Quick Start Guide

AXIhycon
12 – 20 H



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WARNING:

Please be aware that this is a quick guide. It is absolutely essential to carefully read and follow the complete instructions to ensure proper setup.

1. PREPARATION FOR STARTUP

- Ensure accessibility to all devices.
- Check the installation and ventilation of the inverter.
- Ensure the top of the inverter is free of obstacles.
- Lay cables in a protected manner.
- Connect the Bluetooth antenna.

2. DOWNLOADING THE APP

1. Search for "AXIcloud" on the Google Play Store or App Store.
2. Scan the QR code to download "AXIcloud."

3. CONNECTORS

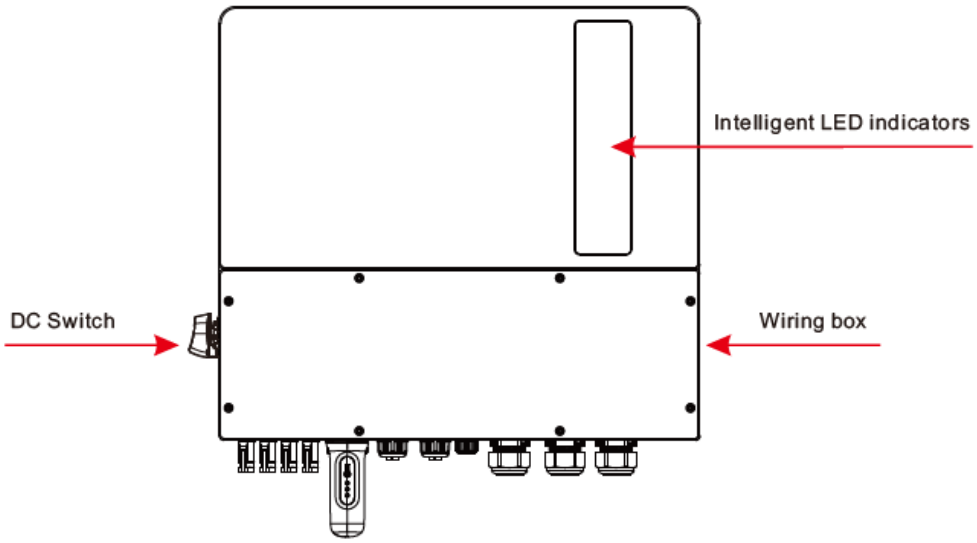


Figure 1.1 Front side view

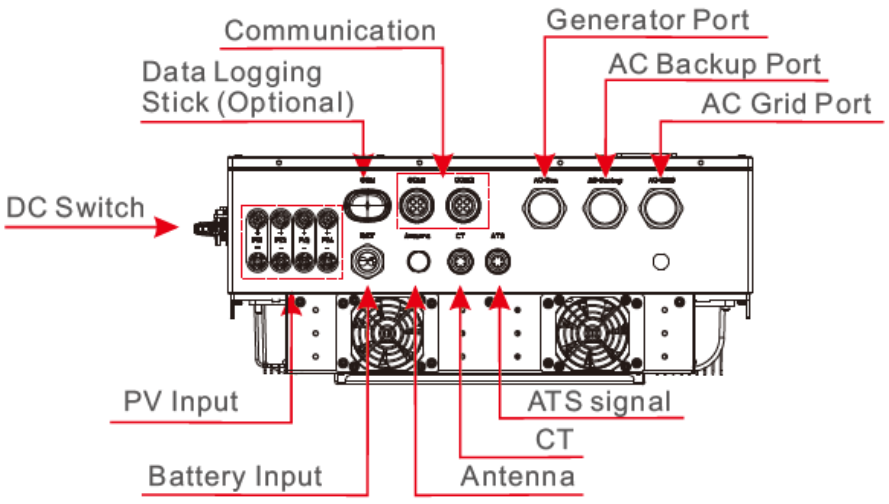


Figure 1.2 Bottom side view

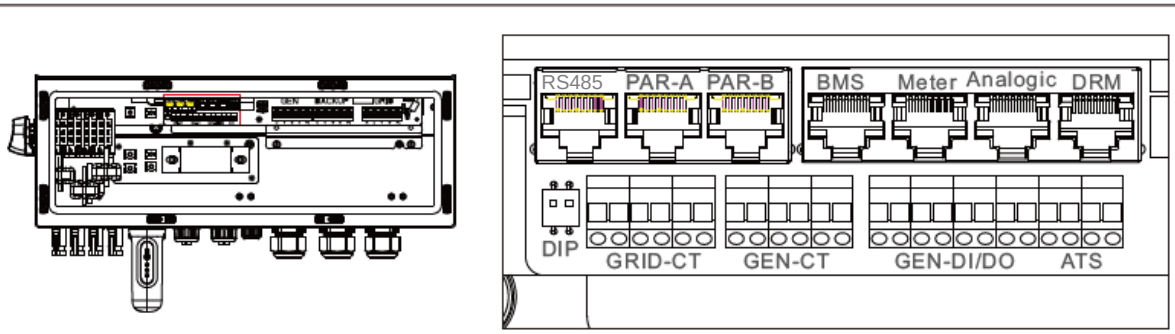


Figure 4.16 Communication terminals

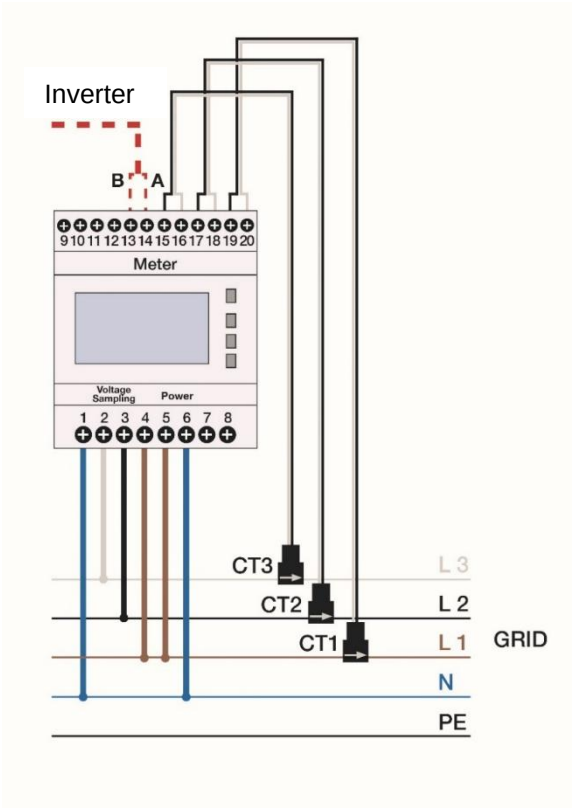
Terminal	Typ	Description
RS485	RJ45	Used for RS485 communication.
PAR-A	RJ45	(Optional) Parallel operation communication port.
PAR-B	RJ45	(Optional) Parallel operation communication port.
BMS	RJ45	Used for CAN communication between inverter and Lithium battery BMS.
Meter	RJ45	(Optional)Used for RS485 communication between inverter and the smart meter.
Analogic	RJ45	Used for output analogic signal.
DRM	RJ45	(Optional) To realize demand response or logic interface function, this function may be required in UK and Australia.
DIP-Switch (2-1)		When a single inverter is running, DIP switch 1 and 2 shall be both at the bottom position. When multiple inverters are paralleled, DIP switch: Option 1: Both the first and last inverter (INV1 & INV3) have 1 of the DIP switch enabled (Either Pin1 or Pin2). Option 2: One of the first and the last inverter (INV1 or INV3) has 2 DIP switches enabled (Both Pin1 & Pin2)

- Connect the AC power supply.
- Connect additional communication ports (BMS, meter, RS485, DRM, P-A/P-B, DO/DI) as needed.

4. CONNECTING THE SMART METER

4.1 CHECK WIRING

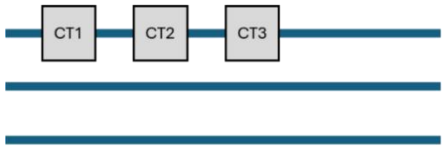
Make sure phase 1 is connected to phase 1 input terminal L1 (4). CT1 must also be connected to phase 1 and connected to the **$S2_1S1$ (19 and 20)** of the meter.
When power is imported into the house (turn off the inverter), the smart meter **shows negative power for all phases**.



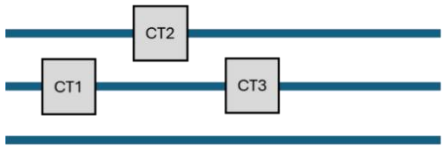
4.2 ATTACH CT-CLAMPS CORRECTLY

Please follow the steps below to attach the CT clamps to the correct phase:

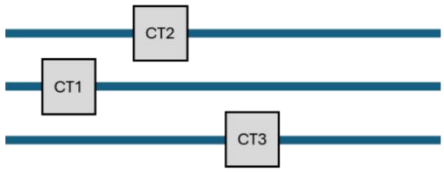
- Switch off the inverter.
- Attach all three CT-clamps to one of the three phases.
- Read the active power (P) on the smart meter. The phase with the greatest negative active power is wired correctly. The other two CT-clamps are connected to the next phase.
- The phase that has already been recognized as correct can now be ignored. The phase of the remaining two with the largest negative active power is wired correctly. Attach the last CT-clamp to the remaining phase.













4.3 CONNECTION OF CT CLAMPS WITHOUT SMART-METER [OPTIONAL]

Instead of the supplied Smart Meter, the CT clamps can also be connected directly to the inverter in order to detect the direction of the grid current and transmit the operating status of the system to the hybrid inverter. The maximum distance between CT clamps and Smart Meter / inverter is 10m. It must be ensured that the cable lengths of the CT clamps are always the same length.

CT Model: 120A/40mA_0.5%, ESCT-TA16 120A/40mA

CT Cable: Size – 2.3mm2, Length - 1m

Please install the CT on the phase lines at the system grid connection point and the arrow on the CT needs to point to the grid direction.

Lead the CT wires through the CT port at the bottom of the inverter and connect the CT wires to the 6 pin communication terminal block.

CT Wire	6 PIN Communication Terminal Block
White	Pin 1 (From Left to Right)
Black	Pin 2 (From Left to Right)

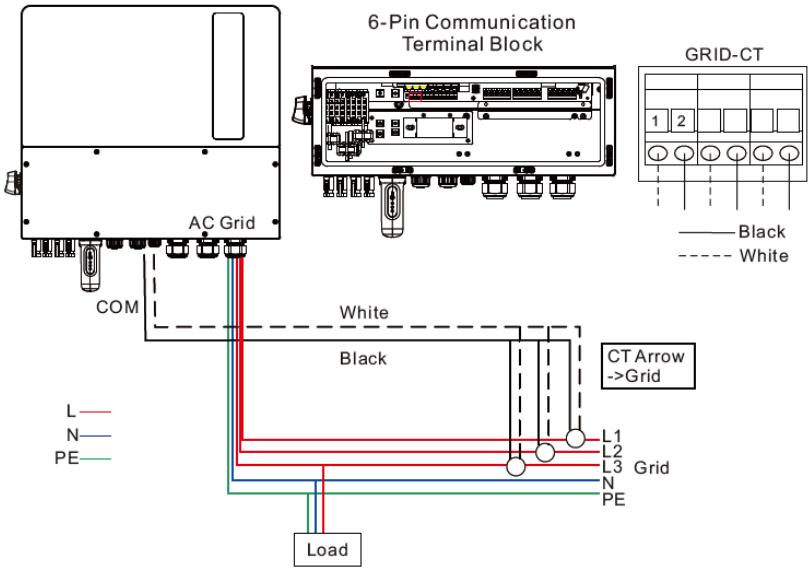


Figure 4.15

4.4 ATTACH CT-CLAMPS CORRECTLY

Please follow the steps below to attach the CT clamps to the correct phase.

- Check in the app
- Attach all three CT clamps to one of the three phases.
- Read the active power in the “Mains” area of the CT clamps in the app.
- The phase with the highest negative active power is correctly wired. The other two CT clamps are connected to the next phase.
- The phase that has already been identified as correct can now be ignored. The phase of the remaining two with the largest negative active power is correctly wired. Attach the incorrectly positioned CT clamps to the remaining phase.

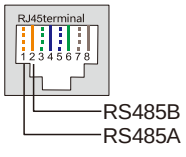
5. CONNECTING AN ENERGY MANAGEMENT SYSTEM (EMS) [OPTIONAL]

CAUTION:
Ensure that the AC cable is completely disconnected from the power source before connecting the smart meter, EMS, and CT clamps.

NOTE:
The pin configuration of the RS485 port follows the EIA/TIA 568B standard.

RS485A is connected to pin 1 orange/white.

RS485B is connected to pin 2 with orange.



6. CONNECTION OF THE POWER STORAGE SYSTEM

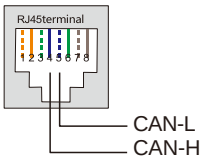
Use the supplied CAN cable to connect one end to the CAN port of the battery and the other end to the BMS port of the inverter.

NOTE:

The pin configuration of the BMS and CAN ports adheres to the EIA/TIA 568B standard.

CAN-H is on pin 4 (blue)

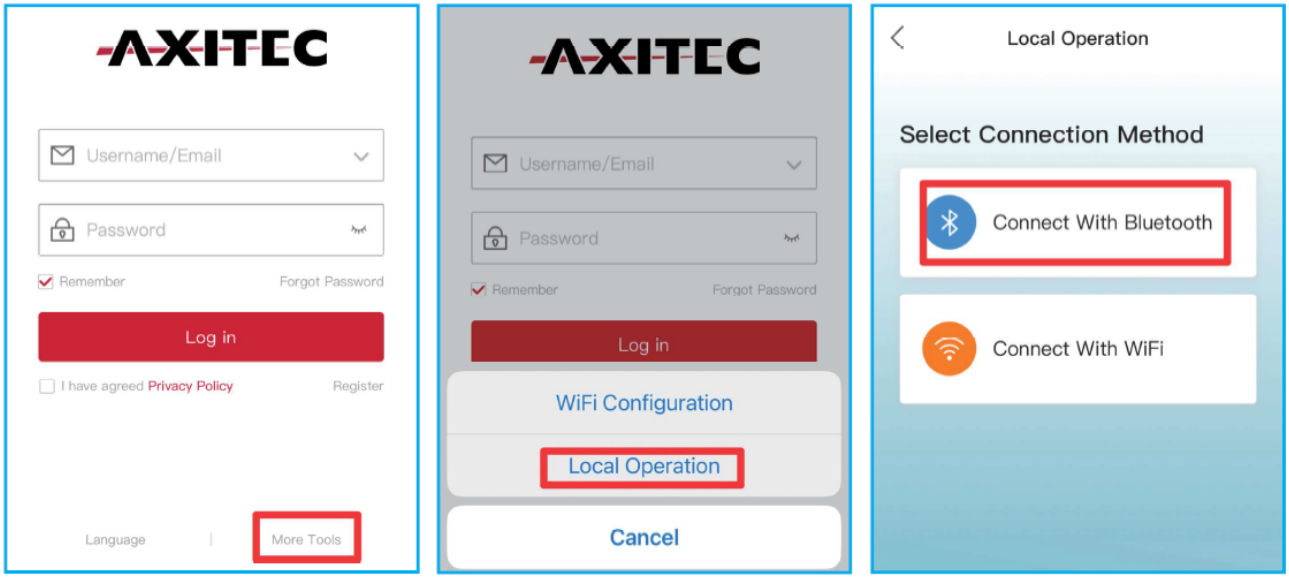
CAN-L is on pin 5 (blue/white).



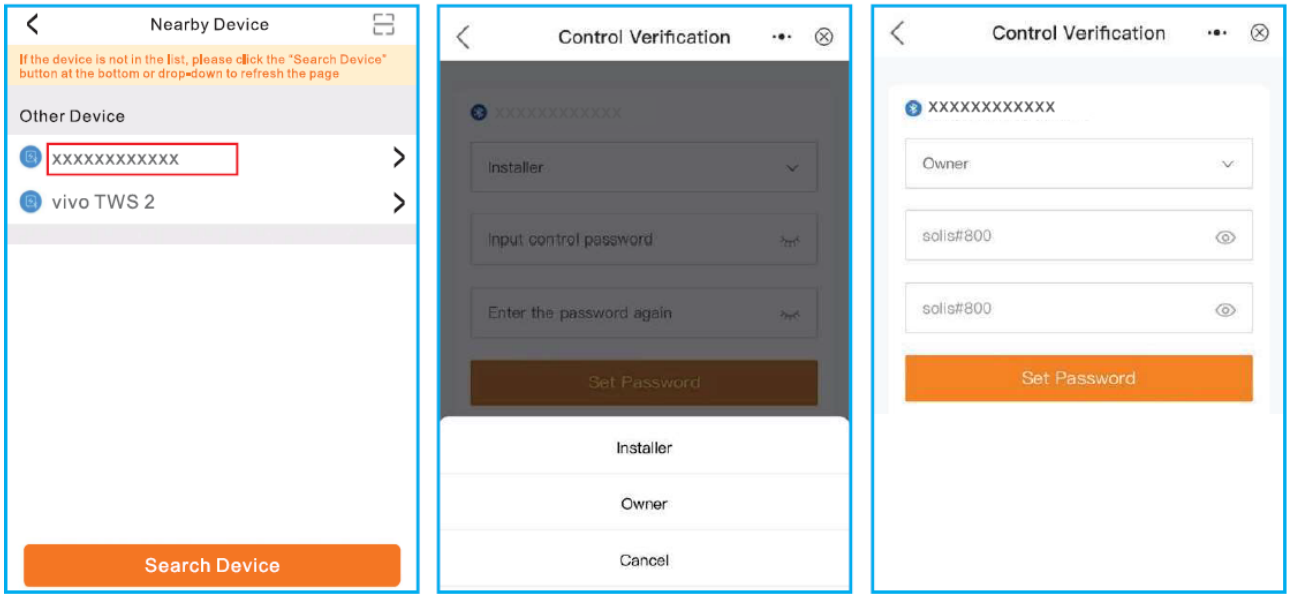
7. CONNECTING THE DC CONNECTIONS

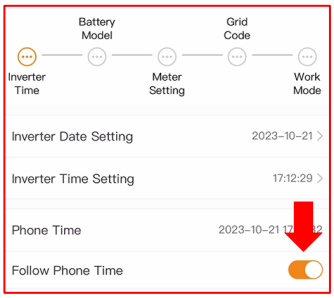
- Check the polarity of the photovoltaic (PV) and battery strings.
- Measure the AC voltage and frequency.
- Connect the photovoltaic and battery power cables to the inverter.

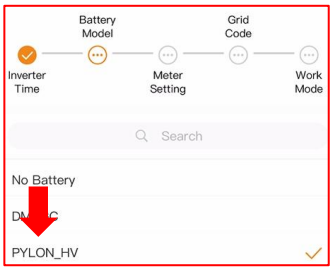
8. INSTALLATION OF THE INVERTER (OFFLINE)

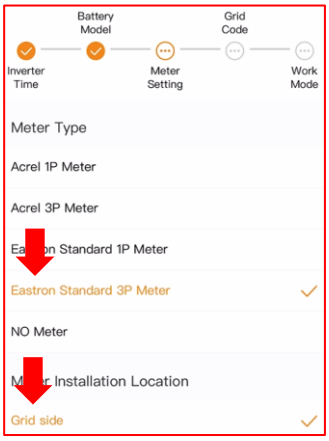


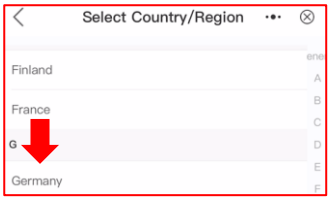
- Connect with the device INV_...
- During the initial setup, you will be prompted to set a password. Please follow the on-screen instructions.

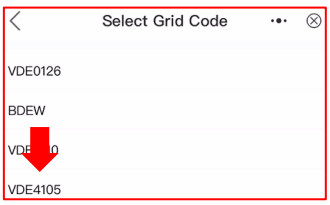


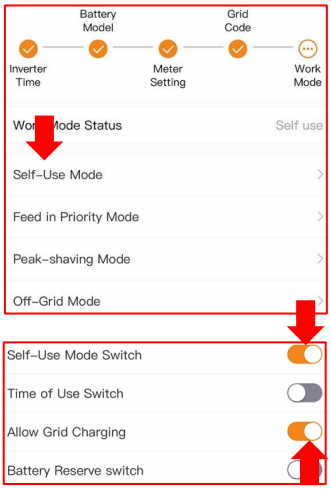












9. INTERNET CONNECTION INVERTER + BATTERY (RECOMMENDED)

9.1 LAN-CONNECTION INVERTER

Step 1: Turn on the external AC switch.
Step 2: Connect the data logger via the COM port.
Step 3: Connect the data logger to the router using an LAN cable.

- All LEDs on the data logger should be lit steadily.



CAUTION:
No other device should be connected to the inverter via USB except for the data logger, as this may cause damage to the inverter.



NOTE:
The red LED indicates that the data logger is powered,
the yellow LED signifies a connection between the data logger and the inverter,
the green LED indicates that the data logger has established a connection to AX-Icloud.

9.2 WIFI-CONNECTION INVERTER

Step 1: Activate the external AC switch.
Step 2: Connect the data logger via the COM port (LEDs should illuminate).



CAUTION:
Es darf kein anderes Gerät außer dem Datenlogger über USB mit dem Wechselrichter verbunden, da sonst Schäden am Wechselrichter entstehen können.



NOTE:
Die Rote LED gibt an, dass der Datenlogger mit Strom versorgt wird, die gelbe LED zeigt an, dass eine Verbindung zwischen Datenlogger und Wechselrichter besteht. Die grüne LED gibt an, dass der Datenlogger eine Verbindung zur AXIcloud aufgebaut hat.

Step 3: Ensure that your mobile phone/laptop does not automatically connect to the home Wi-Fi.
Step 4: Connect to the Wi-Fi of the data logger "D_..." Password: "123456789".
Step 5: Open the browser and enter the IP address: "10.10.100.254".
- Username: "admin", Password: "123456789".

Step 6: Click on "Quick Set," select the home network, enter the home network password, and click on Save.

- All LEDs on the data logger should remain lit continuously.

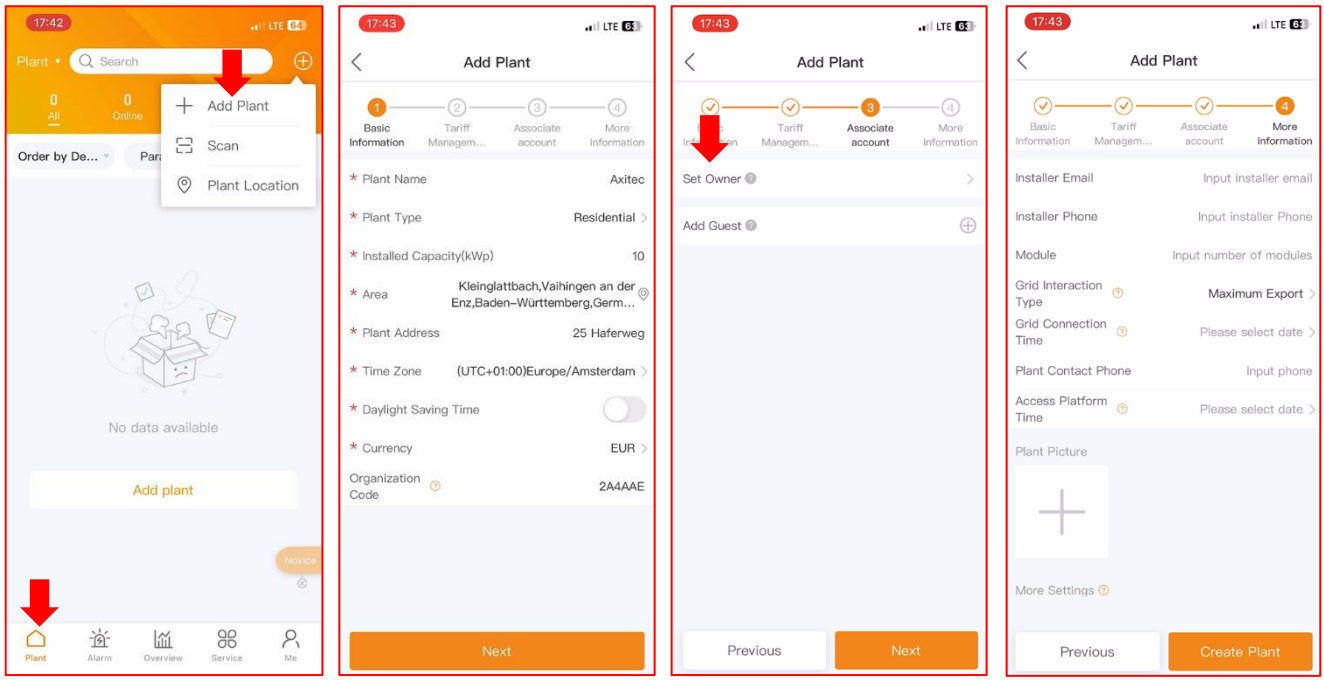
9.3 WIFI-CONNECTION BATTERY

Step 1: Turn on the DC isolator switch.
Step 2: Press the red start button for 5 seconds.
Step 3: Make sure your phone/laptop doesn't automatically connect to the home Wi-Fi.
Step 4: Connect to the batteries Wi-Fi named "AP_...".
Step 5: Open the browser and enter the IP address: "10.10.100.254".
- Username: "admin" Password: "admin".

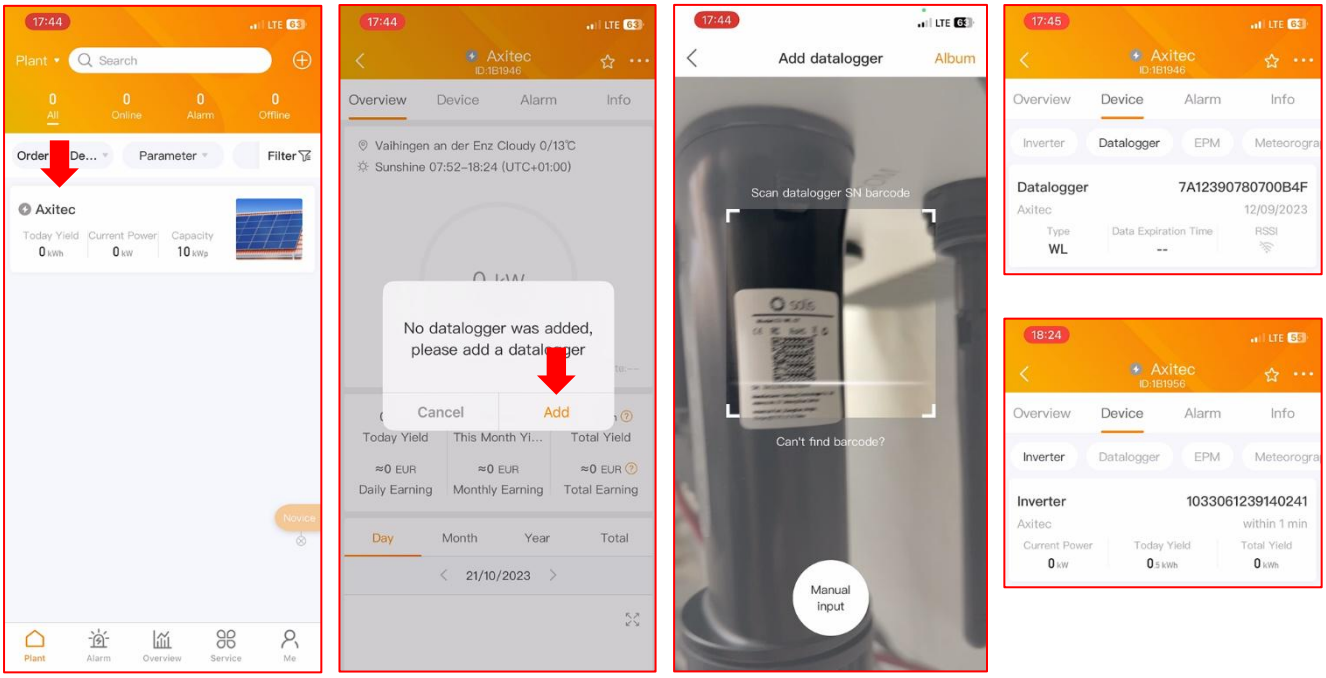
Step 6: Click on "Quick Set", select the home network, enter the home network password, and click Save.
Step 7: For updates, please provide us with the batteries Wi-Fi name (AP_...).

9.4 CREATING PLANT AND ADDING DATA LOGGER

- Log in to the AXIcloud app.
- Fill in all necessary fields.
- **Enter the owner's email address to allow them to monitor their plant.**



- Add the logger.
- The inverter will appear automatically after a short period.



10. TURNING ON THE SYSTEM

Step 1: Turn on the AC breaker at the power connection point.
Step 2: Turn on the DC switch of the inverter.
Step 3: Turn on the battery switch.

11. TURNING OFF THE SYSTEM

Step 1: Turn off the AC breaker at the power connection point.
Step 2: Turn off the battery switch.
Step 3: Turn off the DC switch of the inverter.
Step 4: Wait until the device is powered off, and the system shutdown is complete.

In case of discrepancies in this user manual, please refer to the actual products.
If you encounter any issues with the inverter, please identify the inverter's serial number (S/N) and contact us.
We will strive to respond to your inquiry as quickly as possible.

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