



AC EV Charger

USER MANUAL

VAS-7-G2
VAT-11-G2
VAT-22-G2

About This Document

Purpose

This document describes the safety precautions, product information, installation, electrical connection, operation, troubleshooting, and maintenance of the EV charger which is also called EVSE (Electric Vehicle Supply Equipment). Please carefully read this manual before the installation, operation, and maintenance. This document is subject to update without notice. For detailed information and the latest documents, please visit <https://www.hoymiles.com/>.

Scope of Validity

This document is valid for the following EV charger models:

- VAS-7-G2
- VAT-11-G2
- VAT-22-G2



Item	Meaning	Description
A	Series name	VAS: Single-phase AC EV charger VAT: Three-phase AC EV charger
B	Rated input/output power	7: The rated input or output power is 7 kW.
C	Generation	G2: The second generation





Target Audience

This document is applicable to a person who meets the following requirements.

Target Audience	Requirements
EV charger owners	<ul style="list-style-type: none"> • Own and operate the EV charger for commercial or business purposes, or may allow others to use it. • Legally responsible for protecting users, other employees, and third parties while the charger is working.
Qualified engineers	<ul style="list-style-type: none"> • Proficiency in the installation, operation, and maintenance of the EV Charger. • Training in the installation and commissioning of electrical devices. • Ability to identify potential hazards of the product and take necessary measures to protect personal and property safety. • Familiar with local laws and regulations. • Compliance with this document and all safety precautions.

Symbol Convention

Symbol	Description
	Indicates a hazard with a high level of risk that, if not avoided, will result in death or serious injury.

	<p>Indicates a hazard with a medium level of risk that, if not avoided, can result in death or serious injury.</p>
	<p>Indicates a hazard with a low level of risk that, if not avoided, can result in minor or moderate injury.</p>
	<p>Indicates a situation that, if not avoided, can result in property damage. NOTICE is used to address practices not related to personal injury.</p>
	<p>Indicates that the information is helpful or provides useful advice. It does not contain any information about danger or harm.</p>

Disclaimer

- This document has been subject to rigorous technical review before being published. It will subsequently be revised at regular intervals.
- The information in this document is for informational purposes only.
- This manual, related documents, and warnings do not replace your responsibility to use common sense when working with the EV charger.
- Although Hoymiles has put its best efforts into keeping the document precise and up-to-date, Hoymiles shall not assume any liability for defects and damage that may come from using the information.
- Any changes to the EV charger, including but not limited to user-specific modifications to the EV charger (such as placing stickers, SIM cards, or using different colors), hereinafter referred to as "Customization", may affect the final product's user experience, appearance, quality, and lifespan.
- Hoymiles will not be responsible for any damage caused by the product "customization" and will not be responsible for any damages, losses, costs, or expenses resulting from the improper handling of the product.

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Warranty

The warranty period is defined in your warranty policy. If you have purchased an extended warranty, the warranty period is defined in your purchase agreement.

The warranty only covers the product and its parts delivered by Hoymiles. The warranty does not cover consumable parts such as cables, connectors, any other materials, labor, accommodation, or travel costs. Changes or modifications to the equipment, unless specifically agreed upon with Hoymiles, will void the warranty.

	<p>When you replace parts under warranty, keep the old parts until you know that Hoymiles does not need them for inspection. Only qualified personnel can perform installation, operation, commissioning, and maintenance. For someone who is not authorized, doing these will void the warranty.</p>
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1 Safety Precaution



Before installing, operating, commissioning, and maintaining the EV charger, please carefully read the safety rules and usage instructions in this document as failure to do so may result in safety hazards or device damage. During the installation and operation of the EV Charger, it is imperative to comply with local laws and regulations.

1.1 General Safety

- Only qualified personnel can install, operate, commission, and maintain the product.
- All installation and wiring must be done when the AC cables are not energized. This means that the EV charger cannot be turned on during this process, which helps to prevent electrical accidents, short circuits, and electric shock hazards. It makes sure that the system will not be turned on during risky procedures, which reduces the risk of fires.
- Keep the product far from explosive or flammable substances.
- Do not use the product in or near water.
- If it is visibly damaged, do not use it.
- Do not clean the product with running water or a pressure washer.
- Do not change or modify the product unless Hoymiles has approved it.
- Do not wrap the cables around the product while charging.
- Do not put the charging connector on the ground. Put it in its holder after charging.
- Only qualified personnel can perform relevant operations that are described in this manual or the related manual.
- Follow the safety and accident prevention rules for the product and the place where it is used.
- Make sure the product is used in the environmental conditions that are specified for it. For more information about environmental requirements, refer to the technical parameters.
- When handling the electrical connection, always follow safety precautions, wear personal protective equipment (PPE), and use insulated tools.
- Follow local laws and regulations and instructions in this document. If any requirements in this document are not the same as local laws and regulations, follow local laws and regulations or the stricter one of the two, as permitted by law.

1.2 Symbols on the Label

	<p>Electric hazard</p> <p>This symbol indicates that there is a danger of electric shock. Failure to pay attention to the procedures, practices, or improper implementation may cause injuries or death. Only perform operations with this symbol if you fully understand and meet all requirements.</p>
	<p>Caution</p> <p>This symbol indicates that there is a hazard that could damage the product. Only perform operations with this symbol if you fully understand and meet all requirements.</p>
	<p>Garbage disposal</p> <p>This symbol indicates that the electrical and electronic equipment and their accessories should be disposed of separately from household waste. They can be reused, recycled, or disposed of in a safe and environmentally friendly way in accordance with local disposal regulations for electronic waste.</p>
	<p>Grounding</p> <p>This symbol indicates ground protection. Once the ground fails or there is no grounding, the EV charger will report fault and stop charging.</p>

	<p>CE mark The product complies with the requirements of the applicable EU directives.</p>
	<p>Observe the documentation Read and understand all documentation supplied with the product.</p>


1.3 Personnel Safety Guidelines

1.3.1 General Requirements

- Be trained in safety and job skills, and pass the corresponding assessment.
- Understand how the electric vehicle and EV charger work, how to troubleshoot common problems, how to maintain the charger, how to handle emergencies, and how to impart safety knowledge.
- Follow local laws and regulations and instructions in this document. If any requirements in this document are not the same as local laws and regulations, follow local laws and regulations or the stricter one of the two, as permitted by law.
- know about electrical safety requirements and how to do first aid and emergency treatment.
- Strictly follow the operating procedures and job specifications when working to ensure safety and stability.
- Wear a uniform, work permit, insulated shoes and gloves, a safety helmet, and other protective gear if necessary.
- Be responsible for their work and fulfill their service commitments to the best of their abilities.
- Communicate with customers in a professional and courteous manner, using clear and concise language.

1.3.2 Operational Guidelines

Item	Guideline
Preparation	<ul style="list-style-type: none"> • Follow the safety rules of the construction site. • Wear personal protective equipment (PPE), and make sure they are in good condition. • Do not wear unsafe clothing, such as loose clothes or slippers. • Safely use portable power tools. • Tie up your tools if working at heights is needed. • Do not go to work inebriated. • Before installing, operating, and commissioning the EV charger, confirm the upper power supply point, power supply lines, and whether there is a safety emergency plan on site. • Make sure the metal shell is grounded or connected to the neutral line. • Make sure there are at least two carbon dioxide fire extinguishers on site.
Protective Measures	<ul style="list-style-type: none"> • If there is heavy dust on the construction site or painting work is being done, wear a dust mask. • Do not enter dangerous areas, such as places under the position of vertical operation. • Do not strike objects. • Stay away from mechanical equipment and electrical circuits to prevent accidents. • Assume that all electrical equipment and lines are live, do not touch them before checking the power. Turn off the power and check them again before touching them. Put a “No closing, someone is working” sign on the power switch handle or take other measures to prevent false closing.

<p>Protective Measures</p>	<ul style="list-style-type: none"> • When working on live equipment, first identify the L, N, and PE lines and choose a safe working position. When working, do not touch the conductive part and the ground part at the same time. • Do not change the original wiring and structure of the EV charger without permission and approval. • After the work is completed, restore the components to their original state, check the tools to prevent omissions, and clean and organize the site. • Replace damaged electrical components immediately. • Temporary wires must be made of rubber cables, not plastic flexible cords. • Do not plug temporary wires directly into sockets. • Do not use temporary electrical components when they are live.
<p>Ground Conditions</p>	<ul style="list-style-type: none"> • Be careful of ground conditions with iron nails and steel bars to prevent injuries such as piercing, touching, hanging, and falling.
<p>Site Maintenance</p>	<ul style="list-style-type: none"> • Do not dismantle construction site protection facilities, safety signs, and warning signs without permission. • Maintain construction equipment in good condition to prevent malfunctions or overload operation.
<p>Product Usage</p>	<ul style="list-style-type: none"> • Keep the cover of the charger closed after installing it to prevent it from getting wet in the rain.
<p>Accident Treatment</p>	<ul style="list-style-type: none"> • Immediately turn off the power at the upper power supply point and start the safety emergency plan. • Report to the relevant person in charge immediately as required. • Conduct on-site emergency treatment in accordance with the emergency plan for the first time. • Control the spread and expansion of the accident, and rescue personnel and property. • If there is an electric shock, immediately cut off the upper power and perform rescue according to the emergency rescue method. • Make emergency calls for professional help and report to the superior leader. • Make a record.
	<ul style="list-style-type: none"> • Only people who have been authorized, certified, and trained by Hoymiles or other qualified personnel can commission the AC EV charger. Hoymiles will not be responsible for any losses caused by third-party personnel commissioning the AC EV charger without Hoymiles' authorization. • Commissioning must be done carefully according to the procedures. If any operation cannot be completed, it must be stopped until the problem is found and solved. Commissioning cannot be done in severe weather conditions such as rain, snow, or sandstorms.

1.4 Fire Safety Guidelines

1.4.1 Construction Site Requirements

- Do not store flammable and explosive materials on the construction site. Choose proper storage areas for these materials to prevent accidents.
- Place at least two fire extinguishers in a location that is easy to see and access, such as carbon dioxide fire extinguisher, to respond to any possible fire hazard.
- Make sure the fire distinguishers do not block any evacuation routes and can be quickly and safely accessed in an emergency.

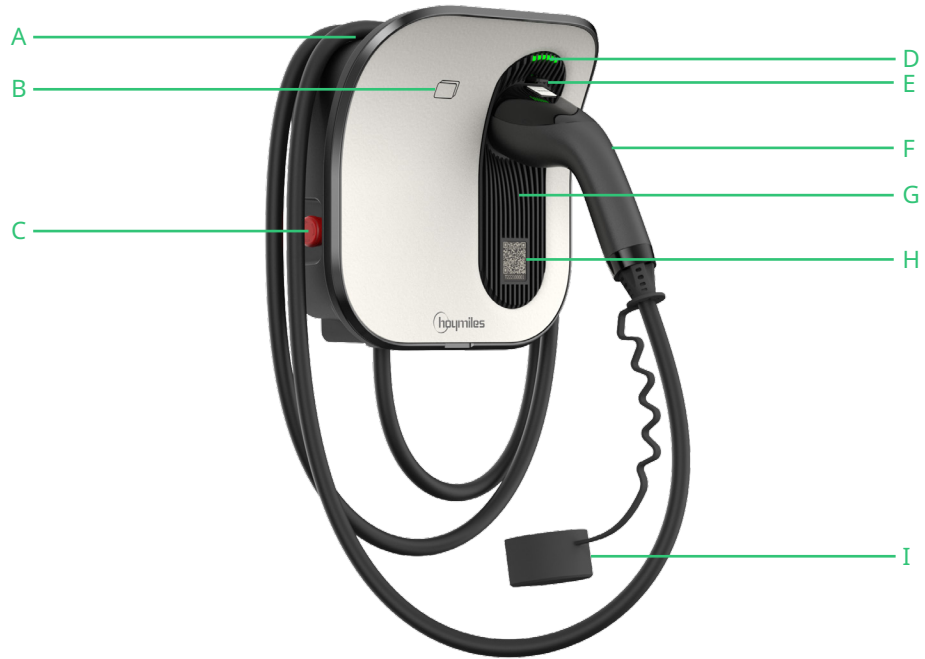
1.4.2 Emergency Response Plans

Stage	Implementation
Initiation	<p>If a fire happens, tell the emergency command leading group right away. Everyone must follow the orders of the emergency response team to help rescue people and take relevant actions.</p>
Contingency Procedures	<p>If you see a fire accident:</p> <ul style="list-style-type: none"> • Stop charging immediately. If the fire is in the charging station, stop the charging process to prevent the fire from getting worse. • Call the fire department. Call the fire department right away and tell them where the fire is. • Evacuate safely. Get away from the fire quickly and stay away from it. • Use a fire extinguisher (if possible). If the fire is small, you can use a fire extinguisher to put it out. But make sure you use the right type of fire extinguisher. <p>If there is a fire:</p> <ul style="list-style-type: none"> • Tell your supervisor right away. • If the fire is small and you can control it, use a fire extinguisher to put it out. While you are doing this, tell people at all levels about the fire. • Have at least two people fight the fire. Stand upwind, crosswind, or in a safe position. • If you cannot control the fire, have everyone in the area evacuate immediately. • If the fire gets bigger, the person in charge must evacuate everyone immediately. • Tell employees in the affected area to go to the assembly point along the designated route. Follow the instructions of the person in charge of the company. • The emergency response team (ERT) will organize rescue efforts according to the fire. • If you cannot control the fire, report it to the government department in time for support. Cooperate with the fire brigade for rescue efforts. • Collect information about what happened before the fire, what the monitoring system showed, and what witnesses saw. This will help you to understand what caused the accident. You will need to share this information with the owner. • Give the local fire department the information they need to investigate the cause of the fire. • If the company did not cause the losses, the local branch will claim compensation from the relevant parties. The company's EHS (environment, health, and safety) and risk control center will provide support and cooperation.
Conclusion	<p>When the emergency crews have finished their work, the people in charge of emergencies will announce that the disaster is over and the emergency is lifted. Everyone can go back to their normal work.</p>

2 Product Overview

2.1 Product Appearance

Wall mounting



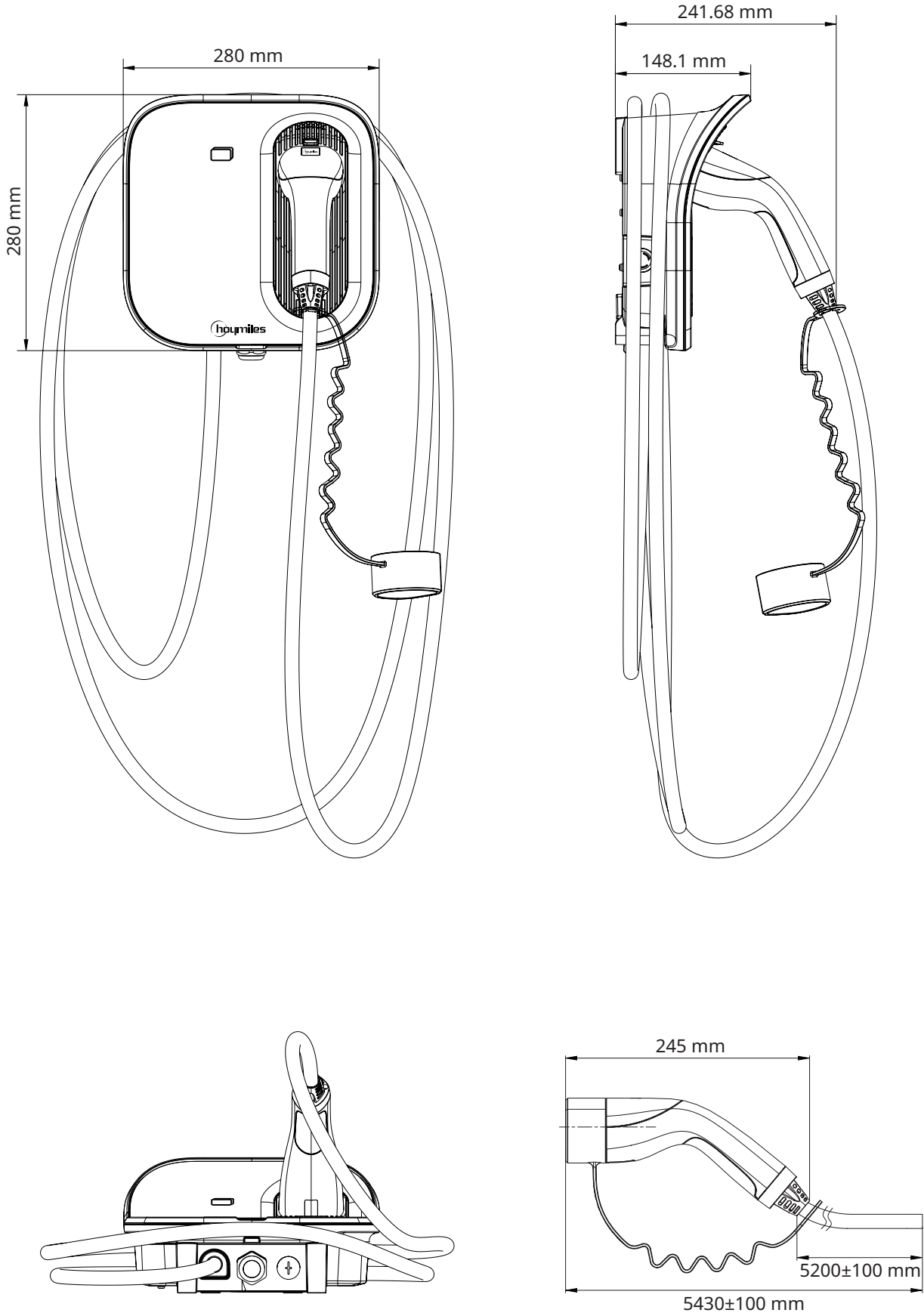
Item	Description
A	Cable Winding Groove
B	RFID Reader
C	Emergency Stop Button
D	LED Indicators
E	Charging Connector Unlocking Button
F	Charging Connector
G	Charging Connector Holder
H	QR Code
I	Sealed Cap

Pole mounting






Item	Description
A	RFID Reader
B	Emergency Stop Button
C	LED Indicators
D	Charging Connector Unlocking Button
E	Charging Connector
F	Charging Connector Holder
G	QR Code
H	Sealed Cap
I	Pole

2.1.1 Product Dimensions



2.1.2 Indicator Definition

Indicator	Indicator Status	Description	Subsequent Operation
	Flashing green every 4s	The charger is in standby, and no fault occurs.	<ol style="list-style-type: none"> 1. Correctly plug the charging connector into the electric vehicle and swipe the RFID card to start charging. 2. Correctly plug the charging connector into the electric vehicle and start charging.
	Solid blue	The charging cable is connected.	Start charging by swiping the RFID card.
	Flashing blue quickly every 0.125s	RFID card reading.	Wait until the RFID authentication is completed to start charging.
	Breathing	Charging.	The electric vehicle is being charged.
	Flashing blue slowly every 0.5s	The electric vehicle suspends, or the EV charger suspends.	Check the vehicle screen: <ol style="list-style-type: none"> 1. If any failure is found, replace the charger. 2. If the failure is still displayed, please consult the vehicle dealer. 3. If not, the grid side has limited the charging.
	Solid red	<ol style="list-style-type: none"> 1. CP fault or smart meter fault. 2. The ID is not configured. 	<ol style="list-style-type: none"> 1. Remove the faults according to the "8 Troubleshooting". 2. If the problem cannot be removed, please contact your dealer or service provider.
	Flashing red 1 time	The emergency stop button is pressed.	
	Flashing red 2 times	Ground fault	
	Flashing red 3 times	Undervoltage	
	Flashing red 4 times	Overtvoltage	
	Flashing red 5 times	Relay adhesion	
	Flashing red 6 times	Overtemperature	
	Flashing red 7 times	Leakage current fault	
	Flashing red 10 times	Overcurrent	

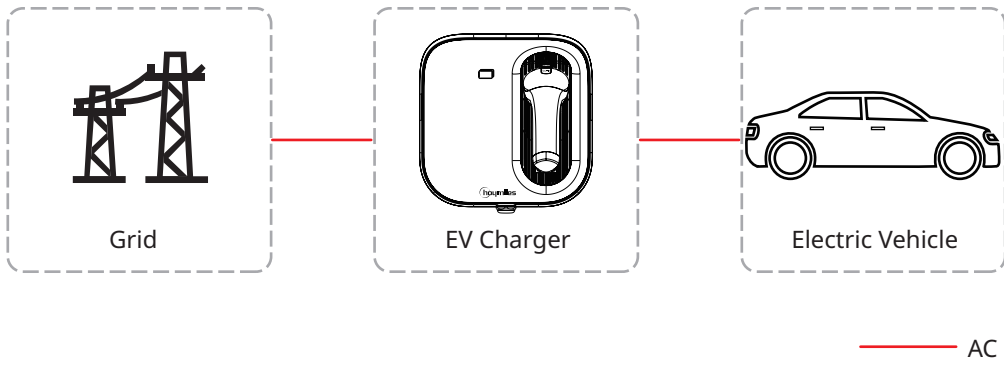
2.1.3 Emergency Stop Button

In the event of an emergency, press the emergency stop button immediately to cut off power output. Upon activation, the LED indicator will turn red. If the emergency stop button is not available, please power off the EV charger.

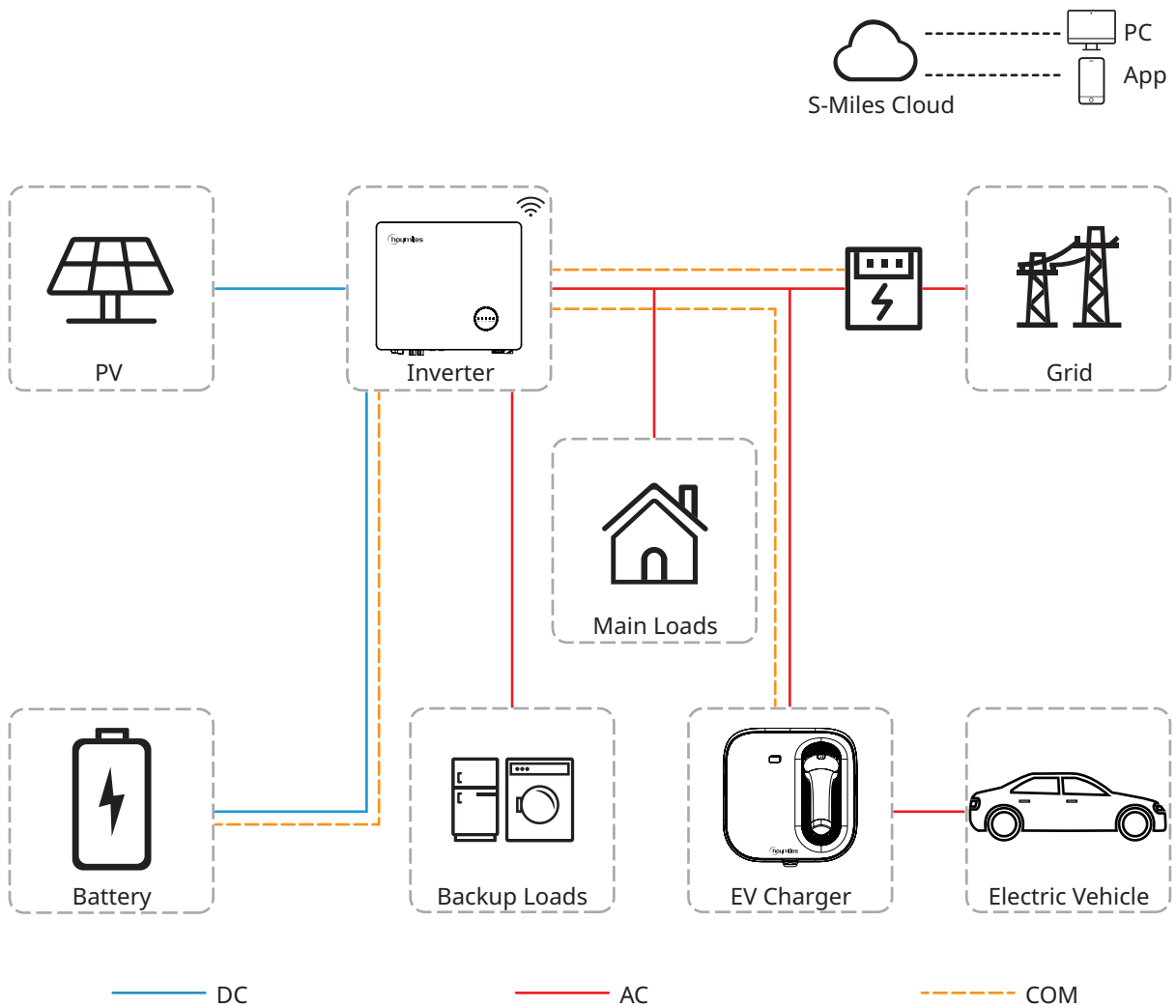
Please note that the EV charger cannot be remotely reset if the emergency stop button is pressed, contact our customer service center to solve any problem. The qualified personnel should reset the emergency stop button once the problem is solved.

2.2 System Diagram

Stand-alone EV Charger System



PV-ESS-EV Charging System



2.3 Product Usage

Users can start and stop charging through RFID Card, App, or Free Charge. The default charging method is RFID Card. Users can also log in to the S-Miles App to change the charging method and configure relevant parameters. For details about online operation, please refer to "[7 S-Miles App](#)". The operation instructions for RFID Card and Free Charge are shown as follows.

2.3.1 RFID Card

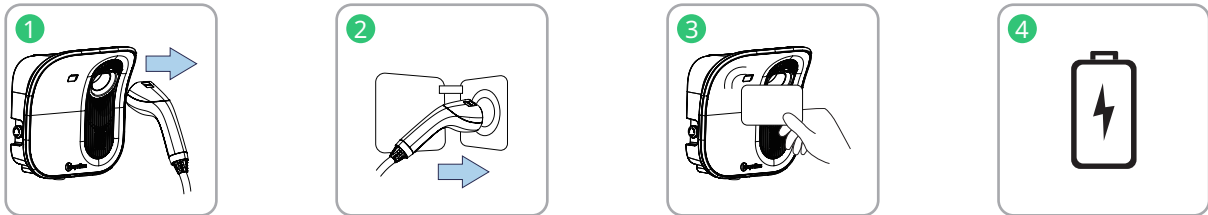
- **Start Charging**

Step 1 Pull out the charging connector from the EV charger.

Step 2 Connect the charging connector to the electric vehicle. The charging connector is correctly connected once the LED indicator on the charger is solid blue.

Step 3 Authorize the charging process by swiping the RFID card. Note that the charging process is successfully authorized once the indicator on the charger is flashing blue quickly every 0.125s.

Step 4 The charger will start charging when the blue indicator is breathing.

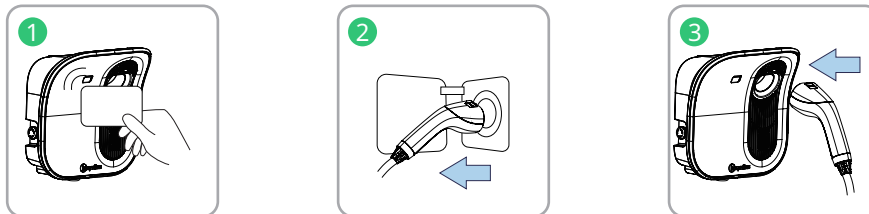


- **Stop Charging**

Step 1 Swipe the RFID card before the RFID reader until the indicator flashes blue slowly every 0.5s. (If the electric vehicle has been fully charged, the charger will automatically stop with no need to swipe the card.)

Step 2 Remove the charging connector from the electric vehicle.

Step 3 Wrap the charging cable around the enclosure and plug the charging connector into the holder.



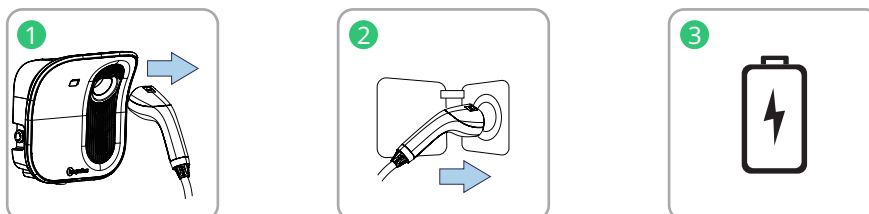
2.3.2 Free Charge

- **Start Charging**

Step 1 Pull out the charging connector from the EV charger.

Step 2 Connect the charging connector to the electric vehicle. The charging connector is correctly connected once the indicator on the charger is solid blue.

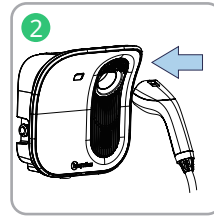
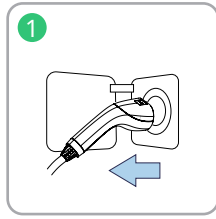
Step 3 The charger will start charging when the blue indicator is breathing.



- **Stop charging**

Step 1 Remove the charging connector from the electric vehicle.

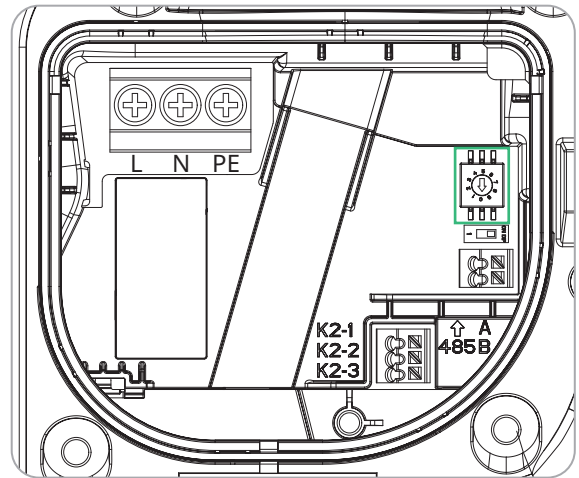
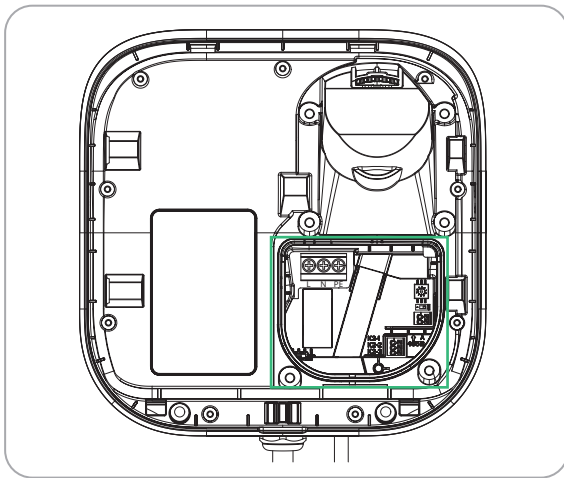
Step 2 Wrap the charging cable around the enclosure and plug the charging connector into the holder.



2.4 Product Function

2.4.1 Output Power Limit

The EV Charger can limit the output current by adjusting the rotary switch. The rotary switch and its corresponding values (unit: A) are shown as follows.



Model \ Rotary Switch	0	1	2	3	4	5	6	7	8	9
VAS-7-G2	32	6	8	10	13	16	20	25	32	32
VAT-11-G2	16	6	8	10	13	16	16	16	16	16
VAT-22-G2	32	6	8	10	13	16	20	25	32	32

2.4.2 Green Power Mode

The green power mode is to use the surplus PV power in preference to charge the electric vehicle.

$$\text{Surplus PV power} = \text{PV power} - \text{load consumption} - \text{ESS charging power.}$$

To protect the electric vehicle, users need to set the maximum grid input power when enabling the green power mode, to ensure that the charger still can charge the electric vehicle when the PV power is not stable or the surplus PV power is less than the EV charger start power.

Note:

The minimum start power of a single-phase EV charger is 1.4 kW; the minimum start power of a three-phase EV charger is 4.2 kW. It is recommended that the set grid input power should be larger than the EV charger start power, otherwise, the EV charger may not start.

In green power mode, the EV charger charging power is related to the surplus PV power and maximum grid input power. The following table takes the single-phase EV charger as an example to illustrate the correlation.

Table 1 Maximum grid input power > Minimum start power (the EV charger is sure to start)

Surplus PV Power (kW)	Maximum Grid Input Power (kW)	Actual Charging Power (kW)
4	3	4
2	3	3 (surplus PV power 2 kW + grid input power 1 kW)
1	3	3 (surplus PV power 1 kW + grid input power 2 kW)
0	3	3

Table 2 Maximum grid input power < Minimum start power (the EV charger may not start)

Surplus PV Power (kW)	Maximum Grid Input Power (kW)	Actual Charging Power (kW)
4	1	4
1	0.5	1.4 kW (surplus PV power 1 kW + grid input power 0.4 kW)
1	0.3	0
0	1	0

3 Unpacking and Inspection

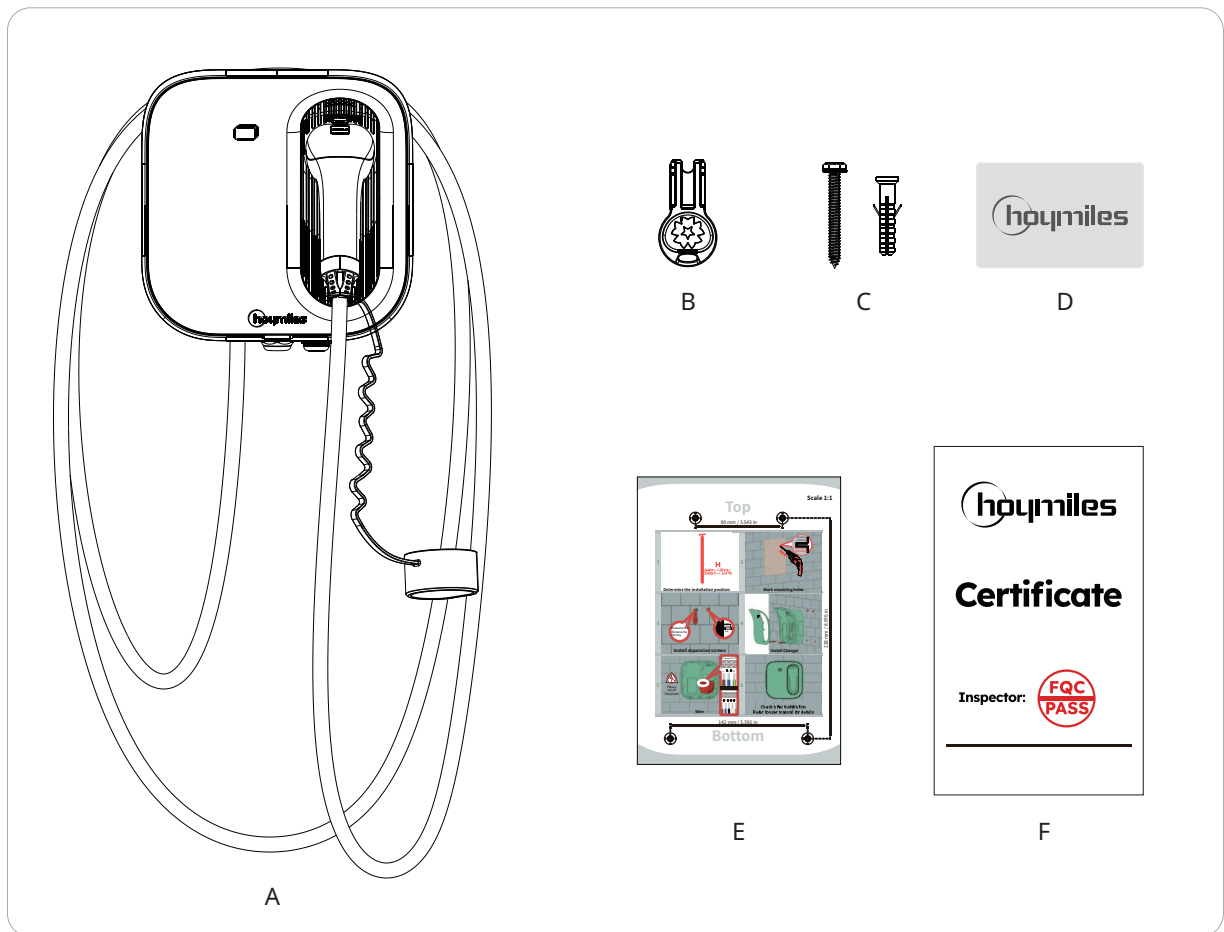
3.1 Unpacking

After receiving the product, carefully unpack the package which may be reused for storage or other usages, and check the following items to ensure the things you receive are intact and complete.

- Verify the packing list quantity matches the actual number of equipment pieces.
- Check the equipment nameplate for accurate information.
- Ensure all attached documents are present.
- Confirm all accessories are included.
- Inspect the equipment for any signs of damage, such as dents, bumps, or stains.

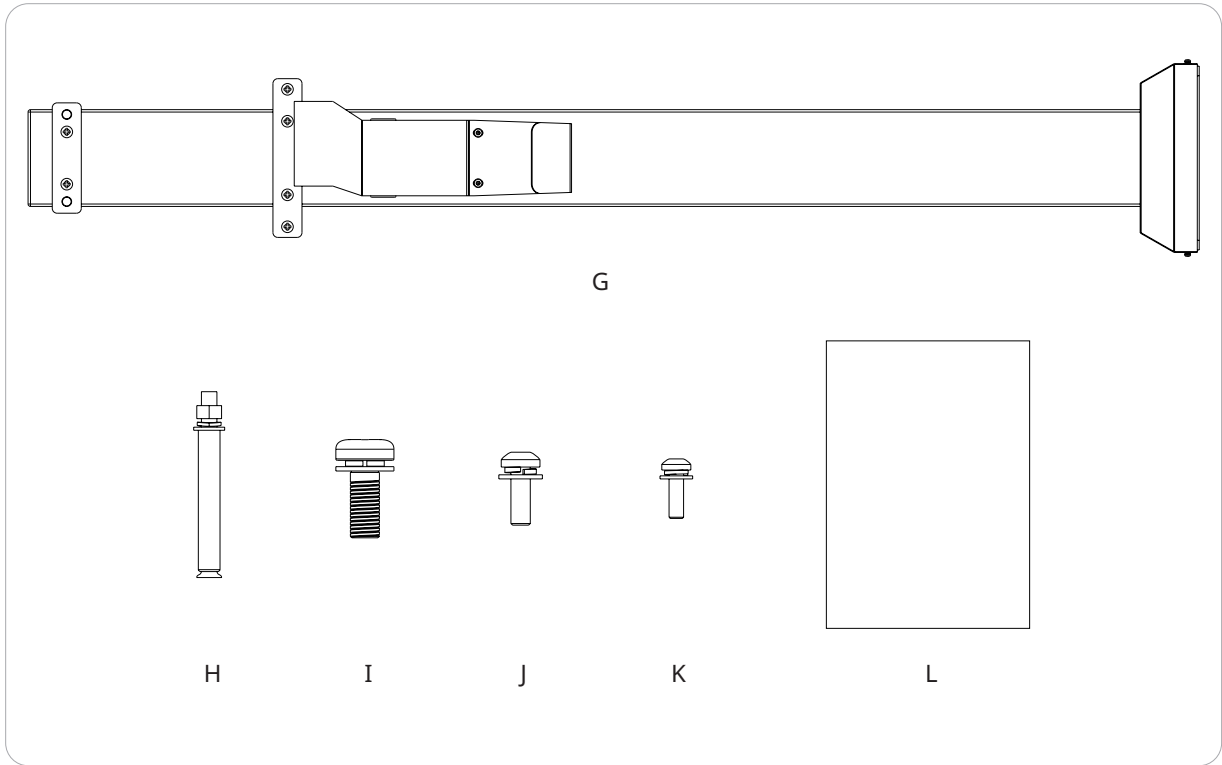
3.2 Packing List

Please ensure that none of the components listed below are missing or damaged upon receipt of the EV charger.



Item	Description
A	EV Charger*1
B	Cover Key*1
C	Self-tapping Screw M6*50*5 (1 for standby) Anchor Φ8*40*5 (1 for standby)
D	RFID Card*2
E	Positioning Cardboard*1
F	Certificate*1

If you want to install the EV Charger on the pole, please purchase it separately.



Item	Description
G	Pole*1
H	Expansion Screw M10*120*4
I	Cross Screw M6*16*3
J	Torx Screw M4*12*1
K	Torx Screw M3*10*1
L	Installation Guide*1

4 Installation Instruction

DANGER

- Make sure that holes are not drilled over any electrical parts or plumbing installations to avoid electric shock or other injuries.
- Improper installation and maintenance can be dangerous.

WARNING

- Only qualified personnel can install a charger following local laws and regulations.
- All powers should be disconnected before installation and maintenance.
- Do not install the charger in explosive environments, areas with high electromagnetic radiation, or flood-prone areas.

CAUTION

- Ensure that the wall has sufficient bearing capacity.
- Qualified personnel must wear personal protective equipment (PPE) during installation and maintenance.
- When installing underground cables for public EV charger networks, take care to avoid damaging existing underground utilities.
- Always consult the electricity transmission licensee before any excavation work (for structures, cables, grounding systems, etc.) to prevent damage to their underground cables.

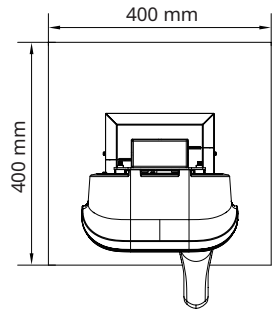
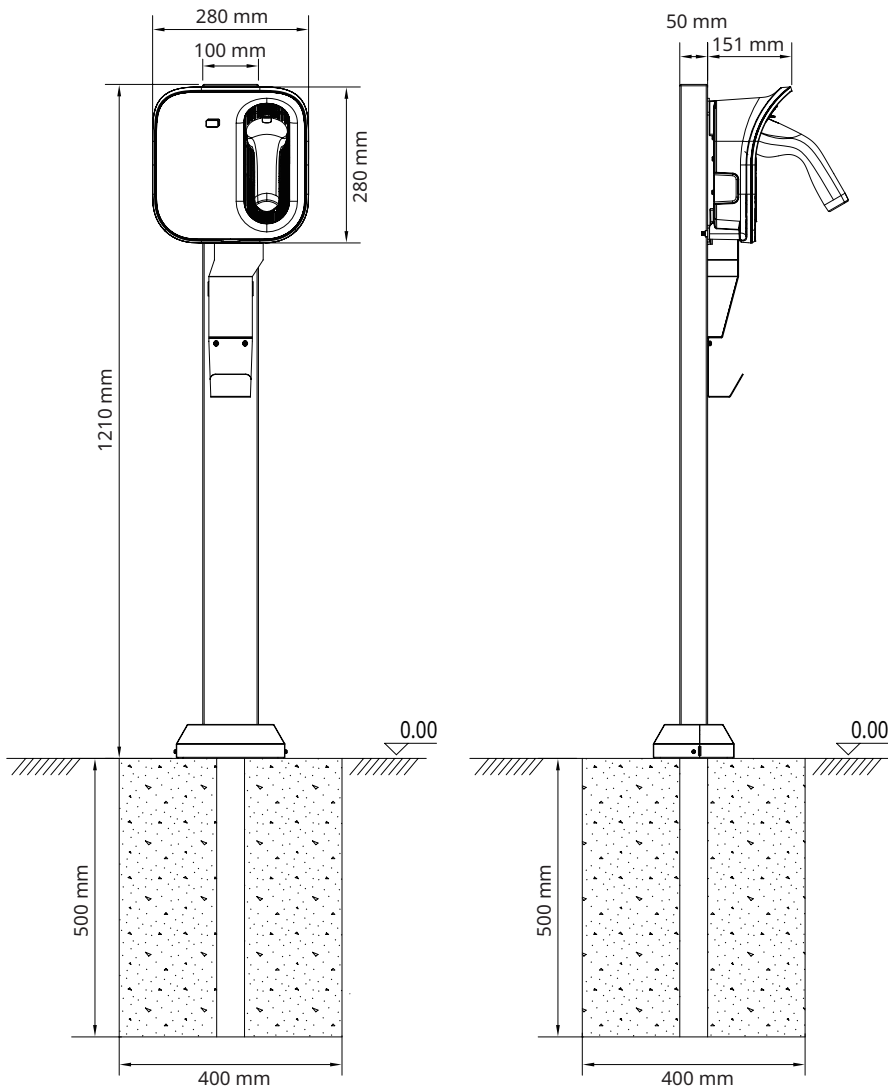
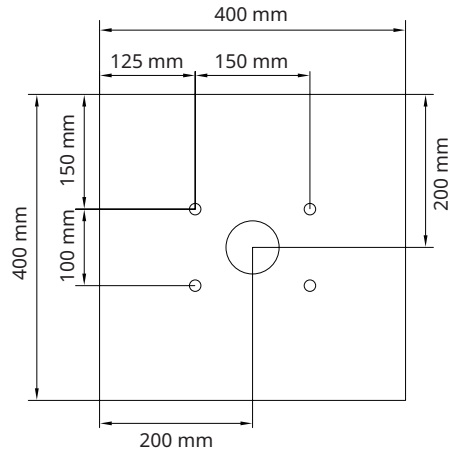
4.1 Environmental Requirements

- The installation place should be protected by shelter from direct sunlight or bad weather such as snow, rain, or lightning.
- The product should be installed on a solid surface that is suitable for its dimensions and weight.
- The product should be installed vertically or at a maximum back tilt of 15° (wall mounting).
- The product should be installed in an environment with good ventilation and heat dissipation conditions.
- The product should be installed at eye level for convenient maintenance.
- The product should be installed far from corrosive and flammable materials.
- The relative humidity should be between 5% and 95%, without condensing.
- The operating temperature should be between -30°C and 50°C.
- The altitude should be no more than 3000 m.
- The dust level should be no more than 1 mg/m³.

4.2 Concrete Foundation (Optional)

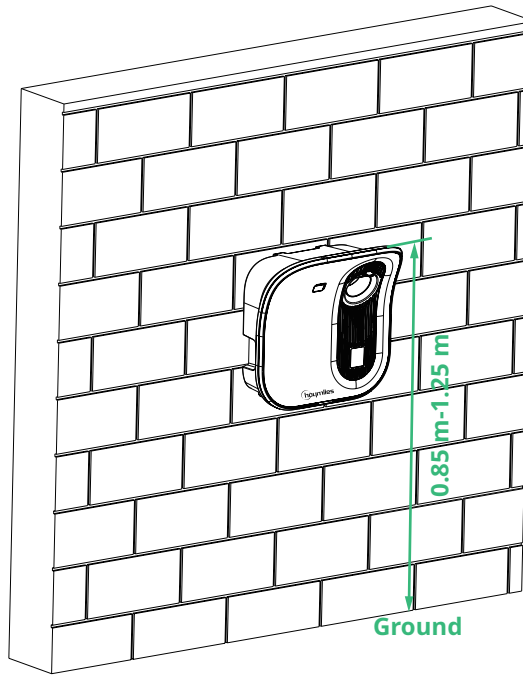
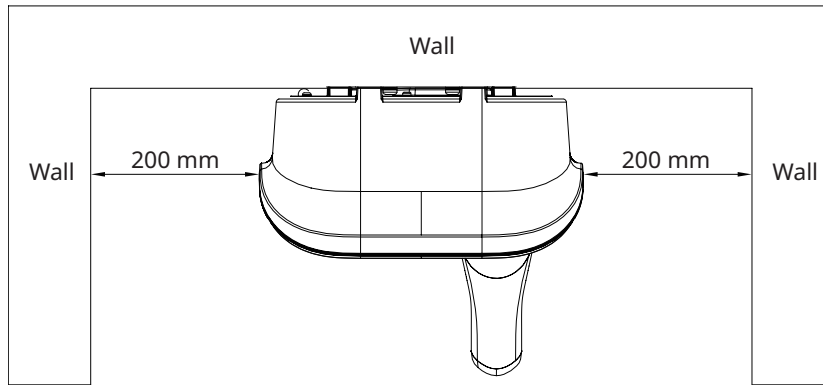
In the absence of a suitable existing mounting location for a pole mounting EV charger, constructing a concrete foundation is recommended. The concrete foundation must be poured before the installation.

- Standard dimensions: 400 mm x 400 mm x 500 mm (depth: 500 mm)
- Adjustable size based on customer requirements and site conditions.
- Ensure proper leveling during concrete pouring.
- The foundation should be installed higher than ground level, with appropriate space reserved for maintenance based on site conditions.
- The foundation must be filled with C20 concrete.
- Reserve an opening in the foundation for cable access.
- After pouring, use a spirit level to verify the level of foundation.
- Four M10 screws should be embedded in the concrete with 30 mm-40 mm exposed on the top surface.

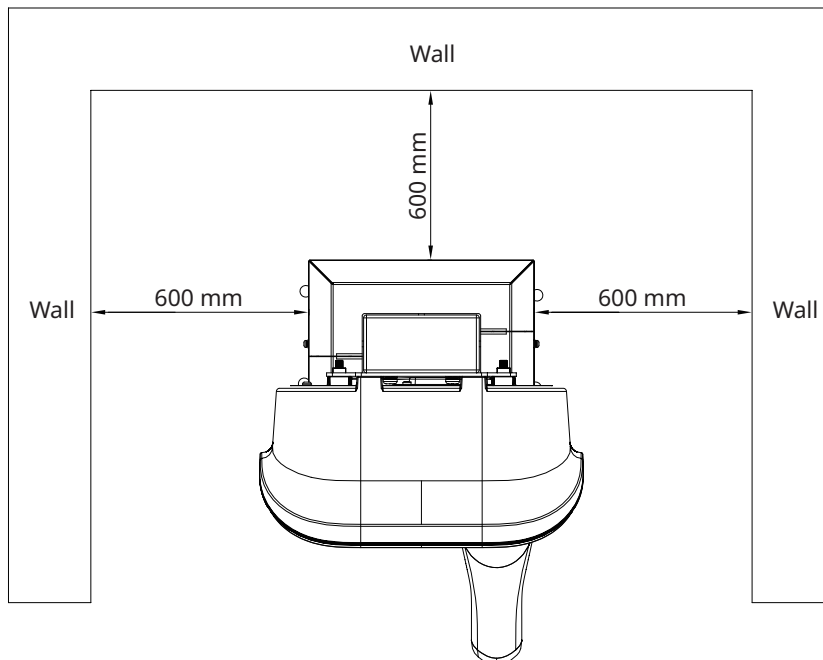


4.3 Space Requirements

Wall mounting

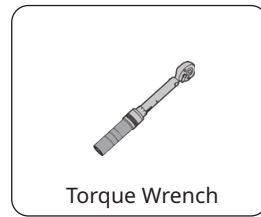
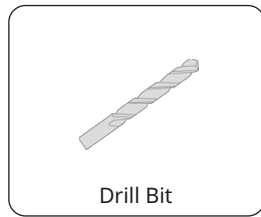
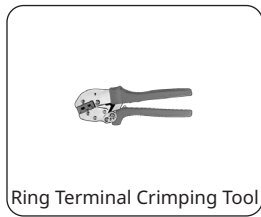
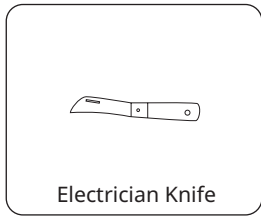
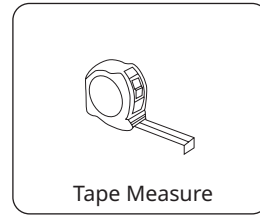
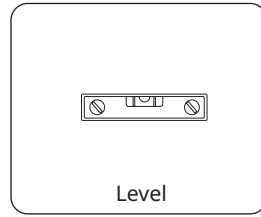
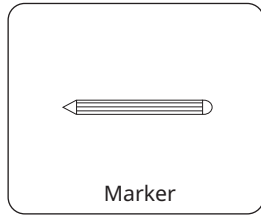
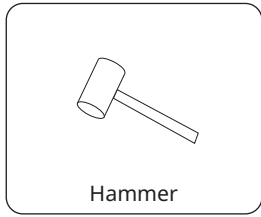
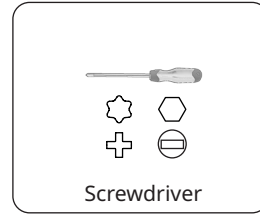
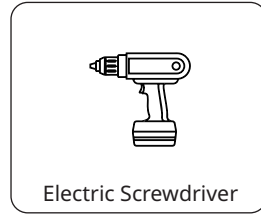
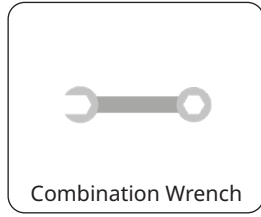
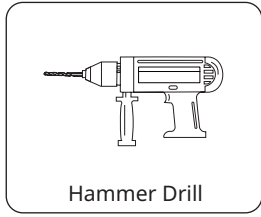


Pole mounting



4.4 Installation Tools

The following tools are recommended in the installation process, and other auxiliary tools can also be used on-site if necessary.



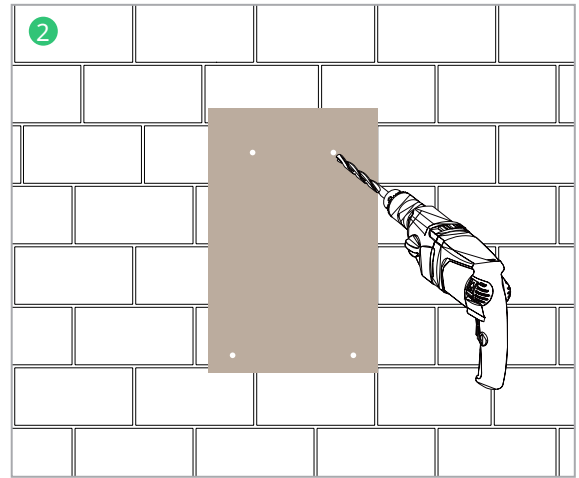
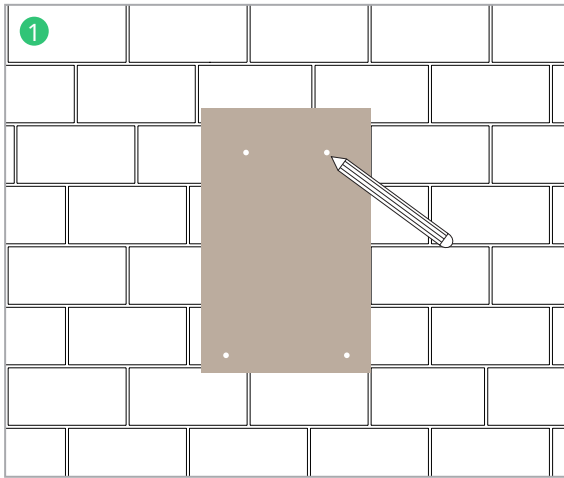
Personal Protective Equipment (PPE)



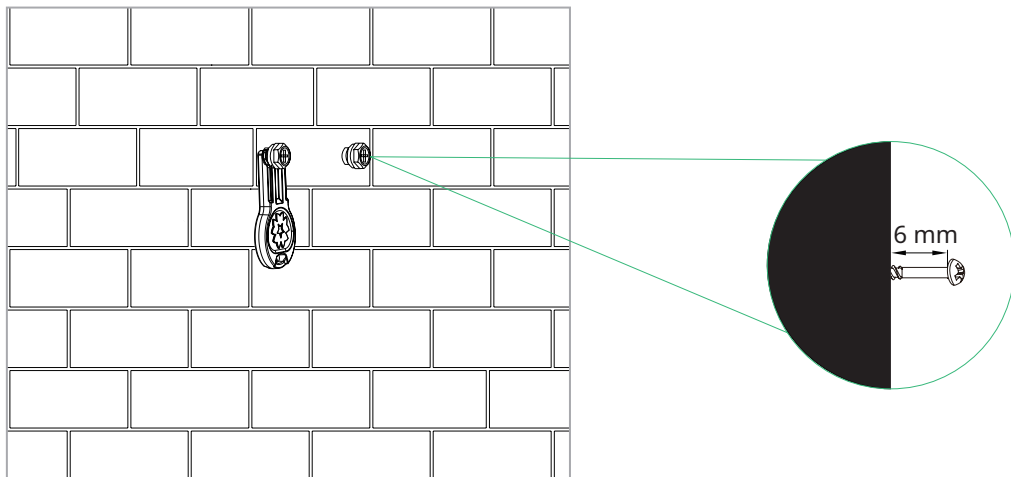
4.5 Wall Mounting Procedures

Step 1 Mark the installation position and 4 holes with a marker and positioning cardboard. The top of the EV charger should be at least 0.85 m (0.85 m-1.25 m) above the ground.

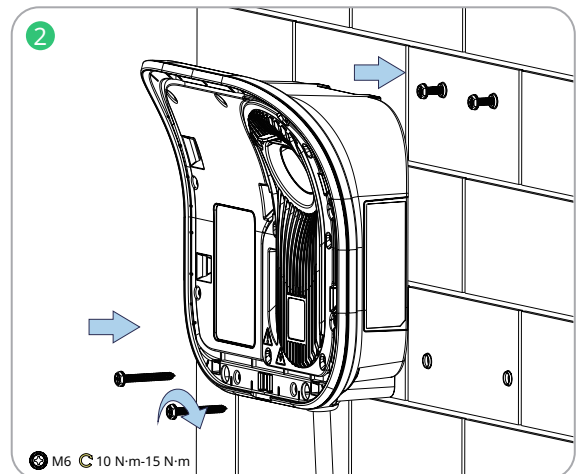
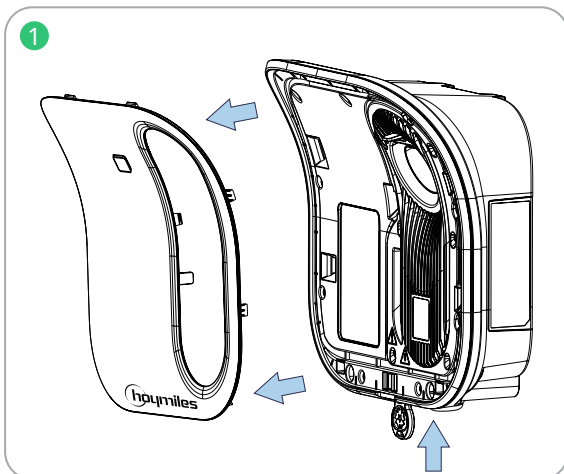
Step 2 Drill 4 holes with a diameter of 8 mm and a depth of 50 mm on the wall using a hammer drill.



Step 3 Place the anchors in 4 holes and put the self-tapping screws into the top two anchors. (note: the top two self-tapping screws flange end distance is reserved about 6 mm from the wall, and the cover key can be used to adjust the distance.)

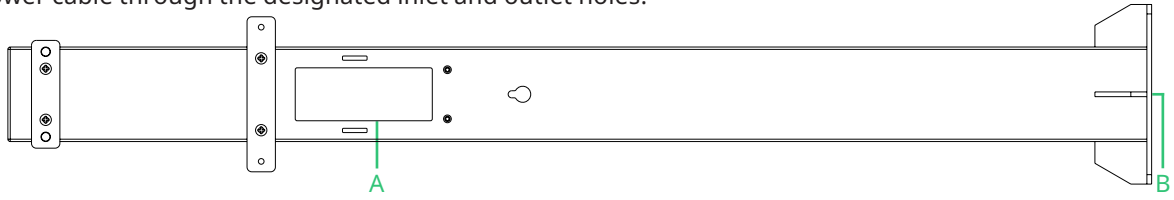


Step 4 Remove the front cover of the EV charger with the cover key, hang the charger on the top two screws, and insert the two self-tapping screws at the bottom through the front mounting hole of the charger to fix it.



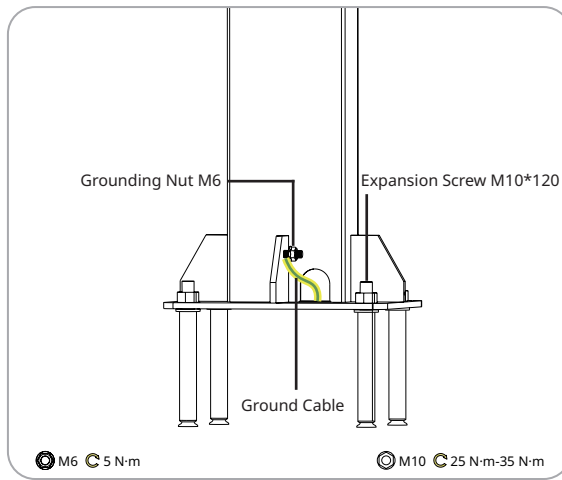
4.6 Pole Mounting Procedures (Optional)

Step 1 Remove the trim cover and cable holder from the pole. Lay the pole flat on the ground. Route the power cable through the designated inlet and outlet holes.

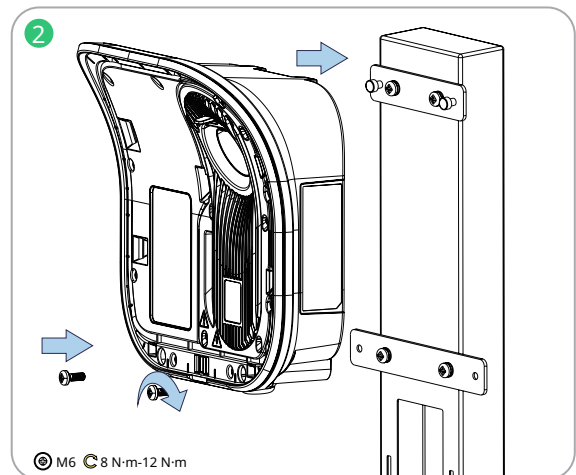
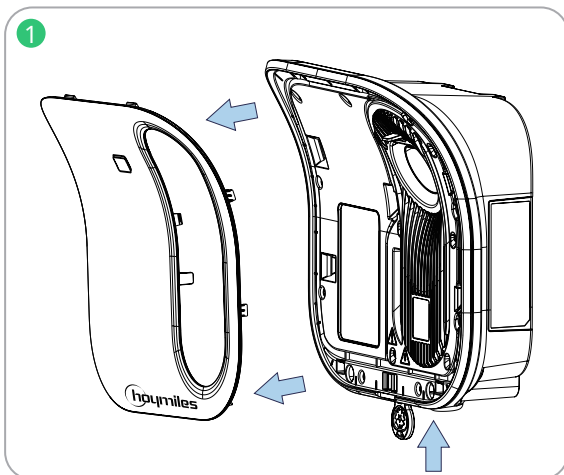


Item	Description
A	Cable Outlet Hole
B	Cable Inlet Hole

Step 2 Fix the pole to the ground using M10 expansion screws with a torque between 25 N·m and 35 N·m, and tighten the M6 grounding nut with a torque of 5 N·m.



Step 3 Remove the front cover of the EV charger with the cover key, hang the charger on the top two screws, and then install the two screws at the bottom through the front mounting hole of the charger to fix it.



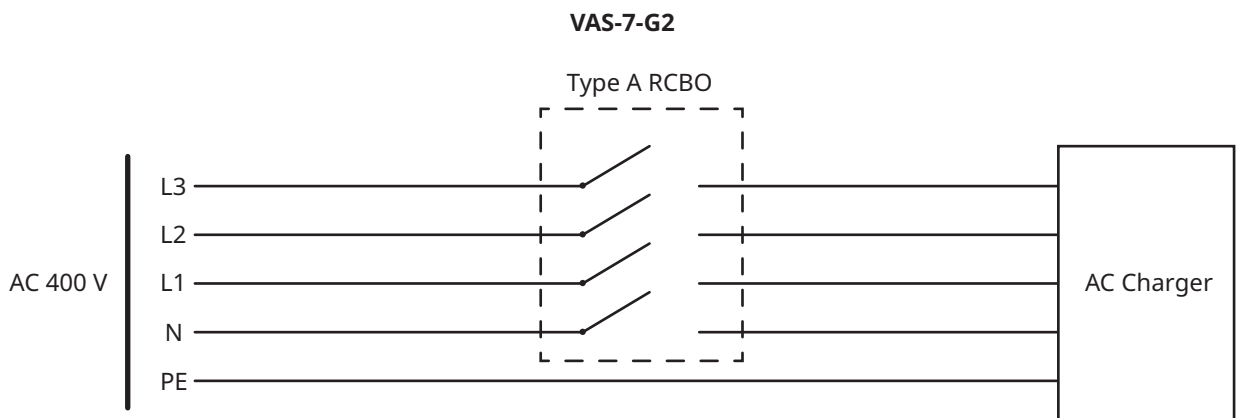
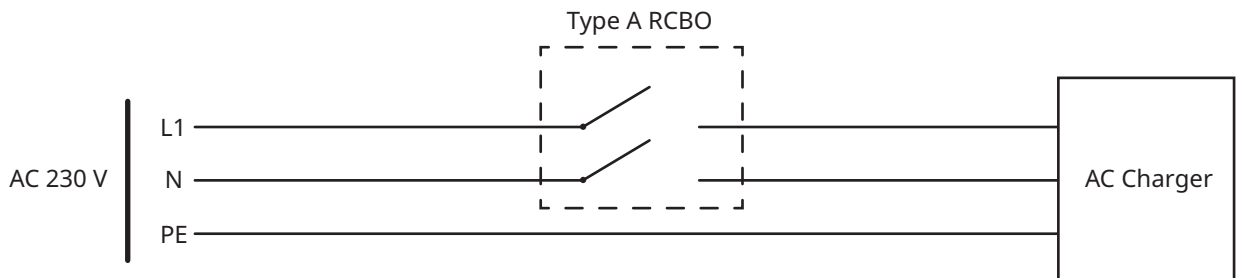
5 Electrical Connection

WARNING

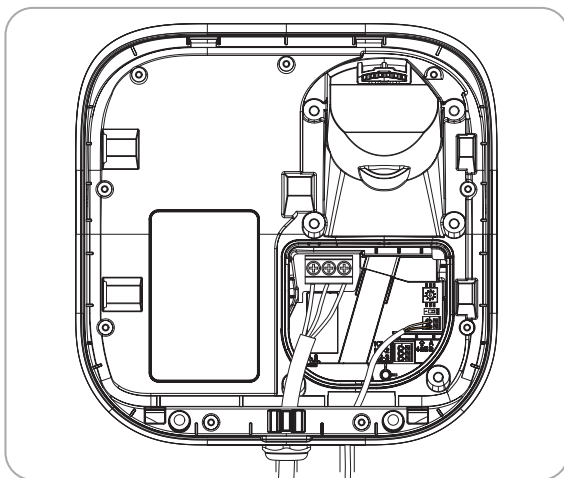
- The power cable must be connected directly to a dedicated Type A RCBO (Residual Current Operated Circuit-breaker with Integral Overcurrent protection) or MCB+ Type A RCD (Residual Current Devices) in the distribution box. The RCBO/RCD capacity should match the charging cable size.

NOTICE

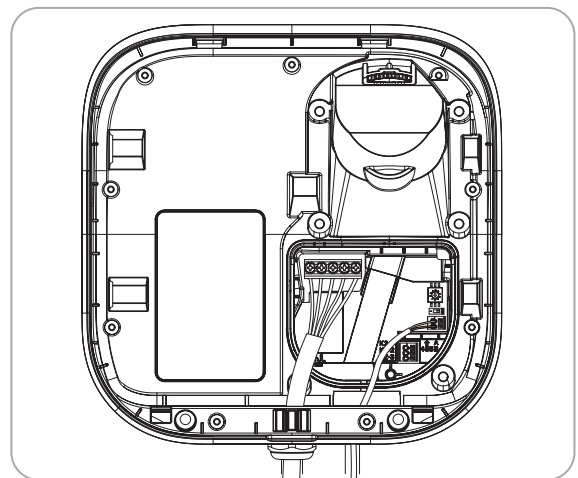
- All electrical connections must be in accordance with local and national standards.
- Do not attempt to repair the EV charger yourself, and this document contains no instructions for user-serviceable parts.



VAT-11/22-G2



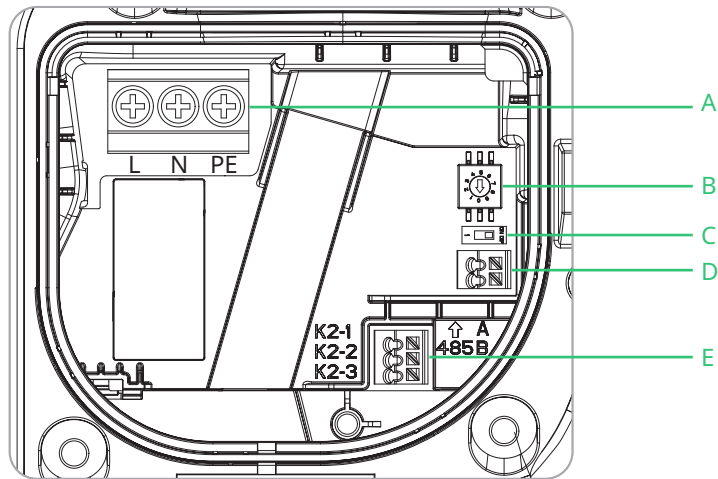
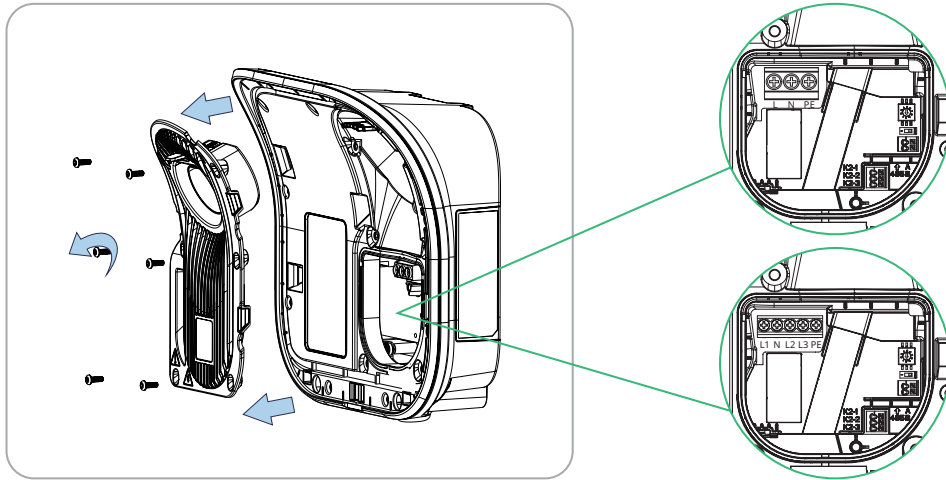
VAS-7-G2



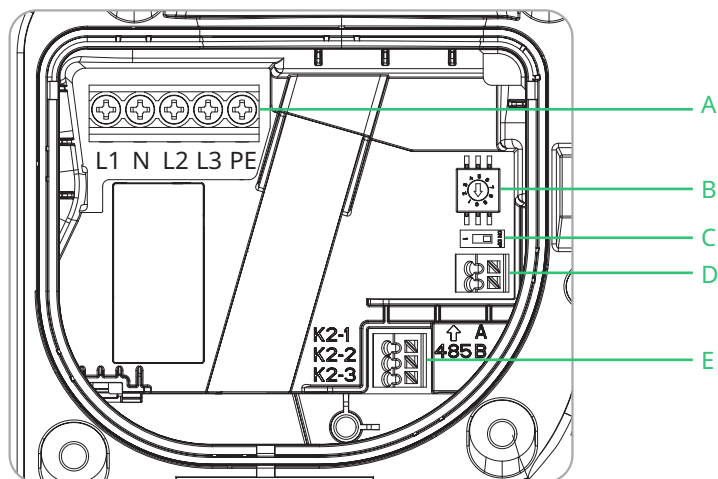
VAT-11/22-G2

5.1 Removing Charging Connector Holder

Remove the 6 screws connecting the charging connector holder, remove the charging connector holder, and prepare to connect the power cable.



VAS-7-G2

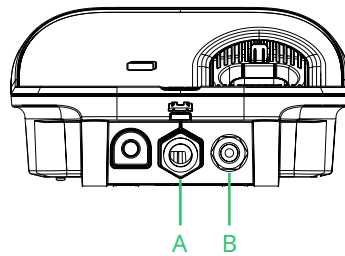


VAT-11/22-G2

Item	Description
A	AC Terminals
B	Rotary Switch
C	DIP Switch
D	RS485 Terminal
E	Relay Terminal (Dry Contact) (K2-1 COM, K2-2 NO, K2-3 NC)

Note:

The power cable hole and communication hole are at the bottom of the charger. The power cable hole is equipped with an M25 gland, which is suitable for cable diameters of 13 mm-18 mm. The communication cable hole is equipped with an M20 plug.



Item	Description
A	M25 Gland
B	M20 Plug

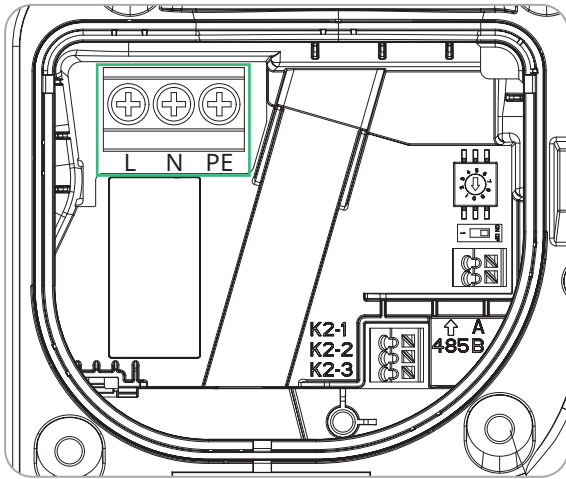
5.2 Connecting AC Cables

If the power cable is a flexible conductor, it is recommended to use ferrules on stranded wires. Use proper crimping tools to crimp the cable and terminal, connect the cable to the corresponding terminals of the EV Charger, and gently pull the cables backward to ensure that they are firmly connected.

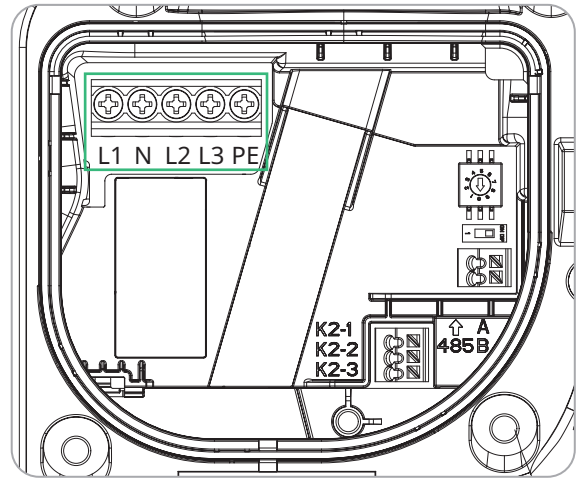
Model	Recommended Cable Specification (Copper)	Recommended Circuit Protection
VAS-7-G2	Three-core cable Cross-sectional area: 6 mm ² /10 mm ² Outer diameter: 13 mm-18 mm	Type A RCBO or MCB + Type A RCD, Ue=230 V, In=40 A, 2P
VAT-11-G2	Five-core cable Cross-sectional area: 2.5 mm ² /4 mm ² Outer diameter: 13 mm-18 mm	Type A RCBO or MCB + Type A RCD, Ue=400 V, In=40 A, 4P
VAT-22-G2	Five-core cable Cross-sectional area: 6 mm ² /10 mm ² Outer diameter: 18 mm-25 mm	Type A RCBO or MCB + Type A RCD, Ue=400 V, In=40 A, 4P

Note:

- A flexible cable is recommended for a wall mounting EV charger.
- For VAS-7-G2 and VAT-22-G2, the cable cross-sectional area should be not less than 6 mm². If using a 6 mm² or 10 mm² flexible cable, correspondingly, a KST E6012 or KST E10-12 pin-type terminal (or equivalent) is recommended.
- For VAT-11-G2, the cable cross-sectional area should be not less than 2.5 mm². If using a 2.5 mm² or 4 mm² flexible cable, a KST E2512 or KST E4012 pin-type terminal (or equivalent) is recommended.

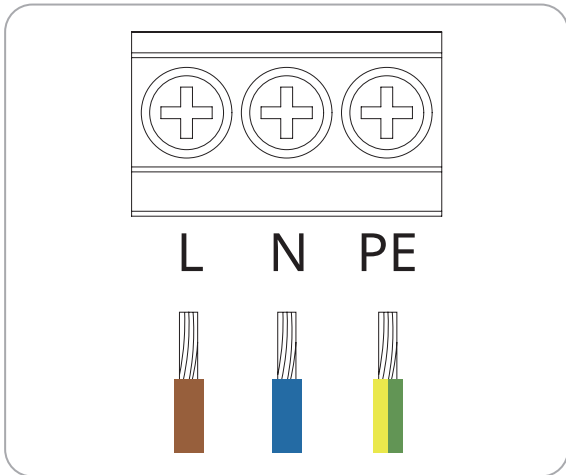


VAS-7-G2

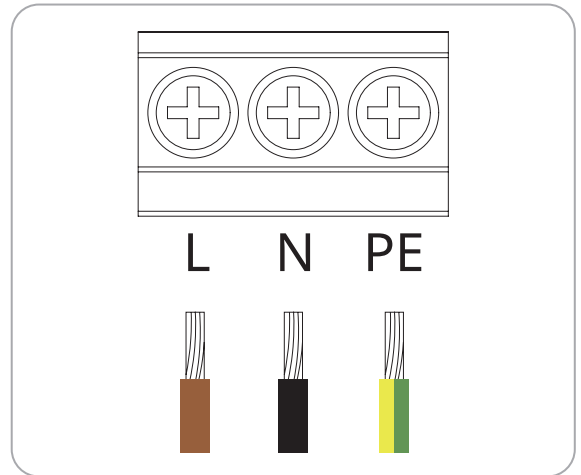


VAT-11/22-G2

Single-phase

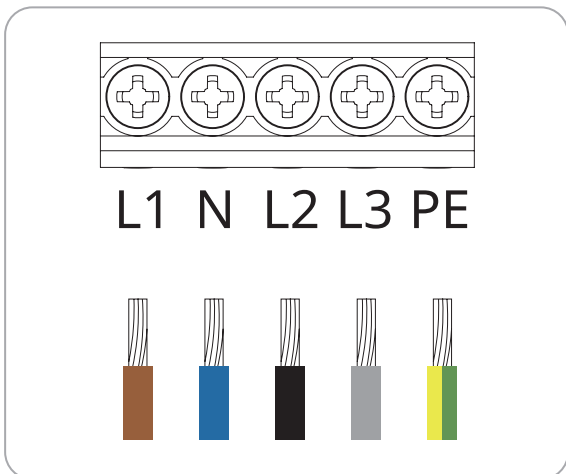


TN/TT

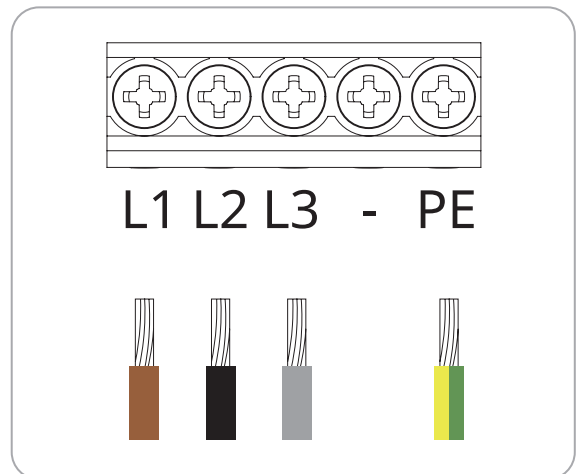


IT

Three-phase



TN/TT



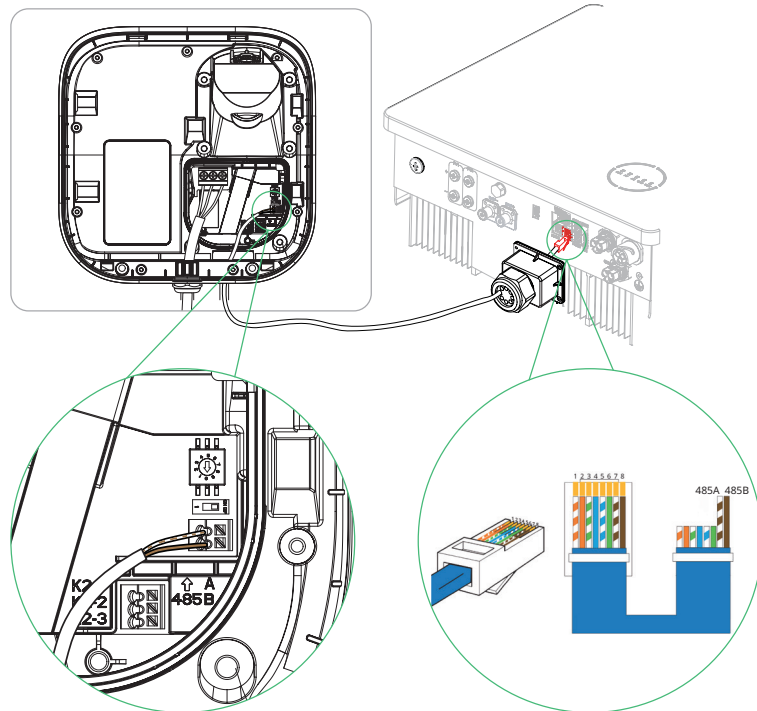
IT

Note:

- While this document uses illustrations based on the IEC 60446 standard for wire color coding, national standards may vary. Always follow the existing color codes used in your specific installation.

5.3 Connecting Communication Cable

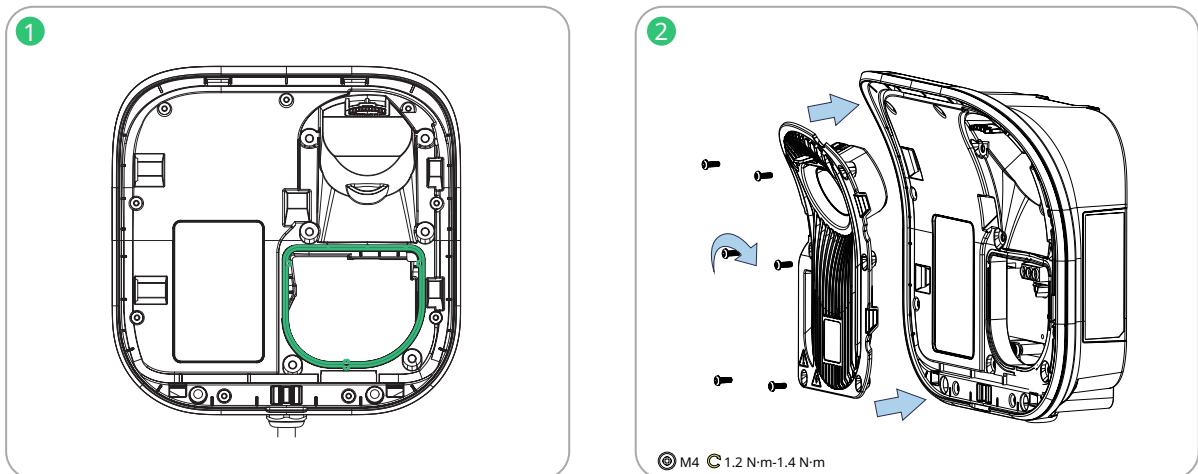
Respectively connect the RS485A terminal and RS485B terminal of the EV charger to the BMS terminal (RS485A (7) and RS485B (8)) of Hoymiles energy storage inverter.

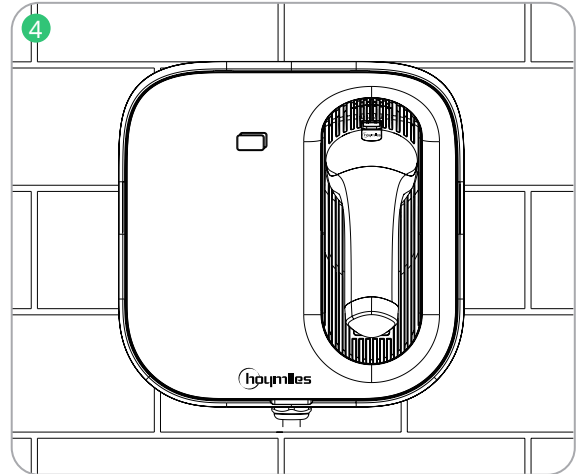
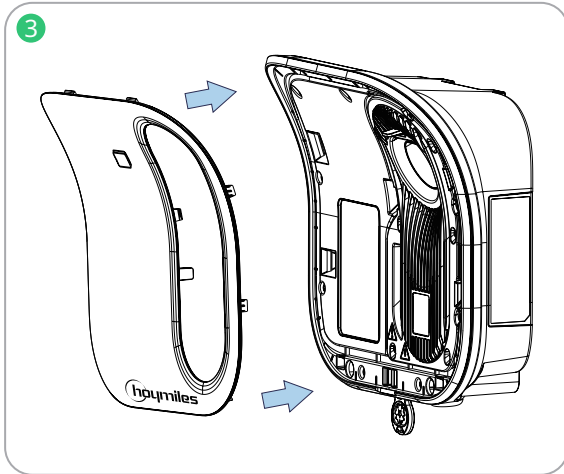


5.4 Completing the Installation

Wall mounting

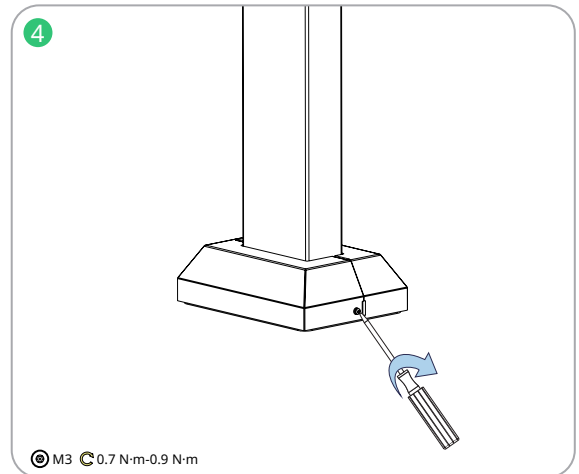
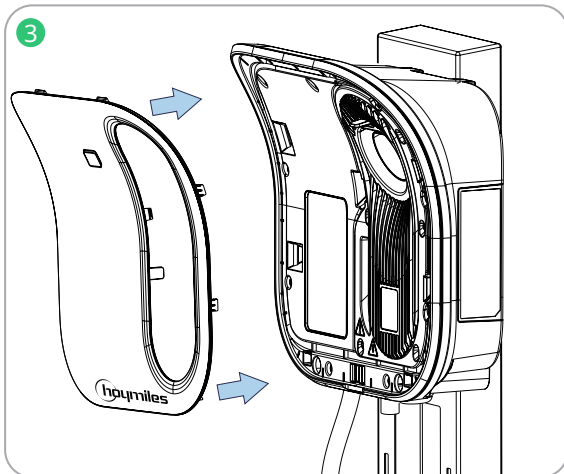
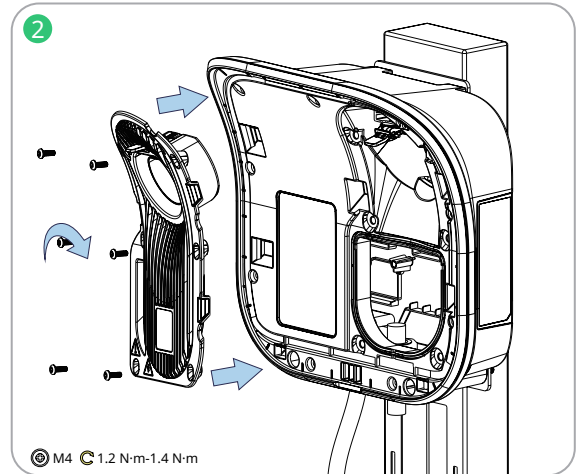
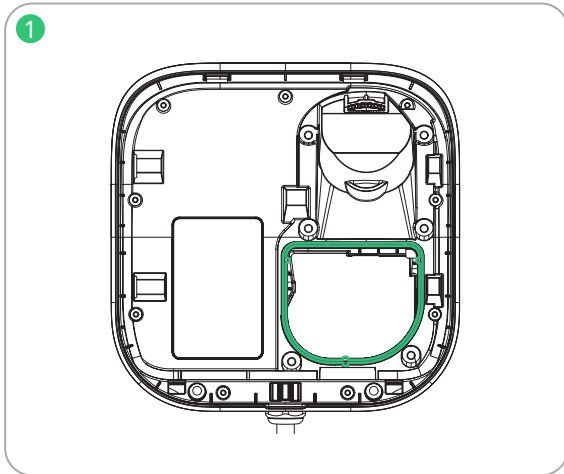
Ensure the sealing rubber strip of the wiring area is properly installed. Install the charging connector holder and tighten the 6 screws, install the front cover, and insert the charging connector into the charging connector holder.

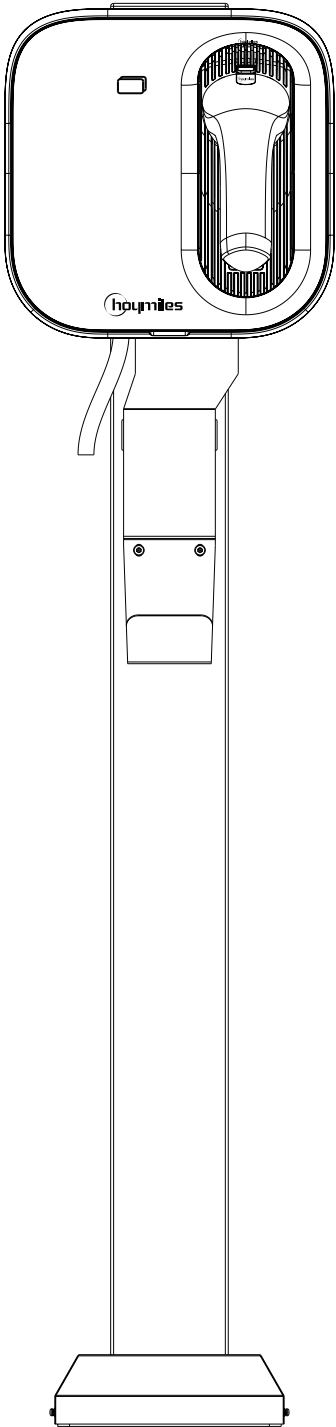




Pole mounting

Ensure the sealing rubber strip of the wiring area is properly installed. Install the charging connector holder and tighten the 6 screws, install the front cover, and insert the charging connector into the charging connector holder. Finally, install the cable holder and trim cover.





6 Commissioning

6.1 Preparation

- Dispose of all shipping and packaging materials in accordance with local laws and regulations.
- Clean the charger and surrounding debris, such as small cables, straps, screws, etc.
- Do not leave the installation tools on site or in the charging station (record the type and quantity of tools to prevent omission).
- Wipe the insulation with an anti-static cloth. Do not use any corrosive solvents.
- Verify that the base is secure and properly sealed.
- Ensure all internal components of the device are securely fastened.
- Check if the protection level of the device meets the requirements, especially the cable inlet at the bottom of the device.
- Inspect the overall appearance, markings, completeness, and cleanliness.
- Verify that all screws and electrical connections are secure.
- Ensure proper connection of all phase wires and data cables.
- Measure the insulation resistance with a multimeter. It should be greater than 1 M Ω (1 megohm).
- Before activating the charger's protection device, measure the voltage on the applied MCB in the consumer unit. The voltage between the phase(s) and neutral should be within 10% of 230 V.

6.2 Power-on and Startup

Turn on the power, and wait until the LED indicators turn green.



If you want to check relevant information about the EV charger, start and stop charging through the App, or change the charging mode, please download and log in to the S-Miles App. Detailed operation instructions are shown in "[7 S-Miles App](#)".

7 S-Miles App

The S-Miles Cloud App has been developed for Hoymiles and offers the following features.

- a. Network configuration;
- b. Local installation assistant;
- c. System monitoring.

Please download the S-Miles Cloud App from the Google Play Store or the Apple App Store. The QR code below can also be scanned to download the App.



S-Miles Installer



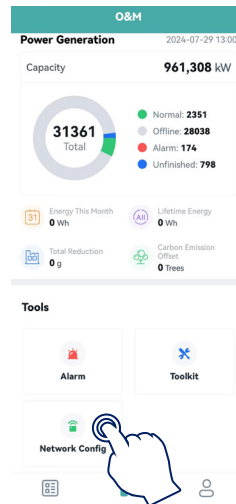
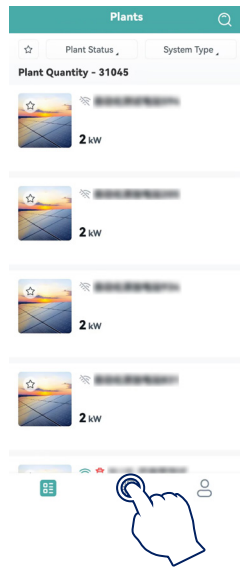
S-Miles End-user

7.1 DTS Online Setting

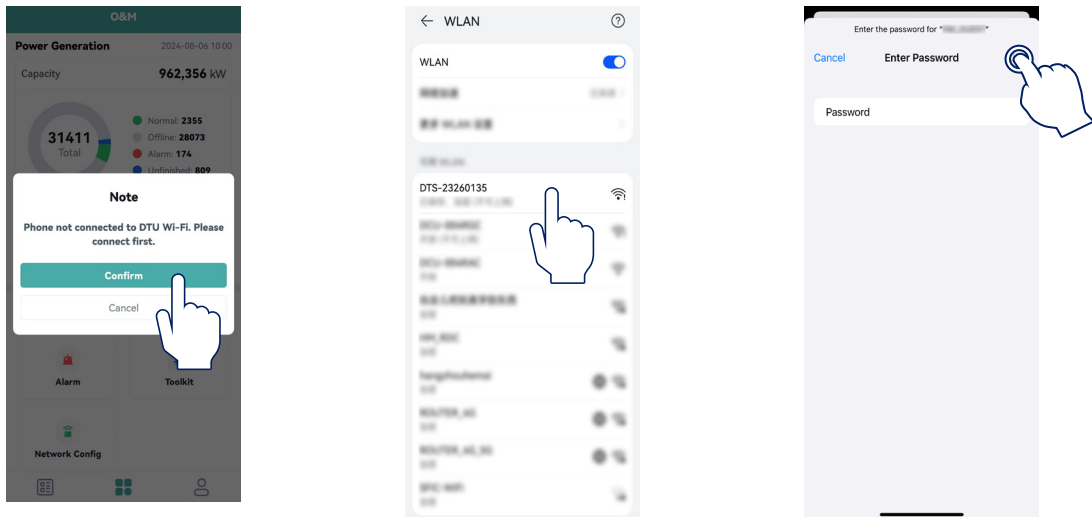
1. Open the app and log in with your installer account and password. For new Hoymiles installers, please apply for an installer account from your distributor in advance.

2. Use the App to connect to the DTS.

(a) Open the Installer App on smartphone/tablet and log in. Tap on “O&M” at the bottom of the page, and then tap on “Network Config”.

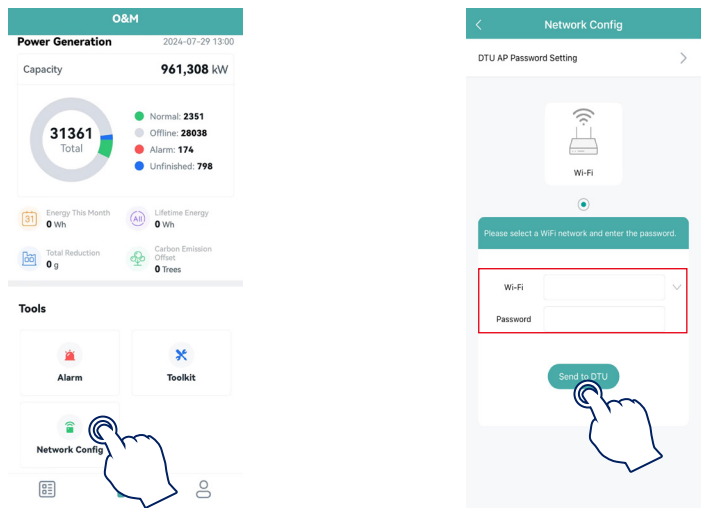


(b) Select the DTS's wireless network, enter the password, and tap "Join". (The network name consists of DTS and the last 8 digits of the product serial number, and the default password is ESS12345.)



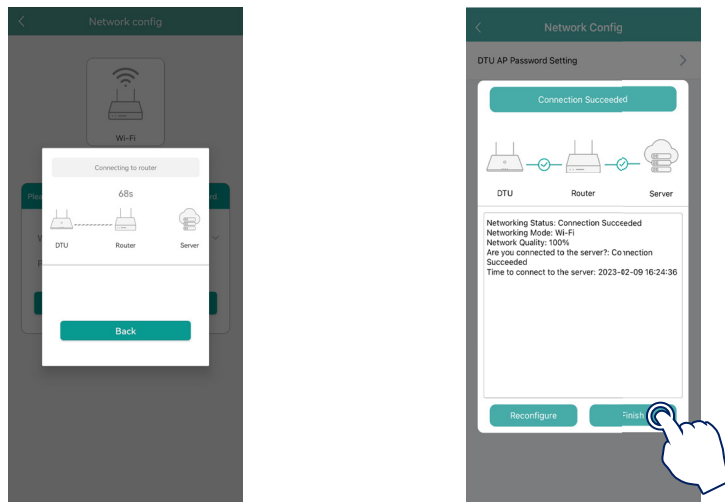
3. Network configuration.

- (a) Upon successful connection, tap on "Network Config" again and access the Network Configuration page.
- (b) Select the router Wi-Fi and enter the password.
- (c) Tap on "Send to DTU".



4. Check the DTS indicator for a solid blue light, which signifies a successful connection.

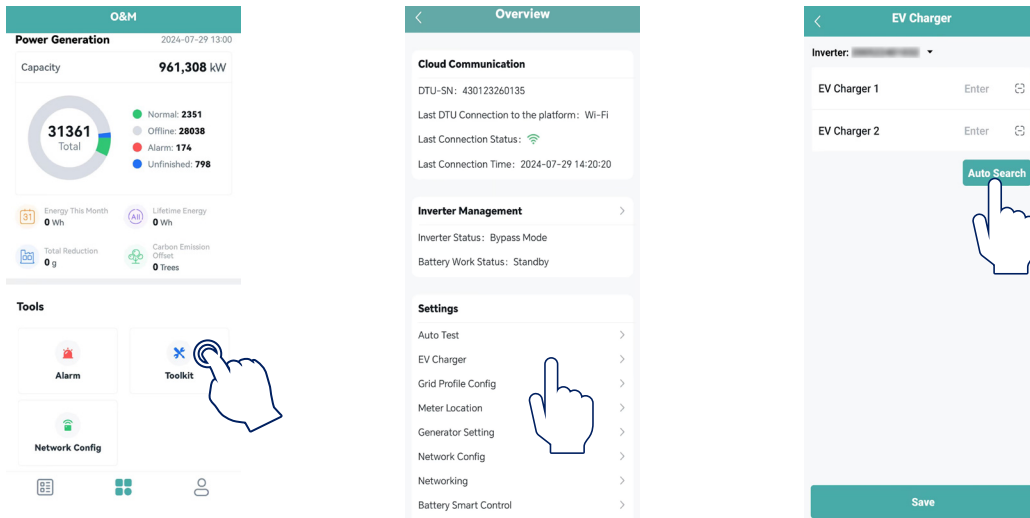
The network configuration takes about 1 minute, please be patient. If the network is not connected, please check the internet as instructed.



7.2 Operation Guide

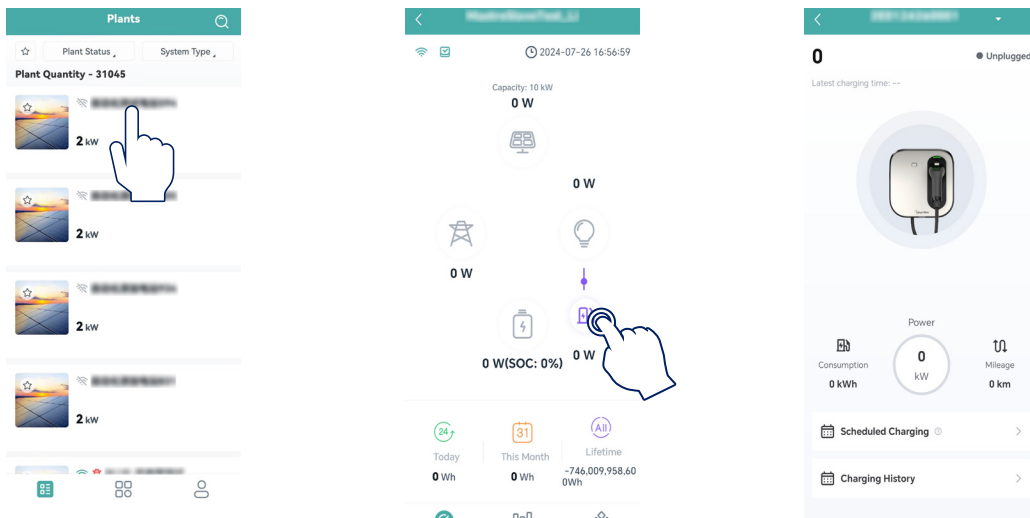
7.2.1 Adding an EV Charger

1. Tap "Toolkit → EV Charger" to add an EV charger.
2. Tap "Auto Search" or scan the QR code on the label to identify the serial number (SN) of EV charger, and tap "Save". Note that currently, it is not supported to connect two EV chargers to one inverter.

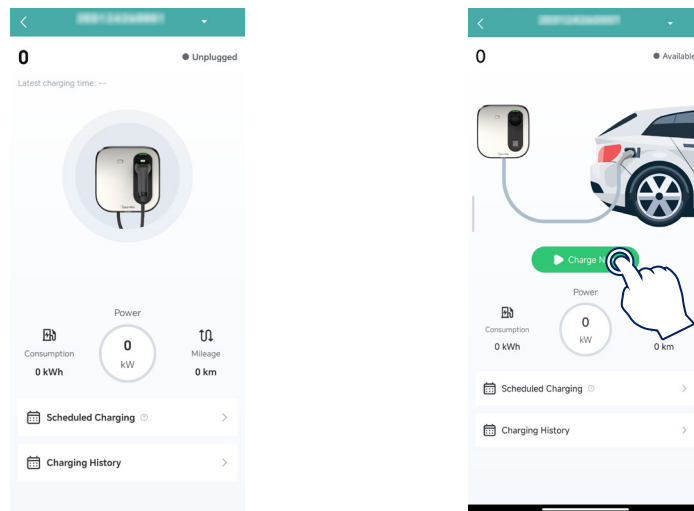


7.2.2 Charging Process Overview

1. Choose the plant to which the EV charger belongs and tap the EV charger icon to enter the EV charger page.



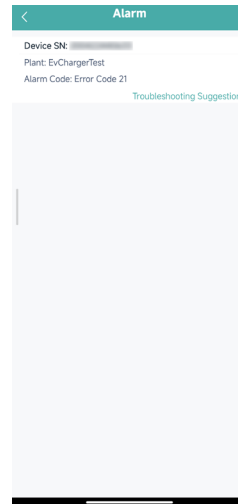
2. Tap "Charge Now" to start charging after the charging connector is plugged into the charging port of the electric vehicle.



3. Tap “Stop Charging” if you want to stop charging before the electric vehicle is fully charged.

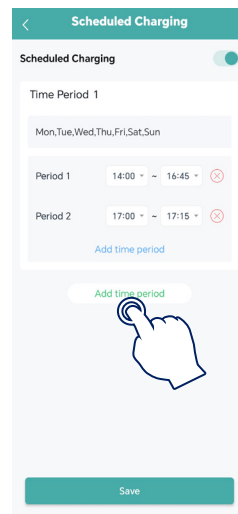
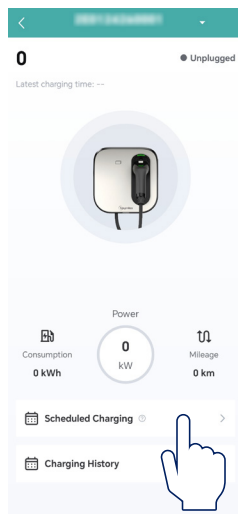


4. If an alarm occurs, tap “Alarm” to check the alarm code and its troubleshooting suggestions.



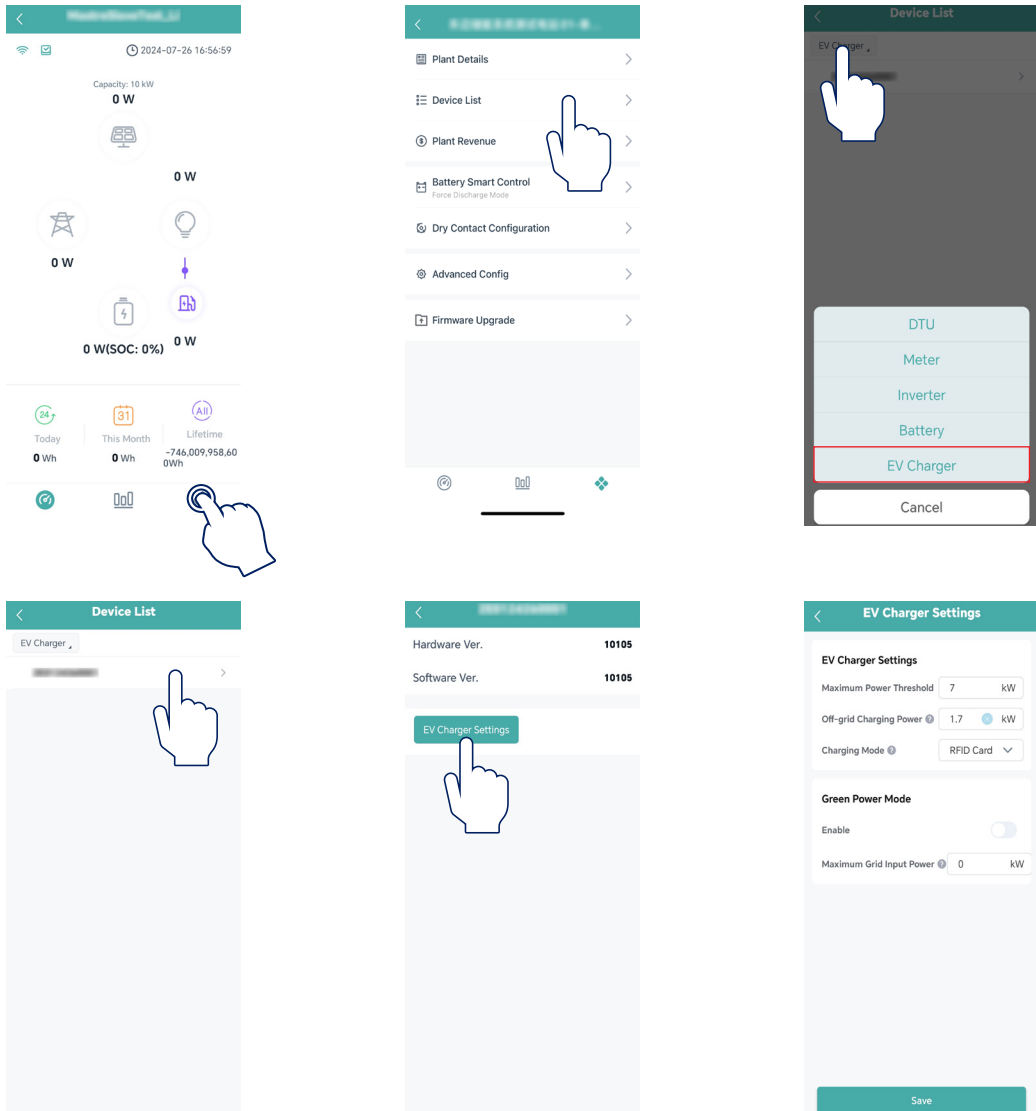
7.2.3 Scheduled Charging

1. Tap “Scheduled Charging” to enter the scheduled charging interface and preset the start and stop time.
2. Tap “Add time period” to add charging time period which can be set by the day (Monday to Sunday).



7.2.4 EV Charger Settings

Tap the icon at the bottom right corner, tap “Device List → EV Charger → EV Charger SN → EV Charger Settings” to set relevant parameters, and tap “Save”.



★ EV Charger Settings

Parameter	Description
Maximum Power Threshold	The maximum charging power of the EV charger. <ul style="list-style-type: none"> VAS-7-G2: 7 kW (default value); 1.4 kW-7 kW (range) VAT-11-G2: 11 kW (default value); 4.2 kW-11 kW (range) VAT-22-G2: 22 kW (default value); 4.2 kW-22 kW (range)
Off-grid Charging Power	The EV charger will charge the electric vehicle at this power if there is a communication failure between the EV charger and the inverter.
Charging Mode	<ul style="list-style-type: none"> RFID Card Free Charge

★ Green Power Mode

The detailed information about green power mode is explained in [“2.4.2 Green Power Mode”](#).

8 Troubleshooting

Fault	Possible Causes	Handling Suggestions
The Power LED is not on	No power supply.	<ol style="list-style-type: none"> 1. Check if the parent MCB+ Type A RCD or Type A RCBO has been turned off. 2. Make sure that the input power cable is intact and has been properly and securely connected to the charger. 3. Check whether the power voltage on the grid side is within the operating range (230/400 ± 10% Vac) of the charger with a voltage tester. 4. Turn off the charger by turning off the parent circuit breaker and restart the charger in about 20s. 5. When the input power cable is influenced by the surge or wrong wiring sequence, the device will be out of power for protection. Searching the support from the professional for the wiring sequence checking or other abnormal interference. 6. Power on after the above checks are finished.
Failure to start charging	The charging connector is not inserted correctly.	Plug and unplug the charging connector again and confirm that the connector connection is successful.
	Failure to execute the charging process correctly.	Please follow the instructions in "2.3 Product Usage" and "7 S-Miles App" .
	The charging connector may be stained or damaged in the locking area.	Clean or replace the charging connector.
Failure to start charging by swiping the RFID card	The EV charger is still in the starting process.	Wait for about 2-5 minutes until the charger starts.
	The RFID card account is not activated.	Please contact your dealer or service provider to activate the RFID card account.
The vehicle is not fully charged, or the charging time increases	The current decreases due to the high temperature of the vehicle or the charger.	<ol style="list-style-type: none"> 1. Visually check whether the connectors are stained, worn, or damaged. 2. If necessary, please contact your dealer or service provider.
	Power is limited due to external control devices (power supply device, PV device).	
The LED turns red	Red color is always on: CP fault/Electric meter failure/ NO ID	Please contact your dealer or service provider.
	Flashing red (1 time): The emergency stop button is pressed.	Please release the emergency stop button by turning it counterclockwise.

The LED turns red	Flashing red (2 times): Ground fault	<ol style="list-style-type: none"> 1. Check whether the grounding of the device is loose, damaged, or removed. 2. Measure whether the grounding resistance of the charger exceeds the standard (the grounding resistance is generally within 100Ω) with a tester (e.g. multimeter).
	Flashing red (3 times): Undervoltage	Check whether undervoltage (≤ 161 Vac) happens to the power voltage on the grid side with a voltage tester.
	Flashing red (4 times): Overvoltage	Check whether overvoltage (≥ 275 Vac) happens to the power voltage on the grid side with a voltage tester.
	Flashing red (5 times): Relay welding fault	Please contact your dealer or service provider.
	Flashing red (6 times): Overtemperature	<ol style="list-style-type: none"> 1. Power off the EV charger. 2. Turn on the EV charger when the temperature returns to normal.
	Flashing red (7 times): Leakage current fault	Please contact your dealer or service provider.
	Flashing red (8 times): The upper cover is opened.	Please check if the upper cover is installed completely.
	Flashing red (10 times): Overcurrent	Please check if the current is within the recommended range.

Note:

If the problem still exists, please contact your dealer or service provider for help.

9 Maintenance



The inspection items, frequency, and working hours listed below are for reference only. Different regions can adjust these based on local regulations and actual site conditions.

The recommended maintenance schedule is provided in the table below. Local regulations may require adjustments to the maintenance cycle. In such cases, always comply with applicable laws.

Item	Maintenance Cycle	Working Hours
Appearance Check	Yearly	5 mins/unit
Internal Check		10 mins/unit
Functional Check		15 mins/unit
Cleaning		20 mins/unit

9.1 Appearance Check

NOTICE

Before the inspection, please ensure that the power is off.

Item	Content	Method
Appearance Check	The EV charger is intact and complete.	Visually
Appearance Check	All components of the equipment are free from stains, scratches, and deformations.	Visually
	Nameplate and other symbols including safety warning signs are accurate, clear, and complete.	
	The charging cable/socket is complete without damage.	
	No water or dust in the charging connector.	
	The insulation cap of the charging connector is complete.	

9.2 Internal Check

NOTICE

Before the inspection, please ensure that the power is off.

Item	Content	Method
Internal Check	Ensure the wiring and screws on MCB are firm.	Visually/Manually
	L1/L2/L3/N/PE connection.	

Note:

If any screw or connection is found loose, a screwdriver must be used to tighten it.

9.3 Functional Check

NOTICE

Before the inspection, please ensure that the EV charger is on.

Item	Content	Method
Functional Check	During standby, the LED indicator is functional with color codes.	Visually
	Measure the voltage between L1/L2/L3 and N; N and PE; L1/L2/L3 and PE in the switch box.	Visually/ Measurement
	During charging, the LED indicator is functional with color codes.	Visually

9.4 Cleaning

NOTICE

Before the inspection, please ensure that the power is off.

It is recommended that the enclosure of the charger is regularly cleaned with a wet cloth. In addition, there should be no plants growing on or around the charger.

- Do not clean the product with a high-pressure water pipe.
- Do not clean the product with a corrosive cleanser.
- Do not clean the inside of the product.

10 Transportation and Storage

If the EV charger will not be used immediately, or after removing it from the wall or pole, it should be moved or stored based on the following requirements:

- The product should be transported and stored in its original packages.
- The product should be stored indoors.
- The product should be stored in a dry, clean and well-ventilated place.
- The product should be stored away from flammable and corrosive substances.
- The product should be stored between -40°C and 85°C.
- Do not place any other objects on the EV charger.
- Do not lift or carry the EV charger by the charging cable.
- Do not lift or carry the EV charger by flexible conduits and input conductors.

11 Disposal

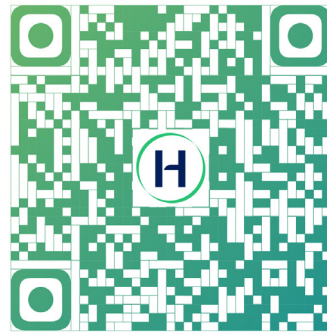
In accordance with the European Directive 2002/96/EC, Waste Electrical and Electronic Equipment (WEEE) and its implementation in national law, the electrical devices including chargepoints which are used must be collected separately and recycled in an environmentally responsible manner. We recommend that you return your used device to your dealer or obtain information regarding a local, authorized collection and disposal system. Failure to comply with this EU Directive may result in a negative impact on the environment.

12 Technical Datasheet

Model	VAS-7-G2	VAT-11-G2	VAT-22-G2
General Information			
Charging mode	Mode 3 (IEC 61851-1)		
Input/output power rating (kW)	7	11	22
Max. input/output current (A)	32	16	32
Input/output voltage rating (V)	230±10%		400±10%
Rated frequency (Hz)	45-65		
Grid form	L/N/PE	3L/N/PE	
Supported grid type	TN-S, TN-C-S, TT, IT (L1 + L2 230 Vac single-phase)		
Charging interface	IEC 62196-2 Type 2 tethered plug (Case C)		
Residual current protection	DC 6 mA		
Protection	Overcurrent, overvoltage, undervoltage, residual current, overtemperature, grounding fault (optional), integrated surge protection		
User Interface			
Display and support languages	No display		
Status indication	LED indicator		
Button and switch	Emergency stop button		
User authentication	RFID card		
RFID reader	IEC 14443 A		
Communication			
Network Interface	RS485		
Protocol (EVSE and EV)	Control pilot		
Environmental Information			
Operating temperature (°C)	-30 to +50		
Storage temperature (°C)	-40 to +85		
Humidity	5% to 95%, no condensing		
Altitude (m)	≤3000		
Mechanical Information			
Dimensions (W × H × D [mm])	280 × 280 × 148 (without pole) 280 × 1210 × 201 (with pole)		
Weight (kg)	Approx. 3.75		
Installation	Wall mounting; pole mounting (pole is optional)		
IP rating	IP65		
IK rating	IK10		
Cooling	Natural convection		
Charging cable length (m)	5		
Certifications and Standards			
Standards and compliance	IEC 61851-1, IEC 61851-21-2, LVD 2014/35/EU, RED 2014/53/EU, IEC 62955 (RCD), RoHS 2.0, REACH		
Certification	CE-RED, CB		



S-Miles Installer



S-Miles End-user

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