VERDEXON

BORN FROM EARTH, BUILT FOR TOMORROW

Installation, Operation & Maintenance Guide.

Infinity Edge Series AC Charger

7kW/11kW/22kW

Table of Contents

1 Overview

WB20 series AC charger is designed to use with electric vehicle on-board charger. Equipped with color display and suitable for floor and wall mounted installation, it allows for plug and play charging, card swiping or app charging and supports charging amount recording. This basic charger has a wide range of applications and is suitable for apartments buildings, shopping malls and workplace. It can be installed in various electric vehicle charging stations to provide convenient and safe charging services for electric vehicle drivers.

2 Environment Condition

Operating temperature: -25℃～+40℃; Storage temperature: -40℃～+70℃

Applicable altitude: ＜2000 m

Operating humidity: 5%～95%, no condensation

3 Product Picture and Interface Description

3.1 Exterior Drawing of Charger

Fig. 1 Outline drawing

3.2 External Dimensions of Charger

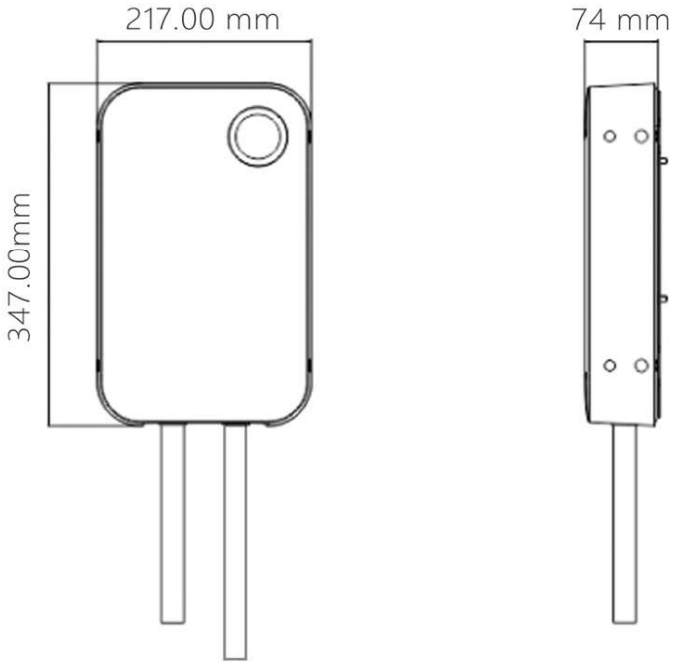


Fig 2 Dimensional drawing of charger

4 Installation Methods

4.1 Wall-mounted Installation

1. Drill holes according to the reference paper and remove it afterward.
2. Put the plastic plugs into the holes to install the expansion screws.
3. Align the mounting plate with the holes and fix it on the wall using M5*30 expansion screws.
4. Following the instructions in the previous steps, fix the plug base approximately 0.2m below the charger.
5. Align the main body of the charger with the buckle and install it on the hanging plate using the M5*10 machine screw. Then, insert the provided waterproof hole plugs.
6. Connect the station to the power grid following the wiring sequence.The installation is now complete.

Note: For mode C charging station that comes with a fixed charging cable, please refer to the first six steps while for mode A charging station that comes with a charging socket, please refer to all the steps

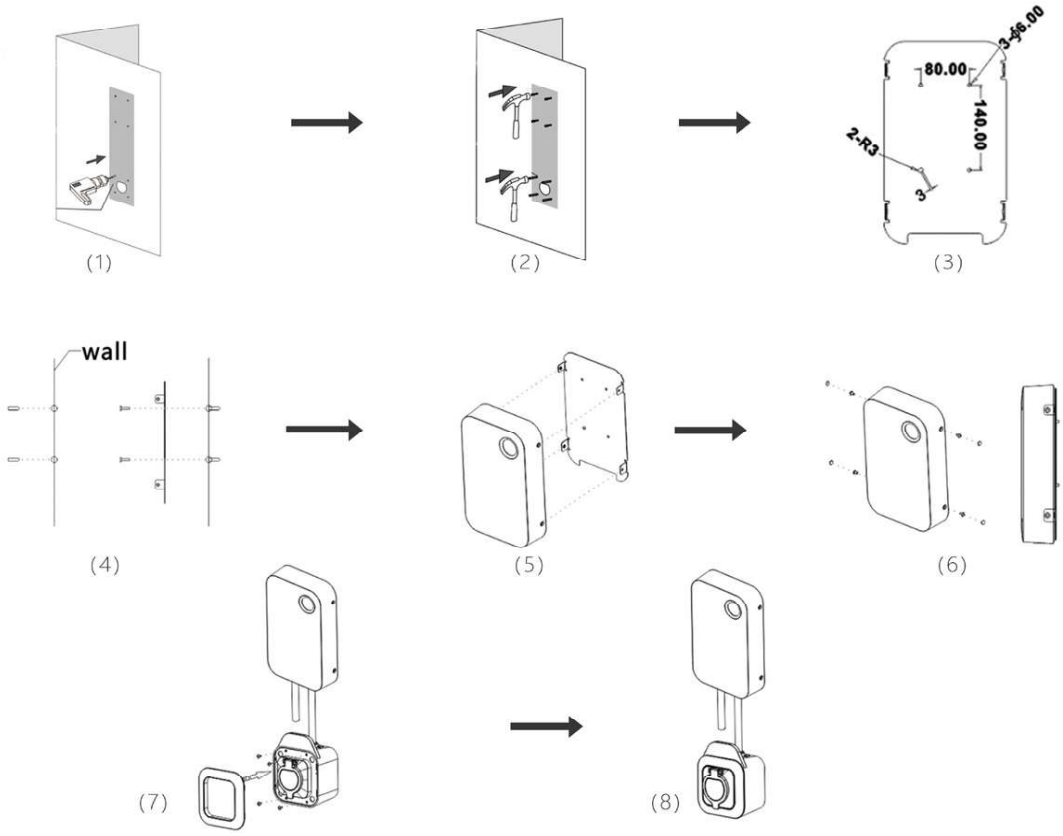


Fig 3 Wall-mounted installation procedures

4.2 Charger Input Power Interface

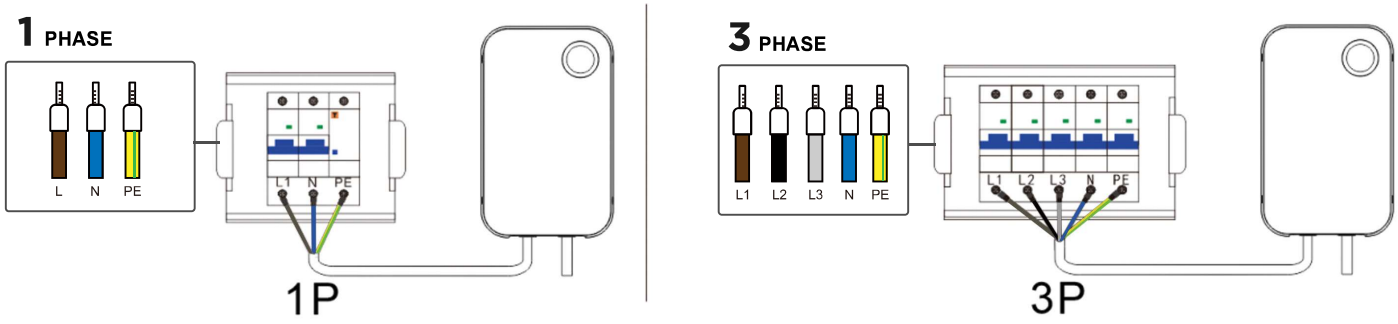


Fig 4 Charger input power interface

Single-phase 230V Connection:
- Connect the single-phase 230V cable to L1, N, and PE interfaces.

Three-phase 400V Connection:
- Connect the three-phase 400V cable to L1, L2, L3, N, and PE interfaces

Choose the incoming cable according to the charger's maximum current specification.
Opt for a 2.5mm²cable for a 16A charger, a 6mm²cable for a 32A charger and a 8mm²cable for a 40A charger.

5 Composition and Electrical Schematic Diagram of Charger

The main circuit of charger includes the input cable, charging main control board and charging interface connector; The secondary circuit includes operation status indicator and display screen, which can be optionally equipped with card reader or communication module.

The charging power board has the functions of overload, short circuit and leakage protection, and controls the charging output on-off. The connector provides the charging interface connected with the electric vehicle, with locking device and anti-misoperation function. The signal lamp provides "standby", "charging" and "full" status indication and the carrier metering board measures AC charging.

6 Technical Parameters

Specifications	Model: WB20	
Technical specification	Certificate	CE\FCC\RoHS
Exterior material	Product name	WB20 EV AC CHARGER
	Shell material	ABS+PC Plastic shell
	Routing mode	Lower incoming line, lower outgoing line
	Charging interface	Charging connector
	Dimension	347*217*74mm
	Weight	5-9kg
Electrical indicators	Input voltage	230V/400V AC three-phase five-wire configuration (L1 phase, L2 phase, L3 phase, Neutral, PE)
	Input current	16A/32A/40A
	Input frequency	50Hz /60Hz
	Phase	Single/Three phase
	Maximum power	3.6kW/7.2kW/8.8kW/11kW/22kW
	Metering capabilities	Yes
	Measuring accuracy	Class 2
	Output voltage	230V/400V AC
	Output current	16A/32A/40A

	Standby power	⩽10W
	Standard	EN 61851-1:2019
	MTBF	100,000 hours
Environmental indicators	Applicable scene	Outdoor / Indoor
	Operating temperature	-25℃～+40℃
	Operating humidity	5%～95%
	Altitude	＜2000m
	IP rating	IP66
Safety protection	Overload protection	Yes
	Short circuit protection	Yes
	Leakage protection	Yes
	Low voltage protection	Yes
	Over temperature protection	Yes
	Lightning protection	Yes
Human-computer interaction	LED light	Yes
	LCD	Yes
	RFID	Only available on RFID model
	APP	Only available on APP model
	Touch screen	Yes

Table 1 Technical parameters

7 Charging Status Indicator

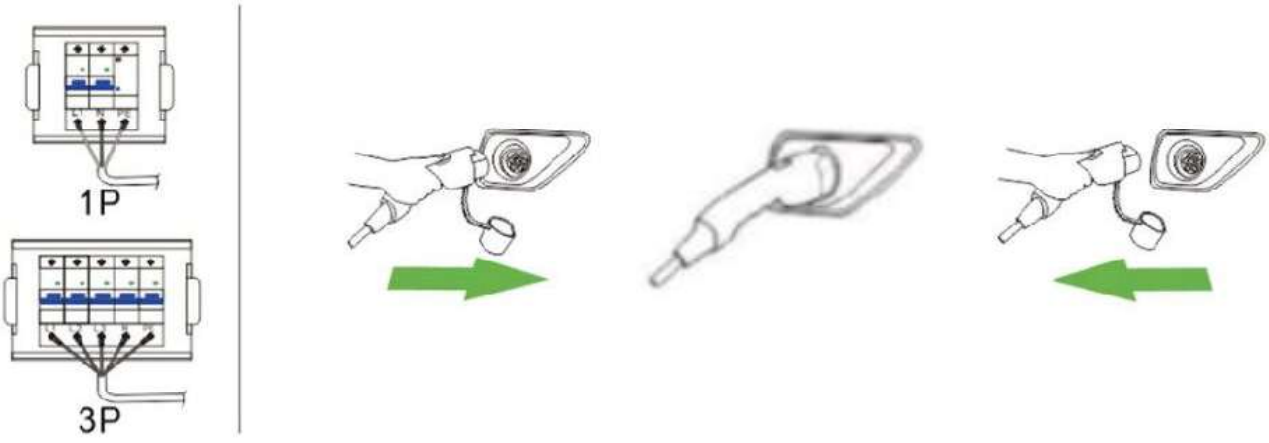
State	Power (Cyan)	Connected (Green)	Charging (Green)	Fault (Red)
Stand By	On	Off	Off	Off
Connected	Off	On	Off	Off
Charging	Off	Off	Breathing	Off
Fault	NA	NA	NA	On

Table 2 Color status diagram of charging status indicator

Charging will cease in the event of a short circuit protection or leakage protection fault. To resume charging, the charging plug must be disconnected and reconnected. For other faults, automatic resumption of charging occurs once the issue is rectified, without the need to unplug and replug the charging plug.

8 Operating Instructions

8.1 Plug and Charge



1. Make sure the charging station is connected to power.

2. Connect the EV and the charging station with the EV charging cable.

3. After connecting the charging plug, there will be a green breathing indicator light which signals that the charger has entered the charging mode.

4. When you need to complete charging, just pull out the charging plug.

9 User Interface Operation

Charger start page

9.1 Illustration of Screen

9.2 Charging Tutorial

Refer to the quick tutorial illustrated in the following figure. Complete a charging session by following the sequence of operations from left to right and from top to bottom:

Plug to be inserted

Charging standby

Charging

Full charge

Disconnect the plug after charging is complete

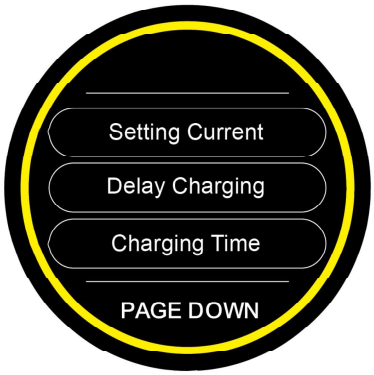
9.3 Charger Password Setting

The charger comes with a password function for security, which is disabled by default. We recommend enabling this function to prevent unauthorized use, particularly in outdoor settings.

To enable the password function, simply navigate to the 'SETTING' home page on the touchscreen, then scroll down to the 'Password' option. From there, you can turn on the password function and set or change the password.
The default password is '123456'.

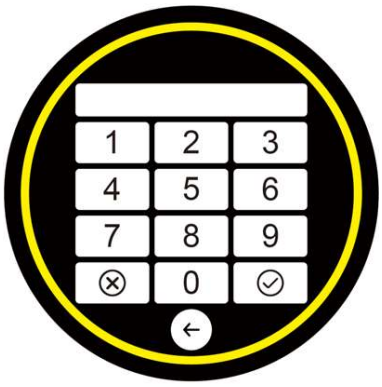
Standby page

Home page



Function list

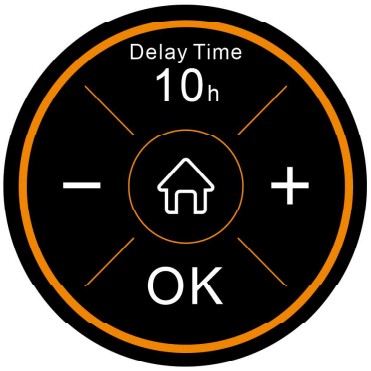
Password function
Turn on/off
Setting page



Password
Input page

9.4 Other Settings Page

Current setting



Time booking

Charging duration setting

Current saving

Accumulated electricity setting

Multi-function setting

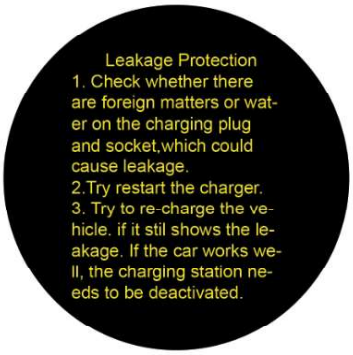
Booking display

9.5 Error Reporting Page

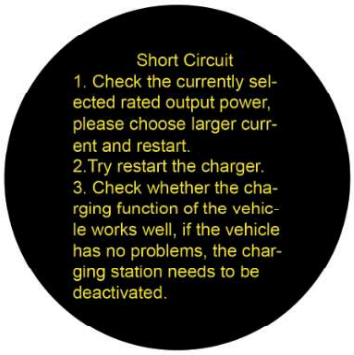
If the system encounters an abnormality, a fault prompt will be displayed, as shown in the following figure.

For critical faults, the system cannot recover automatically. To alert the user of such faults, the system will initiate a 10-second countdown to restart automatically after the user unplugs the device.

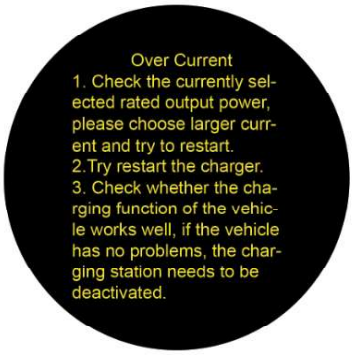
Leakage Protection



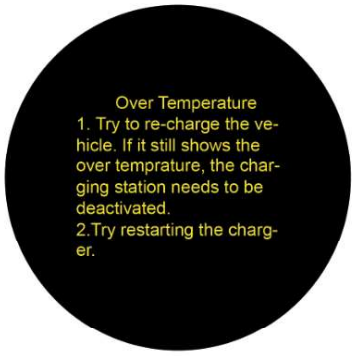
Short Circuit



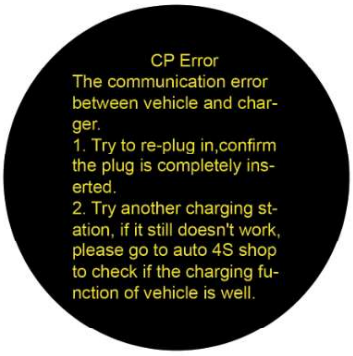
Over Current



Over Temperature



CP Error



10 Precautions for Use

- Failure to follow the instructions may result in danger;
- Please use the charging station under safe and proper operational conditions;
- Prevent children from touching the charging station;
- Install the charging station away from pyrotechnics, dust, and corrosive environments;
- Due to the high voltage output, prioritize personal safety during usage. Serious injury or death may occur if safety measures are not observed;

- In the event of a fault, there's a risk of electric shock or even death. Cut off the power supply in emergencies;
- Avoid disassembling the charging station during charging.

11 About Maintenance

The product has been already packed in the factory. During transportation , strong impact and bumps should be avoided to prevent damage to the outer packaging of the product . The product should be stored at an ambient temperature of -40℃～+ 70℃ and a relative humidity of no more than 95% . The ambient air should not contain acids , alkalis or other corrosive gases and explosive gases , and the product should be protected from rain , snow , wind and sand.

12 Security Warnings

- Regularly check the charging station for visible damage. Operating a damaged product may pose a risk of electric shock.
- Ensure all safety facilities are present and conduct regular tests to guarantee proper operation.
- In the case of a ground fault, it is highly probable that the earth wire carries voltage. So only inspect the charger after confirming there is no high voltage power in the system.
- Users of the charging station must strictly adhere to principles and regulations to ensure personal safety and equipment safety. Failure to comply may result in serious consequences.
- Installers and users must follow principles and regulations for their safety and equipment safety.
- Before powering on the charging station, ensure proper grounding to avoid accidents.
- Insulate tools without exposed metal parts to prevent short circuits.
- Do not modify, refit,or change any part by yourself under any circumstances.
- Maintain the charging station for a stable operation. Keep the environment clean, thermally regulated, and consistently humid. Avoid using the station in the presence of volatile gas or flammable atmosphere.
- Confirm that input voltage, frequency, circuit breakers, and other conditions meet specifications before powering up.
- Have the charging station installed by authorized personnel.
- Check if the product meets local regulatory requirements.
- Hang the charging plug 0.4-1.5m above ground level.

13 Warranty

13.1 Warranty Conditions

After the product leaves the factory, due to transportation reasons, the user found that the product or supporting parts were damaged during the unpacking inspection.

After the product leaves the factory, the user encountered quality issues despite strictly following the storage, installation, and usage rules outlined in this instruction manual.

13.2 Warranty Period

The product is guaranteed for 12 months from the date of receipt.

13.3 Warranty Methods

During the warranty period, the manufacturer is responsible for free replacement or repair.

Beyond the warranty period, the user shall negotiate with the manufacturer to replace or repair in a paid way.

This manual is subject to any change without notice.

If the contents of this manual do not conform to the real object, please refer to the real object.