



# BENY User and Installation Manual

## ZHEJIANG BENYI NEW ENERGY CO.,LTD.

SHUANGHUANGLU INDUSTRIAL ZONE , BEIBAIXIANG TOWN, YUEQING CITY, WENZHOU CITY, ZHEJIANG PROVINCE, CHINA.

TEL: +86-577-5717 7008 FAX: +86-577-5717 7007

✉ info@evb.com

🌐 www.evb.com

♻️ This catalogue has been printed on ecological paper.

© Zhejiang Benyi New Energy Co., Ltd. All rights reserved.

⚠️ If the models and specifications in this product catalogue change due to product updates, we will not provide prior notification.



VERSION: 20240906-01

WWW.EVB.COM



**ZBENY**



G R E E N S M A R T

## CONTENTS

<b>1. Safety Information</b>	<b>01</b>
Important safety instructions	01
<b>2. Product Introduction</b>	<b>02</b>
2.1. Product Appearance	02
2.2. Parameter table	03
2.3. Product Features	04
2.4. Protection Functions	04
<b>3. Installation Instructions</b>	<b>05</b>
3.1. Installation Considerations	05
3.2. SIM Card Installation	05
3.3. Minimum Installation Requirements	05
3.4. Installation Position	06
3.5. Power Supply	06
3.6. Accessories List	06
3.7. Installation Step	07
<b>4. Operating instructions</b>	<b>09</b>
4.1. Button Usage	09
4.2. Buzzer	09
4.3. LED Lights Display	10
<b>5. Warranty</b>	<b>14</b>
<b>6. Manufacturer self-declaration</b>	<b>14</b>

## 1. Safety Information

Important safety instructions: this document contains important instructions and warnings that must be followed when installing and maintaining the EV Charger.

### Warning

- ⚠ Read this entire mandatory document before installing or using the EV charger.
- ⚠ This device should be supervised when used around children.
- ⚠ The BCPCV series EV Charger must be grounded through a permanent wiring system or an equipment grounding conductor.
- ⚠ Do not install or use the EV Charger near flammable, explosive, harsh, or combustible materials, chemicals, or vapors.
- ⚠ Use the EV Charger only within the specified operating parameters.
- ⚠ Never spray water or any other liquid directly at the EV Charger. Never spray any liquid onto the charger handle or submerge the charger handle in liquid. Store the charger handle above the ground to prevent unnecessary exposure to contamination or moisture.
- ⚠ Stop using and do not use the EV Charger if it is defective, appears cracked, frayed, broken, or otherwise damaged, or fails to operate, or continue operation.
- ⚠ Do not attempt to disassemble, repair, tamper with, or modify the EV Charger. The EV Charger is not user serviceable, contact us for any repairs or modification.
- ⚠ Please take care while transporting the EV Charger. Do not subject it to strong force or impact or pull, twist, tangle, drag, or step on the EV Charger, to prevent damage to it or any components.
- ⚠ Do not touch the EV Charger's end terminals with sharp metallic objects, such as wire, tools, or needles.
- ⚠ Do not forcefully fold or apply pressure to any part of the EV Charger or damage it with sharp objects.
- ⚠ Do not insert foreign objects into any part of the EV Charger.
- ⚠ Use of the EV Charger may affect or impair the operation of any medical or implantable electronic devices, such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator. Check with your electronic device manufacturer concerning the effects that charging may have on such electronic devices before using the EV Charger.

### Cautions

- ⚠ Do not use private power generators as a power source for charging.
- ⚠ Incorrect installation and testing of the EV Charger could potentially damage either the vehicle's Battery and/or the EV Charger itself. Any resulting damage is excluded from New Vehicle Limited Warranty and the EV Charger Limited Warranty.
- ⚠ Do not operate the EV Charger in temperatures outside its operating range of -30°C to +55°C.
- ⚠ The cord extension sets are not allowed to be used.

### Notes

- ⚠ Ensure that the EV Charger's charging cable is positioned so it will not be stepped on, driven over, tripped on, or subjected to damage or stress.
- ⚠ Do not use cleaning solvents to clean any of the EV Charger's components. The outside of the EV Charger, the charging cable, and the connector end of the charging cable should be periodically wiped with a clean dry cloth to remove accumulation of dirt and dust.
- ⚠ Be careful when removing the power supply, do not damage the circuit board.

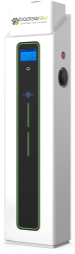

## 2. Product Introduction

### 2.1. Product Appearance



1	Logo
2	LED light
3	LCD Screen
4	Emergency Button Switch (When the button is pressed, the EV Charger will stop, then rotate the button pop-up reset.)
5	Function test button (For WPS connection, and leakage test.)
6	Type 2 socket
7	RFID
8	LED light

## 2.2. Parameter table

Model	BCPCV-DT2N-P	BCPCV-CT2N-P
		
Maximum Power	2*22kW	2*22kW
Input Voltage/Output voltage	AC400 3-PHASE	AC400 3-PHASE
Input Frequency	50/60Hz	
Tethered/Socket	Socket	Tethered
Meter	Built-in Electric Meter	
Display	Five-inch LCD Screen + LED Lights	
Frequency	50/60Hz	
Rate Charging Current	2*(6-32A)	
Standby Power Consumption	4G: <8W Wi-Fi: <6W	
Operating Temperature	-30°C ~ 55°C	
Storage temperature	-40°C ~ 85°C	
Operating Humidity	5% ~ 95%	
IP Protection	IP54	
Safety Protection	Leakage Protection, Over Current Protection, Ground Protection, Over Voltage Protection, Under Voltage Protection, Contactor Adhesion Protection, Neutral and Live Wire Reverse Connection Protection, Over Temperature Protection, CP Signal Abnormal Protection, Lightning Protection	
Operating Altitude	<2000M	
Charger Dimension	Height:1422mm Width:350mm Depth:220mm	
Gross weight	43KG/47KG	
Leakage Detection	TYPE A+DC6mA leakage sensor built-in	

## 2.3. Product Features

- Cover opened detection: if the cover is opened, the Charger will alarm in red light and stop the work.
- LCD Screen: The data of the Charger can be seen more directly and clear.
- Built-in MID meter: to monitor the voltage and current more precisely, to measure the degree.
- Human Induction: when the person is close to the Charger, the LCD screen will light up, this can reduce the consumption and longer the service life.
- Double socket: reduce the cost, which can charge for 2 cars at the meantime.
- APP: Control the Charger remotely, and can view the historic electricity consumption.
- Various protection function: to protect efficiently the device and personal safety.
- IP54: high degree of water-proof, to protect the device well.
- Leakage Protection: built-in TYPE A + DC6mA leakage sensor.
- Temperature Monitoring: monitor the operating temperature anytime, once detecting the over temperature, the Charger stop the work immediately.
- WPS wifi connection: to achieve fast wifi connection.
- Backup power: If the power is cut-off by accident while charging, the backup power could unlock the charging cable of the Charger.

## 2.4. Protection Functions

With full protection to avoid all kinds of charging safety hazards, it will automatic power off after the vehicle is fully charged, to protect the car battery and prolong the working life.



### 3. Installation Instructions

#### Warning

- ⚠ Normally, the earth wire should be properly connected, otherwise the EV charger will not work.
- ⚠ For situation where there is no earth connection, in order to enable the EV Charger to operate, it can be set via APP to turn off the earth detection and it will work, but it will reduce to the leakage protection safety level.
- ⚠ This BCPCV series AC EV charger must be grounded via a permanent electrical system or equipment grounding conductor.
- ⚠ Before installing an AC EV charger, please confirm the type of grid connection available. If you are unsure of the type of connection available on the service panel, please consult an electrician or contact ZJBENY for assistance.
- ⚠ Note: Please consult your local electrician or refer to your local code in order to choose the proper wire for the AC EV charger current.

#### 3.1. Installation Considerations

- Note: Throughout the manual, "conduit" is used as the standard term for the protective tubing that houses the service wiring. In regions where conduit is not used (Europe for example), a cable comprised of service wiring enclosed in a protective jacket may be substituted for conduit if allowed by local regulations.
- Here are some additional guidelines
- Conduit needs to be metal and flame retardant.
- Use an appropriate circuit breaker.
- The EV charger doesn't come with the battery for safety shipping, we advise the users to buy the CR1220 battery or same size battery if need the history record function.

#### 3.2. SIM Card Installation

- Note: If you need to use 4G mode, please install a Micro SIM card.

#### 3.3. Minimum Installation Requirements

Installation of the charger requires that you:

- Calculate the existing electrical load to determine the maximum operating current.
- Calculate the distance to ensure minimal voltage drop.
- Obtain any necessary permits from the local authority that has jurisdiction and confirm that the follow-up inspection has been scheduled by an electrician after the installation is complete.
- Use only copper conductors.
- Use copper wire that meets the specifications of local wiring regulations. The selected cable must be capable of withstanding continuous loads of up to 40A at all times. The selected circuit protection device must incorporate an appropriate residual current device (RCD) and corresponding electrical load over current protection.

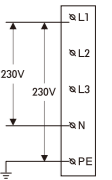
#### 3.4. Installation Position

- Ensure that the parking position is within range of the charging cable.
- There is enough clearance for the charging cable to wrap around and the charging handle can be comfortably positioned on the side of base.
- If installed in an enclosed garage, choose to install on the side of the EV charger slot.
- For outdoor installations, waterproof protection is recommended but not mandatory.
- Install in a well-ventilated space. Avoid installation in enclosed boxes or close to high power appliances.

#### 3.5. Power Supply

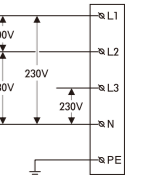
230V single-phase power supply

- For 3-phase EV charger, connect the single phase wire (L1), the neutral wire and the earth wire do not connect the other phase wires (L2 or L3). The phase voltage between the line and neutral wires should be 230V.








400V three-phase power supply with neutral line

- If three phases are applied, all three phases (L1, L2 and L3) and the neutral line should be connected to each other and the voltage of each phase to the neutral line should be 230V.

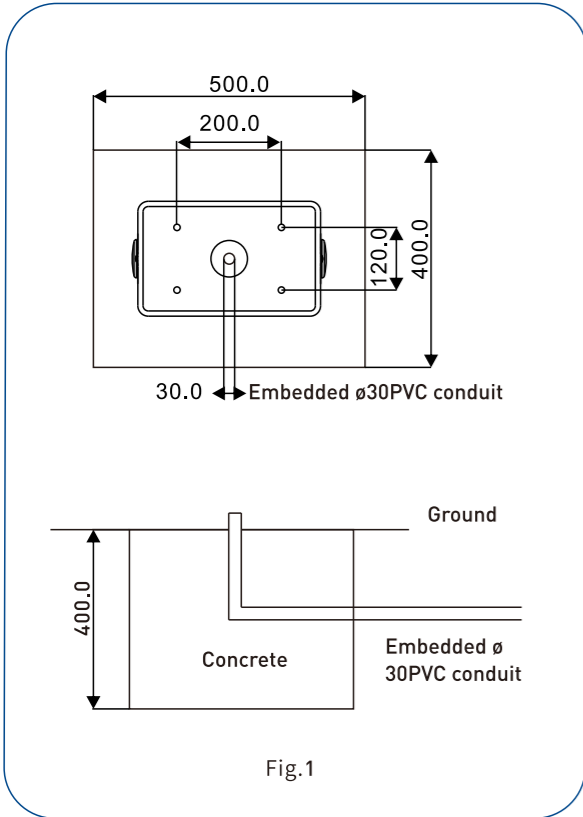


#### 3.6. Accessories List

- |   |  |  |
|---|--|--|
| ①<br><br>EV charger<br>X1  | ②<br><br>RFID card (optional)<br>X2 | ③<br><br>M10 expansion bolt<br>X4 |
| ④<br><br>User Manual<br>X1 | ⑤<br><br>Position template<br>X1    |  |

Note: Card type supported by RFID: RF card ISO14443 Type A, MIFARE® ONE (MF1) card, with the read-write frequency of 13.56MHz±7K.

### 3.7. Installation Step



#### Step 1

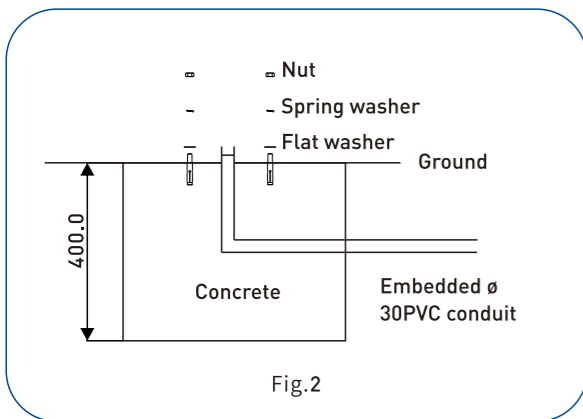
Before the installation of EV charger, dig a pit (D x L x W: 400 mm x 500 mm x 400 mm) on the ground, and embed PVC conduit (ø30mm) as shown in Fig.1 (or install it on the ground).

#### Step 2

Prepare the concrete and cast it in the excavated pit. After the cement hardens, install EV charger.

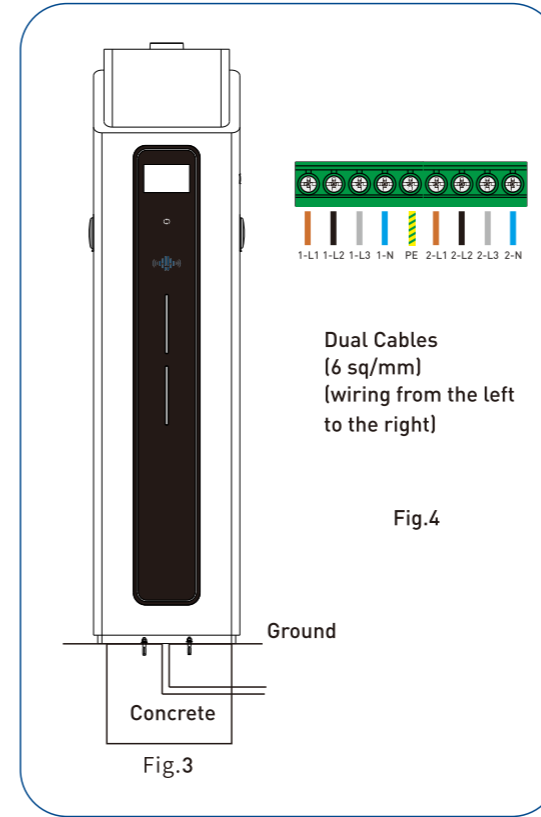
#### Step 3

Thread a set of 6 mm<sup>2</sup> copper core cables into the embedded conduit, of which 0.7 m of one end for EV charger passing through the ground is reserved for accessing EV charger, and the other end is connected to the distribution box with the reserved length depending on the wiring distance and actual situation of the distribution box.



#### Step 4

Draw the fixing hole positions of the post on the cement base according to Fig.1, drill 4 holes with a 14-mm impact drill (hole depth: 45 mm), and then fit M10 expansion screws into the holes (nut, spring washer and flat washer shall be screwed out first) as shown in Fig.2.



#### Step 5

Thread the reserved cable through the middle of EV charger, loosen the two screws on the side of the bottom cover of EV charger, finally install EV charger with four expansion screws, fix it with a movable wrench or M10 socket tool, and finally lock the bottom cover of EV charger as shown in Fig.3.

#### Step 6

Open the door panel on the back of EV charger and connect the cable to the corresponding terminal as shown in Fig.4 (torque: 1.8 N·M-2.2 N·M).

#### Note:

Do not do wiring without guiding of professional person.

Do not make installation without reading the installation manual.

Do not remove the EV Charger by yourself in any situation, it may damage the precision parts inside, and which will make you can not enjoy after sale service.

## 4. Operating instructions

### 4.1. Button Usage

● Function test button

short press	light up the LCD screen Choose which charging gun to use. (When the screen is on)
Press the emergency stop reset button, and then press the function test button.	leakage test
hold down	WPS pairing (need to be without network, and under the WPS mode)

**Note:** The charging gun cannot be inserted into the car during the leakage test.

● Emergency Button Switch

press	emergency stop
press and rotate	reset


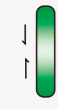
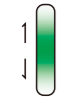
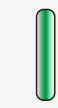


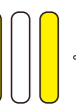
- Press the emergency button and hold down the reset button for 20 seconds, to restore factory setting.
- Hold down the reset button for 5 seconds, to restore default password.
- Hold down the reset button to power up the Charger, to be in firmware update mode by Z-BOX.
- Hold down the emergency button to power up the Charger, to be in WEB configuration mode.






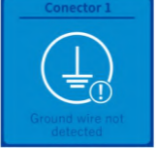

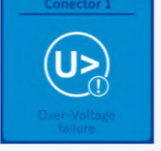

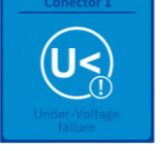

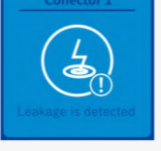




### 4.2. Buzzer

Enter into WEB configuration mode successfully	Long buzzing once
WEB configured successfully	Long buzzing once
WEB configured failed	Long buzzing twice
RFID card/remote authentication failed	Short buzzing 5 times
RFID card/remote authentication start	Short buzzing once
RFID card/remote authentication stop	Short buzzing twice
Start the leakage test	Long buzzing once
Restore the password successfully	Long buzzing once
Restore the factory setting	Long buzzing once

### 4.3. LED Lights Display

Normal Status				
LED Behavior	LED Status	Status Description	Potential Cause	Solution
	Lights OFF	No power supply	No power	Check the power source
	All lights ON, Yellow and Green lights are blinking till green lights in the breathing state.	Charger Power ON self test		
	The first green light fast blinking (ON for 0.25 seconds, OFF for 0.25 seconds)	Enter WPS configuration	In WPS configuration status	Recheck the configuration
	The first green light slow blinking (ON for 1 second, OFF for 1 second)	Network is not connected	WIFI connection failure or wrong password	1.5G or WPA 2_Enterprise is not available for charger 2.Ensure password is correct 3.Restart the APP
	All green light breathing	Standby		
	The 1-5 green lights slow blinking (ON for 1 second, OFF for 1 second)	The charger is reserved		
	The 1-5 green lights ON, brightness decreases from top to bottom	Charger authorized, waiting for the Charging Connector plug in		

Normal Status				
LED Behavior	LED Status	Status Description	Potential Cause	Solution
	Green lights up and down	The Charging Connector is plugged in, waiting for RFID card authentication		
	Green lights end in the middle	Waiting for the car start to charge		
	Green lights extend from the middle to the ends	Charging		
	All green lights ON	Charging finished		
	No. 1 and No. 2 green lights flash alternately	Waiting for updating the firmware		
	No. 1-5 green lights are moving and flashing	In updating the firmware		
	Yellow lights flashing	Charger is remotely disabled or not registered	Charger is not configured	Configure the charger

Fault Status				
LED Behavior	LCD Screen/LED Light	Status Description	Potential Cause	Solution
		Contactors failure	Contactors adhesion or tripping	Check whether the vehicle charging module is normal
		Emergency stop protection	Emergency stop button is pressed	Rotate the emergency stop button Pop-up reset
		Grounding abnormality	The ground wire is not wired or the neutral wire is reversed	Check whether the grid connection and charger wiring is correct
		Over Voltage	Power supply has short circuit or unstable	1.Check the power supply 2.Check the wire of power supply
		Under Voltage	Power supply voltage is insufficient	1.Check the power supply 2.Check the wire of power supply
		Leakage fault	Leakage happens	1.Reset with emergency stop button 2.Check the charger connector or vehicle for leakage
		Over current	Short circuit may happen	Call for professional repair
		Over temperature alarm	High temperature	1.Wait for charger cooling 2.Ensure the wiring of charger terminal is not loosening



Fault Status				
LED Behavior	LCD Screen/LED Light	Status Description	Potential Cause	Solution
		Abnormal CP signal	The connection between the charger and the vehicle is loose	1.Check if the connector is with water leakage in 2.Ensure the connector is matched with EV
		Abnormal CC signal	The connection between the charger and the vehicle is loose	Check whether the charger connector is firmly inserted
		Open fault	The cover is opened or not fastened	Check if the cover is opened and fasten the cover
	Yellow light ON triple	LED board is offline	LED board is fault or losing	Open the charger cover and check whether the light board cable is connected correctly and firmly
	Yellow light flash 4 times	RFID off-line		
	All red lights ON	Meter off-line		
	RED light flash 4 times	The car is over temperature, stop charging		
	Yellow lights light up for 5 seconds	Firmware update failed		

## 5. Warranty

In order to ensure the normal service life of charging piles and reduce the risks in use, maintenance must be done within the specified time by professionals with accredited safety maintenance tools.

- Three-year free warranty is provided for any damage or malfunction caused by quality problems from the date of production of the charger.
- Damage caused by operation failure, natural force majeure, incorrect installation or instructions for use is not covered.
- Repair can only be performed by professionals. If any problem occurs during installation or use, contact your dealer first.

## 6. Manufacturer self-declaration

1. In order to improve the stability of the charger, BENY will provide software updates for at least three years from the date of manufacture of the charger.
2. The charger will not collect and save users' sensitive personal data, such as payment information, timestamped location data, audio input stream or biometric data.
3. The manufacturer will not collect telemetry data of the charger through remote service.