83	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_ReadyToChargeState_TIMEO UT	84	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_ChargeParameterDiscovery_T IMEOUT	85	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_CableCheck_TIMEOUT	86	Check if the charging connector connection is reliable or investigate the cause at the vehicle/ship end.
STOP_connector_TEMP_TOO_HIG	87	Over temperature protection, try again after the equipment cools down.
STOP_CCS_BST_FullChgComplete	88	BST charging completed.
STOP_CCS_BST_ChgFinished	89	Investigate the reasons at the vehicle/ship end.
STOP_CCS_BST_Emergency	90	Investigate the reasons at the vehicle/ship end.
STOP_SHORT_LINE	91	Check if there is a short circuit in the output circuit.

### **Chapter 6 Precautions for Use**

- **3.1** In the normal charging process, it is strictly forbidden to plug or remove the charging interface with electricity;
- **3.2** To end charging, you must first press the "Start/Stop" button, pull the interface, and then disconnect the charger to disconnect the mains;
- **3.3** Do not pull the locked interface out of the socket by brute force to avoid conductive materials such as metal foreign bodies entering the device.
- 3.4 Non-professionals do not open the charger shell to avoid damage to the charger;
- **3.5** The charger is equipped with a standard input cable. Users need to connect an external circuit breaker before the input connector to ensure that the input PE cable is reliably grounded.
- **3.6** Only when the input power distribution capacity is not less than the rated power of the charger, can the charger be charged at full power.
- 3.7 Dc charging interface is standard, no need to install it separately;
- **3.8** The equipment protection level is IP54,But it is forbidden to be used in rainwater environment;
- **3.9** If there is a heat source near the charger, please move it as far as possible and take the surrounding space into full consideration to facilitate heat dissipation;
- 3.10 Avoid steam, dust and metal dust;
- 3.11 Keep away from flammable, explosive and corrosive gases and liquids;
- **3.12** Stay away from electromagnetic interference sources.

## Chapter 7 The appendix

#### 4.1 Quality assurance

During the warranty period, the company will repair or replace new products free of charge. During the warranty period, the company requires customers to show the invoice and date of purchase. At the same time, the trademark on the product should be clearly visible, otherwise the right not to give quality assurance. The unqualified products after replacement shall be handled by our company. Customer shall allow company reasonable time to repair faulty equipment.

The company reserves the right not to guarantee quality in the following cases:

- •The whole machine and parts have exceeded the free warranty period
- Transportation damage
- Incorrect installation, modification, or use
- Extremely harsh operating conditions beyond those specified in this manual
- •Machine failure or damage not caused by installation, repair, alteration or disassembly by our service personnel
- Failure or damage of the machine caused by non-standard use or not confirmed by the company
- Any beyond the scope of use specified in the relevant national standards
- Damage caused by abnormal natural conditions



Non-company personnel are prohibited to open the charging equipment, such as personal accidents, property accidents, safety accidents caused by this has nothing to do with the company

In case of product failure caused by the above situation, if the customer requires maintenance service, the company can provide paid maintenance service after the judgment of the service organization.

#### 4.2 Precautions

The company does not assume any responsibility for the loss caused by the configuration software products provided with the products.

Any use of any or all of the data in the firmware or software developed by the company for commercial purposes is prohibited.

It is forbidden to decomplicate, decrypt or destroy the original program design of the software developed by the company.

#### 4.3 Company name

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