

User Manual



Business series Wallbox

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1 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 disassemble, 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 city1town 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.

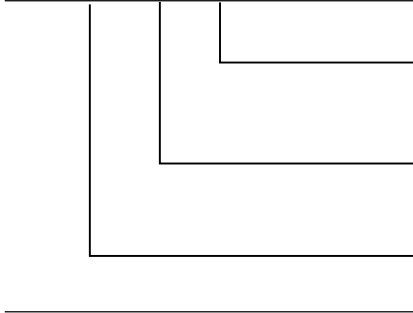
2 Introduction

2.1 Product Technical Specifications

	Model	PowerFed Home 22 kW
Input	Power Supply	Three-phase
	Rated Voltage	400V AC
	Rated Current	32A
	Frequency	50/60Hz
Output	Output Voltage	400V AC
	Maximum Current	32A
	Output Power	22kW
User Interface	Charging Outlet	Type 2 socket
	Cable Length	7m
	Housing Material	Galvanized steel+ Temper glass
	LED Indicator	Green/Yellow/Red
	RFID Reader	Mifare ISO/IEC 14443A with 2pcs
	Start Mode	RFID card/ APP
Communication	Supported	Wi-Fi 2.4G
	Protocol	OCPP 1.6J
	Frequency Bandwidth	2400-2483.5MHz (Wi-Fi) 13.553-13.567MHz (RFID)
	Max RF Output Power	<20dBm (-10dBW)
Safety	RCD	Type A + 6mA DC
	Ingress Protection	IP54
	Impact Protection	IK08
	Electrical Protection	Over current protection, Residual current protection, Surge protection, Over/Under voltage protection, Over/Under frequency protection, Over temperature protection
	Certification	IEC 61851-1: 2017, IEC 61851-21-2: 2018
	Warranty	2 years
Environment	Installation	Wall-mount/Floor-mount
	Working Temperature	-30°C ~ +50°C
	Working Humidity	5%~95%
	Work Altitude	<2000m
Package	Product Dimension	452*295*148mm (L*W*H)
	Package Dimension	560*380*226mm (L*W*H)
	Net Weight	11kg
	Gross Weight	12kg

2.2 Module Difference

AC - 7000 - AE - 34



3: 3rd Generation
4: 2.7' black & white screen

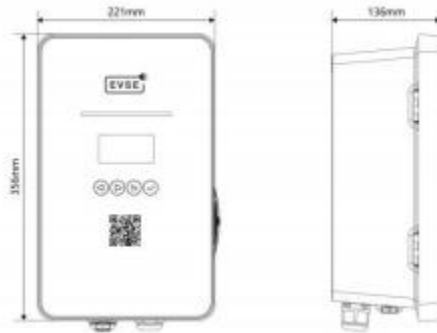
A: Type 2 charging cable
B: Type 2 charging socket
E: European standard

7000: Max Power 7kw
022K: Max Power 22kw

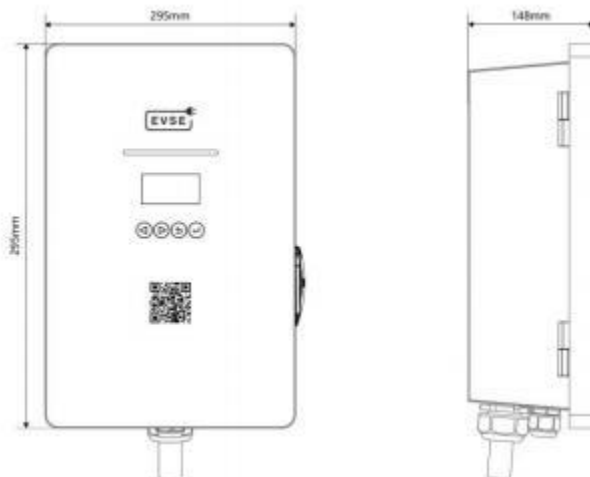
AC: AC charger

2.3 External structure

1. single.phase















2. Three.phase



2.4 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.

			
	<p>φ6 Expansion Plug (x4) for single-phase (x7) for Three-phase</p>	<p>self-tapping screw (x4) for single-phase (x7) for Three-phase</p>	<p>Cable Holder (only for cable version) (x1)</p>
			
	<p>M4*12 screw (only for three-phase) (x2)</p>	<p>Installation Position Template (only for single-phase) (x1)</p>	<p>wall-mount Bracket (only for three-phase) (x1)</p>
			
<p>User Manual (x1)</p>	<p>RFID Activation Card (x2)</p>	<p>Back Cover Opening Keys (only for three-phase) (x2)</p>	<p>Insulated Terminal (x6) for single-phase (x10) for Three-phase</p>

3 Operation Instruction

3.1 Installation Preparation

1) Tools required

Tool Name	Photo	Function
Multimeter		Check electrical connection and electrical parameter
Cross screwdriver		Tighten the screws
Insulated Torque Wrench		Tighten the bolts
Electric drill		Hole on the wall
Diagonal Pliers		Cut cables
Combination wrench		Tight the bolts

2) Materials and Cables

Name	specification	Quantity
Power supply cable	single-phase or three-phase power supply cable	Depend on actual requirement
Insulated tape	0.15mm*18mm, 0~600V, 0°C ~80°C	Depend on actual requirement
Connector for mains cable	RJ45	Depend on actual requirement
Insulating tape	0.15 mm × 18mm; 0-600V; 0, C-80, C	Depend on actual requirement
Cable tie	4 × 200mm	Depend on actual requirement

3.2 safety of Installation

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.

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.

3.3 Installation Process

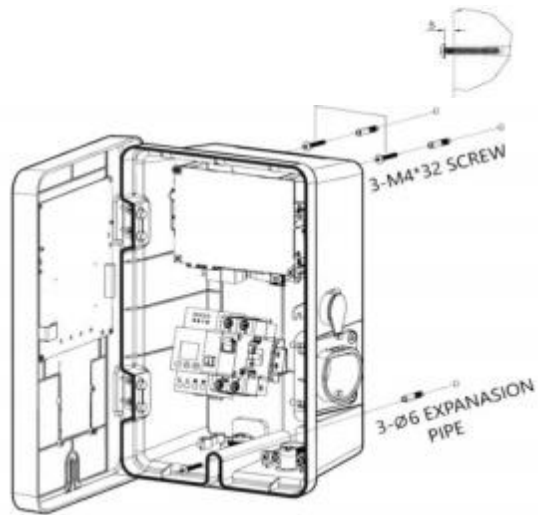
1) Wall.mount Installation

For single-phase

- 1) Based on the installation position template, identify the installation position and mark the two holes for the wall screws, which will be inserted in the top rear of the charger.
- 2) Drill two holes with the 6mm diameter drill bit and insert the plugs horizontally into the holes, paying attention to the force and depth with which they are inserted (make sure the plug completely enters the hole) .
- 3) Insert the two M4x32 screws into the wall plugs, allowing the heads of the screws to protrude by at least 5 mm.



- 4) Provisionally position the charger by inserting the head of the screws into the upper holes at the rear.
- 5) Open the front of the charger.
- 6) Mark the position of the third fastening screw. The hole is located at the bottom of the charger.
- 7) Remove the station and make the third hole, inserting the wall plug.
- 8) Reposition the station and secure the third screw at the bottom.

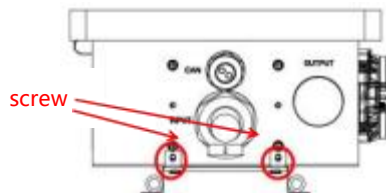


For three-phase

1. Based on the four holes around of the attached wall-mount bracket, drill 4 x ϕ 6 * 35 mm holes on the wall, and insert the expansion pipe.



2. Lock the 4 x M4*32mm self-tapping screws into the expansion pipe, fixed the bracket between the screw head to the wall.
3. Hang the charger to the bracket through the two raised screws on it.
4. Fix the charger to the bracket by mounting two screws to two screw holes at the bottom of the charger and bracket.



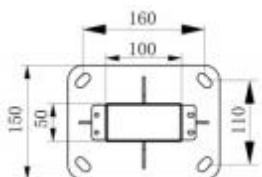
5. Connect wires to the connectors (Refer to section 4.3) .

2) Floor.stand Installation

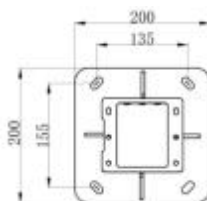
1. Locate the position for floor-stand pillar on the ground, against the center line of parking place. Let power supply cable go through the inner space of floor-stand pillar. And remain 150cm cable outside.



2. Install the mounting-stand on the ground according to below size and fix it by mounting the four screws.



FOR Single-phase prODUCT



FOR three-phase prODUCT

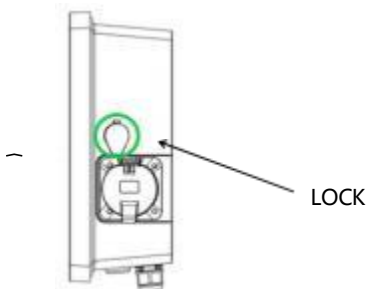
3. Hang the charger on the mounting-stand as below and fix screws.



3) Locking

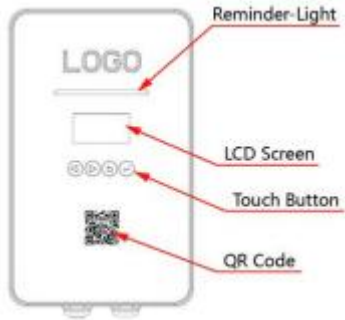
The locking of the charger housing does not depend on the type of mounting.

Turn on the switch inside and close the front cover of the charger with the wrench supplied. The locks are located on the right side.

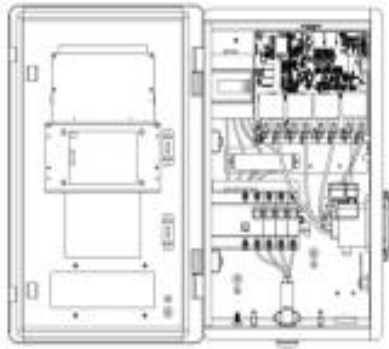


4 ElectricalConnection

4.1 ChargerAppearance



4.2 Overview of Internal structure



4.3 AC Wiring

Note: Before insert input power wire, please cut silicon sealed loop as required to maintain IP65.



1. Remove a length of 40mm of the cable jacket and strip the wire insulation to a length of 8~15mm.
2. Crimp the terminals as shown in the figure below.



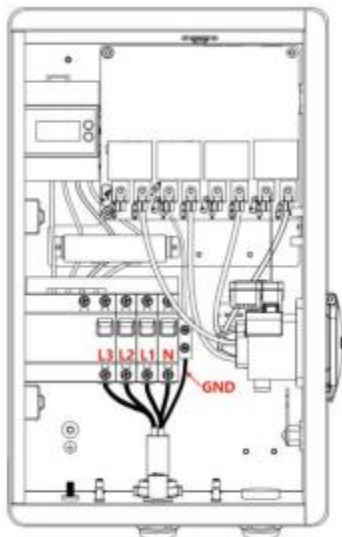
single.phase Wiring



Three.phase Wiring

3. Distinguish different input wires of three-phase and single-phase, then insert the wire into the corresponding wire slot.

Note: If your charger is with PEN-protection function, please follow same wiring as shown below.



5 Configuration and Operation

5.1 Power-on Checking

1) Checks before Power-on

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.
- . Reconfirm the charger is installed properly.
- . No components or other items have been left on the top of the charger.

2) LED status

When powering on the charge point, the LED indicator should be in standby status.

state	Description	LED status
standby	Power-on, but the charging connector is not plugged in	Flashing green slowly, 1second on; 3 seconds off;
Ready to charge	The charging connector is plugged in successfully	Flashing green fast, 200ms on; 1s off; 5 times; 3s off;
Charging	Charging in progress	Breathing green, 1s on; 1s off
Fully charged	The electric vehicle is fully charged	solid green
Unplug	The charging connector is unplugged	Return to standby mode
RFID card read	Put the RF1D card on the reader and it is successfully read	Flashing yellow fast; 100ms on; 100ms off; 5 times

3) LCD screen checking

Power-on the charger, the LCD screen should show following interface.



5.2 Configuring the charger

The Hotspot interface is intended for the local configuration of the charger. A smartphone is needed to connect the charger hotspot. You can initiate the Hotspot interface by following the instructions.

PreparatiOn

1. Activate the hotspot



- Activate the hotspot of the charger by restarting the power.
- The hotspot of the charger remains available for 15mins since charger reboot.

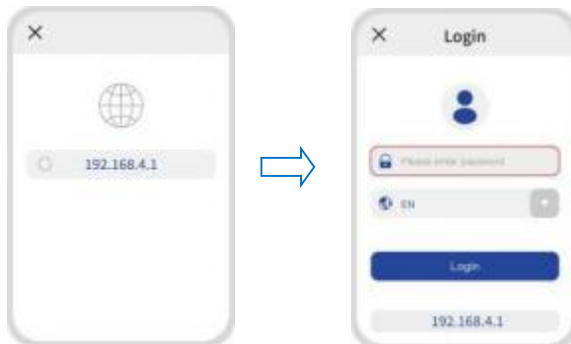
2. connect to charger Hotspot



- Turn on the smartphone wi-Fi, and connect the hotspot of the charger. If unable to connect, try using Airplane mode.
- The name of the hotspot wi-Fi starts with the charger sN number, i.e. "sN." .
- The password is .admin12311.

L0gin

- open the browser on your smartphone and enter 192.168.4.1 in the address bar.
- Log in using the four-digit p1N code located on the last page of the manual. After login, the function menu will be displayed.



COntigUratiOn

NetwOrk Setting
click "Network setting", you'll see the following:
1. communication types
The default type will be wi-Fi. other options include: 4G / Ethernet.
2. wi-Fi name
select the wi-Fi or enter the wi-Fi name and enter the password.
3. server address
The default address will be shown here. You can also enter a new address.
4. Grid type
The default Grid type will be shown here. If the default is wrong, click the dropdown button and select the right type from 1T / TT / TN.

Notice: when the configuration is successfully done, you need to reconnect the smartphone to the charger hotspot.

Then go back to the web page. It will automatically jump to the login page. Login again to start charging setting.

Charger Setting
click ".charger setting" to configure the charger.
1. Load balance
The function of Load Balance is oNLY available when power meter or cT is installed.
If both power meter and cT are installed, both ratio of transformation and maximum current can be set properly according to the cT specification.
If only one installed, either power meter or cT, oNLY maximum current can be set.
2. charging mode switch
click ".mode switch" and choose the ".Network mode" or ".plug&charge mode". Then click ".confirm" to complete mode switching.

5.3 Charging Operation

WARNING! Observe the safety instructions on page 1 before using the product.

Make sure that the following requirements are met before using the charger:

- The authorized electrician have set up the electrical connection properly.
- The charger is properly configured.

1) Connect the charger to electric vehicle

1. Plug the charging connector to the electric car.
2. After plug-in, please check the connector is connected correctly and tightly.
3. when the connection is correctly established, the charger's LED indicator will flash green fast, which indicates that the charger is ready for charging.

2) start charging & stop charging

1. By RFID card: Put the RFID card on LCD screen to start or stop charging.
2. Plug & Play mode: After plug in connector, will begin charging, and will stop charging after plug out connector from car side.
3. By APP: scan the QR code on the charger by APP, and follow the instruction of APP to operate.

If the car does not start charging, check that charging is activated in your car and that the connectors are properly plugged in. If charging still does not start, check what might be the cause on page 15.

6 Trouble Light signal

Problems	LED status
Ground Warning	Flashing yellow, 2s on, 2s off, Cycle
Relay adhesion	solid red light
Leakage current fault	Flashing red, 500ms on, 500ms off, 1 time, 3s off, Cycle
CP fault	Flashing red, 500ms on, 500ms off, 2 times, 3s off, Cycle
Over current fault	Flashing red, 500ms on, 500ms off, 3 times, 3s off, Cycle
Input polarity reverse	Flashing red, 500ms on, 500ms off, 4 times, 3s off, Cycle
Leakage current loop abnormal	Flashing red, 500ms on, 500ms off, 5 times, 3s off, Cycle
Input terminal overtemperature	Flashing red, 500ms on, 500ms off, 6 times, 3s off, Cycle
Relay overtemperature	Flashing red, 500ms on, 500ms off, 7 times, 3s off, Cycle
Over/Under Voltage fault	solid yellow light blocks for 2s and flashing red, 500ms on, 500ms off, 1 time, 3s off, Cycle
Over/Under frequency fault	solid yellow light blocks for 2s and flashing red, 500ms on, 500ms off, 2 times, 3s off, Cycle
Meter comm abnormal	solid yellow light blocks for 2s and flashing red, 500ms on, 500ms off, 3 times, 3s off, Cycle
smart meter comm abnormal	solid yellow light blocks for 2s and flashing red, 500ms on, 500ms off, 4 times, 3s off, Cycle
CT fault	solid yellow light blocks for 2s and flashing red, 500ms on, 500ms off, 5 times, 3s off, Cycle
Charging connector lock abnormal	solid yellow light blocks for 2s and flashing red, 500ms on, 500ms off, 6 times, 3s off, Cycle
Charging connector current abnormal	solid yellow light blocks for 2s and flashing red, 500ms on, 500ms off, 7 times, 3s off, Cycle

Note: If the problem occurs, please contact customer service.