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Appendix 1. Overload Capacity

1. About This Guide

1.1 Purpose and Scope

This guide is intended for end users and covers system overview, daily operation, and user app features. For installation, wiring, and commissioning, refer to the Anker SOLIX XE (AE111) Installer Guide.

1.2 Model Reference

This guide applies to the following products.

Product Name	Shortened Form
Anker SOLIX XE	Main Module
Anker SOLIX XE Battery Module	Battery Module

1.3 Model Number Format

All system model numbers follow the same naming pattern.

The example model number below indicates a system with one main module and one battery module.

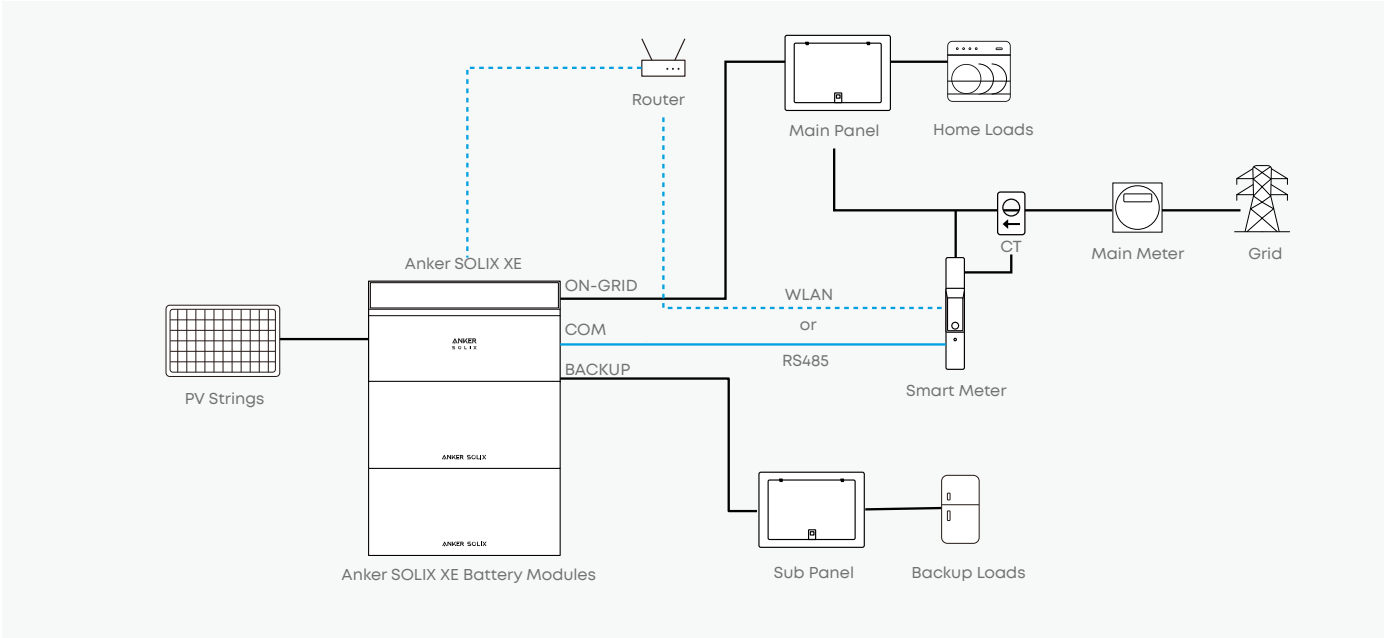


No.	Meaning	Value
1	Product	Anker SOLIX XE
2	Number of Battery Modules	1 to 5: One to five battery modules No suffix: No battery module

2. System Overview

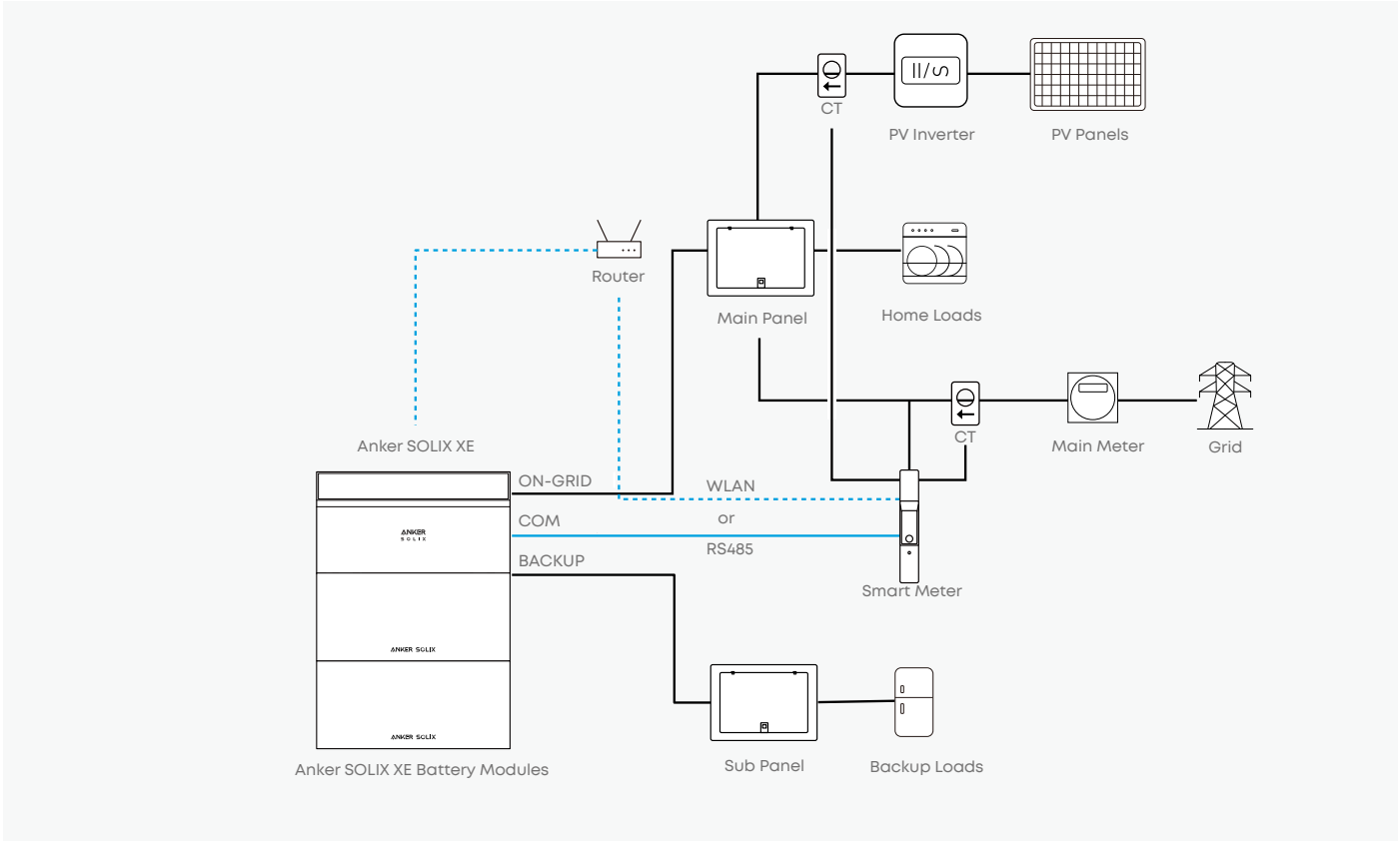
2.1 New-Build Scenario

The following diagram shows a typical system layout for a new installation without an existing PV system.



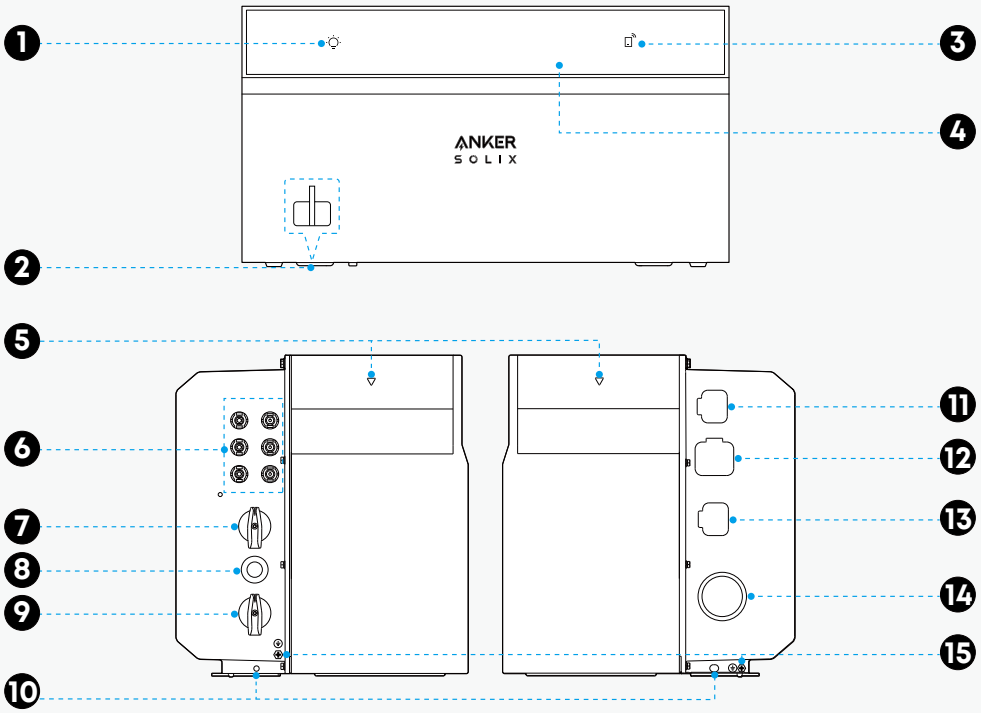
2.2 Retrofit Scenario

The following diagram shows a typical system layout for a retrofit installation with an existing PV system.



3. Product Overview

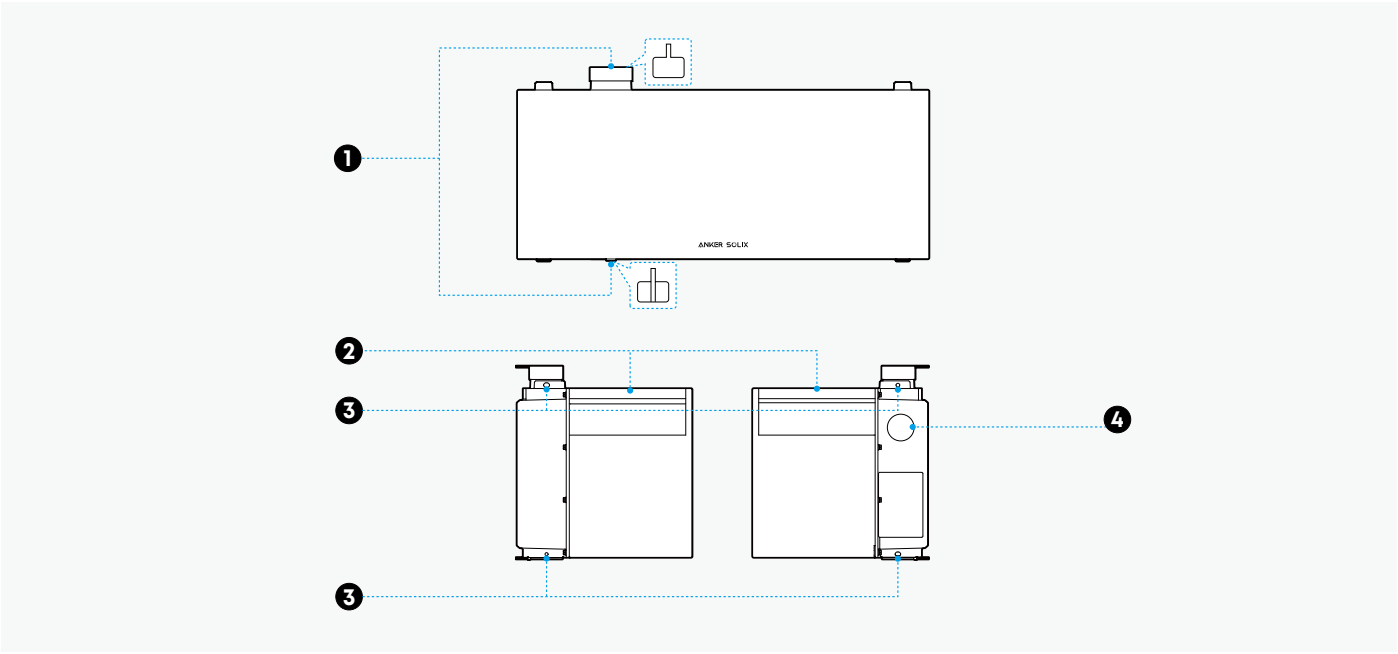
Anker SOLIX XE



1. Screen On/Off Button
2. Battery Port
3. IoT Button
4. Display
5. Handle
6. PV Input Ports
7. PV Switch
8. Power Button
9. Battery Switch
10. Interlocking Screw Holes
11. On-Grid Port
12. COM Port
13. Backup Port
14. Pressure Relief Valve

    This valve is a safety device. Do not remove or damage it.
15. Ground Terminals

Anker SOLIX XE Battery Module

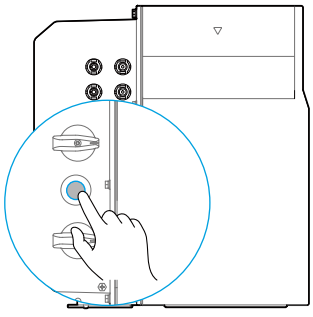
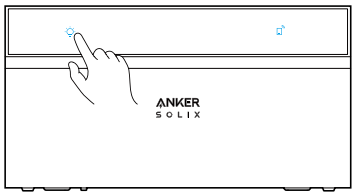


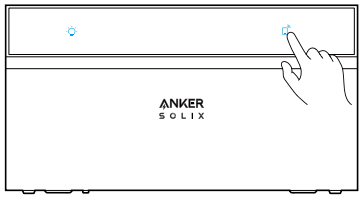
1. Battery Port
2. Handle
3. Interlocking Screw Holes
4. Pressure Relief Valve

   This valve is a safety device. Do not remove or damage it.

4. Controls and Indicators

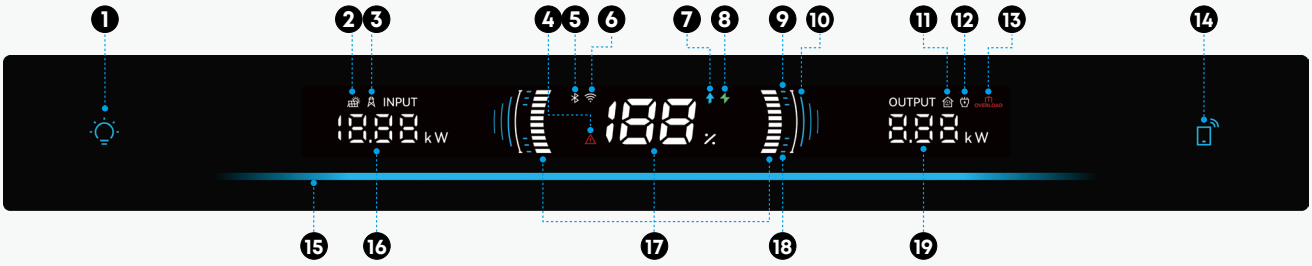
4.1 Button Controls

Button	Action	Function
	Press and hold for 5 seconds.	Power the main module on or off.
	Tap once.	Wake or turn off the display.

	Tap once.	Confirm Bluetooth connection.
	Touch and hold for 2 seconds.	Enable or disable network connection. · Enabled: The Bluetooth / Wi-Fi icon on the screen flashes white. · Disabled: The Bluetooth / Wi-Fi icon is not displayed on the screen.
	Touch and hold for 7 seconds.	Reset Bluetooth and Wi-Fi settings. · Successful: The Bluetooth / Wi-Fi icon on the screen flashes white.

4.2 Screen Guide

The display may vary by firmware version.



Indicator	Description
1	**Screen On/Off Button** Controls the screen display. For details, see Section 4.1 Button Controls.
2	**Input from the PV Panels** Indicates power input from the PV panels.
3	**Input from the Grid** Indicates power input from the grid.
4	**General Fault Alert** Indicates a fault. Check the app for details.

5	**Bluetooth Status** Flashing white: Connecting to Bluetooth. Solid white: Connected to Bluetooth. Not displayed: Bluetooth is disabled.
6	**Wi-Fi Status** Flashing white: Connecting to Wi-Fi. Solid white: Connected to Wi-Fi. Not displayed: Wi-Fi is disabled.
7	**Discharging Status** Indicates that the battery is discharging.
8	**Charging Status** Indicates that the battery is charging.
9	**Charge Upper Limit** Displays the configured upper limit for charging.
10	**Smart Mode** Indicates that smart mode is enabled.
11	**Output to Grid** Indicates power export to the grid.
12	**Output to Loads** Indicates power supply to home loads.
13	**Overload Alert** Indicates that the port output exceeds the allowable range.
14	**IoT Button** Controls network connectivity. For details, see Section 4.1 Button Controls.
15	**Light Bar** Indicates system status. For details, see Section 4.3 LED Guide.
16	**Total Input Power** Displays the total power currently flowing into the system.
17	**Battery SOC** Displays the battery state of charge.
18	**Discharge Lower Limit** Displays the configured lower limit for discharging.

19 **Total Output Power**

Displays the total power delivered to connected loads.

4.3 LED Guide

Unless otherwise specified, the LED is blue-to-green in smart mode and blue in non-smart modes.

LED	Status
	**Powered On** The blue LED illuminates from both ends toward the center.
	**Powered Off** LED fades from both ends toward the center.
	**Connecting to the Network** LED flashes.
	**Connected to the Network** LED turns solid.
	**Charging** LED spreads outward from the center.
	**Discharging** LED turns solid.
	**Switching to Smart Mode** Blue LED changes to a blue-to-green gradient.
	**Switching to Non-Smart Mode** The blue-to-green gradient LED turns blue.

	**Firmware Updating or Self-Testing** LED runs from one end to the other.
	**Malfunction** LED flashes red. Check the app for details.

5. Maintenance

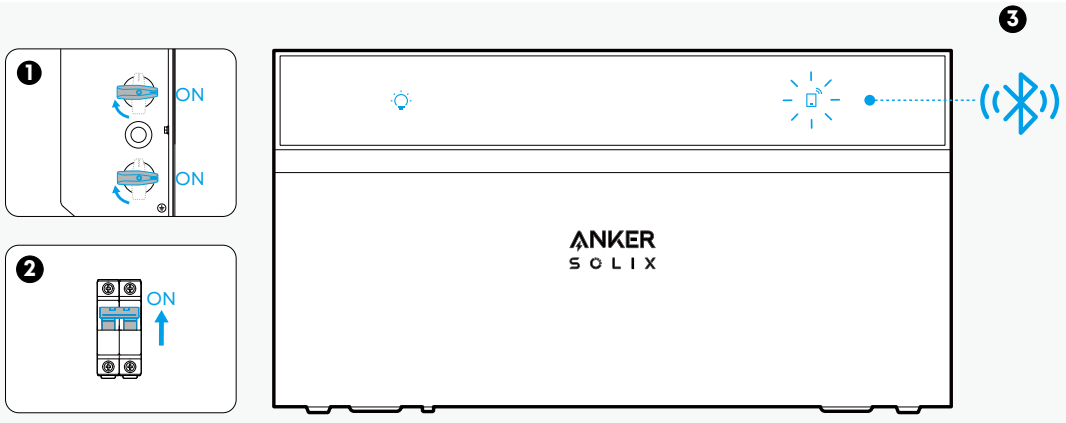
5.1 Power On / Off

- After the system powers off, residual electricity and heat may still cause electric shocks and burns. Wait for at least 2 minutes before performing any operations.
- To force a startup of the main module, turn on the battery switch and PV switch, then press and hold the power button for 5 seconds.
- To force a shutdown of the main module, press and hold the power button for 5 seconds.

To power on:

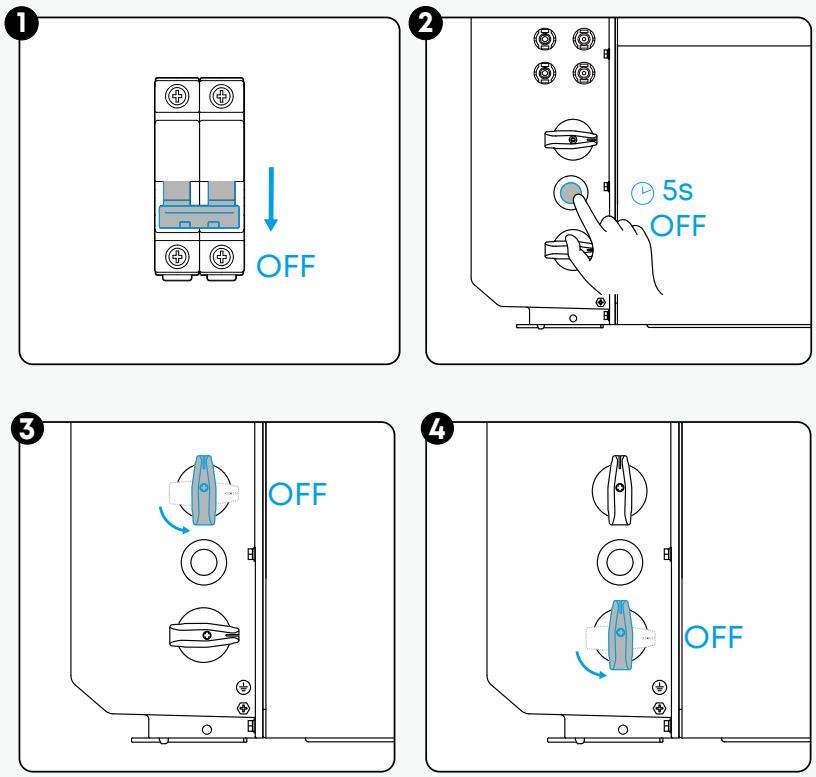
1. Set the battery switch and PV switch to the ON position.
2. Turn on the main breaker and the circuit breakers connected to the main module.
3. The main module powers on and the screen lights up automatically.

   Before Bluetooth connection is completed, the main module automatically enters networking mode when it powers on.



To power off:

1. Turn off the circuit breakers connected to the main module.
2. Press and hold the power button for 5 seconds.
3. Set the PV switch to the OFF position.
4. For transport or long-term storage, set the battery switch to the OFF position.



5.2 Routine Maintenance

Power off the system before cleaning it, connecting cables, and checking grounding reliability.

Perform routine maintenance to keep the system operating properly over time.

Check Item	Check Method	Maintenance Interval
System cleanliness	Check that the heat sinks are free of dust and obstructions.	Every 6 to 12 months

System operating status	· Check that the equipment is not damaged or deformed. · Check that the equipment does not produce abnormal sounds during operation. · Check that the equipment parameters are correctly set while the equipment is running.	Every 6 months
Firmware version	Check in the app that the firmware is updated to the latest version.	Every 6 months

5.3 Troubleshooting



Only qualified professionals or trained personnel are allowed to install and service the equipment.

The Anker Power app notifies you when a fault is detected. For example, if a ground fault is detected, the app will send a notification and the light bar will flash red. This meets the earth fault alarm requirements of AS/NZS 5033.

Please have the following information ready when contacting Anker.

· Owner name
· Phone number or email address
· Serial numbers
· Brief description of the issue

6. Anker Power App for Smart Control

The app images in this section are for reference only. Actual screens may vary by software version.

6.1 Sign In

1. Download the Anker Power app from the App Store (iOS devices) or Google Play (Android devices), or by scanning the QR code.

Anker Power

GET IT ON Google Play

Google Play and the Google Play logo are trademarks of Google Inc.

Download on the App Store

Apple and the Apple logo are trademarks of Apple Inc.

2. Log into the app. If you have not previously created an account, check the email to get your account name and initial password.

6.2 Anka (Home Energy Assistant)

Anka is the home energy assistant in the Anker Power app. Use Anka to check energy data, control the system, and get help through text or voice commands.

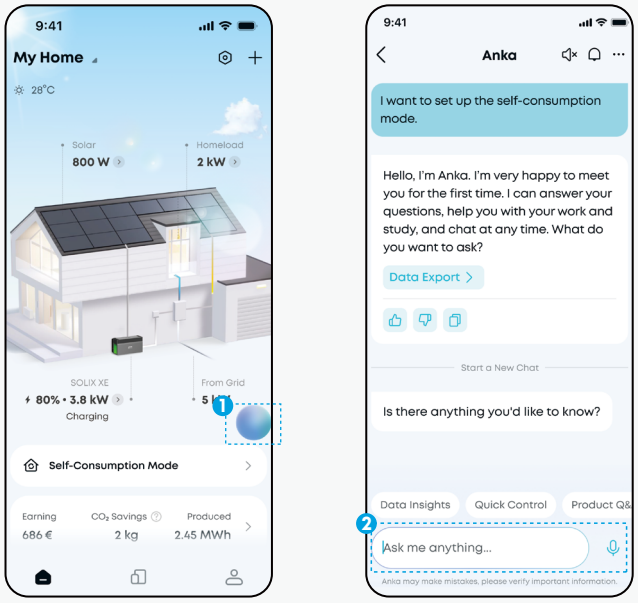
· Ensure that the system is connected to Wi-Fi.
· To enable voice input, grant microphone permission to the Anker Power app.

What Anka Can Do

Capability	Details
Data Queries	Check real-time power flow, daily solar generation, energy savings, or historical usage. Anka can also display charts for statistical data.
Device Control	Change modes or adjust charge and discharge limits.
Fault Guidance	Get troubleshooting steps from the alert screen.
Proactive Alerts	Receive notifications for severe weather and energy milestones.
Product Q&A	Get answers about the system features, installation, and operation.

How to Use Anka

1. Tap the floating Anka icon on the home screen.
2. Type your question, or tap and hold the microphone button to speak. For example:
   - "What is my solar generation today?"
   - "Switch to smart mode."



6.3 Third-Party Control

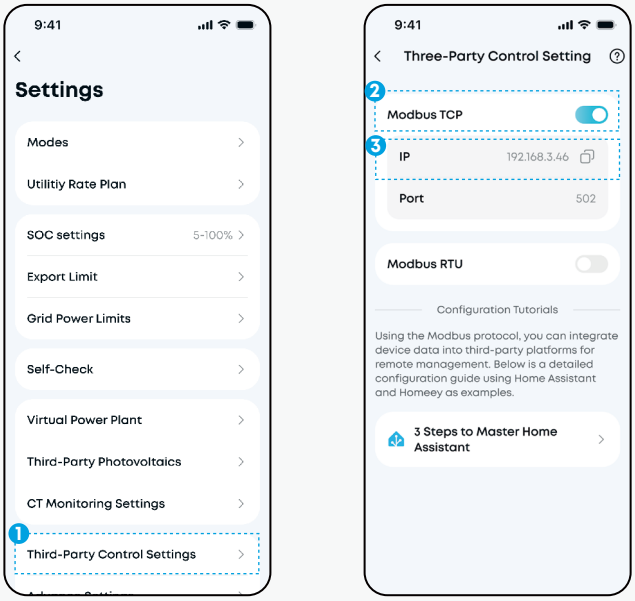
The Anker SOLIX XE system can connect to Home Assistant through Modbus TCP. After setup, you can monitor and control the system from the Home Assistant dashboard.

Enabling Modbus TCP may expose the system to unauthorized control. Use this feature only on a trusted private network.

- Ensure that the system is connected to the same Wi-Fi network as the Home Assistant server.
- Use Modbus TCP to integrate the system with Home Assistant.
- When Home Assistant controls the system, mode settings in the Anker Power app are locked. To unlock mode settings, disable third-party control in Home Assistant first.

In the Anker Power app:

1. Go to **Settings > Third-Party Control Setting**.
2. Enable **Modbus TCP**.
3. Copy the IP address.



In Home Assistant:

1. Go to **Settings > Devices & services > Add integration**.
2. Search for and add the **Anker Solix Official** integration.
3. Paste the IP address. The device name appears automatically.
4. Follow the on-screen instructions to complete the setup.

6.4 Operating Mode

Choose how the system manages energy through the following modes to meet your power needs.

Smart Mode

Smart mode uses AI to create optimal charging and discharging strategies. The system learns your local weather, electricity prices, and household energy usage to improve performance and maximize savings.



- A smart meter is recommended for best results.
- Prediction accuracy improves over time. Keep smart mode enabled and avoid switching modes frequently.

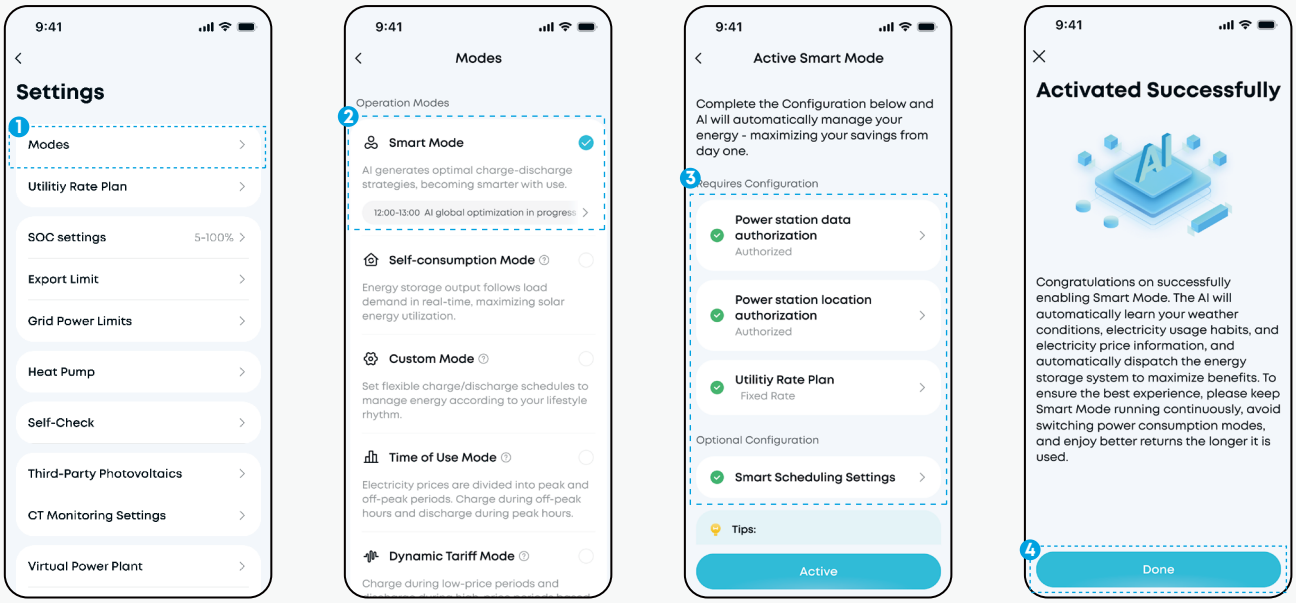
How It Works

The system analyzes the following inputs to generate a charge and discharge schedule:

Input	Description
Solar Forecast	Predicts solar output for the next 24 hours based on local weather forecasts and historical solar generation data.
Price Fluctuations	Uses tariff information to optimize charging and discharging based on expected price changes.
Usage Patterns	Learns household electricity usage from historical consumption data and predicts hourly demand for the next 24 hours.

How to Set Up

1. Go to **Settings > Modes**.
2. Select **Smart Mode**.
3. Complete the following:
   - Authorize data access.
   - Authorize location access.
   - Set the utility rate plan.
   - (Optional) Set smart scheduling.
4. Tap **Done**. Smart mode starts immediately.

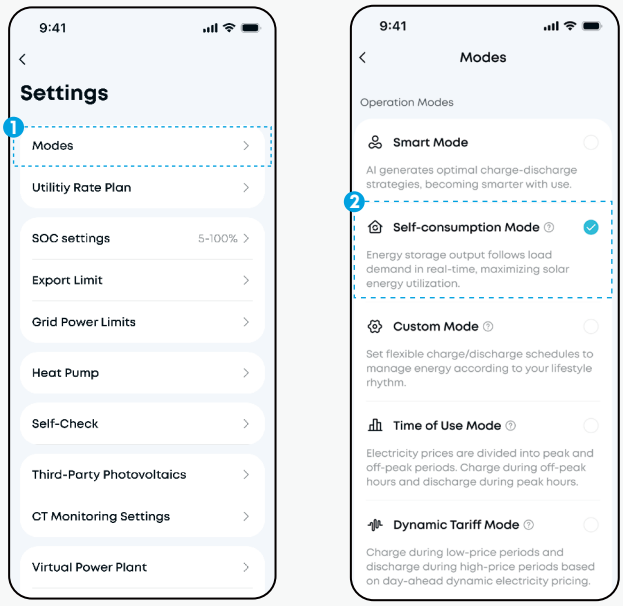


Self-Consumption Mode

Self-consumption mode maximizes solar power usage and minimizes reliance on the grid. In this mode, the system dynamically adjusts the power output or storage based on the power demand.

How to Set Up

1. Go to **Settings > Modes**.
2. Select **Self-Consumption Mode**.



Custom Mode

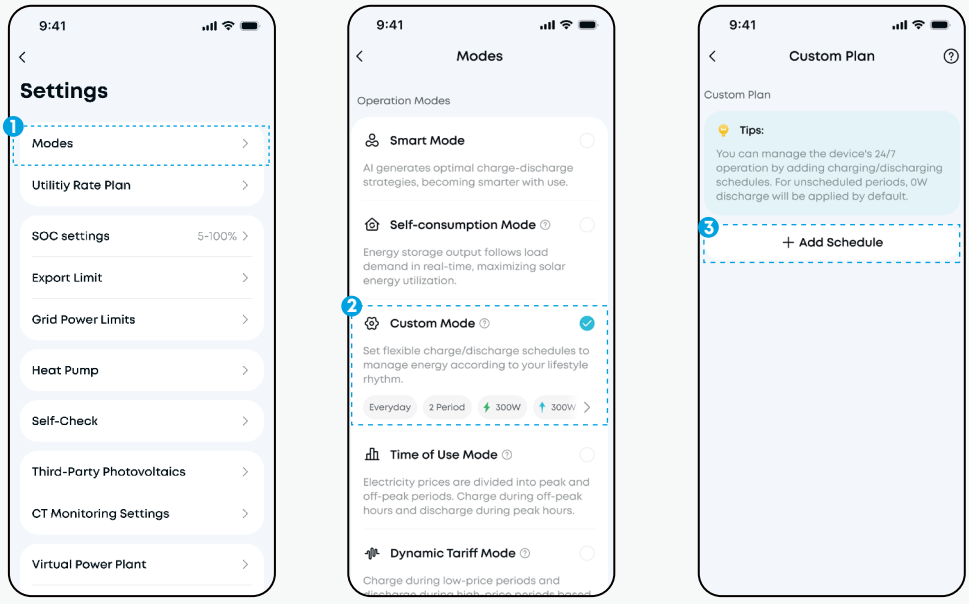
Custom mode lets you define when the system charges and discharges. It also lets you apply self-consumption mode or standby mode at different times to match your daily routine.

How It Works

Feature	Description
Add Schedule	· If no custom plan is added, the system prioritizes solar power to supply home loads at 200 W throughout the day. Excess solar power is stored in the battery. · You can add plans to manage household power usage and battery charging power.
Standby Mode	· In standby mode, the system stays in a low-power state and does not actively charge or discharge. · The system follows fallback protection logic. It supplies power automatically during a power outage and stops charging automatically when the battery is full.

How to Set Up

1. Go to **Settings > Modes**.
2. Select **Custom Mode**.
3. Tap **Add Schedule** to customize a plan.



Time of Use Mode

Time of Use (TOU) mode reduces electricity costs by automatically scheduling charging and discharging based on utility rates. The battery charges when electricity prices are low and discharges when rates are high.

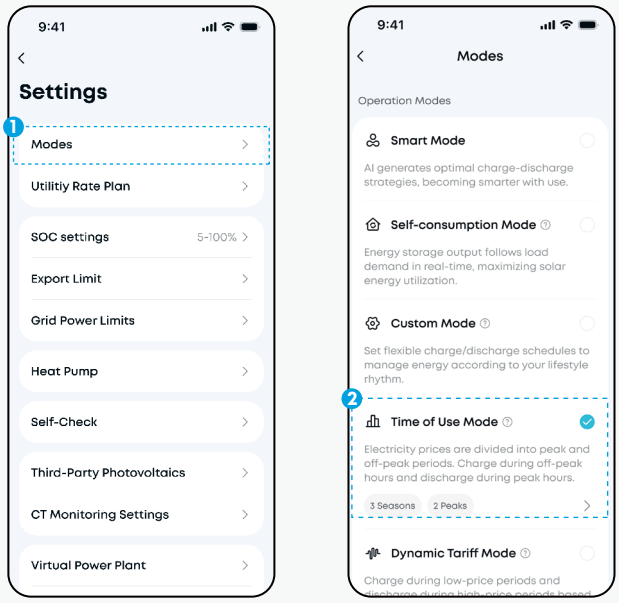
How It Works

TOU mode applies different charge and discharge strategies to different time periods.

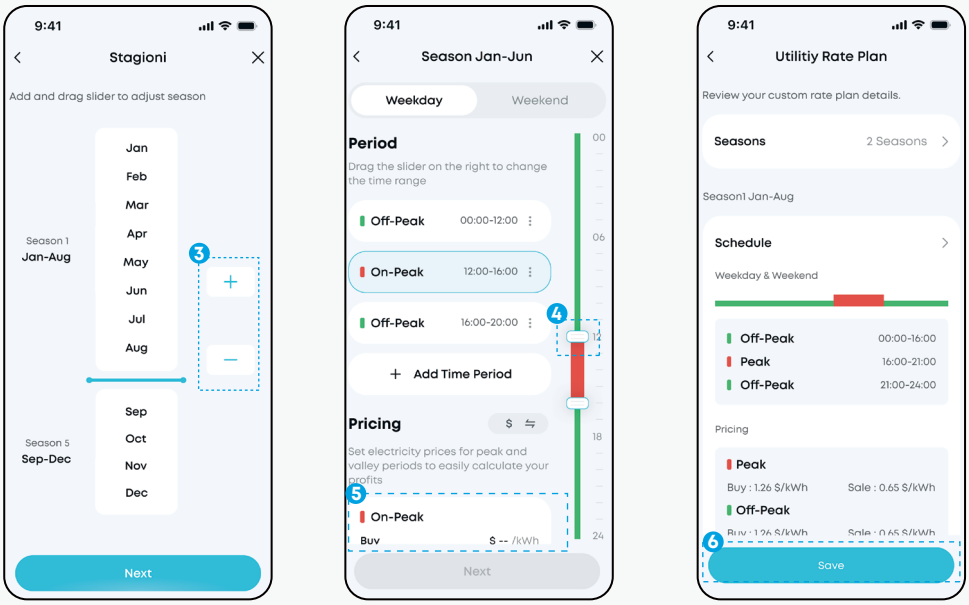
Period	Strategy
On-Peak	Highest rates; usually daytime. · Solar powers home loads first; surplus solar charges the battery. · If solar is insufficient, the battery discharges to supply home loads.
Mid-Peak	Moderate rates; usually early evening or midday. · Solar powers home loads first; surplus solar charges the battery. · If solar is insufficient, the battery discharges to supply home loads.
Off-Peak	Low rates; usually night or early morning. · Solar powers home loads; the battery supplements as needed, down to the set discharge limit. · The grid does not charge the battery.
Super Off-Peak	Lowest rates; usually late night or early morning. · Solar charges the battery; if solar is insufficient, the grid also charges the battery. · The battery does not discharge. · The system targets a full charge before this period ends.

How to Set Up

1. Go to **Settings > Modes**.
2. Select **Time of Use Mode**.



3. Add or remove seasons as needed.
4. Edit time periods by dragging the slider.
5. Enter the price for each time period.
6. Review and save your settings.



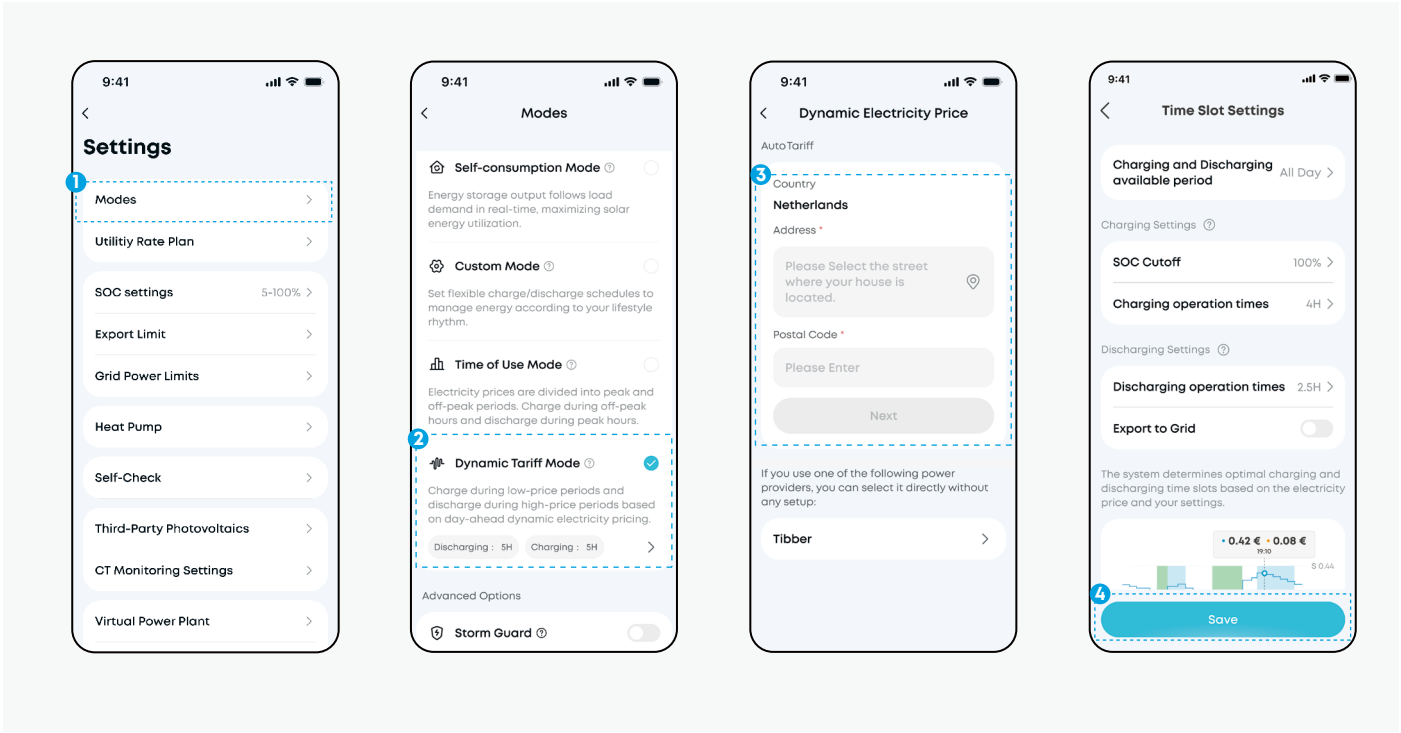
Dynamic Tariff Mode

In dynamic tariff mode, the system automatically charges during low-price periods and discharges during high-price periods based on day-ahead electricity prices.

This mode supports Nord Pool, Octopus Energy, Tibber, and electricity providers available on the Flatpeak platform.

How to Set Up

1. Go to **Settings > Modes**.
2. Select **Dynamic Tariff Mode**.
3. Provide tariff information in one of the following ways:
   - Auto Tariff: Enter the address and postcode. The app uses the Flatpeak platform to identify the local electricity provider. It then retrieves the purchase and selling prices automatically.
   - Select the electricity provider and manually enter tariff details.
4. Review the utility rate plan and adjust if needed.



6.5 Backup Mode

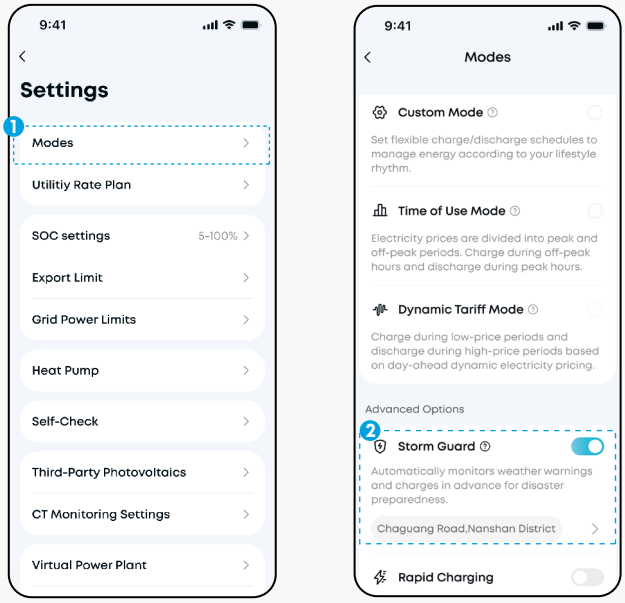
Backup mode keeps the battery at maximum charge, so the system is always ready for unexpected power outages. Normal charging limits do not apply. Keep the system connected to Wi-Fi to receive weather alerts and enable automatic response.

Storm Guard

When a severe weather alert is issued for your area, the battery charges automatically at maximum power. To receive alerts, set your location in the app.

How to Set Up

1. Go to **Settings > Modes**.
2. Select **Storm Guard**.

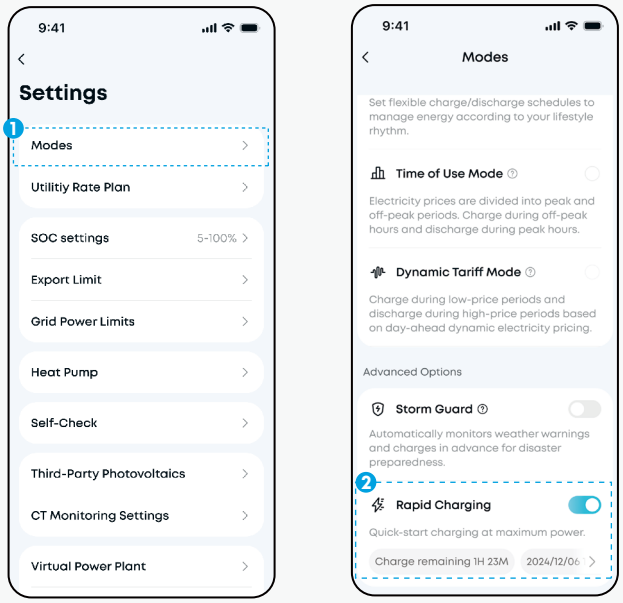


Rapid Charging

Fully charge the battery using the maximum available power.

How to Set Up

1. Go to **Settings > Modes**.
2. Select **Rapid Charging**, and set the specific start and end times for charging.



6.6 Configure the Heat Pump

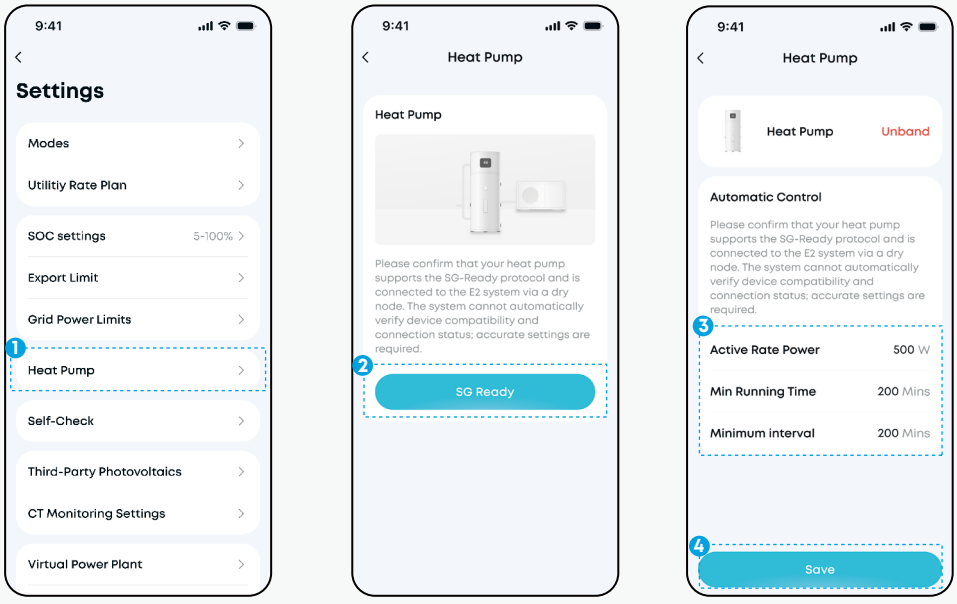
Set up how your SG-Ready heat pump works after the installer completes the electrical connections.

- Ensure that the heat pump supports the SG-Ready protocol and is connected to the system through dry contacts.
- The system cannot automatically verify device compatibility or connection status. Make sure the settings are correct.

Item	Description
Active Rate Power	The system controls heat pump operation based on the set active rate power. · When PV surplus power exceeds the set value, the heat pump runs at higher power to use excess PV power more quickly. · When PV surplus power falls below the set value, the heat pump runs at lower power for more stable and balanced operation.
Minimum Running Time	After the heat pump starts, it must keep running for at least the set minimum running time.
Minimum Interval	After the heat pump stops, it can start again only after the set minimum interval has elapsed.

How to Set Up

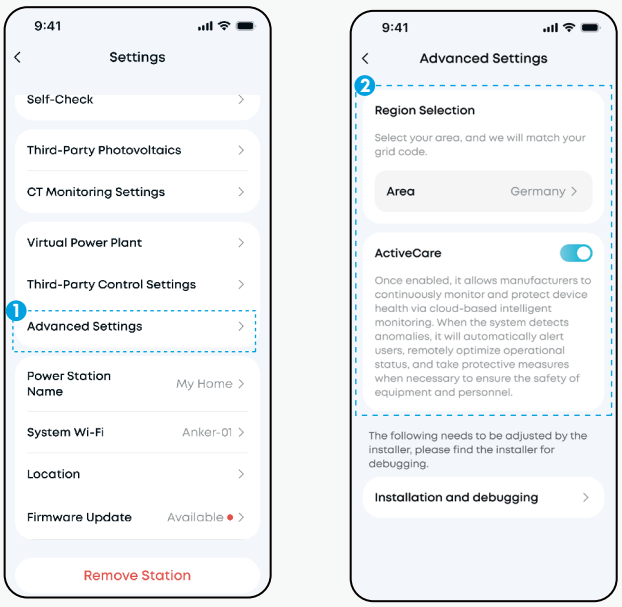
1. Go to **Settings** > **Heat Pump**.
2. Tap **SG Ready** to enable the feature.
3. Set the heat pump parameters.
4. Tap **Save** to apply the settings.



6.7 Advanced Settings

Settings Available to End Users

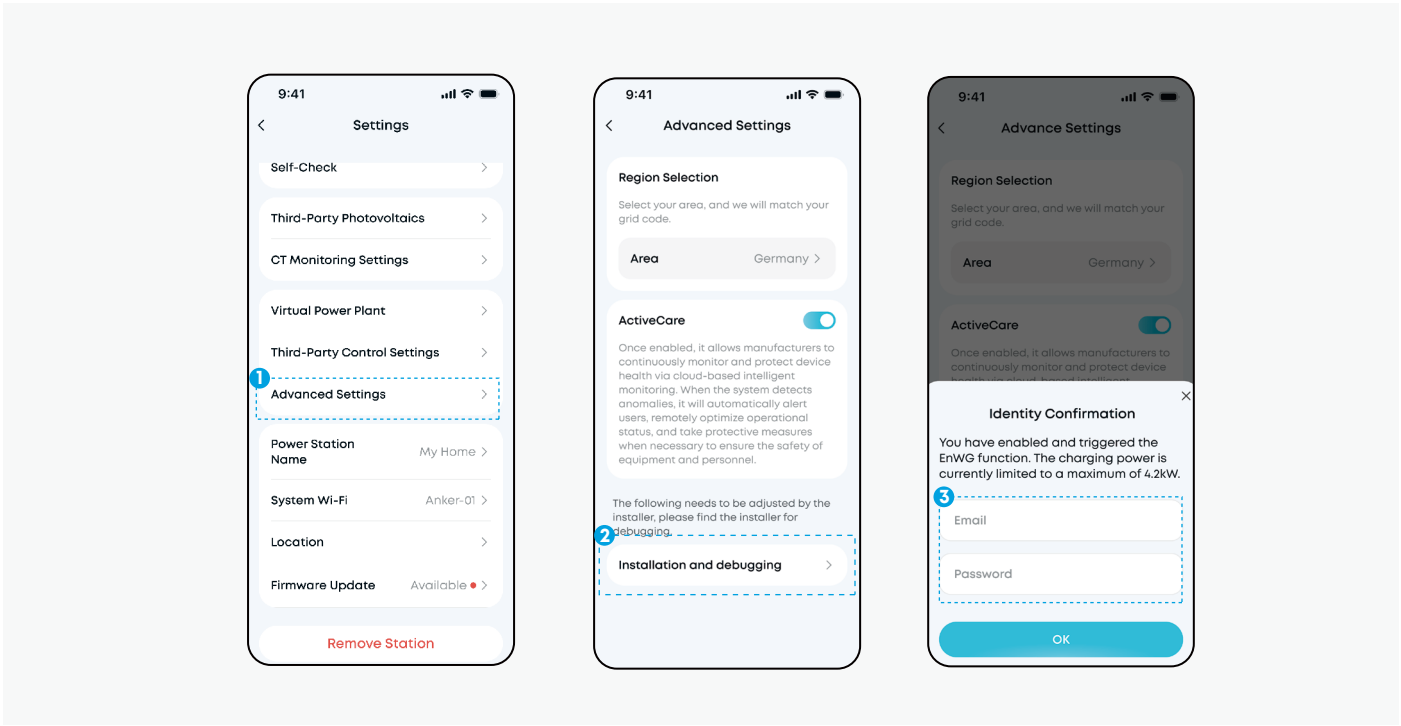
Go to **Settings** > **Advanced Settings** to change the region or turn on ActiveCare.



Item	Description
Region Selection	1. Select your location. The available grid codes are listed automatically. 2. Select the grid code for the country or region where the main module is used.
ActiveCare	ActiveCare uses remote monitoring to help protect the device. If the system detects an issue, it can alert the user, adjust system operation remotely, or take protective action, such as remotely shutting down the device.

Settings Available Through an Installer Account

Go to **Settings > Advanced Settings > Installation and Debugging**. These settings can be configured only through an installer account.



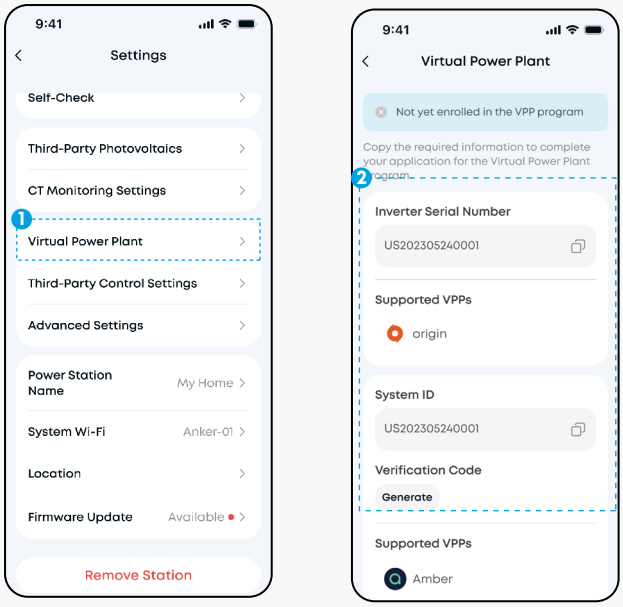
This feature is available only to installer or electrician accounts. It is not available to end-user accounts. For safety reasons, access is restricted because this feature includes parameter settings that require professional electrical knowledge. This helps prevent incorrect operation and reduce safety risks.

6.8 Virtual Power Plant (VPP)

The Anker Power app provides the information required for VPP enrollment. A VPP program allows your system to take part in grid dispatch and energy trading through a supported VPP platform.

After the system joins a VPP program, platform control takes priority over local settings for operating modes, battery charging and discharging, and export power.

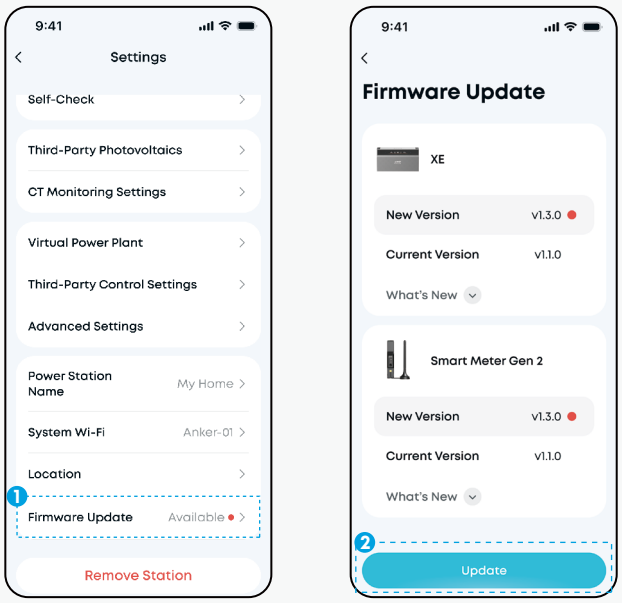
Go to **Settings > Virtual Power Plant**. Then copy the required information to complete your application for the VPP program.



6.9 Update Firmware

Keep the firmware up to date for optimal performance.

To view the current firmware version or check for updates, go to **Settings > Firmware Update**. If a new version is available, follow the on-screen instructions to complete the update.



7. Specifications

Specifications are subject to change without notice.

7.1 Main Module

The following specifications apply to the main module.

Model	AE111GZ1
PV Input	
MPPT Voltage Range	30 to 550 V
Maximum Input Voltage	600 V
Maximum Input Current per MPPT	18 A
Maximum Short-Circuit Current per MPPT	25 A
Maximum PV Input Power	10 kW
Number of MPPTs	3
Integrated Battery System[1]	
Battery Type	Rechargeable Li-ion Battery (LFP)
Cell Capacity	314 Ah
Battery Lifespan	10,000 Cycles
Depth of Discharge	100%
Rated Terminal Voltage	400 V DC
Battery Voltage Range	360 to 600 V DC
Nominal Battery Module Voltage	22.4 V DC
Maximum Charging / Discharging Power	3.5 kW
Maximum Continuous Charging / Discharging Current	9.7 A DC
AC Input/Output (On-Grid)	
Rated Input / Output Voltage	220 / 230 / 240 V AC, L + N + PE
Rated Frequency	50 / 60 Hz
Rated Input / Output Current	21.7 A AC
Maximum Continuous Input / Output Current	22.7 A AC
Rated Output Active Power	5 kW
Maximum Output Apparent Power	5 kVA
Power Factor	0.8 Lagging to 0.8 Leading

AC Output (Backup)	
Rated Output Voltage	220 / 230 / 240 V AC, L + N + PE
Rated Output Frequency	50 / 60 Hz
Rated Output Current	21.7 A AC
Rated Output Apparent Power	5 kVA
Maximum Continuous Output Current	22.7 A AC
Maximum Continuous Output Apparent Power	5 kVA
Power Factor	0.8 Lagging to 0.8 Leading
Backup Switch Disruption Time[2]	0 ms
General Specifications	
Dimensions (W × H × D)	670 × 356 × 325 mm
Weight	76.5 kg
Inverter Topology Type	Non-Isolated
Operating Temperature Range	-20 to 55 °C
Relative Humidity Range	0 to 95%
Protective Class	I
Ingress Protection Rating	IP66
Anti-Corrosion Rating	C5-M
Cooling	Natural Convection
Noise	< 30 dB
Operating Altitude Range	≤ 4,000 m
Overvoltage Category	III (AC), II (PV, BAT)
Installation Location	Indoor / Outdoor
Warranty	10 Years
Communication	WLAN / RS485 / CAN / DI / DO
Maximum Parallel Units	2 (Single-Phase) / 3 (Three-Phase)[3]
Safety Protection Features	PV Reverse Polarity, PV Overvoltage / Overcurrent, Insulation Monitoring, Residual Current Monitoring (RCMU), AC Over/Under Voltage and Frequency, AC Overcurrent / Short-Circuit, Over-Temperature, Anti-Islanding, DC / AC Type II SPD

Standards	IEC/EN 62109-1, IEC/EN 62109-2, VDE-AR-E 2510-50, IEC 62619, IEC 63056, IEC 62040-1, IEC/EN 61000-6-1, IEC/EN 61000-6-3

Notes:

[1] Refers to one main module with one built-in set of battery modules.

[2] Refers to the load-side interruption time. Test condition: During a grid outage, the total backup load must not exceed the rated output power of the main module.

[3] For a single-phase grid system, up to two main modules can be connected in parallel. For a three-phase grid system, up to three main modules can be connected in parallel, with one main module connected to each phase.

7.2 Battery Module

The following specifications apply to the battery module.

Model	**A17E23Z1-81**
Performance Specifications	
Battery Type	Rechargeable Li-ion Battery (LFP)
Cell Capacity	314 Ah
Nominal Energy	7 kWh
Battery Voltage Range	360 to 600 V DC
Maximum Charging / Discharging Power	3.5 kW
Maximum Continuous Charging / Discharging Current	9.7 A DC
Battery Lifespan	10,000 Cycles
Depth of Discharge	100%
General Specifications	
Dimensions (W × H × D)	670 × 275 × 285 mm
Weight	63 kg
Ingress Protection	IP66
Operating Temperature Range	-20 to 55 °C
Operating Altitude Range	≤ 4,000 m
Warranty	10 Years

7.3 Anker SOLIX XE System

The following specifications apply to system configurations with one main module and 0 to 5 battery modules.

Model	AE111GZ1	AE111GZ1-1	AE111GZ1-2	AE111GZ1-3	AE111GZ1-4	AE111GZ1-5
Number of Battery Modules	0	1	2	3	4	5
Rated Capacity	7 kWh	14 kWh	21 kWh	28 kWh	35 kWh	42 kWh
Nominal Voltage	22.4 V DC	22.4 V DC	22.4 V DC	22.4 V DC	22.4 V DC	22.4 V DC
Maximum Charging Power	3.5 kW	10 kW	10 kW	10 kW	10 kW	10 kW
Maximum Discharging Power	3.5 kW	5 kW	5 kW	5 kW	5 kW	5 kW
Weight	76.5 kg	139.5 kg	202.5 kg	265.5 kg	328.5 kg	391.5 kg
Dimensions (W × H × D)	670 × 356 × 325 mm	670 × 631 × 325 mm	670 × 906 × 325 mm	670 × 1,181 × 325 mm	670 × 1,456 × 325 mm	670 × 1,731 × 325 mm

8. Safety Information

8.1 Safety Symbols

Symbols	Description
⚠ DANGER	**Danger** Indicates a highly risky hazard. Failure to avoid this hazard could result in death or serious injury.
⚠ WARNING	**Warning** Indicates a moderately risky hazard. Failure to avoid this hazard could result in death or serious injury.
⚠ CAUTION	**Caution** Indicates a low-risk hazard. Failure to avoid this hazard could result in minor or moderate injury.

8.2 Environmental Safety

⚠ DANGER

- Do not expose the equipment to flammable or explosive gas or smoke. Do not operate the equipment in such environments.
- Do not store any flammable or explosive materials around the equipment.
- Do not place the equipment near heat sources or fire sources, such as smoke, candles, heaters, or other heating devices. Overheating may damage the equipment or cause a fire.

⚠ WARNING

- Install the equipment away from liquids. Do not install it under areas prone to condensation, such as under water pipes and air exhaust vents, or areas prone to water leakage, such as air conditioner vents, ventilation vents, or feeder windows of the equipment room. Ensure that no liquid enters the equipment to prevent faults or short circuits.
- To prevent damage or fire due to high temperature, ensure that the ventilation vents or heat dissipation systems are not obstructed or covered by other objects while the equipment is running.

General Instructions

- The installation and usage environment must meet relevant international, national, and local standards for lithium batteries, and be in accordance with the local laws and regulations. Protect the equipment from fire and other hazards.
- Keep the equipment out of the reach of children and away from daily working or living areas.
- When installing the equipment in a garage, keep it clear of the drive path. It is recommended that the equipment be mounted on the wall higher than the bumper to prevent collision.
- Do not install the equipment in places that are enclosed, unventilated, without proper fire fighting facilities, or difficult for firefighters to access. Do not place flammable or explosive materials around the equipment. It is recommended that the equipment be mounted on a wall to avoid contact with water.
- It is recommended to install the equipment in a sheltered place or under an awning to avoid direct sunlight or rain.
- For areas prone to natural disasters such as floods, debris flows, earthquakes, and typhoons, take corresponding precautions for installation.
- Do not install the equipment in an easily accessible position because the temperature of the enclosure and heat sink is high when the equipment is running.
- Do not install the equipment on a moving object, such as ship, train, or car.

- Ensure that the equipment is stored in a clean, dry, and well-ventilated area with proper temperature and humidity and is protected from dust and condensation.
- Keep the installation and operating environments of the equipment within the allowed ranges. Otherwise, its performance and safety will be compromised.
- Do not install, use, or operate outdoor equipment and cables (including but not limited to moving equipment, operating equipment and cables, inserting connectors to or removing connectors from signal ports connected to outdoor facilities, working at heights, performing outdoor installation, and opening doors) in harsh weather conditions such as lightning, rain, snow, and level 6 or stronger wind.
- Do not install the equipment in an environment with dust, smoke, volatile or corrosive gases, infrared and other radiation, organic solvents, or salty air.
- Do not install the equipment in an environment with conductive metal or magnetic dust.
- Do not install the equipment in an area conducive to the growth of microorganisms such as fungus or mildew.
- Do not install the equipment in an area with strong vibration, noise, or electromagnetic interference.
- Ensure that the site complies with local laws, regulations, and related standards.
- Ensure the installation site has solid, stable ground that is not soft, spongy, or prone to settling. Select a location above the highest recorded water level and away from low-lying areas where water or snow may accumulate.
- Do not install the equipment in a position that may be submerged in water.
- In regions with dense vegetation, regularly remove weeds and reinforce the ground beneath the modules with cement or gravel.
- Before installation, operation, and maintenance, clean up any water, ice, snow, or other foreign objects on the top of the equipment.
- When installing the equipment, ensure that the installation surface is solid enough to bear the weight of the equipment.
- After installing the equipment, remove the packing materials such as cartons, foam, plastics, and cable ties from the equipment area.

8.3 Operational Safety

⚠ DANGER

- When working at heights, wear a safety helmet and safety harness or waist belt and fasten it to a solid structure. Do not mount it on an insecure movable object or metal object with sharp edges. Make sure that the hooks will not slide off.

⚠ WARNING

- Ensure that all necessary tools are ready and inspected by a professional

organization. Do not use tools that have signs of scratches or fail to pass the inspection or whose inspection validity period has expired. Ensure that the tools are secure and not overloaded.

· Do not drill holes into the equipment. Doing so may affect the sealing performance and electromagnetic containment of the equipment and damage components or cables inside. Metal shavings from drilling may short-circuit boards inside the equipment.

General Instructions

· Repaint any paint scratches caused during equipment transportation or installation in a timely manner. Equipment with scratches must not be exposed for an extended period of time.

· Do not perform operations such as arc welding and cutting on the equipment without evaluation by the Company.

· Do not install other devices on the top of the equipment without evaluation by the Company.

· When performing operations over the top of the equipment, take measures to protect the equipment against damage.

· Use the correct tools and operate them properly.

· Only qualified professionals or trained personnel are allowed to install and service the equipment.

· Disconnect all sources of supply before servicing.

Working at Heights

· Any operations performed 2 m or higher above the ground shall be supervised properly.

· Only trained and qualified personnel are allowed to work at heights.

· Do not work at heights when steel pipes are wet or other risky situations exist. After the preceding conditions no longer exist, the safety owner and relevant technical personnel need to check the involved equipment. Operators can begin working only after safety is confirmed.

· Set a restricted area and prominent signs for working at heights to warn away irrelevant personnel.

· Set guard rails and warning signs at the edges and openings of the area involving working at heights to prevent falls.

· Do not pile up scaffolding, springboards, or other objects on the ground under the area involving working at heights. Do not allow people to stay or pass under the area involving working at heights.

· Carry operation machines and tools properly to prevent equipment damage or personal injury caused by falling objects.

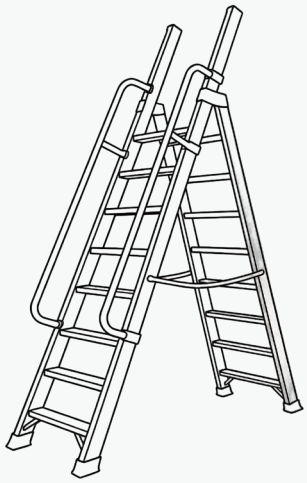
· Personnel working at heights are not allowed to throw objects from the height to the ground, or vice versa. Objects shall be transported by slings, hanging baskets, aerial

work platforms, or cranes.

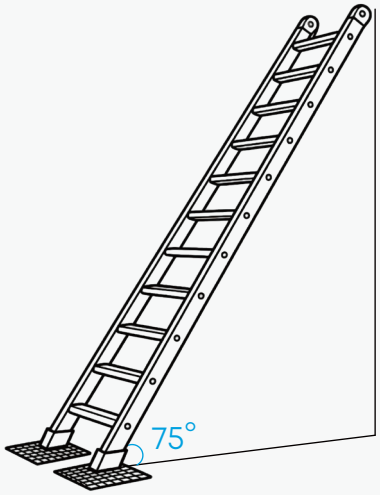
- Do not perform operations on the upper and lower layers at the same time. If unavoidable, install a dedicated protective shelter between the upper and lower layers or take other protective measures. Do not pile up tools or materials on the upper layer.
- Dismantle the scaffolding from top down after finishing the job. Do not dismantle the upper and lower layers at the same time. When removing a part, ensure that other parts will not collapse.
- Ensure that personnel working at heights strictly comply with the safety regulations. The Company is not responsible for any accident caused by violation of the safety regulations on working at heights.
- Behave cautiously when working at heights. Do not rest at heights.

Using Ladders

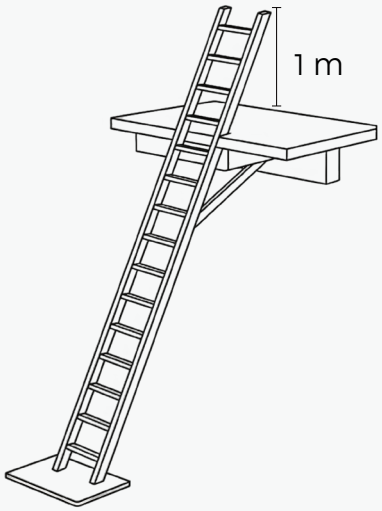
- Use wooden or insulated ladders when you need to perform live-line working at heights.
- Platform ladders with protective rails are preferred. Single ladders are not recommended.
- Before using a ladder, check that it is intact and confirm its load bearing capacity. Do not overload it.
- Ensure that the ladder is securely positioned and held firm.



- When climbing up the ladder, keep your body stable and your center of gravity between the side rails, and do not overreach to the sides.
- When a step ladder is used, ensure that the pull ropes are secured.
- If a single ladder is used, ensure that the wider end of the ladder is at the bottom, and take protective measures to prevent the ladder from sliding.
- If a single ladder is used, do not climb higher than the fourth rung of the ladder from the top.
- If a single ladder is used, the recommended angle for the ladder against the floor is 75°, as shown in the following figure. A square can be used to measure the angle.



· If you use a single ladder to climb up to a platform, ensure that the ladder is at least 1 m higher than the platform.



Drilling Holes

· Obtain consent from the customer and contractor before drilling holes.
· Wear protective equipment such as safety goggles and protective gloves when drilling holes.
· To avoid short circuits or other risks, do not drill holes into buried pipes or cables.
· When drilling holes, protect the equipment from shavings. After drilling, clean up any shavings.

8.4 Battery Safety

⚠ DANGER

· Do not connect the positive and negative poles of a battery together. Otherwise, the battery may be short-circuited.

⚠ WARNING

- Tighten the screws on copper bars or cables to the torque specified in this document. Periodically confirm whether the screws are tightened, check for rust, corrosion, or other foreign objects, and clean them up if any. Loose screw connections will result in excessive voltage drops and batteries may catch fire when the current is high.
- When installing batteries, do not place installation tools, metal parts, or sundries on the batteries. After the installation is complete, clean up the objects on the batteries and the surrounding area.
- After unpacking batteries, place them in the required direction. Do not place a battery upside down or vertically, lay it on one side, tilt it, or stack it. Ensure that the batteries do not fall or get damaged. Otherwise, they will need to be scrapped.

⚠ CAUTION

- Install the battery modules in sequence from bottom to top and from left to right. Lift the modules horizontally and evenly to prevent tipping caused by a high center of gravity.
- Secure the fixed bracket before installing the main module.
- Ensure the main module and main breaker are off before installation.
- The battery circuit must remain disconnected during installation or maintenance.

General Instructions

- Do not use a damaged battery (such as damage caused when a battery is dropped, bumped, bulged, or dented on the enclosure), because the damage may cause electrolyte leakage or flammable gas release. In the case of electrolyte leakage or structural deformation, contact the installer or customer support immediately to remove or replace the battery. Do not store the damaged battery near other devices or flammable materials and keep it away from non-professionals.
- Before installing a battery module, check that its enclosure is not deformed or damaged.

8.5 Transportation Safety

- Do not remove any protective components from the equipment terminals, such as protective covers or waterproof caps, during transportation.
- Handle the equipment with care. Avoid drops or impacts, and always ensure personal safety while moving the equipment.
- Move the equipment stably with balanced force at an even and low speed. Put down the equipment stably and slowly to prevent any collision or drop from scratching the surface of the equipment or damaging the components and cables.

· When transporting the equipment using a pallet truck or forklift, ensure that the tines are properly positioned so that the equipment does not topple. Before moving the equipment, secure it to the pallet truck or forklift using ropes. When moving the equipment, assign dedicated personnel to take care of it.

· Be cautious to prevent injury when moving heavy objects.

· If multiple persons need to move a heavy object together, determine the manpower and work division with consideration of height and other conditions to ensure that the weight is equally distributed.



< 18 kg



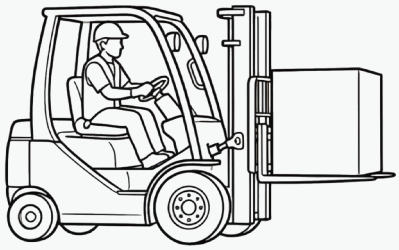
18-32 kg



32-55 kg



55-68 kg



> 68 kg

· If two persons or more move a heavy object together, ensure that the object is lifted and landed simultaneously and moved at a uniform pace under the supervision of one person.

· Wear personal protective equipment such as protective gloves and shoes when manually moving the equipment.

· To move an object by hand, approach the object, squat down, and then lift the object gently and stably by the force of the legs instead of your back. Do not lift it suddenly or turn your body around.

· Do not quickly lift a heavy object above your waist. Place the object on a workbench that is half-waist high or any other appropriate place, adjust the positions of your palms, and then lift it.

· When moving a heavy object, be aware of the workbench, slope, staircase, and slippery places. When moving a heavy object through a door, ensure that the door is wide enough to move the object and avoid bumping or injury.

· When transferring a heavy object, move your feet instead of turning your waist around. When lifting and transferring a heavy object, ensure that your feet point to the target direction of movement.

· Use sea or road transport routes with suitable conditions. Do not transport the equipment by railway or air. Avoid tilt or jolt during transportation.

8.6 Storage Requirements

⚠ WARNING

- Ensure that batteries are stored in a dry, clean, and ventilated indoor environment that is free from sources of strong infrared or other radiation, organic solvents, corrosive gases, and conductive metal dust. Do not expose batteries to direct sunlight or rain and keep them far away from sources of heat and ignition.
- If a battery is faulty (with scorch, leakage, bulge, or water intrusion), move it to a dangerous goods warehouse for separate storage. The distance between the battery and any combustible materials must be at least 3 m. The battery must be scrapped as soon as possible.
- Place batteries correctly according to the signs on the packing case during storage. Do not place batteries upside down, lay them on one side, or tilt them. Stack batteries in accordance with the stacking requirements on the packing cases.
- Store batteries in a separate place. Do not store batteries together with other devices. Do not stack batteries too high. If a large number of batteries are stored onsite, it is recommended that the site be equipped with qualified fire fighting facilities, such as fire sand and fire extinguishers.

⚠ CAUTION

- It is recommended that batteries be used soon after being deployed onsite. Batteries that have been stored for an extended period shall be charged periodically. Otherwise, they may be damaged.

General Instructions

- Store the equipment according to the storage requirements. Equipment damage caused by unqualified storage conditions is not covered under the warranty.
- The storage environment must comply with local regulations and standards.
- The storage environment must be clean and dry. The equipment must be protected against rain and water.
- The air must not contain corrosive or flammable gases.
- The storage environment requirements are as follows:
  - Ambient temperature: -20 to 55 °C
  - Relative humidity: 0% to 70%
- If a battery has been stored for longer than the allowed period, it must be checked and tested by professionals before use.
- Proof that the equipment is stored according to the requirements must be available, such as temperature and humidity log data, storage environment photos, and

inspection reports.

· Ensure that batteries are delivered based on the "first in, first out" rule.

8.7 Notice

Network Configuration Instructions

Bluetooth Low Energy (BLE) Status: When the equipment is not yet connected to a network, it will automatically enable BLE broadcasting and activate BLE services to provide Bluetooth network configuration capabilities.

Note: During the BLE configuration process, ensure your network environment is stable and follow the instructions to complete the setup.

Port 5353

The primary function of port 5353 (TCP/UDP 5353) in a network is to implement the mDNS protocol for mutual discovery between devices on the local area network (LAN).

Application Scenarios: Multi-device linkage, self-consumption scenarios, and energy scheduling strategies in the LAN.

Access the device via hostname.local on the same local area network without traditional DNS configuration.

mDNS Protocol Characteristics: Using UDP protocol, port 5353 is its standard port, compatible with the standard DNS query format.

Appendix 1. Overload Capacity

Understanding overload capacity helps you connect loads safely and avoid unnecessary shutdowns during short periods of high power demand, such as motor startups.

Overload Performance

The following table lists the system overload limits and the maximum duration before overload protection is triggered. Overload protection automatically stops the output when the load exceeds the allowable limit to help protect the system and connected devices.

For example, if a device startup requires 120% of the system's rated output for less than 10 seconds, the system can support the device without interruption.

Output Load Rate	Maximum Duration (Anker SOLIX XE)
< 100%	Continuous operation
100% to 150%	Up to 10 seconds
150% to 200%	Up to 1 second

Overload Protection for Motor-Driven Appliances

Some appliances place a higher load on the system than the power value shown on the screen or in the app. This can happen with air conditioners, refrigerators, pumps, and other motor-driven appliances.

As a result, overload protection may be triggered even when the displayed power appears to be within the rated output range. In this case, an overload alert may still appear as part of normal system protection.

If overload protection is triggered, reduce the connected load and restart the appliances one at a time. Avoid starting multiple motor-driven appliances at the same time.