Poros WS-32-E2 AC EV charger

AEG | Installation Manual

Read the operation manual carefully before use and keep it properly

This operation manual may be revised due to technical upgrades or the adoption of newer manufacturing processes

1. Product Introduction

1.1 Summarize

Poros WS-32-E2 AC charging pile is independently developed and produced by AEG.It adopts industrial-grade high-performance ARM C architecture processor and can be equipped with network module to realize online operation control, interactive and intuitive, and easy operation. The performance meets the relevant standards and requirements of the National Energy Ministry and the National gird.

The product is composed of intelligent control board, intelligent electricity meter, charging gun line, network module,executive component and outdoor box. All-round multi-level protection, leakage protection, overload protection, surge protection,overvoltage protection, undervoltage protection, short circuit protection, emergency top protection, etc., to ensure charging safety. Suitable for installation in electric vehicle charging stations, public parking lots, residential area parking lots, large commercial building parking lots, roadside parking Spaces and other places, can charge electric vehicles with on-board chargers, is the first choice for electric vehicle AC charging products.

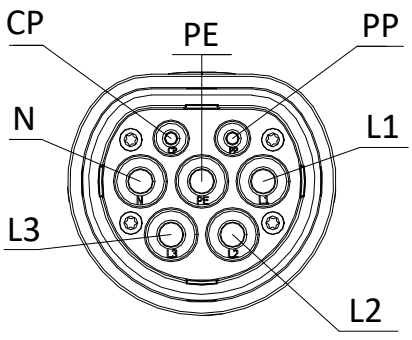
1.2 Standard

IEC 61851-1 《Electric vehicle conductive charging system -Part 1: General requirements》

IEC 62196-2016《Plugs, socket-outlets, vehicle couplers and vehicle inlets-Conductivecharging of electric vehicles》

IEC 62477-1:2011《Safety requirements for power electronic converter systems and equipment - Part 1: General 》

1.3 Charging Pile Socket Interface

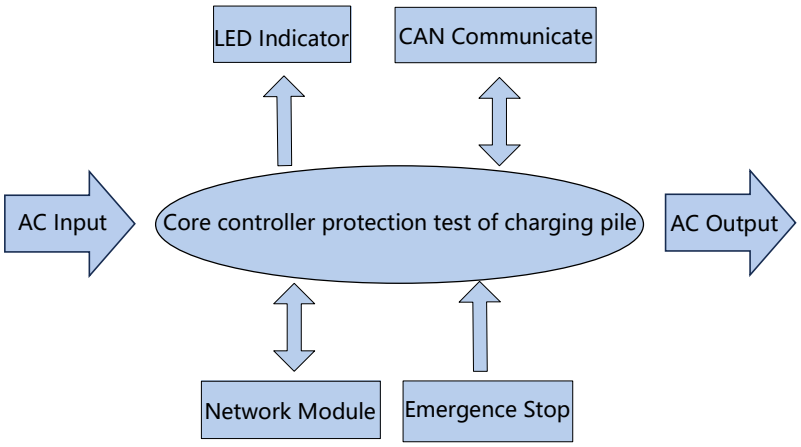


Picture 1.1 Standard seven-pin universal socket table

Table 1-1 Standard seven-pin universal socket:

Terminal No.	Functions
L1	Mains 1
L2	Mains 2
L3	Mains 3
N	Neutral
PE	Ground
CP	Control pilot
PP	Proximity pilot

1.4 Principle Overview



1.5 Product Parameter

Voltage	Three phase 415V±10%
Output Voltage	Three phase 415V±10%
Output Current	16A
Rated Power	11kW
Rated Frequency	50Hz±1Hz
IP Rating	IP54
Operating temperature	-20℃ ~ +50℃
Relative Humidity	5% ~ 95%
Altitude	≤2000m

2. Product Operation Manual

2.1 Product Operation Brief Flow

(1) Verify that the charging pile is powered.

(2) Plug in the gun, swipe the card, and start charging.

(3) Stop charging by program or swiping the card, unplug the charging gun and put it away.

Warning: In case of emergency, please press the emergency stop button!

2.2 Indicator Status Instruction

(1) Power light: indicates whether the charging pile is power on.

(2) Charging light: indicate charging pile connection and charging status.

① Charging light on: Charging cable is connected.

② Charging light blinking: the charging pile is charging.

(3) Fault light: indicate the fault status of the charging pile

State mode	Fault light
Emergency stop	 5 times/s -- stop 2 s -- 5 times/s
Card reader is abnormal	 2 times/s -- stop 2 s -- 2 times/s
CP abnormal	 Lights on
Access control fault Meter communication is abnormal Metering	 1 times/s
Ungrounded	 3 times/s -- stop 2 s -- 3 times/s
EEPROM/FLASH EEPROM/FLASH	 1 times/s -- stop 2 s -- 1 times/s
Leakage self-test failure Leakage PEN leakage	 2 times/s -- stop 2 s -- 2 times/s
Over current	 1 times/s
Adhesion	 Lights on
Short circuit	 5 times/s -- stop 2 s -- 5 times/s
Over Voltage	 1 times/s -- stop 2 s -- 1 times/s
Under Voltage	 2 times/s -- stop 2 s -- 2 times/s
Over temperature	 3 times/s -- stop 2 s -- 3 times/s
Abnormal output status	 Lights on
 Lights on	 Blinking

3. Installation And Commissioning

3.1 Installation Method And Precautions

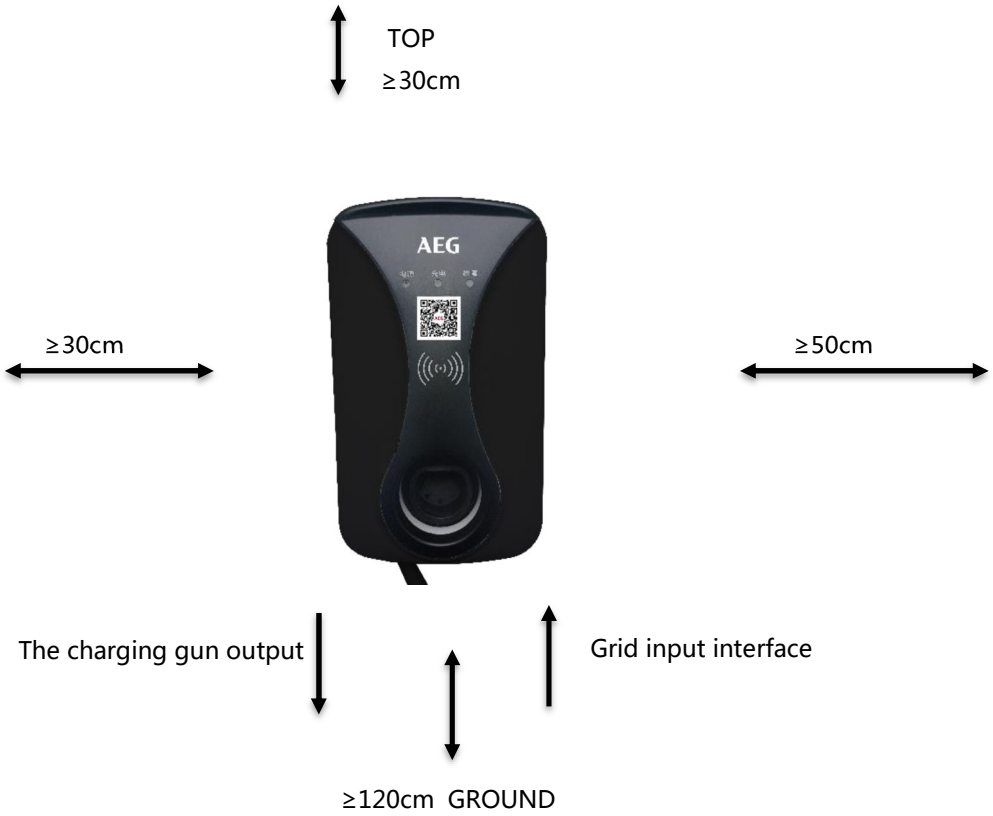
3.1.1. Installation Tool

The recommended installation tools list is as follows

No.	Name	Quantity
1	Electric impact drill and auxiliary drill bit (φ8mm)	1
2	Tape measure (2mm)	1
3	cross screwdriver	1
4	Cable stripper	1
5	Terminal crimping pliers	1
6	Electrician gloves	1
7	19mm wrench	1

3.1.2. Positioning And Installation

The installation position of the charging pile should be reserved enough maintenance space



(1) Wall mounting positioning

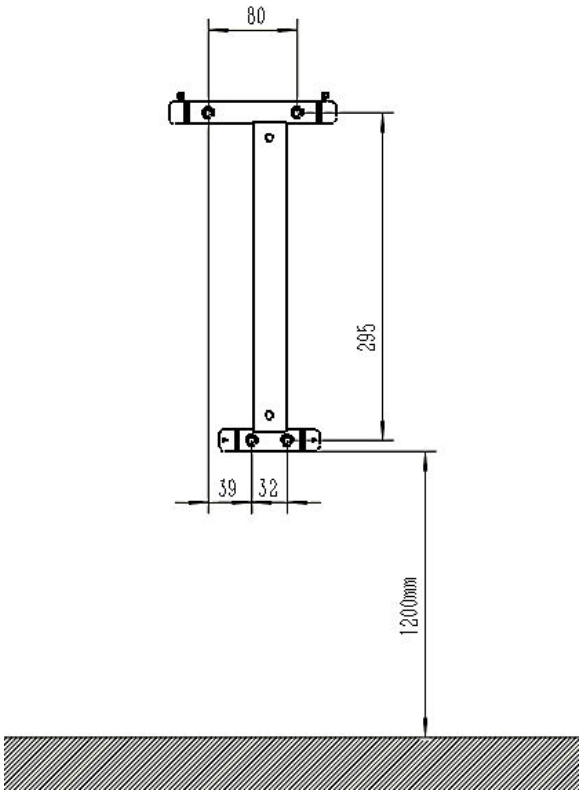
Secure bolts before installation. The recommended parameters are as follows

No.	Name	Quantity	Purpose
1	φ8*60mm Expansion Screw	4	Fixed Hanging Panel

Step 1: Take out the hanging plate and use the hanging plate to determine the installation position.

Step 2: Drill holes on the wall using a impact drill according to the opening hole position of the hanging panel.

Step 3: Insert the expansion rubber plug into each hole, and secure the hanging panel to the wall using the screws provided with the expansion tube.

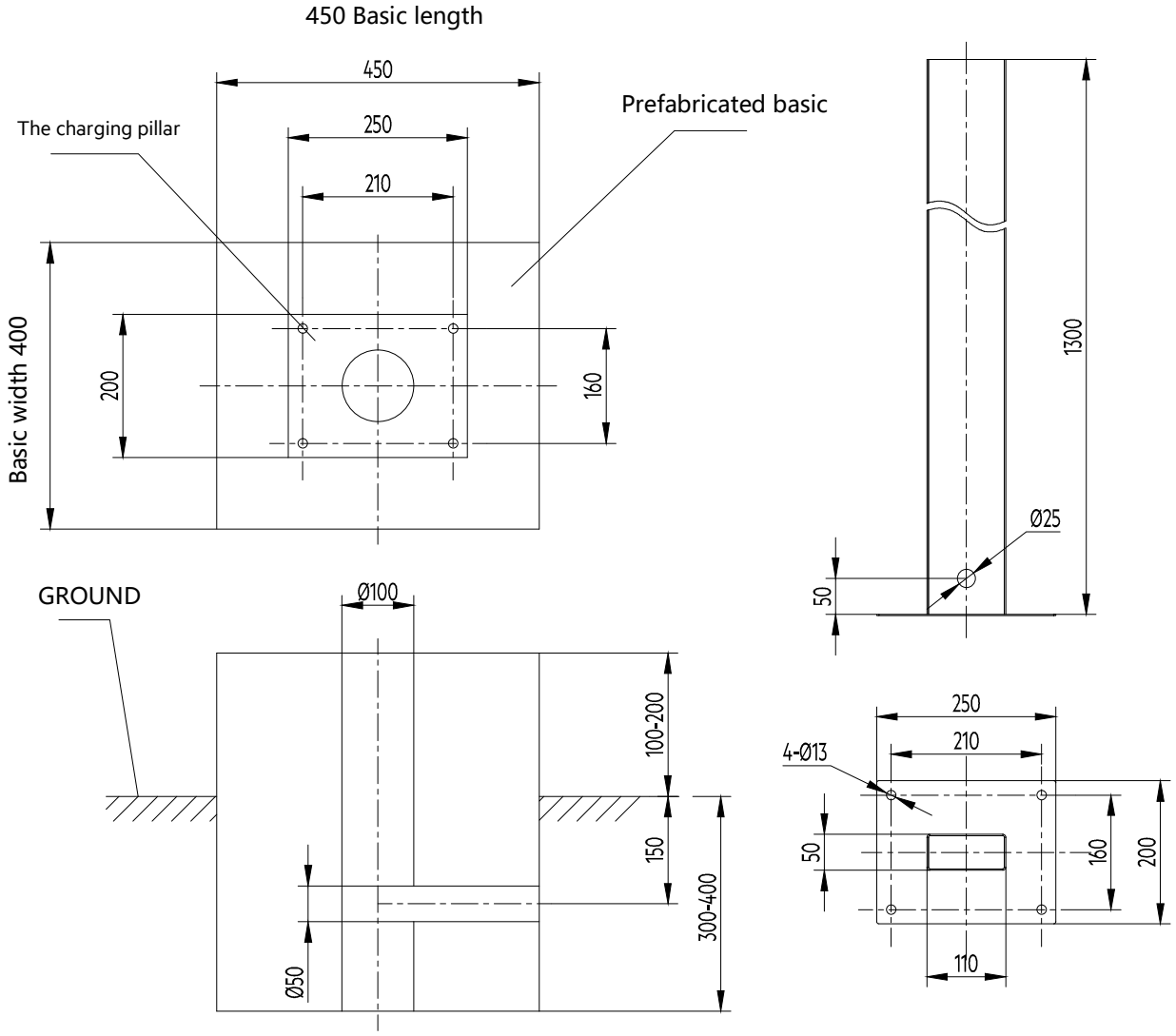


(2) Column installation and positioning

Secure bolts before installation. The recommended parameters are as follows:

No.	Name	Quantity	Purpose
1	M10*80mm Expansion Screw	4	Fixed Pillar
2	M6*20 Combination Screw	2	Fixed hanging panel

Using column installation, should first inspection on the ground of the installation position, mast shall be installed on firm ground, or to do prefabricated foundation, prefabricated basic requirements are as follows.



Step1: Determine the installation position using the base(the reserved cable hole is right below the column).

Step 2: Put the reserved cable through the cable hole of the column.

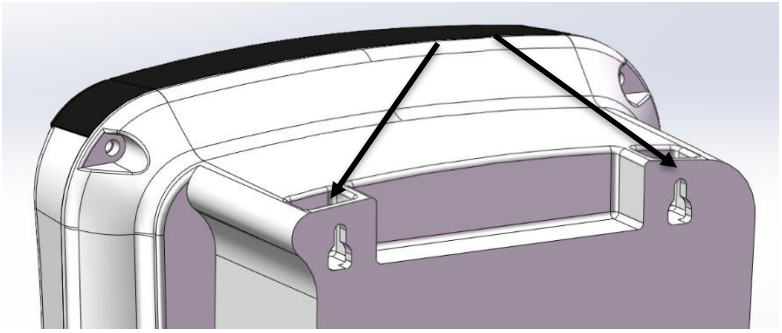
Step 3: Install the column on the ground using the provided expansion bolts.

Step 4: Remove the hanging panel from the main engine and install it on the support with two M6*20 screws.

（3） Fixed the charging pile

Step 1: Hang the charging pile on the hook of the hanging panel through the hanging hole.

Hanging hole



Step 2: Fix the charging pile to the hanging plate by threading two M4*16 screws through the waist-shaped fixing hole at the bottom of the charging pile.

Fixed hole

（4）Wiring requirements

1 The input power supply is connected to cables L1, L2, L3, N and PE, and the color should meet the requirements of local standards. Follow the markings.

2 The charging pile shall have an independent distribution circuit and shall not be shared with other electrical products.

3 The charging pile should be equipped with a circuit breaker with leakage protection.

4 The structure of the input cable conductor of the charging pile should be five-core multi-stranded copper wire, and the cable should be crimped with the terminal piece as required.

5 Input cable of the charging pile should meet following requirement: 22kW charging pile input cable requirements ≥ 6mm^2

6 Outer diameter of cable: 13~18mm.

(6) Safety inspection

To check installation connections, you must check all electrical connections on site to ensure that the connections are correct and secure.

1 Check whether the cable diameter of the charging pile meets the requirements;

2 Check whether the phase sequence connection of the incoming cable is correct;

3 Check whether the terminal of the charging pile is tight and secure;

4 Check whether the torques at the inlet and outlet cables of the charging pile meet requirements. (The inlet and outlet torques of the charging pile are 0.6 N.m)

5 Check whether the inlet direction of the leakage circuit breaker at the front end of the charging pile is accurate.

6 Check whether the input and output cable connectors of the charging pile are locked without leakage.

7 After installation, the input cable should be tested to the ground (L1, L2, L3 to PE, N to PE) Insulation resistance should ≥ 30MΩ (DC500V, test time 1 min)

3.2 Commissioning

1 Make sure all wires are connected correctly, turn on the mian switch of the charging pile, and check whether the power light is on.

2 Connect the charging pile and electric vehicle, start charging, and check whether there is a current and voltage display.

3 All the above pass, you can carry out normal use.

4. Abnormal Phenomena And Treatment Methods

No.	Abnormal Phenomena	Possible cause	Solution
1	Power light is off	Upper open trip	Check the power line
		Superior meter arrears	Recharge the meter
2	Fault light on/blink	Distinguish faults according to color and flash mode	Refer to the fault indicator to view the corresponding
3	Charging light is off	The charging gun is not plugged in	Reinsert the charging gun Make sure the charging gun is properly connected Check whether the button on the charging gun flicks Check the charging port for foreign objects Check whether the insulation rubber ring of the charging port is twisted
4	Stop charging in 5s	Poor ground contact	Checking ground connections
5	The charging power is negative in winter	Battery preheating	The vehicle will resume automatically after it has warmed up
6	Unable to draw	Vehicle self-protection	Try unlocking the door repeatedly

If the above processing methods fail to solve the problem, or other abnormal conditions occur, the charging pile can be restarted after the power off, and re-plug the charging gun, and try again. If the problem is not solved, stop the operation immediately, disconnect the power supply, and contact the after-sales service center.

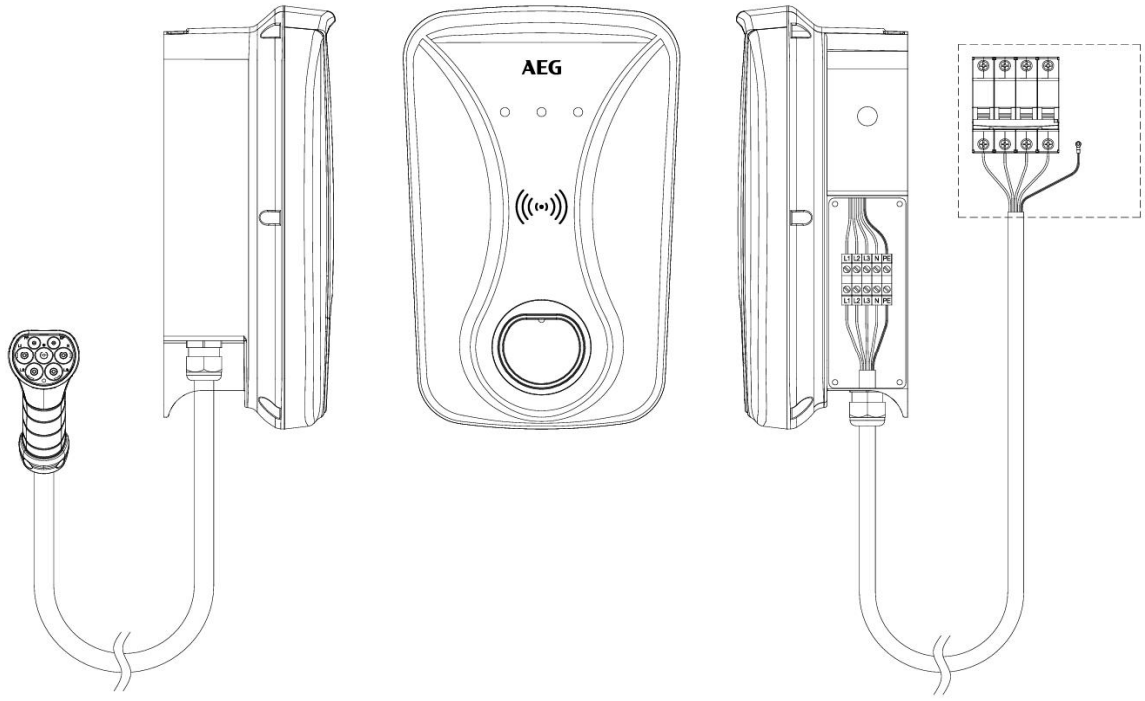
5. Maintenance Instruction

No.	Maintenance content	Maintenance procedure	Cycle (recommended)
1	Input cable and grounding	Check whether the insulation layer of the input cable of the charging pile is charred and aging due to overheating, and whether the grounding cable is securely connected.	6 months
2	Appearance inspection and dust removal	Check charging pile, gun wire, gun head for damage; Remove dust from the surface of charging piles and cables; Remove dust and foreign bodies from the charging port.	
3	Check the various safety signs	Check all kinds of safety signs. If you find any missing or blurred signs, replace them immediately.	
4	Charging process detection	Power on the charging pile, conduct a complete charging process,observe whether the indicator status of the charging pile is normal,and observe whether the charging process is normal.	
5	Emergency stop button test	Power on the charging pile, start the charging process, press the emergency stop switch, test whether the emergency stop switch can disconnect the output circuit.	

6.Packing list

No.	Name	Quantity
1	Poros WS-32-E2 AC EV charger	1
2	Product manual	1
3	Product Qualification Certificate	1
4	Fixed Hanging Panel	1
5	φ8*60mm Expansion Screw 2.0-2.5Nm	4
6	RFID card	2

7.Product wiring diagram



Note: The circuit-breaker and connecting cables must be provided by the user.

AEG

官方网址：www.aeg-imc.com
热线电话：400-820-5234

样本如有修改，恕不另行通知
版本号：AENUCPAO26V1