

AEV300-AC007D-EU

Electric Vehicle Supply Equipment

User Manual

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1 About this document

1.1 Function of this document

The document is only applicable for this EVSE (AEV300-AC007D-EU),including the variants and options listed in section 2.3.3.The EVSE from here on in the document is referred to as the EVSE.

The document gives the information that is necessary to do these tasks:

- Installation
- Commissioning

1.2 Target group

The document is intended for qualified installation engineers.

For a description of the required qualifications,refer to section 3.2.

1.3 Revision history

Version	Date	Description
V1.0	February 2024	Initial version

1.4 Language

The original instructions of this document are in English (EN-US).All other language versions are translations of the original instructions.

1.5 Illustrations

It is not always possible to show the configuration of your EVSE.The illustrations in this document show a typical setup.They are for instruction and description only.

1.6 Units of measurement

SI units of measurement (metric system)are used.If necessary,the document shows other units between parentheses ()or in separate columns in tables.

1.7 How to use this document

1.Make sure that you know the structure and contents of this document.
2.Read the safety chapter and make sure that you know all the instructions.
3.Do the steps in the procedures fully and in the correct sequence.
4.Keep the document in a safe location that you can easily access.This document is a part of the EVSE.

1.8 Special symbols for warnings and dangers

Symbol	Risk type
	General risk
	Hazardous voltage that gives risk of electrocution

1.9 Abbreviations

Abbreviation	Definition
AC	Alternating current
BESS	Battery energy storage system
CAN	Controller area network
CPU	Central processing unit
DC	Direct current

EMC	Electromagnetic compatibility
EV	Electric vehicle
EVSE	Electric vehicle supply equipment
MID	Measuring Instruments Directive
OCPP	Open charge point protocol
PE	Protective earth
PPE	Personal protective equipment
RFID	Personal protective equipment

2 Description

2.1 Short description

The EVSE (AEV300-AC007D-EU) is an AC charging station that you can use to supply electricity to an EV. offers tailor-made,intelligent and network charging solutions for your company or home.The EVSE can connect to the internet via GSM,WiFi or LAN.

2.2 Intended use

The EVSE is intended for the AC charging of EVs.The EVSE is intended for indoor or outdoor use.

The technical data of the EVSE must comply with the properties of the electrical grid,the ambient conditions and the EV.Refer to chapter 11.

Only use the EVSE with accessories that the manufacturer provides or with accessories that obey the applicable laws and local rules.

The EVSE AC input is intended for a hardwired installation that complies with the applicable national regulations.

Only use an external charging cable when the cable has the same or a higher current rating as the onboard converter of the EV.



Danger:

General risk

- If you use the EVSE in any other way than described in the related documents,you can cause death,injury and damage to property.
- Use the EVSE only as intended.

2.3 Product introduction

2.3.1 Reference standard

EN IEC 61851-1:2019 Electric vehicle conductive charging system - Part 1: General requirements

IEC 60364-4-43:2008 LOW-VOLTAGE ELECTRICAL INSTALLATIONS - PART 4-43 : PROTECTION FOR SAFETY - PROTECTION AGAINST OVERCURRENT

IEC 61851-21-2:2018 Electric vehicle conductive charging system – Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply – EMC requirements for off-board electric vehicle charging systems

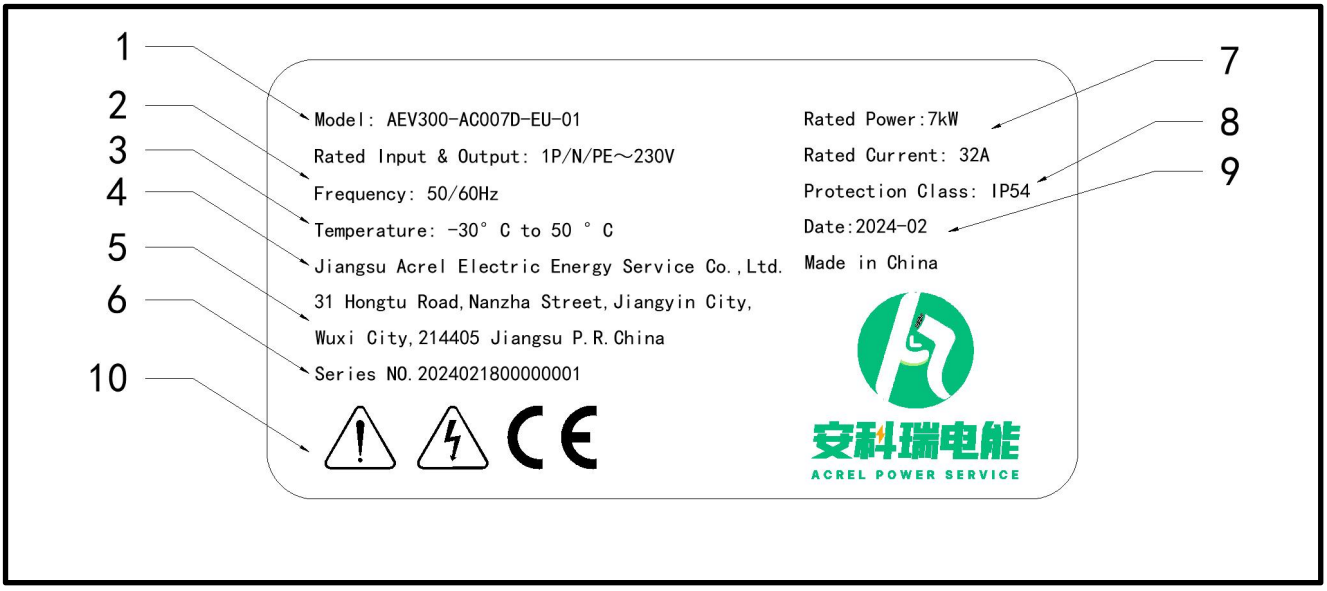
IEC 61000-6-1:2016 Electromagnetic compatibility (EMC) – Part 6-1: Generic standards –Immunity standard for residential, commercial and light-industrial environments

IEC 61000-6-2:2016 Electromagnetic compatibility (EMC) – Part 6-2: Generic standards –Immunity standard for industrial environments

IEC 61000-6-3:2006 Electromagnetic compatibility (EMC) – Part 6-3: Generic standards –Emission standard for residential, commercial and light-industrial environments

IEC 61000-6-4:2006 Electromagnetic compatibility (EMC) – Part 6-4: Generic standards –Emission standard for industrial environments

2.3.2 Product label



1 Model
2 Power supply
3 Ambient temperature
4 Manufacturer's Name
5 Manufacturer's Address
6 Series number
7 Rated power
8 Ingress protection rating
9 Date of manufacture
10 Special symbols

2.3.3 Model Description

AEV300-AC007D-EU-01

1 2 3 4 5 6

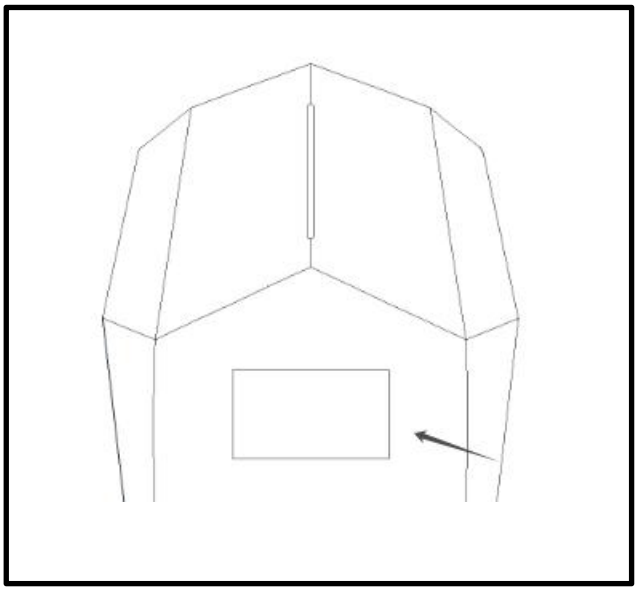
Code part	Description	Value	Meaning of the value
1	Brand name	AEV300	-
2	Voltage type	AC	Alternating Current
3	Power output	007	7kW
4	Number of cables	D	Single
5	Sales market	EU	Europe
6	Option	01	4G with WIFI&BT with LAN with Display
		02	WIFI&BT with LAN with Display
		03	WIFI&BT with Display
		04	Only Display
		05	4G with WIFI&BT with LAN without Display
		06	WIFI&BT with LAN without Display
		07	WIFI&BT without Display
		08	None

2.4 User Interface

Connecticity	**4G** Frequency band B1\B3\B5\B8\B20\B28 Output Power: 25dBm **Wi-Fi:** TX/RX Frequency band: 2412-2484 MHz **Bluetooth** -Operating frequency range:2402-2480 MHz(79 channels) -Maximum output power:2.7 dBm EIRP average (calculated) -Maximum antenna gain:3.7 dBi **Bluetooth LE** -Operating frequency range:2402-2480 MHz(40 channels)-Maximum output power:2.7 dBm EIRP average (calculated)-Maximum antenna gain:3.7 dBi **IEEE 802.11b/g/n (20/40 MHz)** -Operating frequency range:2412-2472 MHz(13/9 channels)-Maximum output power:19.9 dBm EIRP average (calculated)-Maximum antenna gain:3.7 dBi **RFID:** Frequency: 13.533MHz-13.567MHz

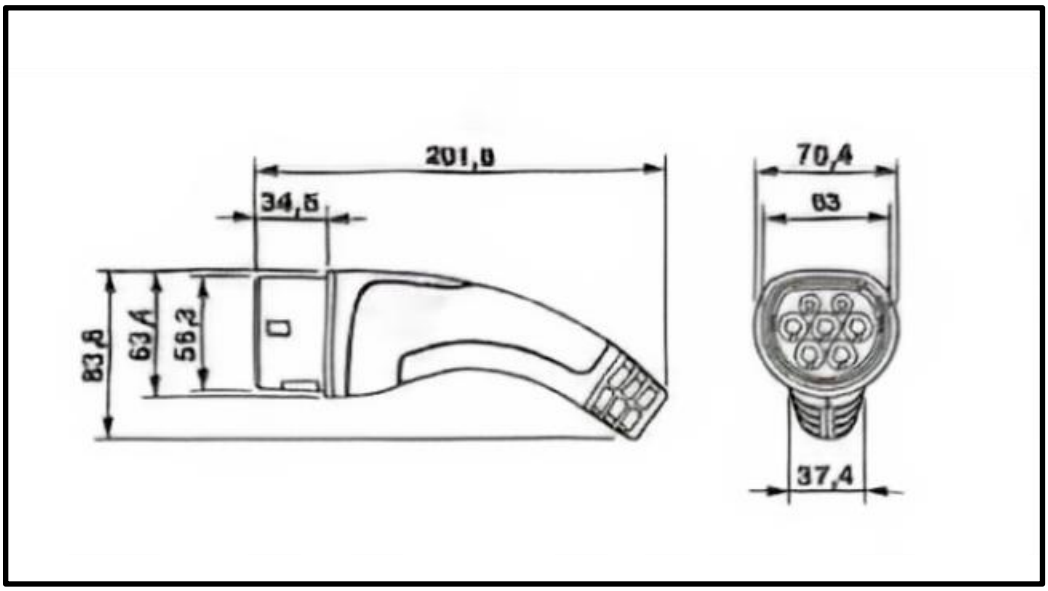
2.5 Options

2.5.1 Display

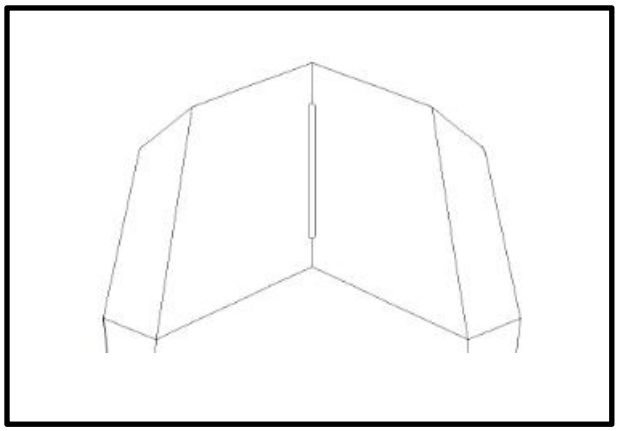


Display:To display charging information

2.5.2 EV charge cable



2.6 Control elements



LED of the EVSE

Status of the LED	Status of the EVSE
Blue	Standby (not connected to the Internet)
Green	Standby (network connection)
Green flashing	EV connected to EVSE
Blue breathing	EV starts charging.
Green breathing	EV charging
Red flashing	Malfunction or emergency stop
Yellow	Program upgrade

3 Safety

3.1 Liability

The manufacturer is not liable for damages,losses,costs or expenses incurred by any user of the EVSE(e.g.the qualified installation engineer or owner of the EVSE) if such damages,losses,costs or expenses result from a failure to comply with the applicable safety instructions given by the manufacturer,including,but not limited to,the following:

- Power outages or disruptions to the electrical supply to the EVSE.
- Accumulation of dirt or ingress of foreign substances within the EVSE. Corrosion of component parts.
- Upgrades enhancements or modifications to the equipment or its use.
- Damage to software or hardware due to any IT security problem,such as but not limited to a virus breakout or malicious hacking of the system.
- Damage or failure of equipment caused by vermin,insect infestations or the like.
- Damage or failure resulting from faults in some other equipment connected to the scope of work.
- Damage or loss caused by hazards such as fire,flood,storm or the like or spillage or leakage of chemicals or harmful substances onto the EVSE.
- Fault tracing caused by problems from a source external to the scope of work.
- Unprofessional or incorrect installation,installation not complying to standards, or installation not following the installation instructions contained in the product specific manual.
- Insufficient ventilation of the EVSE.
- Operation of the EVSE outside of its design conditions.
- Relocation of the EVSE from the original installation location or alteration of the overall system design.
- Only make changes to the EVSE if the manufacturer approves in writing of the changes.

3.2 Required qualifications for the qualified installation engineer

- The qualified installation engineer fully knows the EVSE and its safe installation.
- The qualified installation engineer is qualified according to the applicable local rules to do the work.
- The qualified installation engineer obeys all local rules and the instructions in the installation manual.
- It is the responsibility of the owner of the EVSE to make sure that all qualified installation engineers obey the local rules,the installation instructions,and the specifications of the EVSE.

3.3 Personal protective equipment

Symbol	Description
	Protective clothing
	Safety gloves
	Safety shoes
	Safety glasses

4 Installation

4.1 Installation requirements

4.1.1 Product introduction

Model	AEV300-AC007D-EU-01	
Rated parameters	Input voltage	230VAC
	Input current	32A
	Rated power	7kw
Physical parameters	Size	440mm*280mm*80mm（L*W*D）
	Weight	4.1kg
	Charging cable length	5m

4.1.2 Power supply

The power supply mode of AC charging pile is AC single-phase power supply,input electrical requirements:

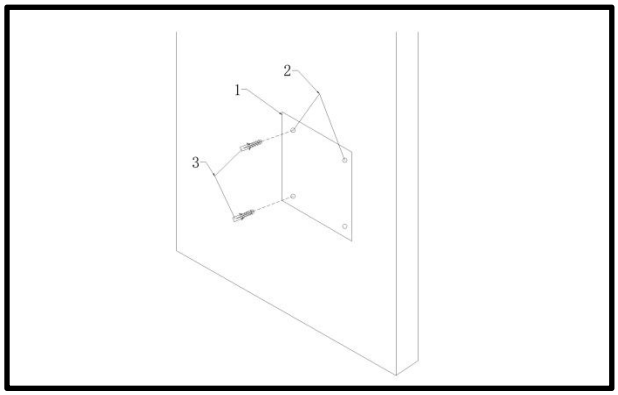
- AC operating coltage:1P/N/PE 230V
- AC operating frequency:50Hz/60Hz

4.1.3Environment requirements

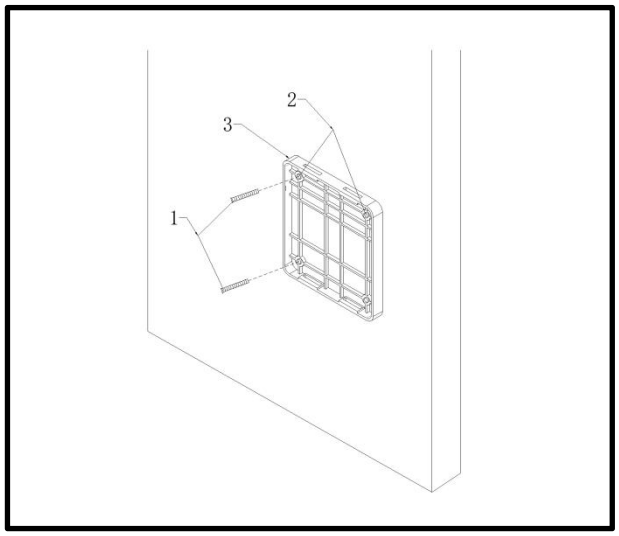
- Working environment temperature：-30℃~50℃
- Relative humidity：5%~95%
- Installation vertical inclination：≤5%
- Altitude of installation and operation：≤2000m
- There is no strong vibration and impact,no strong electromagnetic interference

4.2 Installation steps

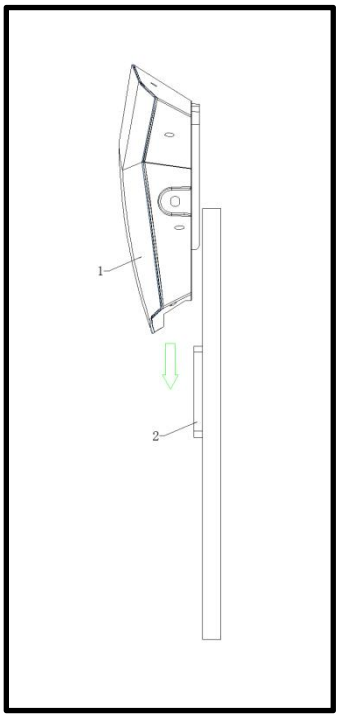
1. According to the size of the mounting plate, make four holes in the wall with a diameter of 4mm and a depth of 20mm；
2. Insert the plastic expansion tube into the hole；



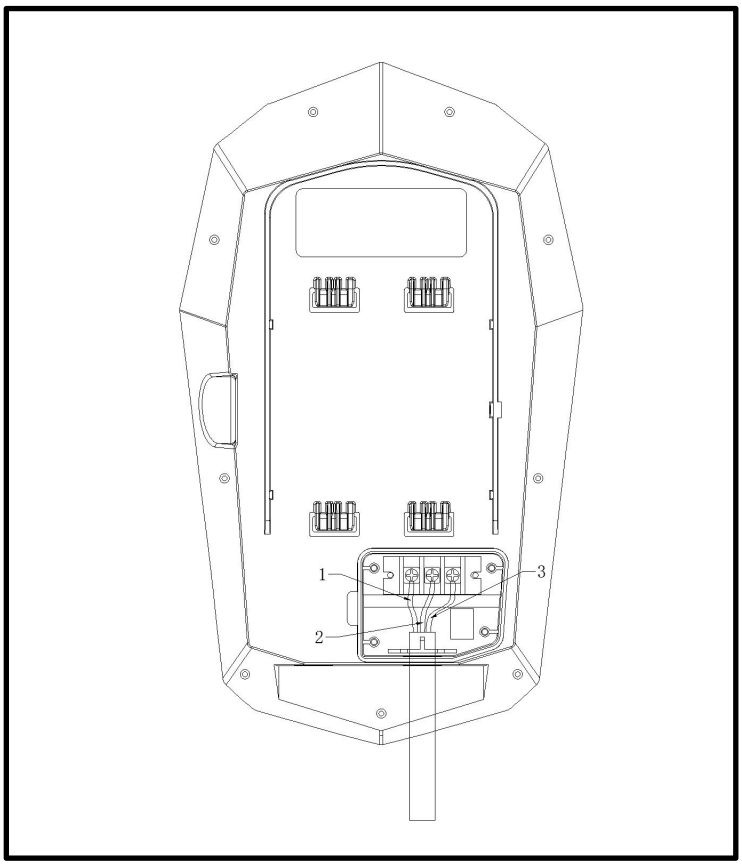
3. Secure the mounting plate to the wall using expansion screws (M4X20)



4. After sliding the EVSE into the mounting plate from top to bottom, fix the EVSE with M4X12 screws from the side



4.3 Power supply



The power supply mode of AC charging pile is AC single-phase power supply,input electrical requirements:

◆ AC operating voltage:1P/N/PE 230V

Code	Description	Recommended cable size
1	1P	6mm^2
2	N	6mm^2
3	PE	6mm^2

Notice:Cable size selection requires priority reference to local rules

5 Troubleshooting

Problem	Possible cause	Possible solution
Residual current detected	There is residual current (30mA AC or 6mA DC)in the charge circuit.Current into the ground	1.Deenergize the EVSE. 2.Contact your local representative of the manufacturer or a qualified electrical contractor
PE missing or swap neutral and phase	The EVSE is not earthed correctly.	1.Do a check of the protective earth line of the connector of the AC input 2.Install the protective earth conductor.
	The neutral and phase wires are swapped.	1.Examine the electrical connections. 2.Make sure that the connection of the phase and line and neutral wires is correct 3.If necessary,adjust the electrical connections
Over voltage	The maximum voltage on the power input is too high.	Make sure that the voltage from the grid is not more than specified.
Under voltage	The voltage on the power input is not sufficient.	Make sure that the voltage from the grid is not less than specified
Over current	There is an overload on the EV side.	1.Examine the EV charge cable connection. 2.Connect the EV charge cable correctly.
Power relay fault	The relay contact is detected in wrong state or has damage	1.Examine the relay contact. 2.If necessary,adjust the current. 3.If necessary,replace the relay contact.

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