

Electric Vehicle AC Charging Box 3.5-7kW Instruction Manual



Note: Please read this instruction manual carefully before using the product.

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Chapter 1 Product Overview

Chapter 1 Product Overview

The arrival of the large-scale industrialization of electric vehicle charging stations has opened a new era in the era of new energy and energy saving. To adapt to the development and demand of the country's new energy electric vehicle charging stations, our company took the lead in developing a series of new products supporting electric vehicle charging stations. This AC charging station is based on the relevant requirements of IEC 61851-1: 2017 "Electric vehicle conductive charging system - Part 1: General requirements" and IEC 62196-2: 2016 "Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and interchangeability requirements for a. c. pin and contact-tube accessories", and refer to "Electric Vehicle Charging Facilities Part of the function of "Typical Design" is designed. Design according to the functions of: 2014/35/EL (The Low Voltage Directive), EN 17186:2019, EN IEC 62196-1:2022, EN IEC 62196-2:2022, EN IEC 61851-1:2019 EN IEC 61851-21-2:2021, EN IEC 61000-6-1:2019, EN IEC 61000-6-3:2021, EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A1:2019+A2:2021.

Chapter 2 Scope Of Application

The AC charging station provides a 220V single phase AC 50/60Hz, power supply for charging electric vehicles with on-board chargers. It is mainly suitable for the following places:

1. Large, medium and small electric vehicle charging stations;
2. Urban residential areas, shopping squares, electric power business places and other public places with electric vehicle parking spaces;
3. Motorway service area, station wharf and other transportation hub areas;
4. Real estate and project construction acceptance needs.

Chapter 3 Working Environment

1. The ambient air temperature during operation is $-35^{\circ}\text{C}\sim+55^{\circ}\text{C}$, 24h daily average temperature $\leq 35^{\circ}\text{C}$ (Too high or too low temperature will affect the life of the product);
2. The average relative humidity $\leq 90\%$ (25°C), no condensation on the surface;
3. Pressure: 80 kPa~110 kPa;
4. Installation vertical inclination $\leq 5\%$;
5. Experimental level of Vibration and shock in use \leq I Level;
6. Inductive strength of an external magnetic field in either direction ≤ 1.55 mT;
7. Housing material: UV resistant thermoplastic, flame retardant grade UL94 V-0;
8. There should be no explosive medium in the place of use, and the surrounding medium does not contain harmful gases and conductive media that corrode metals and damage insulation, and are not allowed to be filled with water vapor and serious mold bacteria;
9. The place of use should avoid direct sunlight. When installing outdoors, it is recommended to add sunshade facilities to the charging Station to prolong the service life of the equipment;

When users have special requirements, please negotiate with our company.

Chapter 4 Functional Characteristics

1. Installation methods: wall-mounted, bar-mounted;
2. The shape adopts ABS plastic I structure;
3. Adopt AC 220VAC input;
4. Insulation resistance: >1000 M Ω (DC500V);
5. The main control board uses a single-chip microcomputer with an embedded operating system, the charging mode is plug and charge;

Chapter 5 Product Parameter

EV AC Charging Station Parameter Table

Product Name		AC Charging Box (Plastic Type)	
Model No.	Home use		
		AF-AC-3.5-B-A-O-1-SA	AF-AC-007-B-A-O-1-SA
Specification	Rated Power	3.5kW	7kW
Charging Device	Installation Method	Wall mounted, Bar-mounted	
	Feeding Method	Bottom in and bottom out	
	Equipment Dimension	150*150*65 mm	
	Equipment Weight	3 KG	
	Cable Length	5m (Optional)	
Electrical Indicators	Input Voltage	AC 220V±20%	
	Input Frequency	50/60 Hz	
	Output Voltage	AC 220V±20%	
	Output Current	Type2: 16 A/1P	Type2: 32 A/1P
	Current Limit Protection Value	≥110%	
	Metering Accuracy	1.0 Level	
Functional Design	HMI	LED indicator strip	
	Charging mode	Automatic full charge	
	Charging method	Plug and charge	
	Mode of payment	/	
	Network way	/	
Operative Norm	2014/35/EL (The Low Voltage Directive), EN 17186:2019, EN IEC 62196-1:2022, EN IEC 62196-2:2022, EN IEC 61851-1:2019 EN IEC 61851-21-2:2021, EN IEC 61000-6-1:2019, EN IEC 61000-6-3:2021, EN IEC 61000-3-2:2019+A1:2021, EN 61000-3-3:2013+A1:2019+A2:2021		
	Safety Function	Charge gun temperature detection, overvoltage protection, undervoltage protection, overload protection, short circuit protection, grounding protection, over temperature protection, low temperature protection, insulation monitoring protection, polarity reverse protection, lightning protection, emergency stop protection, leakage protection	
Environmental Indicators	Working Temperature	-35°C~+55°C	
	Working Humidity	5%~95% non-condensing frost	
	Working Altitude	<2000m	
	Ingress Protection	IP54	
	Cooling Method	Natural air cooling	
	Noisy Control	≤40dB	
	MTBF	17520 hours	

Chapter 6 Installation Method And Drawing

6.1 Overall Dimensions Of The Equipment

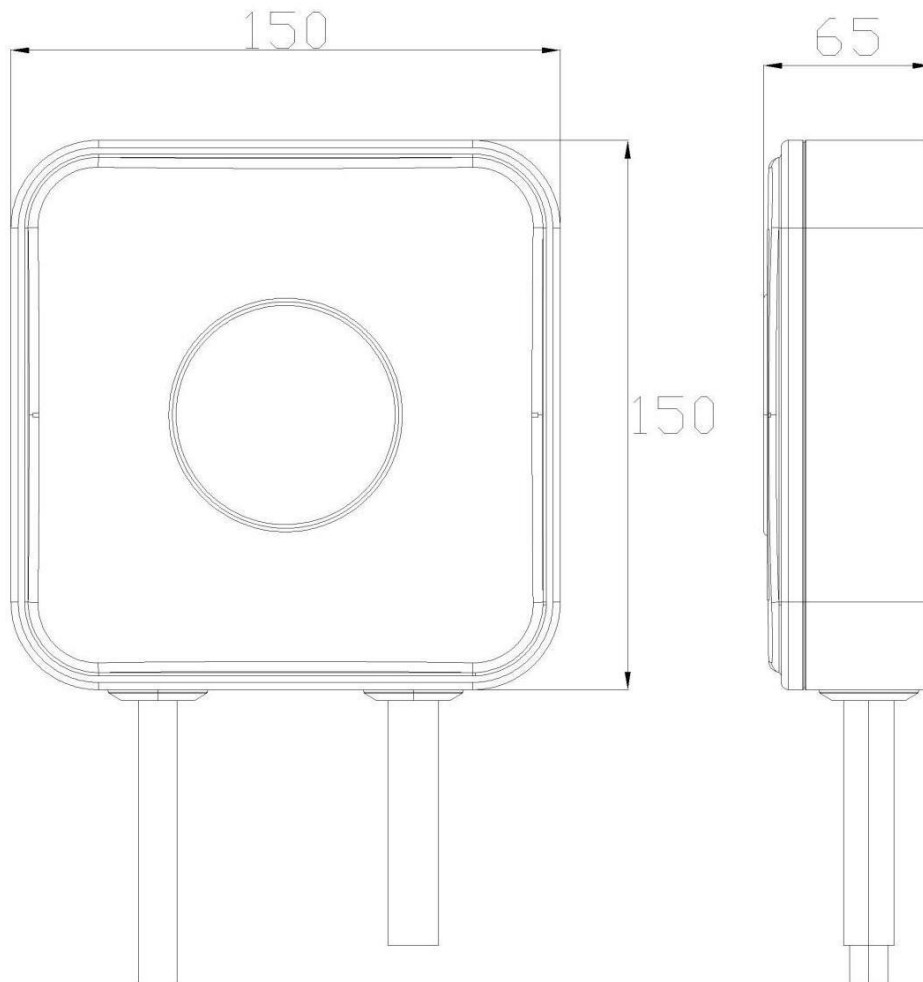


Figure 6-1-1 Overall Dimensions Of The Wall-Mounted Device

6.2 Installation Of Equipment

6.2.1 Check the packing box for the following items before installation (subject to the packing list)

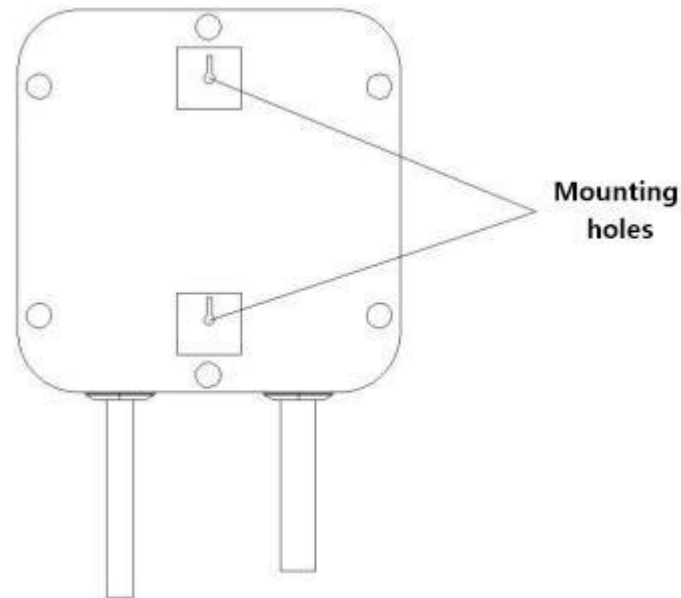
1. Wall mounted AC charging Station (1 set)
2. Installation instructions (1 set)
3. 1 piece of certificate of quality
4. Install expansion screws (4 pieces)

6.2.2 Installation Environment Requirements

1. The Ingress Protection of this series EV AC charging Station: IP54;
2. Ambient temperature: -35°C to +55°C;

6.2.3 Installation Method

1.This series of EV AC charging Station can be installed Wall-mounted or Floor standing mounted according to the requirements Installation size, as the Figure 6-2-1:



The wall-mounted type is fixed on the wall with 2 M4 screws, Hang the two mounting holes on the screws.

Figure 6-2-1 Wall-Mounted Installation Method

Chapter 7 Storage And Transportation

4.1 Storage And Transportation Of Equipment

There must be corresponding tightening measures during transportation. Avoid strong vibration and bumps from damaging the outer packaging of the device. Check for damage after arrival, If there is any transportation damage, please negotiate with the transporter and our company. After opening the box, check whether the contents of the box are consistent with the packing list.

Packaged equipment should be stored in a room with a relative humidity of $\leq 80\%$ and an ambient air temperature of $-10^{\circ}\text{C}\sim+40^{\circ}\text{C}$. The storage place should be kept dry, clean and well ventilated, and can prevent the intrusion of various harmful gases. It is strictly forbidden to store it in the same place with corrosive items.

Note: Non-professionals are strictly prohibited from dismantling equipment components.

Chapter 8 Maintenance And Preservation Of EV AC Charging Station

Shading and rainproof measures should be taken for charging Stations. It is recommended to install canopy outdoors.

Regularly check whether all the bolts in the charging Station are tight, whether the connecting wire is loose, and the connection is not firm. Check whether there is a short circuit.

Pay attention to lightning protection and ensure the effective shielding and reliable grounding of the charging Station.

When using it, try to control the output voltage and current of the charger station within the nominal range, ensure that the charging Station works with maximum efficiency.

When the body is out of use, the charging output should be stopped first, then wind the cable and put it back in place.

Note: During the transportation of the equipment, Pack the charger station firmly and mark the direction of loading and unloading. It is forbidden to store and transport the charger station upside down; There must be corresponding tightening measures. Avoid strong vibration and bumps from damaging the outer packaging of the device.

Note: non-professional personnel are strictly prohibited from installing the EV AC charger.

Chapter 9 Warranty Card

Warranty Regulations

1. The warranty period of this product is 2 year.
2. The customer makes an appointment for on-site maintenance service within 48 hours of the warranty.
3. During the warranty period, Faults caused by normal use in accordance with the instructions for use (Judgment by the official staff of the company), To be repaired free of charge.
4. Except for the following problems of charging equipment, All can enjoy the above related warranty terms:
 - 4.1 Not able to provide this guarantee and a valid purchase certificate;
 - 4.2 Exceeding the warranty period specified by the manufacturer;
 - 4.3 Without warranty certificate and valid invoice, Or the content on the warranty certificate does not match the physical identification of the repaired product or is altered;
 - 4.4 Failure to follow the requirements of the product instruction manual for use, maintenance, and customs declaration, resulting in damage;
 - 4.5 Damage or malfunction caused by foreign matter entering;
 - 4.6 Failure caused by products not manufactured by the company;
 - 4.7 Damage caused by disassembly by the person who is not responsible for the three-pack repair;
 - 4.8 Damage caused by force majeure (such as lightning, excessive voltage, earthquake, fire, flood and other natural disasters);
 - 4.9 Failure and damage caused by other unavoidable external factors;
 - 4.10 Improper use causes damage to the equipment caused by water or other solutions;
 - 4.11 Use of a power supply other than the specified voltage causes damage.
6. Only guarantee the above, No other express or implied guarantee (Including the marketability, the implied guarantee of the reasonableness and adaptability of a particular application), Whether in the contract, civil negligence, or other aspects, The company is not responsible for any special occasional or indirect damages.

For Customer

Product name : _____ Serial number: _____

Product type : _____

Date of manufacture : _____ (Subject to commissioning and acceptance)

Stamp of Manufacturer :

Customer name : _____ Tel : _____

Customer signature : _____

Customer ADD : _____

1. Warranty content : _____ After-sales service : _____

Customer signature : _____

2. Warranty content : _____ After-sales service : _____

Customer signature : _____

3. Warranty content : _____ After-sales service : _____

Customer signature : _____

Certificate Of Quality

Product Name: EV AC Charging Station

Model No: _____

Inspectors: _____

Date of Production: _____

WENZHOU ANFU ELECTRICAL CO., LTD.

Assembly and testing of the equipment are carried out by DOBRATEH, d.o.o. under the supervision of WENZHOU ANFU ELECTRICAL CO., LTD.

(date _____).

Specialist responsible for assembly and control _____