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YOUR LOGIN DETAILS WILL BE CREATED BY THE SOLAR TECHNICIANS AT INSTAGROUP, THIS WILL GIVE YOU ACCESS TO YOUR PROFILE ON THE INSTAGEN INSTALLER APP, THAT'LL ENABLE YOU TO CREATE & COMMISSION THE NEW INSTALLATION. 12
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Important Installation Techniques

Wi-Fi Network

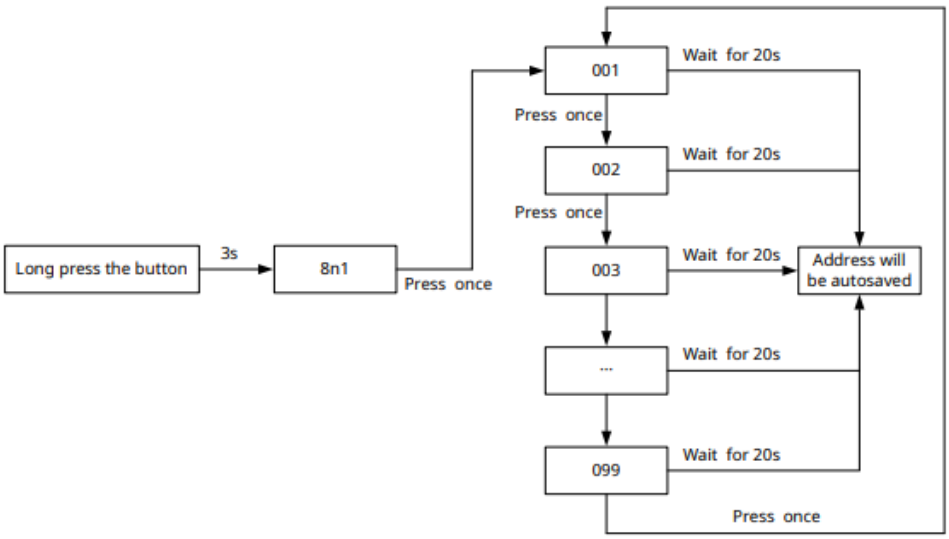
- The 2.4Ghz Wi-Fi network band **must** be selected on a dual-band router.
- The DTS (data transfer stick) will not function/connect to the network on a 5Ghz network.
- The network provider must be contacted and told to change to the 2.4Ghz network, if the router has been set to 5Ghz.

Smart Meter Settings

The settings on the Chint smart meter need to be programmed and set correctly to ensure the plant is configured and working correctly. By holding down the small blue arrow button on the meter for several seconds, you will access the settings mode. After you have accessed the settings mode, press the same button to scroll through the pages.

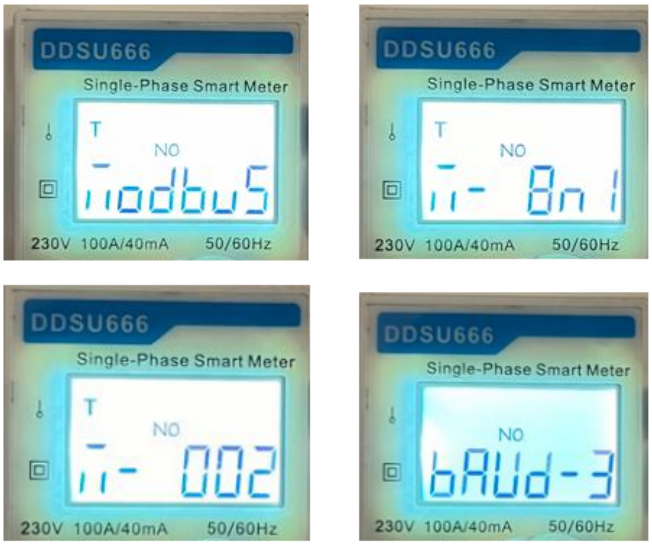


Follow the diagram below to program the Chint smart meter



- Ensure the settings on the Chint meter match the images displayed below.
- “Fr 001” is the factory default setting, this needs to be changed to “Fr 002”

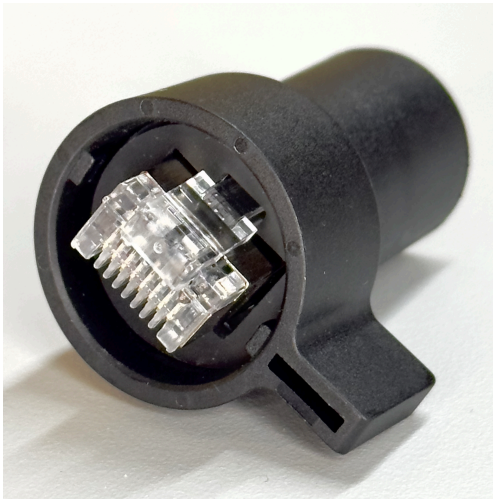
- All the other settings remain the same as set by the factory.



CT clamp

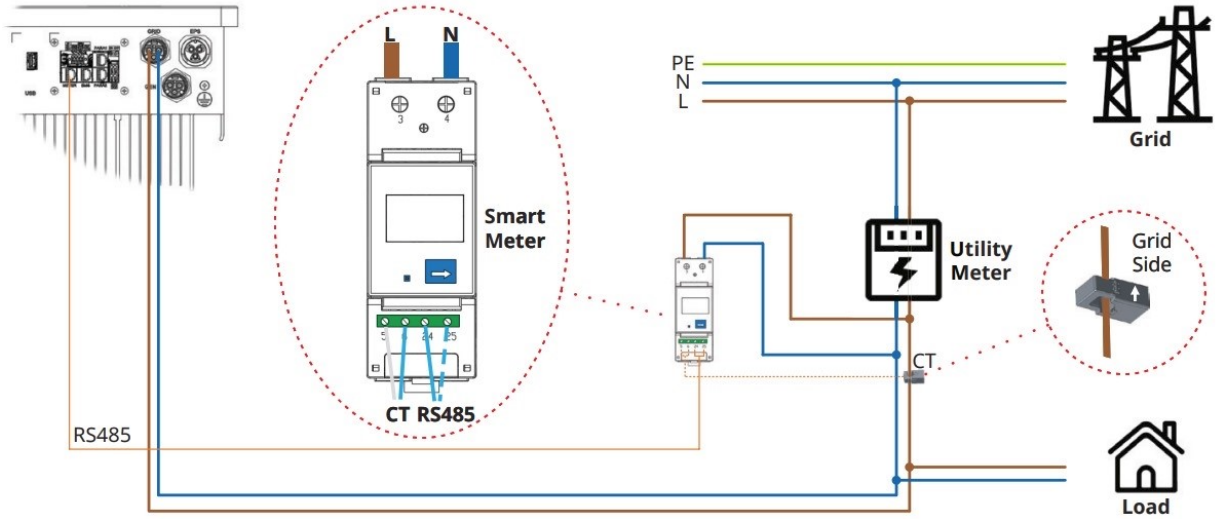
*NB: The arrow on the CT clamp must point towards the grid.

- The Chint smart meter must be installed close to the main incomer to allow proper placement of the CT.
- The CT needs to be placed straight after the homeowner's utility meter, and before the consumer unit – as seen in the diagram below.
- The CT cable (blue & white 5m) should never be extended; however, the RS485/CAT 5 cable can be up to a length of 200m for it to be connected to the inverter.



RJ45 Connector

NB - Insert the provided RJ45 connector into COM2 communication terminal on the BMS. The system will not complete the commisioning process and the inverter will not function, if this is not done. Interlock the connector to the terminal by twisting the cover in a clockwise direction after the RJ45 in the terminal.

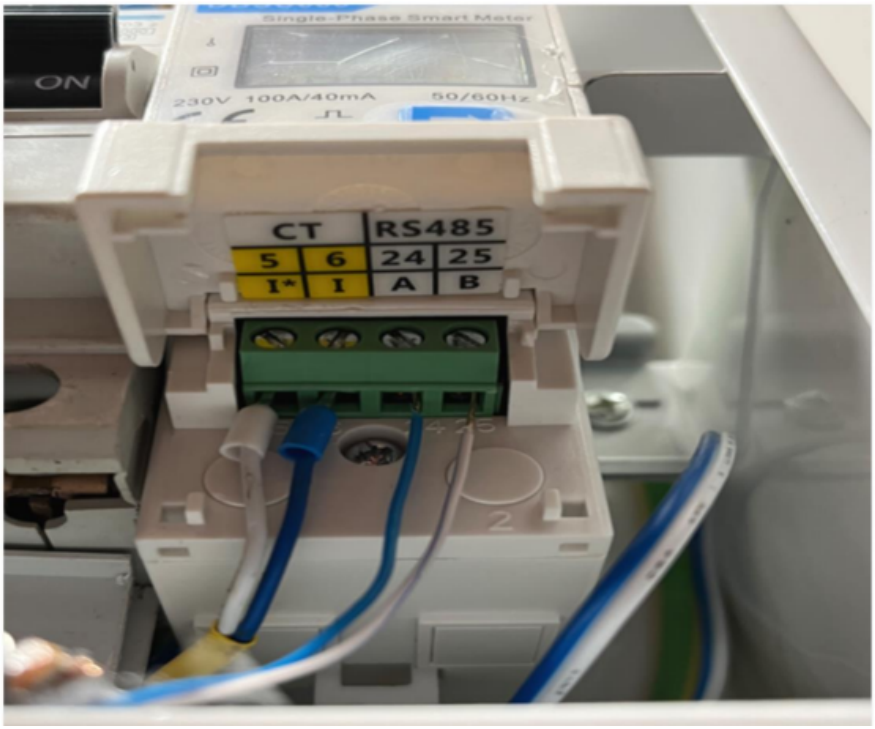


NOTE:

Do not extend the blue/white CT cable. The CT cable is 5 meters in length, ensure the Chint Smart Meter is installed within this range.

Smart Meter polarity

Make sure the correct cables are terminated to the corresponding port on the meter. Use the blue and blue/white striped cables to link the smart meter to the "METER" port on the inverter. It is recommended 0.5mm ferrules be used to avoid poor connections.



CT cables occupy the first two ports, namely 5 & 6, in the following order:

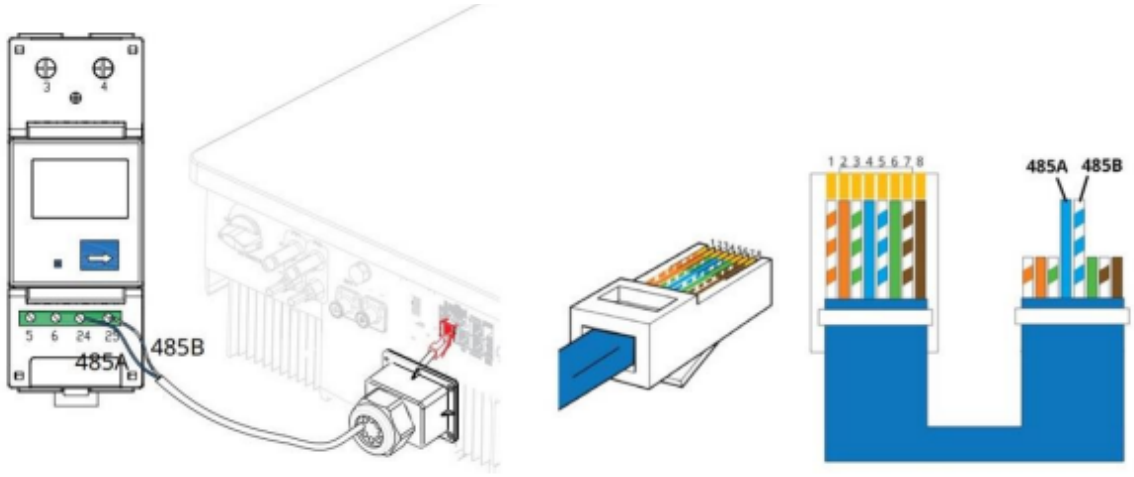
- White cable = port 5 and
- Blue cable = port 6
- The RS485 (CAT 5) cable occupy the remaining two ports, in the following order:
- Blue cable = 24/A
- Blue/white cable = 25/B

RJ45 termination

Make sure the corresponding colours are correctly positioned when terminating the RJ45 (failure to do so will lead to system failure).

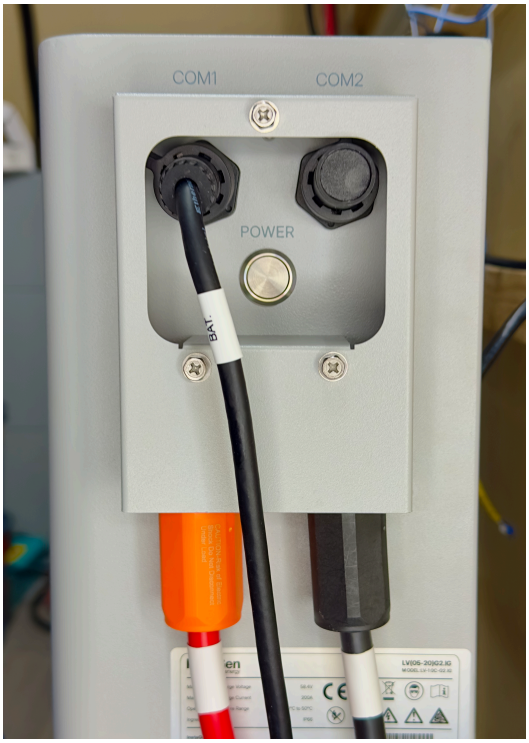
Pins 4 & 5 in the RJ45 need to be used during the termination, this too will cause a system failure if not adhered to.

Do not twist the single cores when terminating the CAT 5 cable at the smart meter but rather use ferrules for a better contact.



Batteries

- The battery BMS (battery controller) has built-in circuit protection by means of a circuit breaker, therefore an external DC battery isolator is not required.
- Make sure the red & black battery leads securely & tightly “click” onto their respective termination points
- The batteries must be secured together using the clamps provided in the kit, as well as the wall bracket to secure the battery tower against the wall.

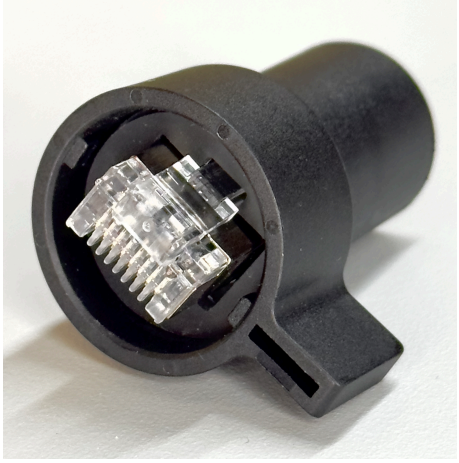




Reset Button

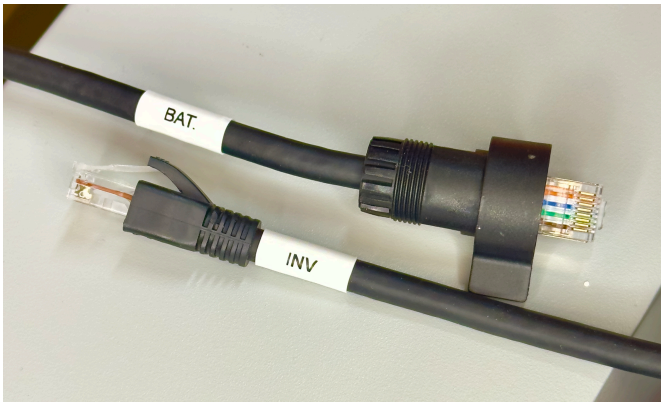
To reset the battery, press & hold the silver reset button for up to 5 seconds. Make sure you have switched “ON” the circuit breaker before doing this.

To switch off the battery, first switch off the circuit breaker next to the reset button, followed by holding in the reset button until the LED on the side of the battery controller switches off completely.

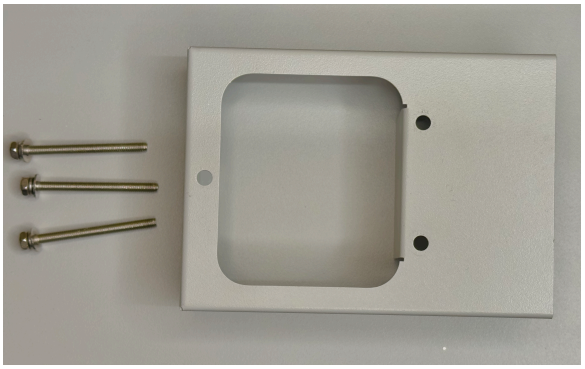


RJ45 Connector

NB - Insert the provided RJ45 connector into COM2 communication terminal on the BMS. The system will not complete the commisioning process and the inverter will not function, if this is not done. Iterlock the connector to the terminal by twisting the cover in a clockwise direction after the RJ45 in the terminal.



Ensure the correct ends of the communication cable is connected to the inverter & battery, according to the label.



Fit this cover to provide additional protection to the cables and terminals.

Inverter LED guide

The following key denotes to the status of the various aspects of the inverter.

Indicator	Status	Explanation
RUN		Off – Inverter is shut down Blink 1 – Inverter is booting Blink 2 – Inverter is in bypass mode On – Inverter is turned on
PV		Off – PV voltage is low Blink 1 – PV power is low On – PV is generating power
AC		Off – Gris is disconnected and EPS is off Blink 1 – Grid is disconnected but EPS is on On – Grid is connected
COM		Off – Communication error of both meter and BMS Blink 1 – Communication failed to meter Blink 2 – Communication failed to BMS On – Both meter and BMS communications are normal
FAULT		Off – No fault On – Fault occurred Blink 1 – EPS port overload Blink 2 – ISO/RCD fault Blink 3 – Arc fault

Checklist

Please refer to the checklist below for reference to ensure the system has been installed correctly

Item	Check	Tick
PV	Check polarity of PV strings and label with Red (+) White (-)	
	Check DC voltage matches the calculated voltage for the string(s) usually within 5% to 10%	
	Check the DC Isolators are switched on	
	Check the DC Isolator on the Inverter is switched on	
	Check the PV LED on the Inverter is solid green	
Battery	Check that the DC breaker on the battery is switched on	
	Check that the LED on the battery is on	
	Check that the "Battery LED" on the Inverter is solid green	
Comms	Check the Modbus (smart meter) settings. 8n1, 002 grid CT, *(2nd meter for PV if applicable set to 001)*, bAUd-3	
	CT arrow pointing towards the grid	
	Check current clamp meter reading at CT position corresponds with the Modbus (smart meter) under load (Kettle test)	
	Check the RS485 cable is consistent with T568B wiring standard for the battery and Modbus	
	Check at Modbus the connection going to the inverter (Blue - 24, Blue/White - 25)	
	Check that the COM LED is solid green	
Grid	Check that the breaker and all AC Isolators are switched on	
	Check that the ASC LED is solid green	
EPS	Check there are no neutral parallel paths	
	Check if the EPS works when disconnecting incoming supply	
Earth Cabling	Check 6mm earth bonding cable is connected between Inverter and battery	
Data dongle (DTS)	Check all 3 LEDs are solid blue	
Site documents	Check that the **Schematic** and **Startup-Shut down** procedures are on-site	

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InstaGen Installer/End User App

InstaGen Installer is a mobile application developed by InstaGroup especially for installers of power plants. Installers can commission and maintain installations.

InstaGen End User is a mobile application developed by InstaGroup especially for owners of power plants. It can obtain the operating data of plants from the InstaGen Cloud.

Scan the QR code to download the InstaGen Apps.

InstaGen Installer

InstaGen End User

Get an InstaGen Installer Account

For New Installers: If you're new to installing the InstaGen kit you will need an installer account. Please contact the Solar Technicians at InstaGroup for this to be setup, before commissioning the system. Ideally, this should be done prior to installation day, to ensure a seamless process.

Contact details:

bruce.allen@instagroup.co.uk / terence.dillon@instagroup.co.uk

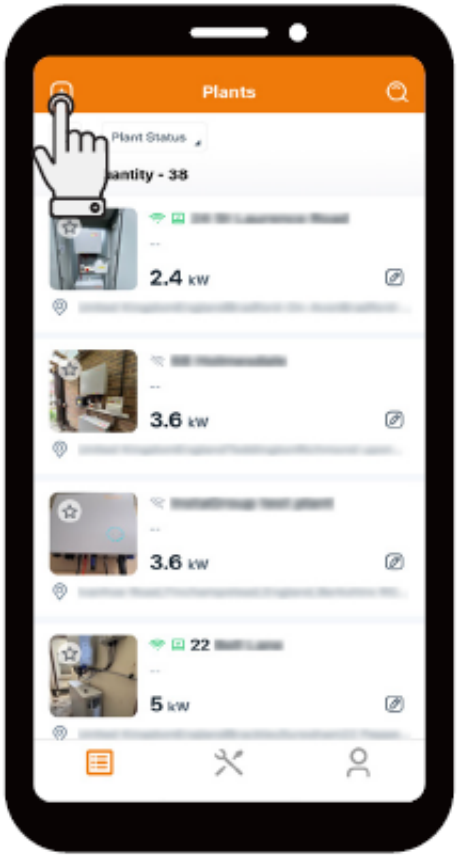
Log in to InstaGen Installer

NOTE:

Your login details will be created by the Solar Technicians at InstaGroup, this will give you access to your profile on the InstaGen Installer App, that'll enable you to create & commission the new installation.

Create a Plant

1. Tap in the **+** button in the upper left corner.
2. Enter the basic information **including a picture of the inverter and battery** and tap **Next**.





Add an Owner

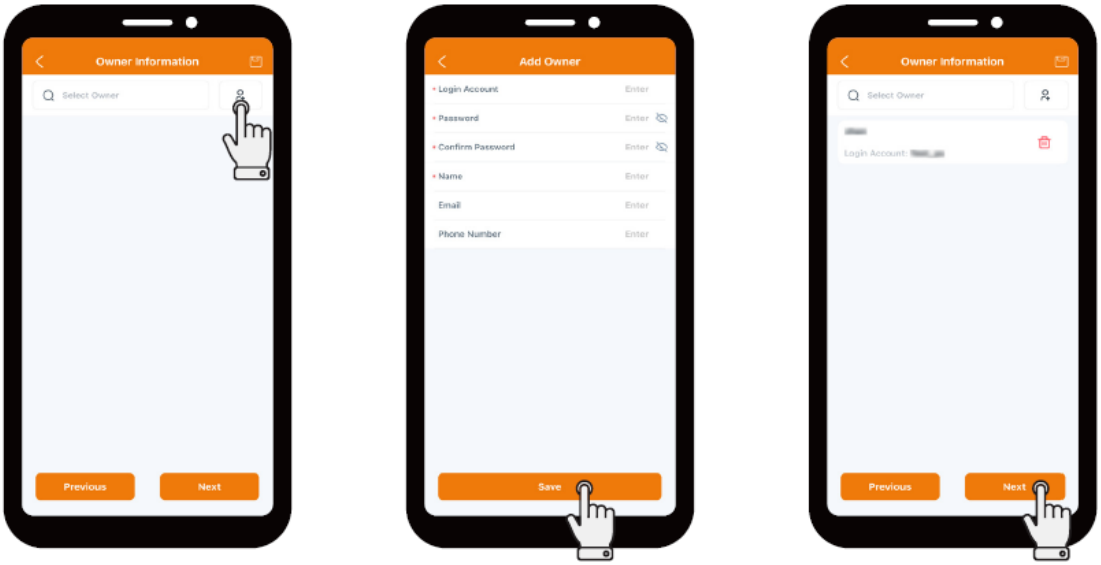
3. Tap the icon in the top right to add an owner.

4. Enter the customers details (login account name, name, password, email and phone number are required, and tap **Save & Next**.

5. Tap **Next**.

NOTE

If you don't want to create an owner, tap **Select Owner** to select an existing owner.

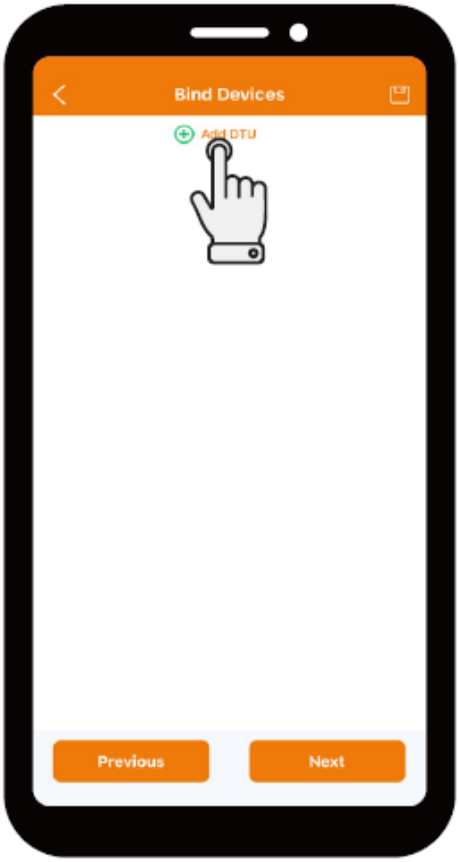


Binding Devices

6. Tap Add DTS.

7. Enter the DTS serial number, located on the printed label.
The inverter serial number will be automatically identified, if the DTS is plugged in and AC power has been applied.

8. Tap **Finish**.



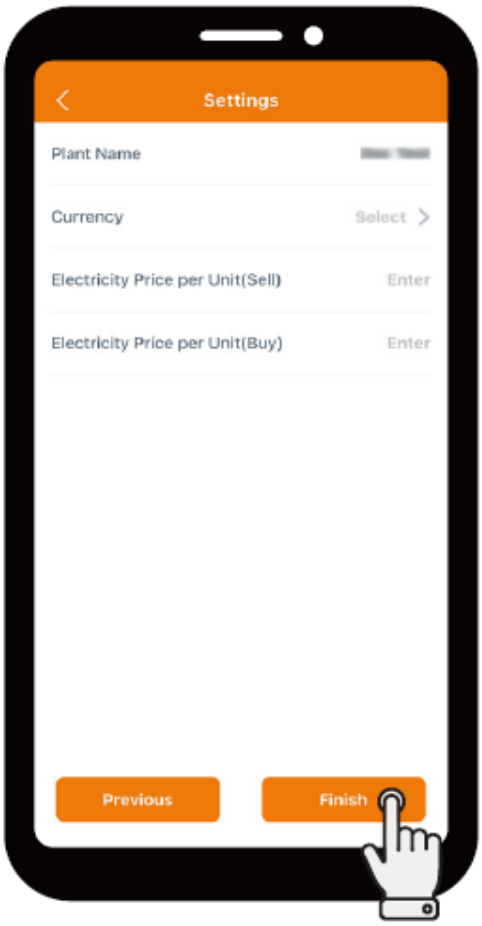




Bind Devices (Inverter & DTS) and Currency settings

9. Tap **Next**
10. (Optional) Set the currency type and the electricity price per unit (Sell and Buy)
11. Tap **Finish**.


Bind Devices
DTU-SN
Inverter
Add DTU
Previous
Next

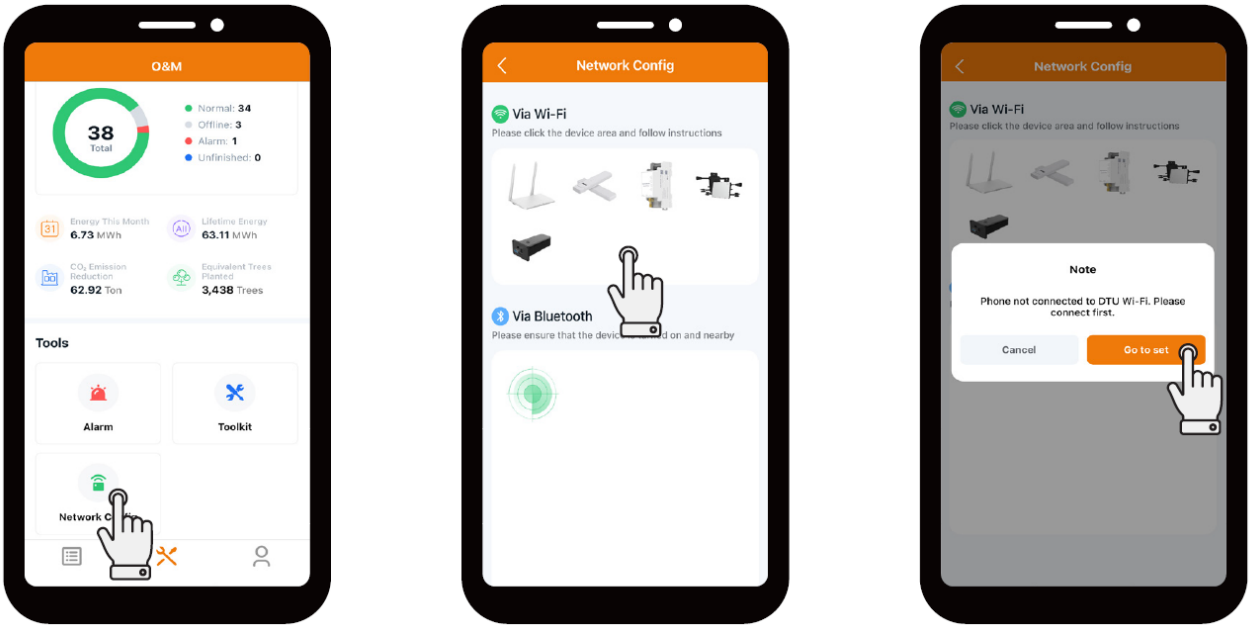

Settings
Plant Name
Currency
Select
Electricity Price per Unit(Sell)
Enter
Electricity Price per Unit(Buy)
Enter
Previous
Finish

Network Configuration & Configure the Network of the DTS

NOTE

- The DTS only supports 2.4 GHz router, and the IP of router cannot begin with 10.10.
- The Wi-Fi name and password should not contain special characters such as spaces.

1. Tap O&M > Network Config
2. Tap the black **DTU** icon.
3. Tap **Go to set**.



The system requires a 2.4Ghz bandwidth network

(the network provider can adjust this setting, if it is not already set)

Please ensure sufficient Wi-Fi signal is available

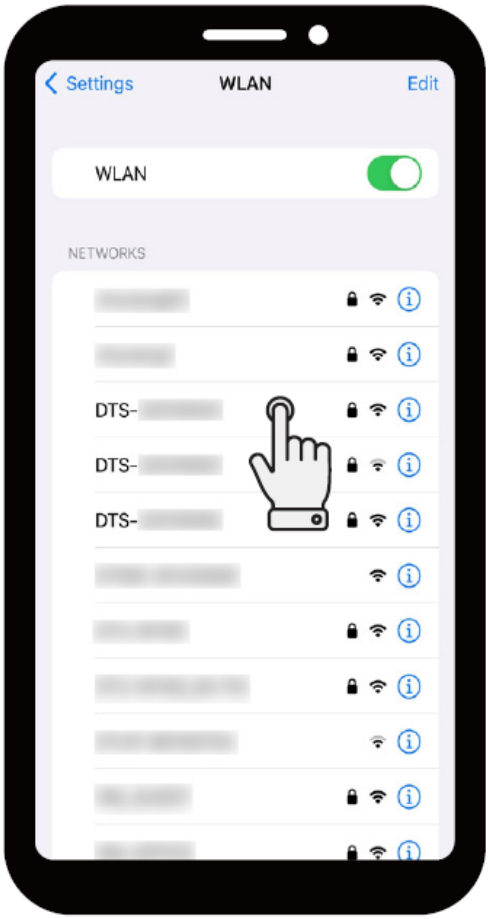
Poor signal will lead to commissioning difficulties

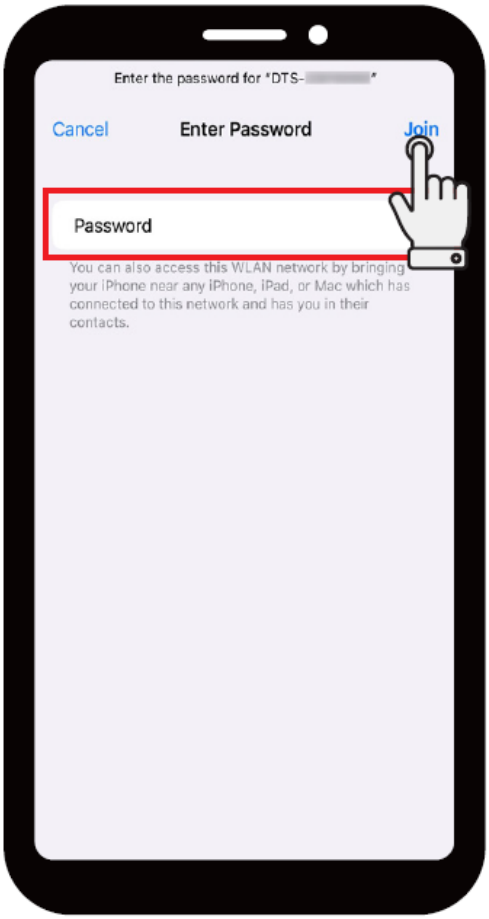
Select DTS Wi-Fi network

4. Open the Wi-Fi tab on your mobile device that has the Installer App, and scan for the available networks

5. Select the wireless network of DTS and enter the **default password ESS12345** and click join**.**

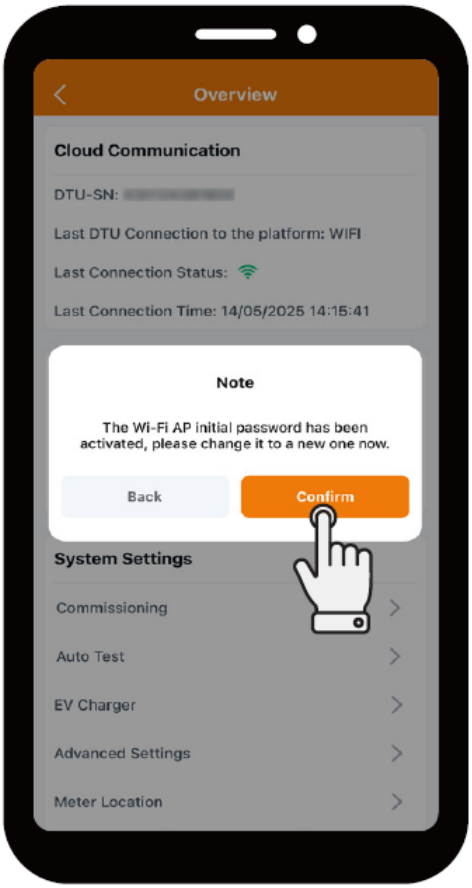
   *(The DTS network name consists of **"DTS"** and the last eight digits of the product serial number)*.

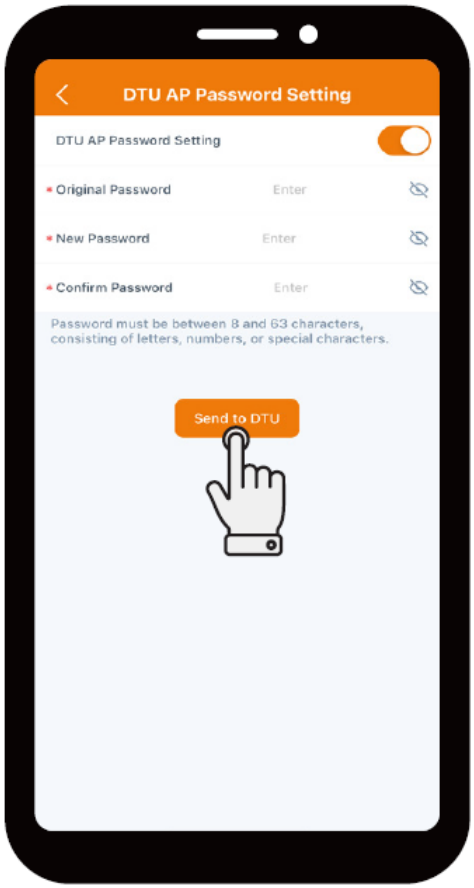




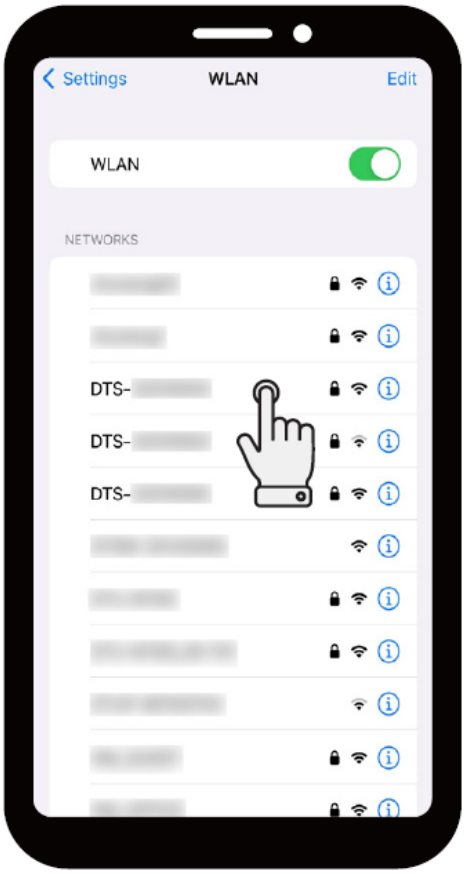
Reset DTS Password

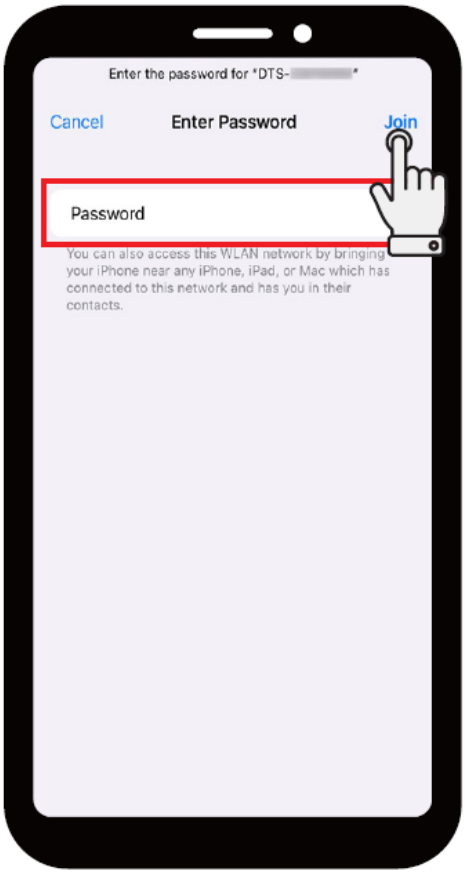
6. Return to the App.
7. Tap **Confirm** to change the default password to a new one.
8. Enter the original password and new password *(this must be different to the default - perhaps the property number and postcode)*, confirm the new one, and tap **Send to DTU**.





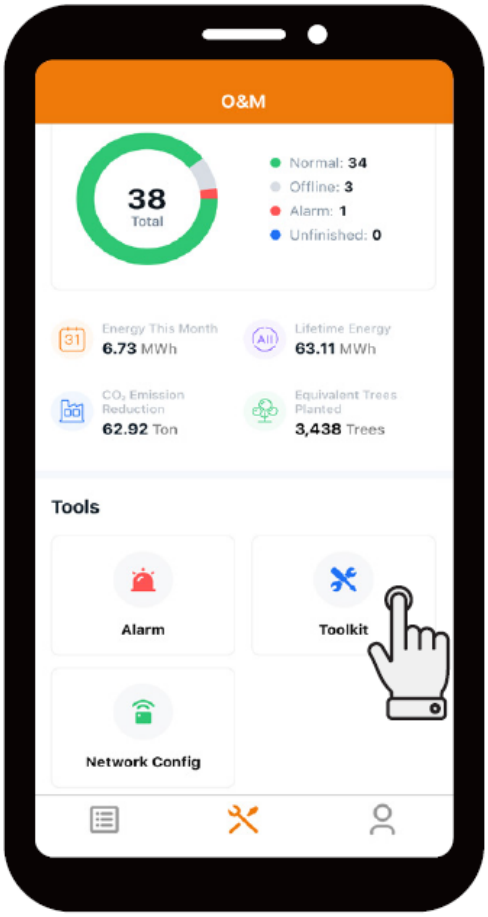
9. Select the wireless network of DTS and enter the new password.

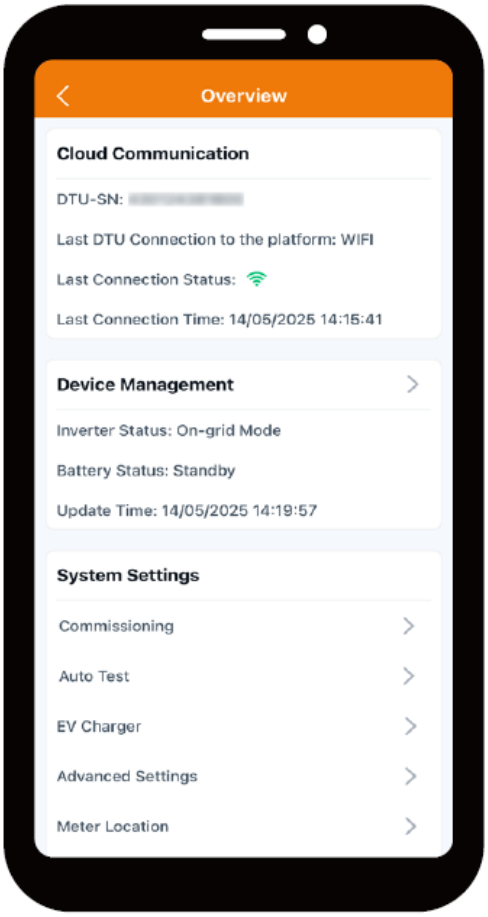




Commissioning

10. Return to the App and tap **Toolkit** again to begin the commissioning process.

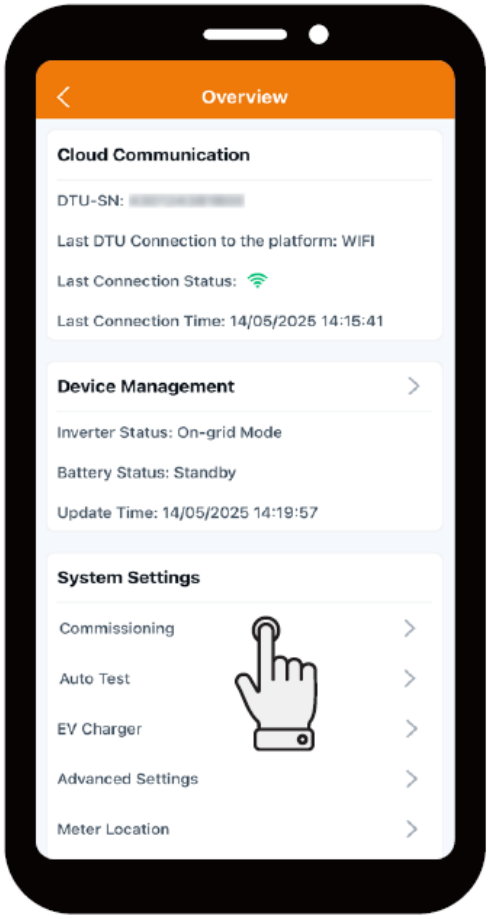


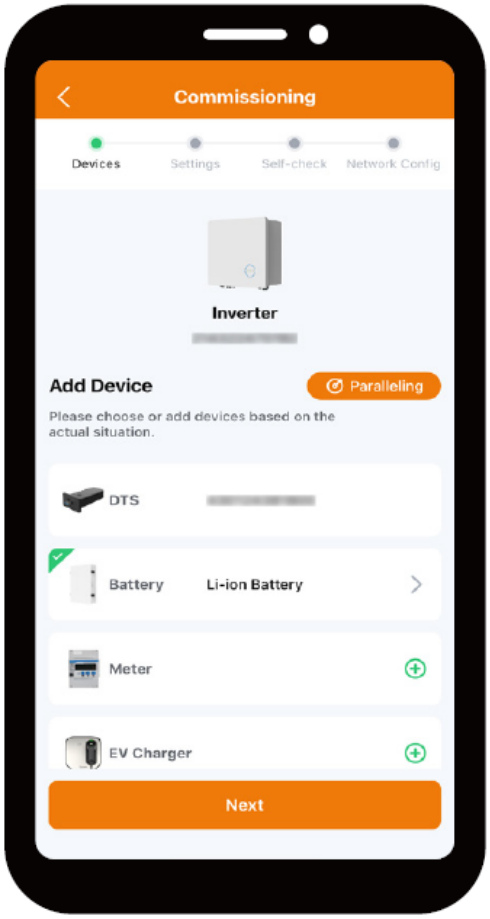


Start Commissioning

Commissioning is used to set and test a new residential energy storage system. It is a critical step to ensure that a new device and system can function properly according to the design specifications.

1. Tap **O&M** > **Toolkit**.
2. Tap **Commissioning**.

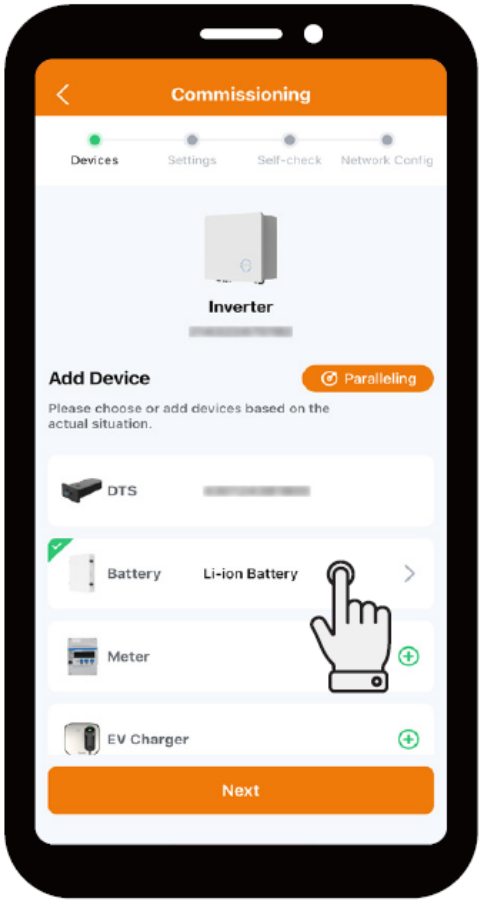


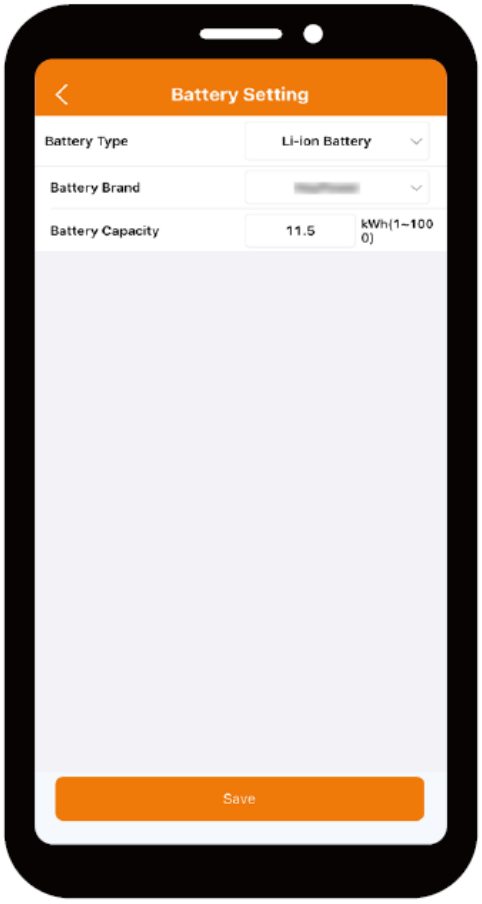


Allow the Commissioning process to run through all the respective steps, after selecting the “Commissioning” tab.

Battery Selection

3. Tap Battery to set relevant parameters. InstaGroup batteries are automatically identified. *(The default battery type is No battery)*





Battery Capacities

1 x Battery = 5.12kWh

2 x Batteries = 10.24kWh

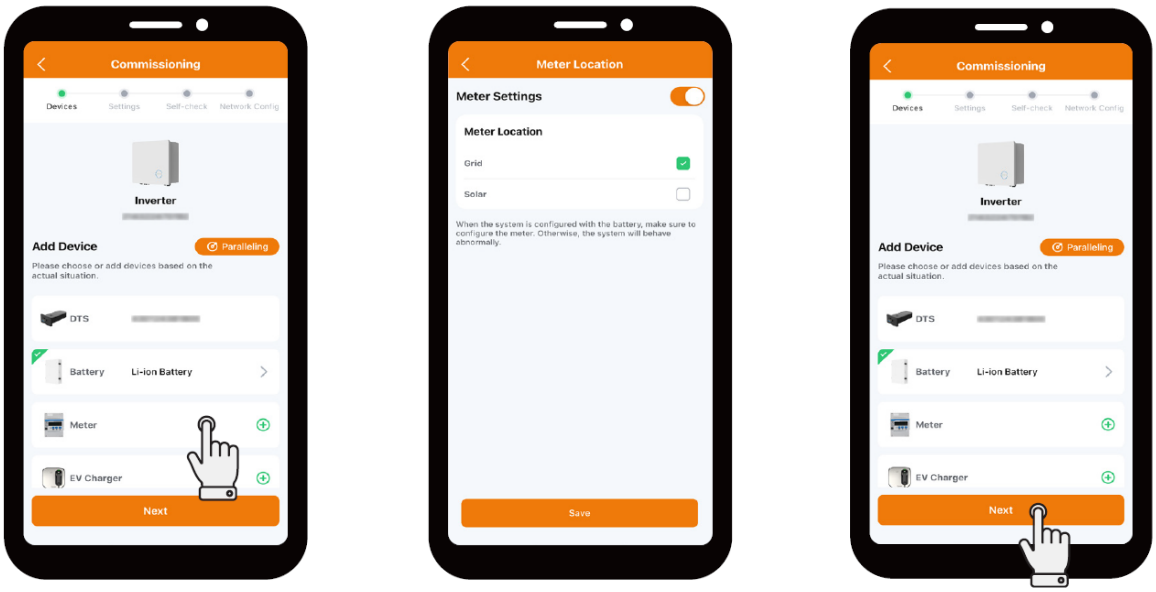
3 x Batteries = 15.36kWh

4 x Batteries = 20.48kWh

The battery capacity depends on the number of batteries installed.

Grid/Solar Meter Settings

4. Tap Meter, toggle on Meter Settings, and select the corresponding checkbox. **tap Save** and then **tap Next**



NOTE

- The meter needs to be switched on and programmed correctly, as described in this manual.
- After the GRID checkbox has been selected, the system will detect it, provided the wiring and programming has been done correctly.

Grid Profile ESS Selection

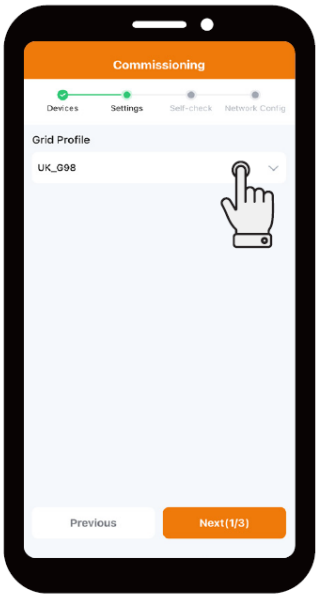
5. Complete other settings

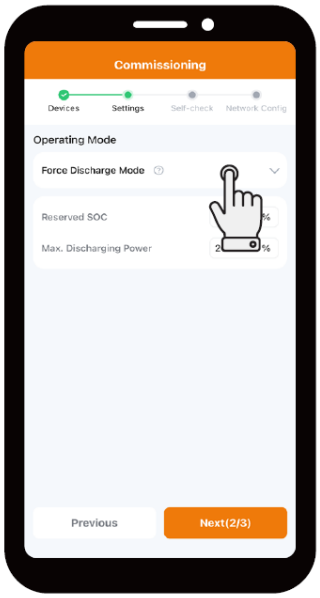
    a. Select the **grid profile** in your region and **tap Next**

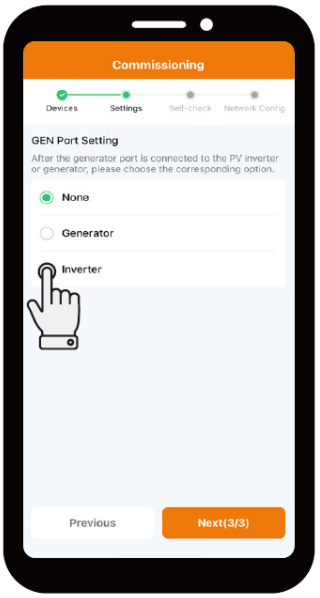
    b. **b.** Select the **working mode** according to your actual needs and **tap Next**
    (For details about working modes, refer to InstaGen Cloud Monitoring Platform User Manua 4.5.6 Set Working Mode).

c. **GEN Port Setting** *(The default option is None)*

d. Select “Next”



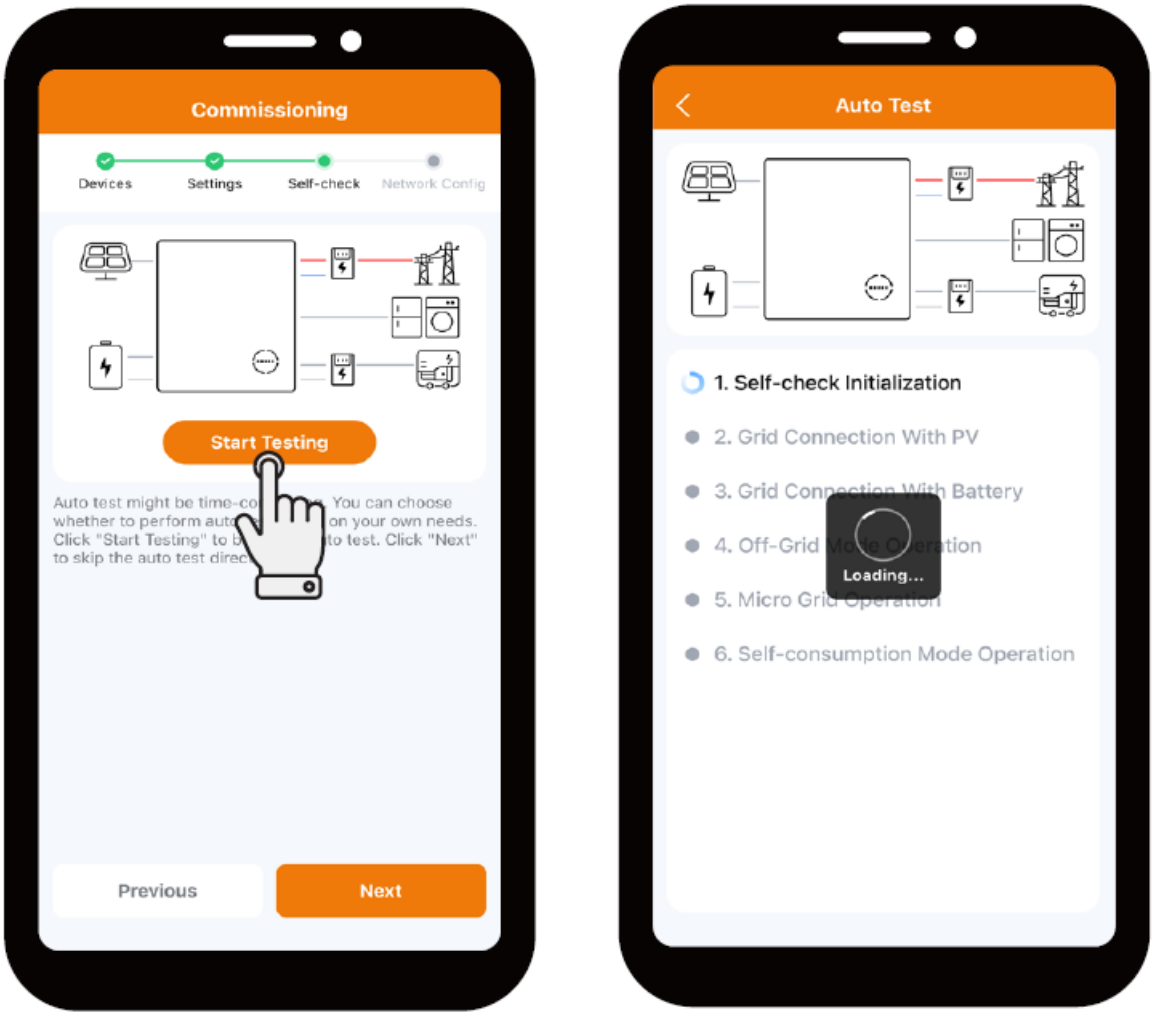




Testing Process

6. Complete the self-check, **tap Start Testing.**

> **NOTE**
>
> Before this operation, make sure that all cables including DC cables, AC cables, and communication cables are properly connected, and all AC and DC switches are turned on.

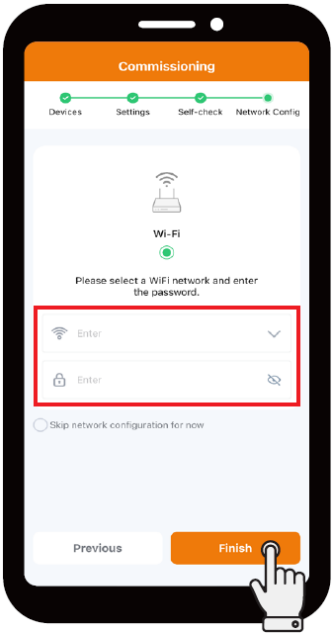


If there is any problem, solve it according to the prompts, Test again to confirm that the problem is completely solved.

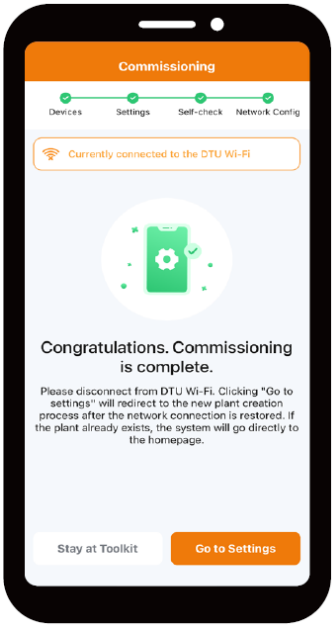
If there is no problem, this interface will display green checkmarks on the right of these items.

Network Configuration Settings

7. Configure the network. Follow the instructions to configure the network
    a. Enter the customers **Wi-Fi name and password** and **tap Finish**
    b. Allow time for the network to configure with the inverter
    c. The Wi-Fi signal strength can be viewed step, in a percentage value.





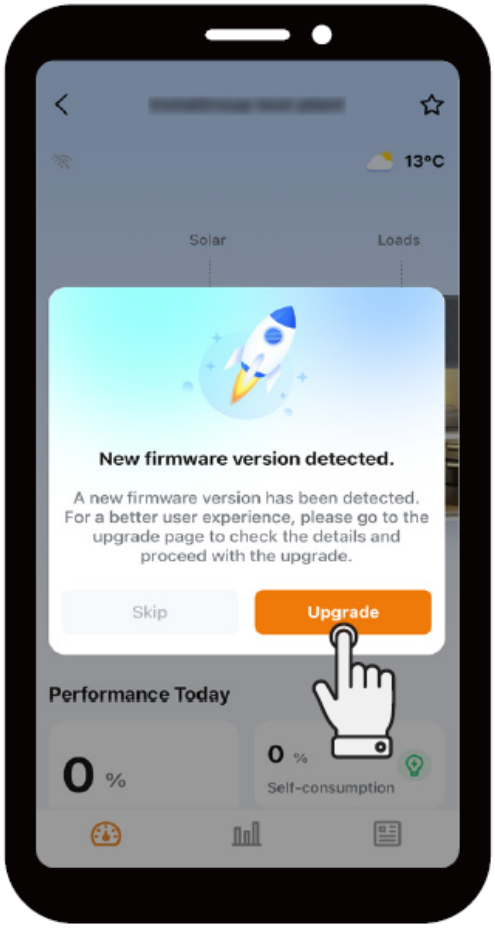


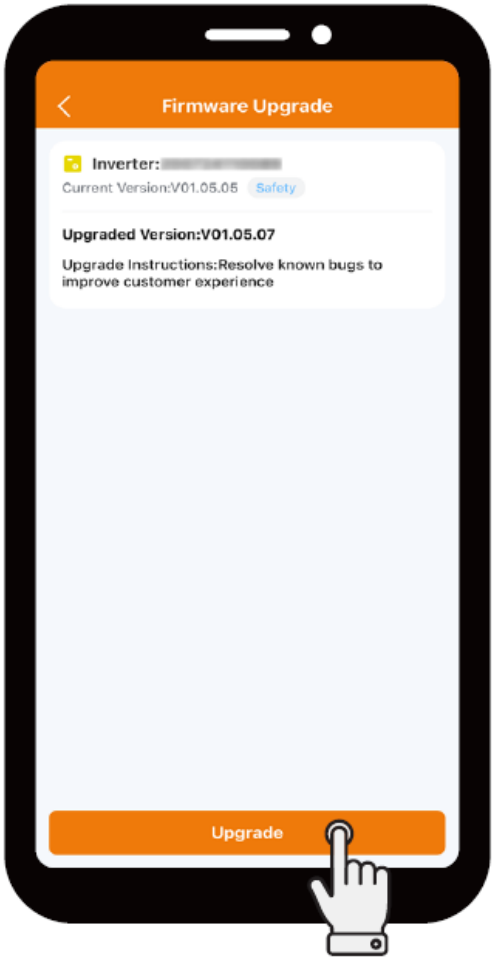
Firmware Upgrade

When you enter the plant overview interface, there will be a pop-up window if there is a new firmware version.

Method One

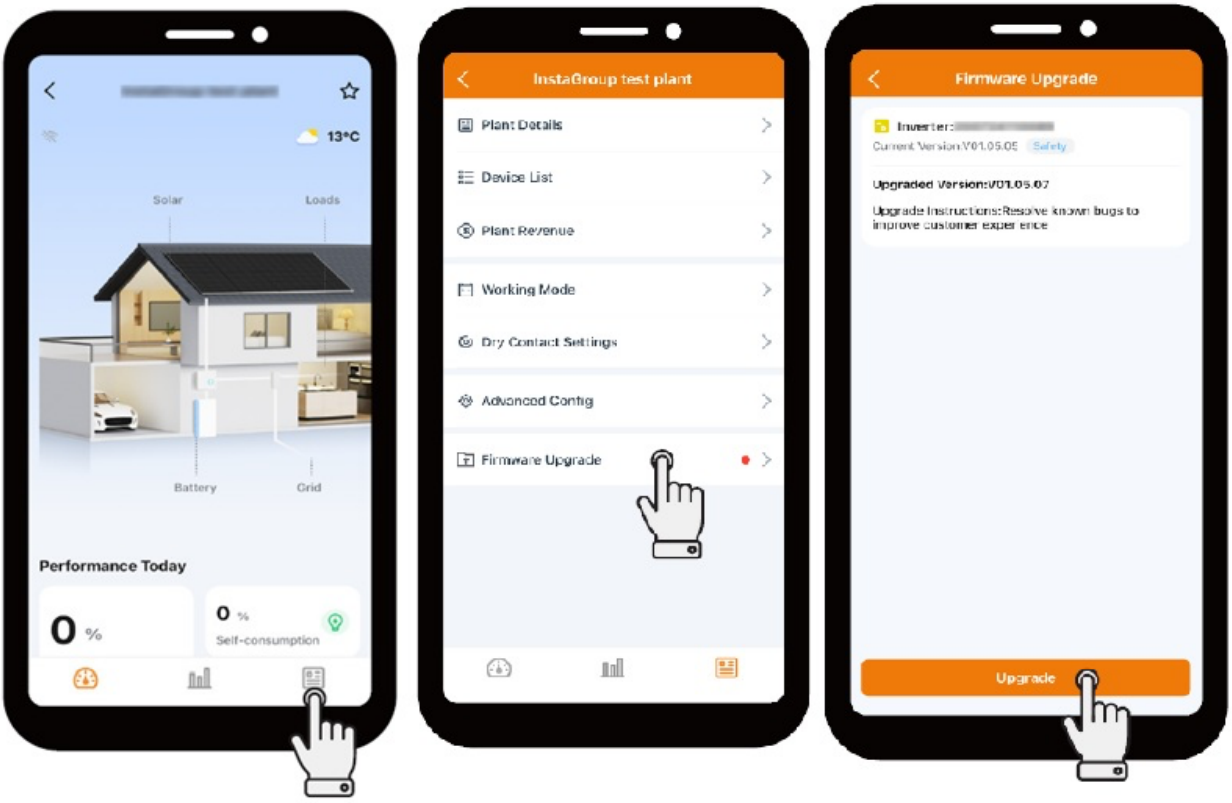
1. Tap the target plant
2. Tap **Upgrade**
3. Tap **Upgrade**


13°C
Solar
Loads
New firmware version detected.
A new firmware version has been detected. For a better user experience, please go to the upgrade page to check the details and proceed with the upgrade.
Skip
Upgrade
Performance Today
0 %
0 %
Self-consumption


Firmware Upgrade
Inverter:
Current Version:V01.05.05
Safety
Upgraded Version:V01.05.07
Upgrade Instructions:Resolve known bugs to improve customer experience
Upgrade

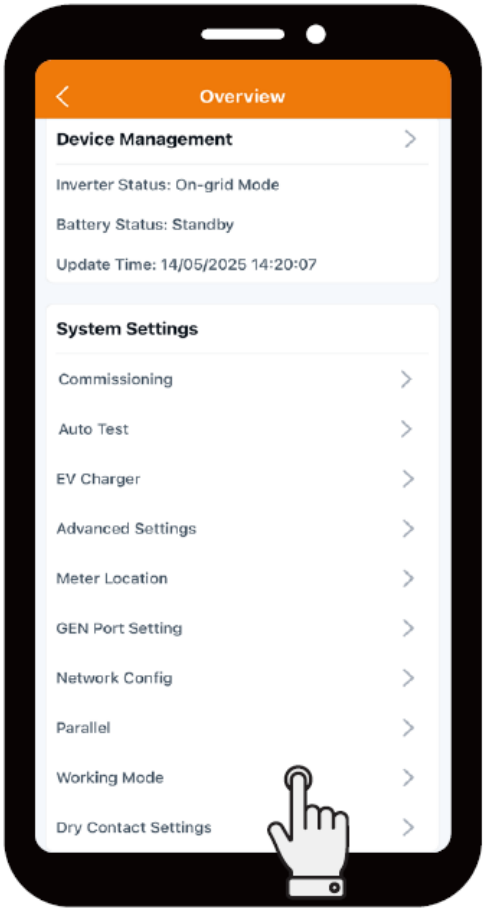
Method Two

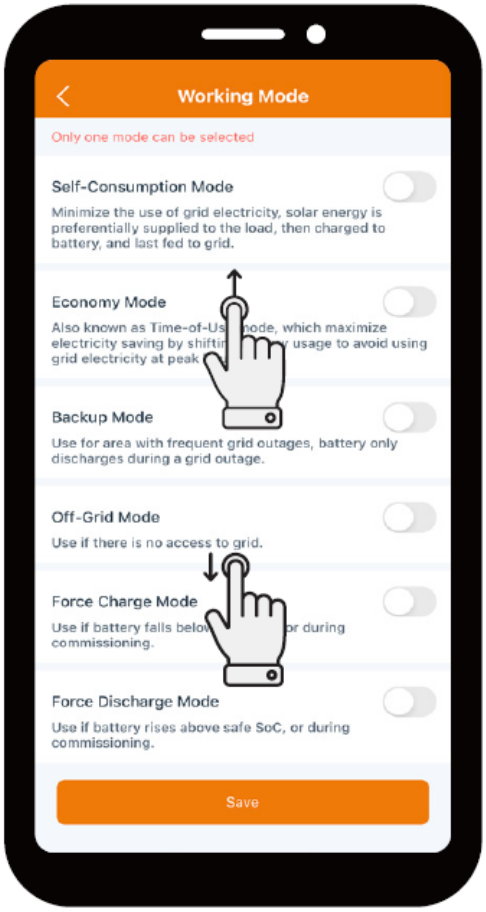
1. Tap the lower right corner
2. Tap **Firmware Upgrade > Upgrade**



Working Mode

1. Tap Working Mode
2. Select one mode and set relevant parameters
3. Tap Save





Working Modes (continued)

Aspect	Self-consumption Mode	Economical (TOU) Mode
Primary goal	Maximise on-site use of your own solar energy	Minimise electricity cost by tariff arbitrage
Day-time solar flow	**Load → Battery → Grid** (export last)	**Load → Battery or Grid** according to tariff schedule
Night-time sequence	**Battery → Load → Grid** once reserve SOC reached	**Battery → Load** (discharge can be paused in expensive windows)
Grid-to-battery charging	**Disabled** (cannot charge from grid)	**Enabled** during user-defined *valley/off-peak* periods
Time-of-Use optimisation	Not considered	Core feature – you define peak / partial-peak / off-peak windows by season or date
Surplus export to grid	Only after battery is full (or export-limit reached)	Allowed whenever economically beneficial or as configured
Reserve capacity setting	✓ – minimum SOC for outages	✓ – same setting available
When it shines	• Low feed-in tariff• Flat electricity price• “Set-and-forget” simplicity	• Large price spread between valley & peak• You like fine-tuning schedules for extra savings

Tip: If your utility offers significant peak/valley price differences, start with **Economical Mode** and create seasonal schedules for best results. If feed-in credits are tiny and you just want your solar to power your home first, stick with **Self-consumption Mode**.

Icon Maps

These icons will appear on the monitoring platform, alongside the plant name.



Icon	Description	
	Refers to Plants page.	
	Tap this icon to create a plant.	
	Tap this icon to search for a plant.	
	Tap this icon to view your favorite plants.	
	Tap this icon to add a plant to your favorites.	
	Tap this icon to edit a plant.	
	Refers to the plant address.	
	Network Status	Normal.
		Unstable Internet Connection.
		Offline.
	System Status	Normal.
		Alarm.
		Abnormal Grid.
		Meter Alarm.
		Communication Failure (only for the AC-coupled plant).
		SN Mismatch.
	Unfinished Plant.	