

A Step-by-Step Guide

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For a more detailed guide, please go to <u>Technical Documents - InstaGroup</u> and find our document <u>Instagen Cloud Operation-Guide</u>

a. Scan the QR code to download.





Instagen Installer

Instagen End-user

b. Search "Instagen Installer" or "Instagen End-user" in the Google Play or App Store.

1 InstaGen App Installation Instructions

1.1 Create an Installer account

Contact InstaGen Solar Technical Division before the installation day to request an Installer Account for your business.

1.2. Download the Installer App

- Scan the 'InstaGen Installer' QR code to download the InstaGen Installer App
- Use the login details provided by InstaGen to access the app

1.3. Set up the homeowner's access

- The homeowner must scan the 'InstaGen End-User' QR code to view their system after installation
- The End-User login details must be created through the Installer App

If adding solar panels, please check the polarity of any DC strings before connecting them to the inverter



2 DTS Dongle Setup Guide

2.1 Secure the DTS dongle

Ensure the DTS dongle is securely fastened to the inverter with the screws provided in the kit

2.2 Power on the inverter

- Turn on the breaker inside the fuseboard labelled PV or similar
- Turn on the battery breaker located on the battery
- On the battery, Press the silver button twice keeping the button pressed for 1 second each time
- Turn on the DC isolator(s) located beside the inverter and or on the inverter located underneath
- Turn on the AC isolator located next to the inverter
- · Wait 5 minutes for the system to reset

2.3 Check the LED indicator

Before proceeding, confirm that the 'RUN' LED is lit blue

2.4 Enable flight mode

On your phone:

- Android: Enable Flight Mode
- iPhone: Enable Airplane Mode

2.5 Enable Wi-Fi

Ensure your Wi-Fi setting is turned on

2.6 Connect to the DTS network

Select Data Transfer Stick (DTS-XXXXXXX) from the available Wi-Fi networks

2.7 Enter the DTS password

- Default DTS Password: ESS12345
- Select 'Join'

2.8 Connection confirmation

You are now connected to the DTS (Data Transfer Stick)



Enter	r the password for "DTS-235277	83″	Settings		< Settings	Edit
Cancel	Enter Password	Join	Q Search	٩		
Passwore	d		Apple Account, ICloud and me	ore	Wi-F	
You can also your iPhone	o access this Wi-Fi network by b e near any iPhone, iPad or Mac th to this network and has you in its	ringing at has	Apple Account Suggestions	2 >	Connect to Wi-Fi, view ava manage settings for join nearby hotspots.	ilable networks, and ing networks and earn more
contacts.			Expiring Soon: 3 Free Months of Apple Arcade	>	Wi-Fi	
			Airplane Mode		DTS-23527783	€ ╤ (j)

3 Installer App - Getting Started

Launch the InstaGen Installer App on your device

3.1 Network configuration steps

- 1. On the Plants page, Click the icon showing crossed spanner and screwdriver Then Toolkit, Network config Icon
- 2. Phone needs to be still connected to the DTS Wi-Fi
- 3. Look for DTS-xxxxxx
- 4. Password = ESS12345
- 5. Click connect
- 6. Enter Name of Homeowners Wi-Fi (Like VMxxxxx for example)
- 7. Enter router password
- 8. Send to DTU
- 9. Click Finish
- 10. The DTS (Dongle) should now be showing 3 blue LED lights



Networ	rk Config		×.	Network Config	J.	<	Network Config	3
DTU AP Password Setting	ı	>	DTU AP Passwo	rd Setting	>	DTU AP	Password Setting	
Please select a WiFi network Last Configured N	A-Fi ork and enter the pass Network:DTU-W100	word.		Connecting to route 67 S	r Eever Server	DTL Netwoo Signal Server Server	Connection Succeed 49 S Connection Succession Router Router King Status: Connection Succession Strength: 100% Connection Status: Connectic Connection Time: 27/01/2025	ed Server eeded In Succeeded 15:30:54
Wi-Fi T Password	TP-Link_B008] ~		Back			Reconfigure	Finish

3.2 Create a New Plant

On the Plants page, press the '+' button to create a New Plant.



- 1. Plant name is the first line of the address
- 2. Plant type 'Residential' or 'Commercial'.
- 3. Capacity means the Inverter size in kW



	Plant Information	
 Plant Name 	InstaTestPla	nt
• Plant Type	Residential Plant	>
Capacity (kW))	10
* Address Ki	United ingdomEnglandWokinghamFincha	•
* Time Zone	(GMT) Dublin, Edinburgh, Lisbon, London [>
 Region 	United Kingdom	>
Supports	JPG, PNG or JPEG formats, 5MB or less	
	Nevt	
and the second se	HUAL	

- 4. Time Zone 'GMT' Dublin, Edinburgh, Lisbon, London
- 5. Region 'United Kingdom'
- 6. Upload Photo to display on main page
- 7. Click Next



<	Plant Location	Confirm
Q Search Lo	ocation	
		۲
• Airinmar		
	Instagr up ©	
IVA _{NHOER} Coffee & O	o ₄₀ ; ☐ Data Di Courtney a T F Centre	rect
Maps Legal	Nicholson McLaren	E Lymaw Radiator
Insta House		~

8. Locate & select plant location: use pin to adjust and click 'confirm'

3.3 Add Owner Information

- 1. Click the 'Person' icon at the top right next to the search bar.
- 2. You the installer, will need to add the customers login and password. Usually, the login is the customer's name and password is 'InstaSolar'.
- 3. Click Save

Tip – screenshot these login credentials, in case you need them again at a later stage.



Owner Infor	rmation	< Add (Dwner	< Owner Information	n [
Q Select Owner	ę	* Login Account	InstaTestPlant	Q Select Owner	P+
		Password	InstaSolar! 💿	Bruce	-
		Confirm Password	InstaSolar! 💿	Login Account: InstaTestPlant	
		• Name	Bruce		
		Email	Enter		
		Phone Number	Enter		
Previous	Next			Previous	Next
		Si	ive		

- 4. Owner information will now be showing in the next screen
- 5. Click 'Next'

3.4 Bind Devices

- 1. Click 'Add DTU' icon This is also referred to as the DTS and is the data stick dongle.
- 2. Enter DTU serial Number (This is found below the barcode, either on the box or on the side of the unit itself).
- 3. Tip The Inverter serial number will auto detect once the dongle serial number has been entered.



4. Click finish	<	s s	Add Device	
< Bind Devices	9			C2 0
Add DTU	+ 0	DTU-SN	430123527783	89
Previous Next			Finish	

3.4 App Settings

1. Select GBP for currency and add tariff information if available.



€	Plants	Q	< Settings	
☆ Plant Sta	System Type		Plant Name	InstaTestPlant
Plant Quantity -	- 33			
\$2 W	InstaTestPlant		Currency	GBP >
10	O kW	Ø	Electricity Price per Unit(Sell)	Enter
Ounited Kingdo	omEnglandWokinghamFincl	hamp	Electricity Price per Unit(Buy)	Enter
1	initer Clo			
3	.75 kW	Ø		
O United Kingdo	omEnglandOxfordNorth Hin	ksey12 Con		
☆ *	arey par			
6	.3 kW	Ø		
O United Kingdo	omEnglandLooePolperro41	Carey Park		
	till Hill Ro			
1	0 kW	Ø		
O United Kingdo	omEnglandCowesCowes48	Mill Hill Road		
	×	00	Previous	Finish

The plant has now been successfully created



4 DTU Password Resetting Process

You will be prompted to change the default password. *This is necessary under new guidelines.*

< Overview		< DTU AP I	Password Setting	
Cloud Communication		DTU AP Password Sett	ting	
DTU-SN: 430123527783		* Original Password	ESS12345	۲
Last DTU Connection to the pla	tform: WIFI	* New Password	UnitedKingdom	0
Last Connection Status: 🔶	005 45-50-47	* Confirm Password	UnitedKingdom	۲
Note		Password must be bety consisting of letters, nu	veen 8 and 63 characters,	rs
activated, please change now. Confirm Back	t to a new one	6	Send to DTU	
Auto Test	>			
Advanced Settings	>			
Meter Location	>			
GEN Port Setting	>			
Network Config	>			

5 Grid and Solar Meter Location Setup Process

Follow these steps to set up the grid and solar meter locations:

- 1. Ensure the Modbus meter(s) are correctly configured
 - 001 for the Solar PV
 - 002 for the Grid







- 2. Go to the Plants page and click on the O&M icon (*Spanner and Screwdriver crossed*) at the bottom of the screen.
- 3. Then click on Toolkit.
- 4. Near the bottom of this page click on Meter Location.
- 5. Enter the serial number of the Grid *(Chint)* Modbus meter. You will find this either on the box it came in or the right side of the meter itself.
- 6. Repeat this process for the Solar PV Meter if applicable (*AC coupled system with 3rd party PV*)
- Plant Status System Type 255 kW Capacity ☆ **Cloud Communication** Plant Quantity - 33 DTU-SN: 430122010055 al: 10 Last DTU Connection to the platform: WIFI InstaTestPlant Offline: 16 28 Last Connection Status: 🛜 Alarm: 0 0 Unfinished: 2 Last Connection Time: 2023-02-09 16:25:17 10 kW Inverter Management 31 9.33 MWh (AII) 118.95 MWh Inverter Status: On-grid Mode Battery Work Status: Standby 118.59 Ton 3.75 kW 0 De 6,480 Trees Update Time: 2023-02-09 16:26:25 12 Con Tools Settings Self-check × 6.3 kW 0 Grid Profile Confi Alarm Toolki Park Meter Location Generator Setting Network Config Ø 10 kW Network Confi O United K ... 0 0
- 7. Click Finish



<	Meter Location	<	Meter Location
8 Grid	240519143494 🖯	🕸 Grid	240519143494 🕞
Solar	Enter the meter SN	Solar	240519143344 🖯
When the s sure to con will behave	system is configured with the battery, make figure the meter. Otherwise, the system abnormally.	When the s sure to con will behave	system is configured with the battery, make rigure the meter. Otherwise, the system abnormally.
	Save		Save

6 Firmware Version Update

The system will automatically detect a new version of firmware is available. While the system is upgrading, you can leave the page, and the process will continue in the background.

You'll know the system is fully up to date when the 4th image appears, showing that there are no available updates.

Ð	Plants	Q	<	InstaTestPlant	i	×	InstaTestPlant		<	InstaTestPlant		<	Firmware Upgrade
☆ Plar	nt Status 🖕 System Tj	/pe ,	Q	© 28/	01/2025 09:12:54	🗎 Plant D	etails	>	* <u>ă</u>		0		
Plant Quant	Ry - 33			Capacity: 10kW		t∃ Device	List	>		0 W			
		6		æ		Plant Re	svenue	>		/88			
Ounited Ki	ngdomEnglandWokingham	Finchampsteadl				B Working	3 Mode	>					
	3.75 kW	Ø	\$	•	Q	🕲 Dry Cor	itact Settings	>	New f	irmware version d	etected.		
United Ki	ngdomEnglandOxfordNort	h Hinksey12 Con	1.2 kW		1.32 kW	Advanc Adv	ed Config	>	A new firm For a bette	nware version has be r user experience, pl	en detected. ease go to the	Device	s are already at the latest version. No
\$	• 6.3 kw	Ø		5		ि Firmwa	re Upgrade	>	upgrad p Sk	e page to check the o roceed with the upgr ip	details and ade. Ipgrade		upgrade is needed.
O United Ki	ngdomEnglandLopePolper	ro41 Carey Park		0 W (SOC:81%)					-				
© United Ki	10 kW ngdomEnglandCowesCow	es48 Mill Hill Road	Today O Wh	31 This Month O Wh	(A)) 0 Wh				(a) Today O Wh	This Month O Wh	(i) Lifetime O Wh		
	×	0	٢	Int		٢	Int		•	Inl			

6.1 To check if there are any updates

Go to the Plants page, click on the plant you want to check – Then click the bottom right icon – The Firmware Upgrade listing will be found at the bottom.

InstaGroup

InstaGen Hybrid Installer App

7 Battery Settings Configuration

Follow these steps to set up your battery settings correctly:

- 1. On the Plants page click on the O&M icon
- 2. Then click on Toolkit
- 3. Click on Device Management
- 4. Select 'Battery Setting'
- 5. Choose the appropriate battery settings using the drop-down tabs.
- 6. Save your settings.

Plants Q	o	8M			< Inv	erter	< Batte	ry Setting
슈 Plant Status , System Type , Plant Quantity - 33	Capacity	255 kW	Device Management	>	Inverter SN 200724110089	Battery Setting No battery	Battery Type Battery Brand	Li-ion Battery V
InstaTestPlant The second sec	28 Total	Normal: 10 Offline: 16 Alarm: 0 Unfinished: 2	Inverter Status: Bypass Mode Battery Status: Standby Update Time: 27/01/2025 16:07:57				Battery Capacity Multiple PCS	10 kwh(1-100 0)
Close	(31) Energy This Month 9.33 MWh	(A) Utetime Energy 118.95 MWb	System Settings					
3.75 kW Ø	Total Reduction 118.59 Ton	6,480 Trees	Auto Test	>				
United KingdomEnglandOxfordNorth Hinksey12 Con	Tools		Advanced Settings	>				
6.3 kW Ø		×	Meter Location GEN Port Setting	>				
United KingdomEnglandLocePolperro41 Carey Park	Alarm	Toolkit	Network Config	>				
	a		Networking	>				
	Network Confi		Working Mode	>				
	83	8	Dry Contact Settings	>				Save

8 Performing an Auto Test

- 1. Start the Test
 - a. Select 'Auto Test'.
- 2. Allow the Test to Run
 - a. The system will automatically check all parameters.
- 3. Check for Faults
 - a. Any system faults or hardwiring issues will be identified during this step.
- 4. Re-Test if Needed
 - a. After resolving any issues, run the test again to ensure all six tests pass successfully.



< Overview	/ Auto Test	< Auto Test	< Auto Test
Device Management Inverter Status: On-grid Mode Battery Status: Discharging Update Time: 27/01/2025 16:10:22			
System Settings	1. Self-check Initialization	6. Self-consumption Mode Operation	
Auto Test	>		
Advanced Settings	> 1. Self-check Initialization	1. Self-check Initialization	1. Self-check Initialization
Meter Location	2. Orid Connection With PV 3. Grid Connection With Battery	2. Grid Connection With PV 3. Grid Connection With Battery	2. Grid Connection With PV
GEN Port Setting	> 4. Off-Grid Mode Operation	4. Off-Grid Mode Operation	4. Off-Grid Mode Operation
Network Config	5. Micro Grid Operation 5. Self-consumption Mode Operation	5. Micro Grid Operation	5. Micro Grid Operation
Networking	> a say conservation approximate	6. Self-consumption Mode Operation $\frac{d_{0}}{2\sqrt{c}}$	6. Self-consumption Mode Operation 🥥
Working Mode	>		
Dry Contact Settings	×		

9 Working Mode Selection

- The working mode can be selected based on the customer's requirements
- Only one mode can be selected at a time
- The setting can be adjusted seasonally or based on the customer's energy consumption

Plants		< Overview	< Working Mode
🖒 Plant Status System Type	Capacity 255 kw	na na serie de la companya de la comp	Only one mode can be selected
Plant Quantity - 33		Device Management >	Self-Consumption Mode
InstaTestPlant	28 Normal: 10 Offine: 16	Inverter Status: Bypass Mode Battery Status: Standby	Minimize the use of grid electricity, solar energy is preferentially supplied to the load, then charged to battery, and last fed to grid.
10 kw	Total Unfinished: 2	Update Time: 27/01/2025 16:07:57	Economy Mode
Contect rangeomenganism rocking sammine maniputedut.	(3) Energy This Mardh (3) Utefine Energy 118.95 MWb	System Settings	Also known as time-of-Use mode, which maximize electricity saving by shifting battery usage to avoid using grid electricity at peak hours.
	Total Reduction 118.59 Ton Carbon Emission Offset	Auto Test >	Backup Mode Use for area with frequent grid outages, battery only discharges during a grid outage.
O United KingdomEnglandOxfordNorth Hinksey12 Con	Table	Advanced Settings	
🗘 🗢 🖾 41 Carey park	Tools	Meter Location >	Off-Grid Mode Use if there is no access to grid.
6.0 AT	×	GEN Port Setting >	Force Charge Mode
United KingdomEnglandLooePolperro41 Carey Park	Alarm Toolkit	Network Config >	Use If battery falls below safe SoC, or during commissioning.
🗢 🖾 48 Mill Hill Road		Networking >	Force Discharge Mode
Initial KingdomEndonerCourseAs Mill kill Door	Network Config		Use if battery rises above safe SoC, or during commissioning.
	8	Dry Contact Settings	Seve

- This screen displays a fully functional plant
- For battery-only installations, the PV panel icon will appear greyed out





10 Exporting to the Grid

To adjust the energy flow to the grid: 1.

Scroll to the bottom of the page.

- 2. Locate the 'Max Export Power Limit' setting.
- 3. Adjust the value (expressed as a percentage) to set the desired export limit.



< Advanced Config		
ESS Advanced Config	ESS Safety Config	
Voltage Set Point V1	90	%(80~99)
Voltage Set Point V2	93	%(80~99)
Voltage Set Point V3	107	%(101~120)
Voltage Set Point V4	110	%(101~120)
Reactive Set Point Q1	43.6	%(0~100)
Reactive Set Point Q2	0	%(0~100)
Reactive Set Point Q3	0	%(0~100)
Reactive Set Point Q4	43.6	%(0~100)
Volt-Var Lock In	20	%(0~20)
Volt-Var Lock Out	5	%(0~20)
Generation Control Function (GCF)		
GCF Function Activated		
Max. Export Power Limit	0	%(0-200)
	Save	

11 ESS Safety Configuration

Follow these steps to ensure the ESS settings are correctly configured:

- 1. Access Advanced Settings
 - a. Select the icon in the bottom right-hand corner
 - b. Tap 'Advanced Config' to open the Advanced Settings page
- 2. Set the Grid Profile
 - a. From the drop-down menu, *select 'UK_G98 for inverters of 3.68kW and less, and G99 for inverters above 3.68kW'*
- 3. Save Your Settings







12 Switching On / Resetting the battery



System battery debugging

System power-off (All cables must be connected correctly).

- 1. Turn off the battery breaker switch located on the side of the battery.
- 2. Press and hold the silver button for 3 seconds The indicator light on the battery will turn off.

System power-on

- 1. Turn on the battery breaker switch located on the side of the battery.
- 2. Press and hold the silver button for 3 seconds <u>(if starting the battery for the first time,</u> <u>double click the silver button holding for 1 second for each press)</u>

Display Description

- 1. The green light flashes in charging mode
- 2. The green light is always on in discharge mode
- 3. In standby mode, the blue light will be on for 3 minutes, then it will be off for 3 minutes and then for 10 seconds
- 4. The red light is always on when a fault occurs.

Indicator light	
	InstaGen



13 Startup & Shutdown procedures

Commissioning

NOTICE

Before commissioning the inverter, please make sure:

- The inverter DC switch and AC Isolator and breaker are in the off position
- Double check the wiring and connections
- Check whether the grid voltage is within the permissible range (230 volts -6%, +10%) before turning on the AC supply
- Unused terminals must be sealed using the corresponding sealing plugs provided
- Nothing is left on top of the inverter and battery
- Cables are routed in a safe place or protected against mechanical damage
- Warning signs and labels are in place

Step	Procedure
1	If the inverter is connected to the battery, turn on the battery following <u>4.2 System power-on</u> on the previous page
2	Turn on the AC breaker between the inverter and the grid.
3	(Only for HYS series inverters) Rotate the DC switch to "ON" if the inverter is connected to the PV strings.
4	Check whether the inverter is operating properly through the inverter indicators status.

System Power-on Procedure

System Power-off Procedure

Step	Procedure
1	Stop the inverter from working via the InstaGen App.
2	Disconnect the AC breaker between the inverter and the grid.
3	(Only for HYS series inverters) Rotate the DC switch to "OFF" if the inverter is connected to the PV strings.
4	Turn off the DC breaker between the inverter and the battery.
5	Check whether the inverter indicators are off.



Decommissioning

NOTICE

After powering off the inverter, follow the steps below if needed:

- Wait at least 10 minutes after the LED indicators turn off to release the internal energy.
- Disconnect all cables.
- Remove DTS and power meter.
- Remove the inverter from the wall, remove the bracket if necessary, and finally pack the inverter and accessories.