

# DRIVING THE WORLD'S SMART ENERGY FUTURE

GoodWe Company Introduction



# **Vision**

Driving the world's smart energy future

# **Mission**

We are determined to become a major driving force in the global energy transition, building a sustainable future.







# **GOODWE FAMILY**



~5000

Total number of employees



1000 H

Overseas en

Overseas employees

# GLOBAL SALES REVENUE



GOODWE TECHNOLOGIES CO., LTD.



# **GOODWE MOMENTS**





# **GOODWE AWARDS**











Residential Hybrid Inverter

Global PV Interver Shipments

High energy

Most financially stable

Ecovadis: 2022 Silver



Top Brand PV Inverter for five consecutive years



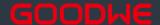
Reddot Design



For seven consecutive



PV Magazine Award



# **GLOBAL PRESENCE**

# 11 Subsidiaries

Australia, Germany, Benelux, United Kingdom, Japan, United States, South Korea, Spain, Poland, Singapore, Vietnam

### 27 Sales & Service Centers

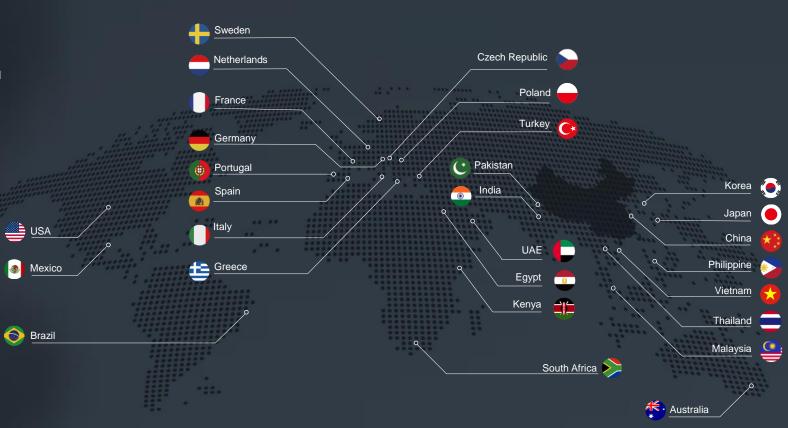
Australia, Netherlands, Germany, France, Mexico, Brazil, Poland, Spain, Italy, South Africa, Portugal, Greece, India, Turkey, Japan, United States, Vietnam, Thailand, Malaysia, UAE, Kenya, Sweden, Czech Republic, South Korea, Pakistan, Philippines, Egypt

# 4 R&D Centers

Suzhou R&D center, Shenzhen R&D center, Wuhan R&D center, Nanjing R&D center

# 3 Production Facilities

Suzhou Manufacturing base (China) Guangde Manufacturing base (China) Haiphong Manufacturing base (Vietnam)



# OVERSEAS WAREHOUSES

# **USA**

Warehouse (Fontana, CA)

> Brazil Warehouse (Cariacica)

Netherlands Warehouse

(Rotterdam)

# **Netherlands**

Warehouse (Alphen aan den Rijn) Bonded warehouse (Istanbul)

**Germany**Warehouse
(Bergheim)

\\_\_\_\_

Japan

GOODHE

Warehouse (Kanagawa)

India Warehouse (Panvel)





Warehouse (Dandenong South)

ustralia

Warehouse (Braeside)





# **Production Capacity**

GoodWe's. manufacturing integrates the latest and most sophisticated processes and advanced automation solutions to deliver unparalleled quality and maximum efficiency

35 GW Solar Inverter Capacity



**2.1**GWh

**Battery Capacity** 





# GOODWE

# **Global Installation**

With an accumulative installation of 71.2 GW installed in more than 100 countries as the end of 2023, GoodWe solar inverters have been largely used in residential and commercial rooftops, industrial and utility scale systems, ranging from 0.7kW to 350kW.

**71.2** GW

Global Accumulative Capacity



**5.5** GW

Energy Storage Inverter



**30.4** GW

Residential Inverter



**7.8** gw

Utility-Scale Inverter



**27.5** GW

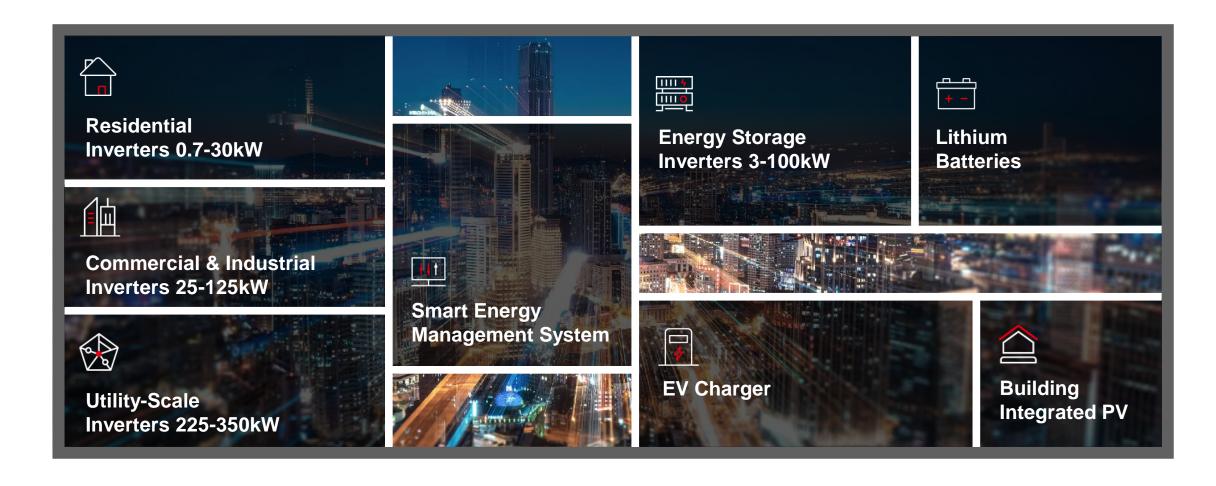
Commercial & Industrial Inverter



(as of the end of 2023)



# GOODWE PRODUCT PORTFOLIO





# Why GOODNE?



Market Relevant Product – Strong Feature Set



Good Reputation – Global Top 3 Brand



Established Local Team – Dedicated RMA Warehouse



Local Presence since 2014 – First Hybrid in SA



Competitive Pricing – Inverter + Battery Solution





# RESIDENTIAL ENERGY STORAGE INVERTERS 3-30kW



 $ET\ G2\ (HV)$ 

6-15kW



# Full Series – ES Series Range



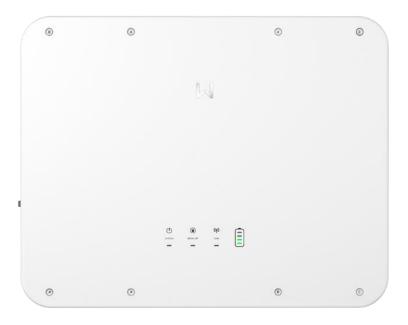


# **GoodWe ES G2**

3 – 6kW | Single Phase | 2 MPPTs | Hybrid

Inverter (LV)

- GW3600-ES-20
- GW5000-ES-20
- GW6000-ES-20



# **GoodWe ES Uniq**

8 – 12 kW | Single Phase | 2 MPPTs | Hybrid

Inverter (LV)

- GW8000-ES-C10
- GW10K-ES-C10
- GW12K-ES-C10





ES Series Key Features:

M

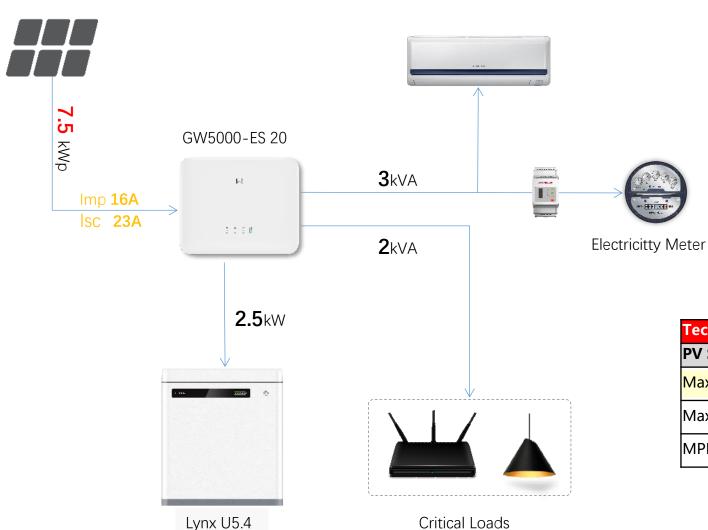
\* \* \* \* **1** 

# **MPPT Oversizing**

# Features – MPPT Oversizing

GOODKE Smart Energy Innovator

More than the capacity you paid



Maximized Usage of the Oversized Solar Capacity

ES G2 inverter support max **1.5\*Pn** PV overload ability, which means the excess power will charge battery.

Suitable for large solar Panels (16A/String)

Technical Data	GW5000-ES-20	GW6000-ES-20
PV String Input Data		
Max. Input Power (W)*2	7,500	9,000
Max. Input Voltage (V)	600	600
MPPT Operating Voltage Range (V)	60~550	60~550





600

60~550

600

60~550

600

60~550

Max. Input Voltage (V)

MPPT Operating

Voltage Range (V)

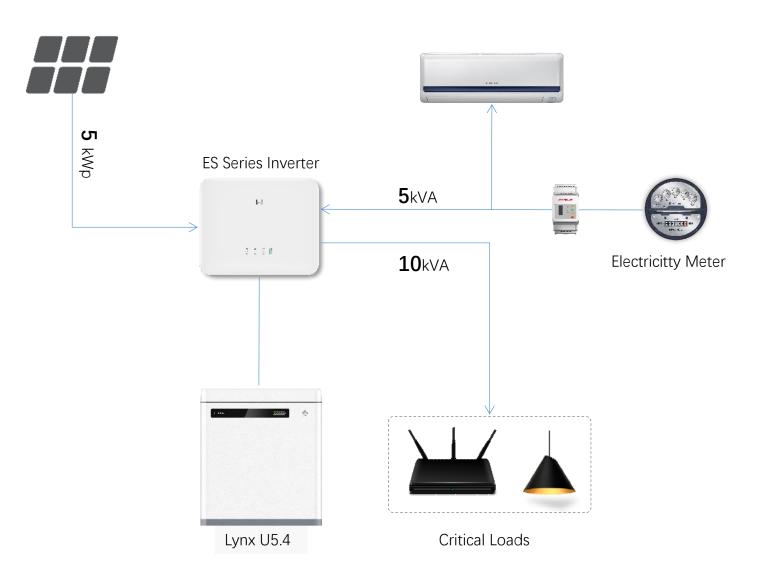
# Backup Overloading



# Features – Backup Overloading



More than the capacity you paid



Less Limited for Whole-Home Backup Usage

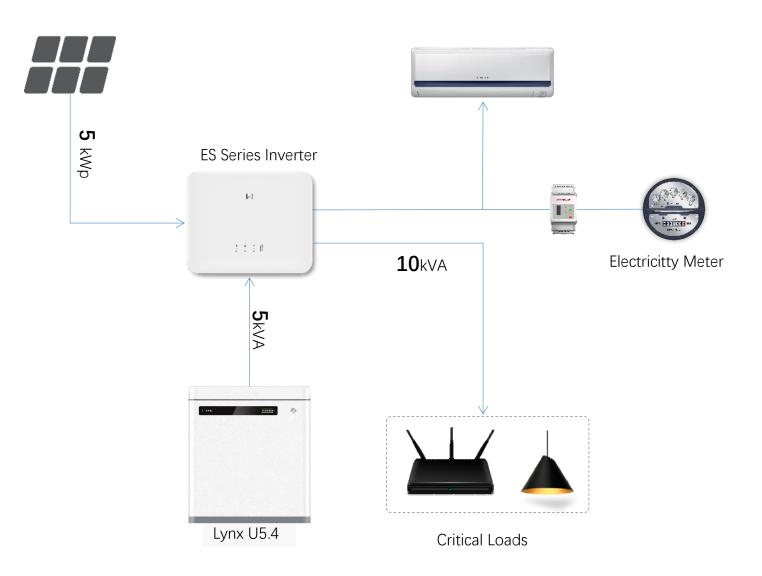
**ESG2** inverter support max **10kVA** output with grid availability.

**ES Uniq** inverter support max **16.5kVA** output with grid availability.

# Features – Backup Overloading



More than the capacity you paid



Less Limited for Whole-Home Backup Usage

And **10kVA** output without utility on the **ESG2** 

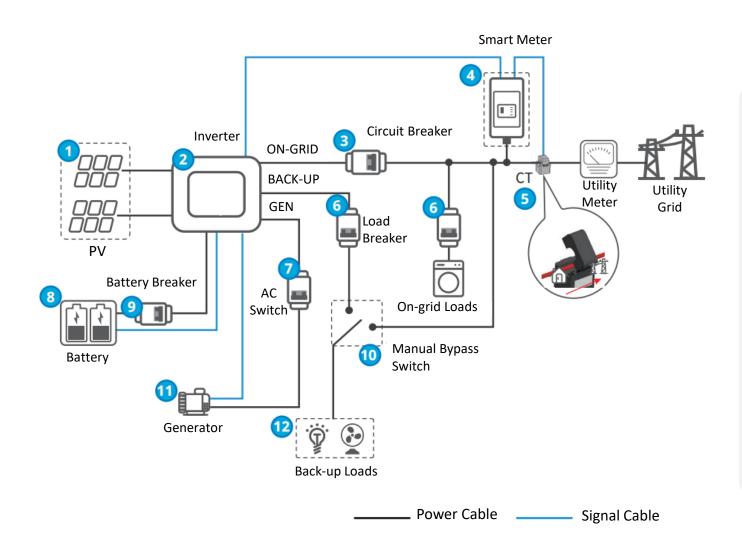
And **16.5kVA** output without utility on the **ES Uniq** 

# Generator & Load Control



# Features – Generator Mode





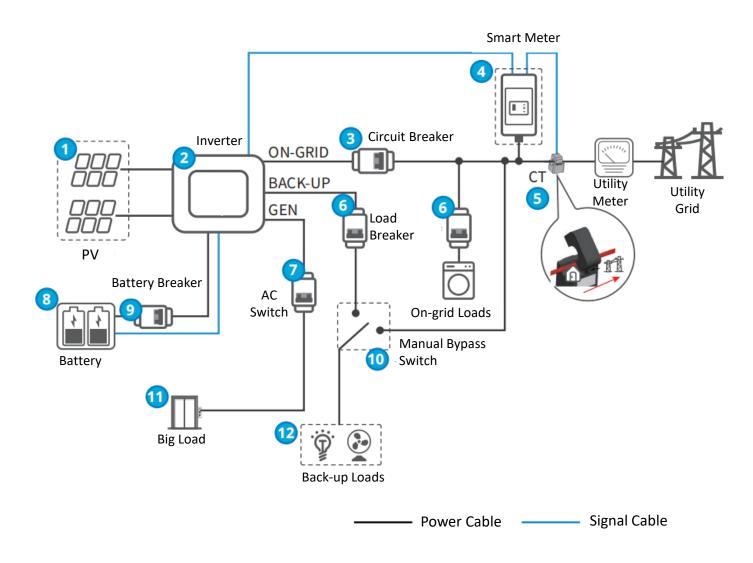
# **Generator mode**

# Including:

- Startup mode selection
- Battery charging function selection
- Idle standby time selection
- Prohibited working time selection
- Start-stop condition setting
- Operating voltage frequency setting
- Capacity setting, runtime setting, etc.

# Features – Big Load Mode / Smart Load Control





# Big load mode

# Including:

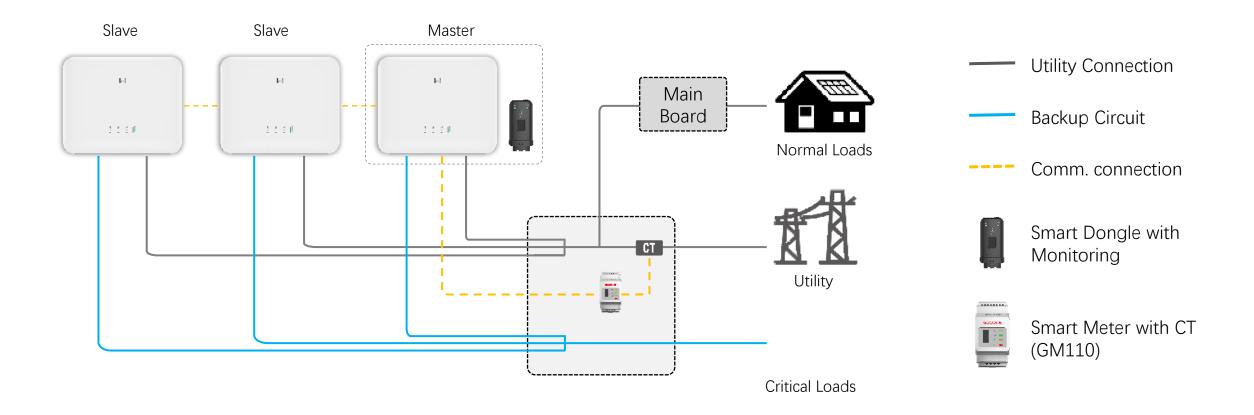
- Turn on/off selection
- Time Management Mode
- Off-grid Load Mode, etc.

# Parallel Systems



# Features – Parallel Systems



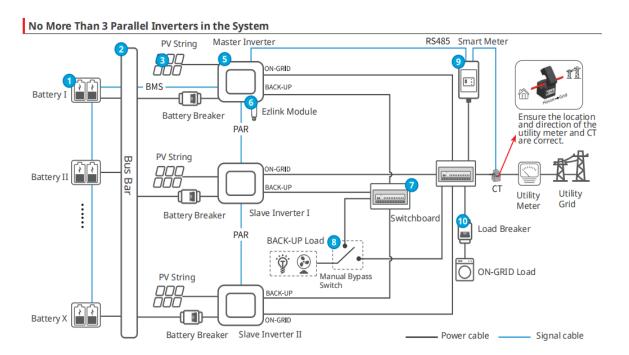


**3 pcs** could be paralleled, by Master & Slave relationship with smart communication dongle. Slave Inverter in fault mode will **automatically be bypassed**.

# Features – Parallel Systems

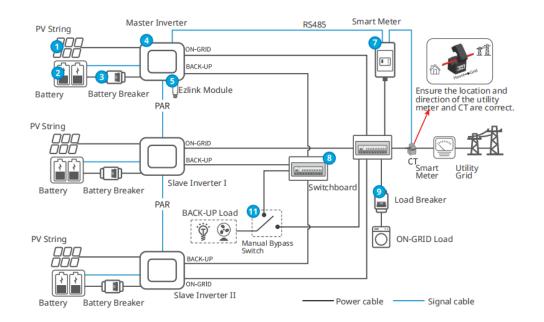


### **Scenarios with Parallel batteries**



# **Scenarios with Non-parallel Batteries**

### No More Than 3 Parallel Inverters in the System



### **UPS Level**

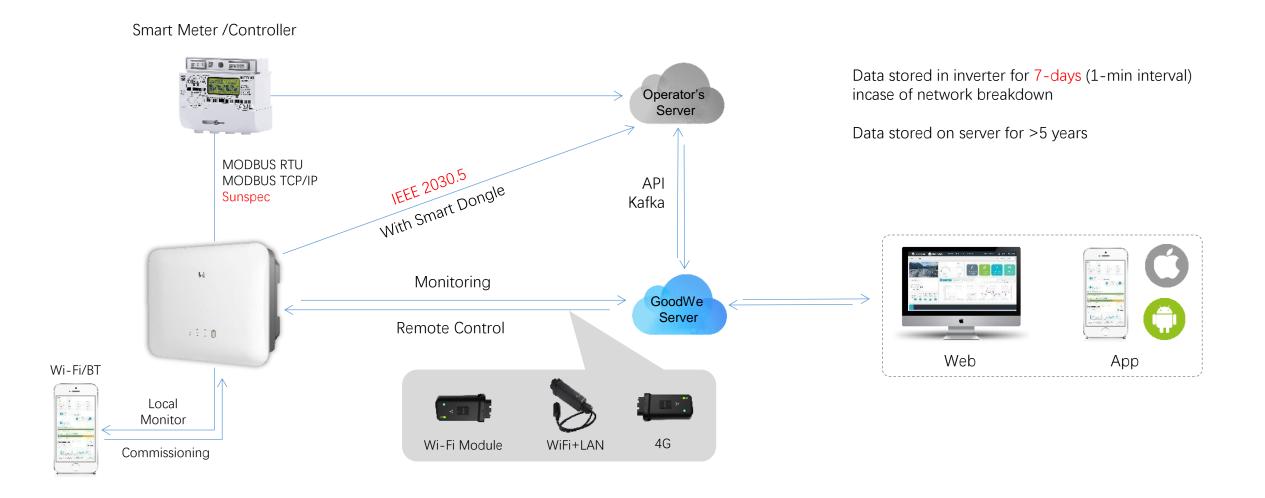
- <3 units</p>
- <10 ms

# 5 Communication



# • Features – Communication Systems





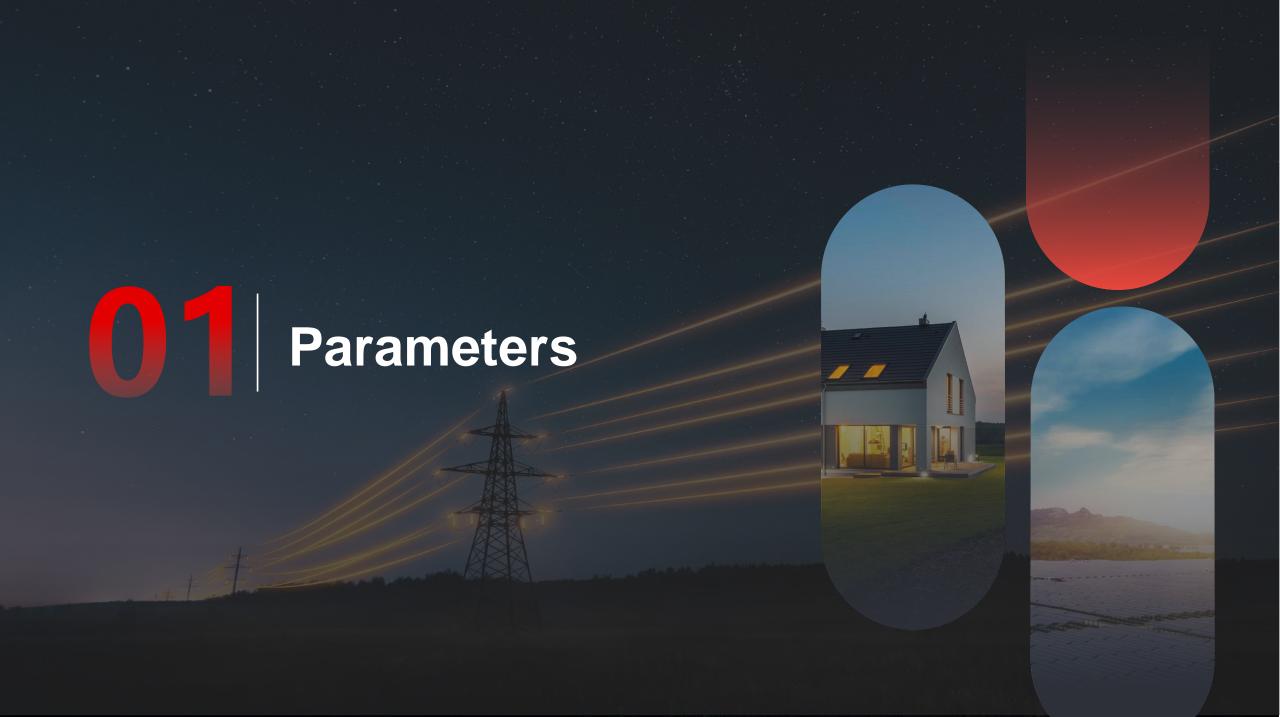




# ES G2

3.6 - 6 kW |Single-phase Hybrid Inverter

- 120A battery current
- Natural Convection Cooled
- UPS level Parallel up to 3 Units
- Easy Commissioning One APP for All



# Parameters



Technical Data		GW5000-ES-20	GW6000-ES-20
Battery Input Data	Battery Type	Li-lon	Li-lon
	Nominal Battery Voltage Range (V)	48	48
	Battery Voltage Rage (V)	40 ~ 60	40 ~ 60
	Max .Continuous Charging Current(A)	120	120
	Max .Continuous Discharging Current(A)	120	120
	Max. Charge Power(W)	5000	6000
	Max. Discharge Power (W)	5300	6300
PV String Input Data	Max. Input Power (W)	7500	9000
	Max. Input Voltage (V)	600	600
	MPPT Operating Voltage Range(V)	60 ~ 550	60 ~ 550
	Start-up Voltage (V)	58	58
	Nominal Input Voltage (V)	360	360
	Max. Input Current per MPPT (A)	16	16
	Max. Short Circuit Current per MPPT (A)	23	23
	Number of MPP Trackers	2	2
	Number of Strings per MPPT	1	1

# Parameters



Technical Data		GW5000-ES-20	GW6000-ES-20
AC Output Data (On-Grid)	Nominal Apparent Power Output to Utility Grid(VA)	5000	6000
	Max. Apparent Power Output to Utility Grid (VA)	5000	6000
	Max. Apparent Power from Utility Grid (VA)	10000	10000
	Nominal Output Voltage (V)	220 / 230 / 240	220 / 230 / 240
	Nominal AC Grid Frequency (Hz)	50 / 60	50 / 60
	Max. AC Current Output to Utility Grid (A)	22.7	27.3
	Max. AC Current From Utility Grid (A)	43.5	43.5
AC Output Data (Back-up)	Back-up Nominal Apparent Power (VA)	5000	6000
	Max. Output Apparent Power (VA)	5000 (10000 @ 10s)	6000 (10000 @ 10s)
	Max. Output Current (A)	22.7	27.3
	Nominal Output Voltage (V)	220 / 230 / 240	220 / 230 / 240
	Nominal Output Freqency (Hz)	50 / 60	50 / 60
	Output THDv (@Linear Load)	<3%	<3%

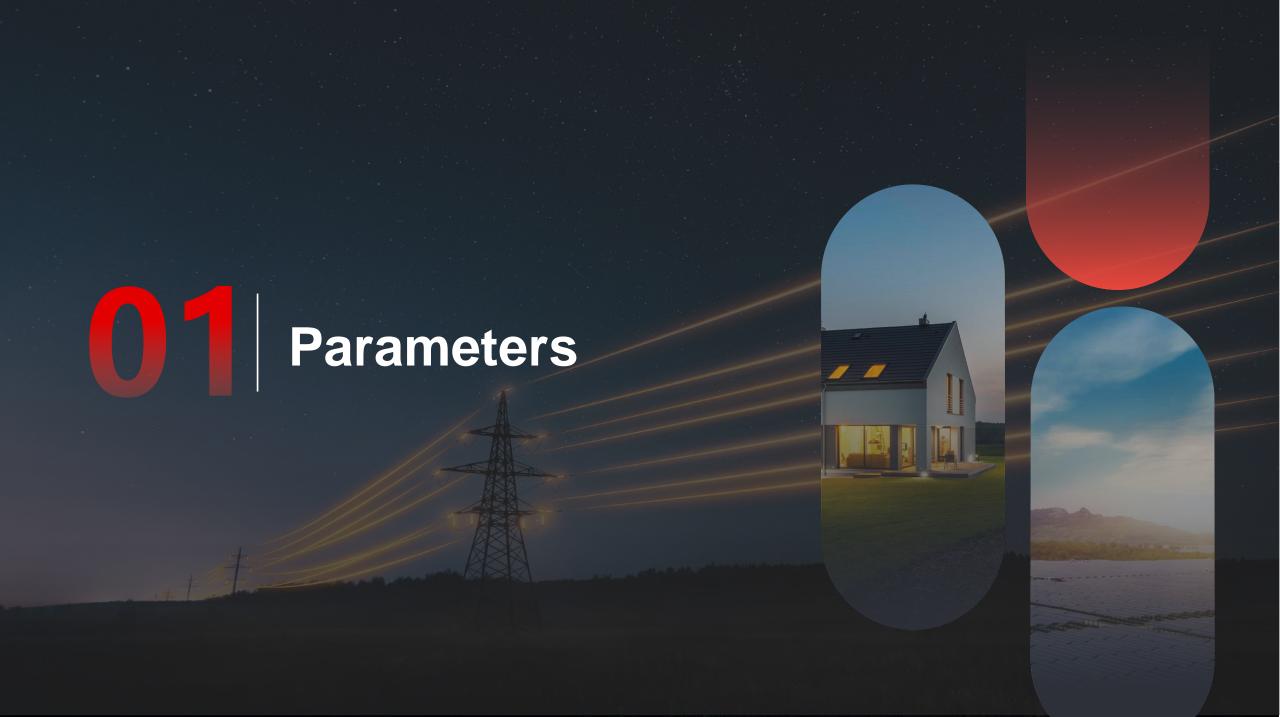




# **ES Uniq**

8-12 kW |Single-phase Hybrid Inverter

- 240A battery current
- CT directly connected
- Compatible with Lynx A
- Dedicated Generator Connection



#### Parameters



	Technical Data	GW8000-ES-C10	GW10K-ES-C10	GW12K-ES-C10
	Battery Type	Li-lon	Li-lon	Li-lon
	Nominal Battery Voltage Range (V)	48	48	48
	Battery Voltage Rage (V)	40 ~ 60	40 ~ 60	40 ~ 60
Battery Input Data	Max .Continuous Charging Current(A)	1600	200	240
buttery imput butt	Max .Continuous Discharging Current(A)	160 (176@10min)	200 (220@10min)	240 (264@10min)
	Max. Charge Power(W)	8,000	10,000	12,000
	Max. Discharge Power (W)	8,800	11,000	13,200
	Max. Input Power (W)	16,000	20,000	24,000
	Max. Input Voltage (V)	600	600	600
	MPPT Operating Voltage Range (V)	60~550	60~550	60~550
	MPPT Voltage Range at Nominal Power (V)	180~500	170~500	200~500
PV String Input Data	Start-up Voltage (V)	58	58	58
i v String input Data	Nominal Input Voltage (V)	360	360	360
	Max. Input Current per MPPT (A)	32/16	32/32	32/32
	Max. Short Circuit Current per MPPT (A)	48/24	48/48	48/48
	Number of MPP Trackers	2	2	2
	Number of Strings per MPPT	2/1	2/2	2/2

#### Parameters

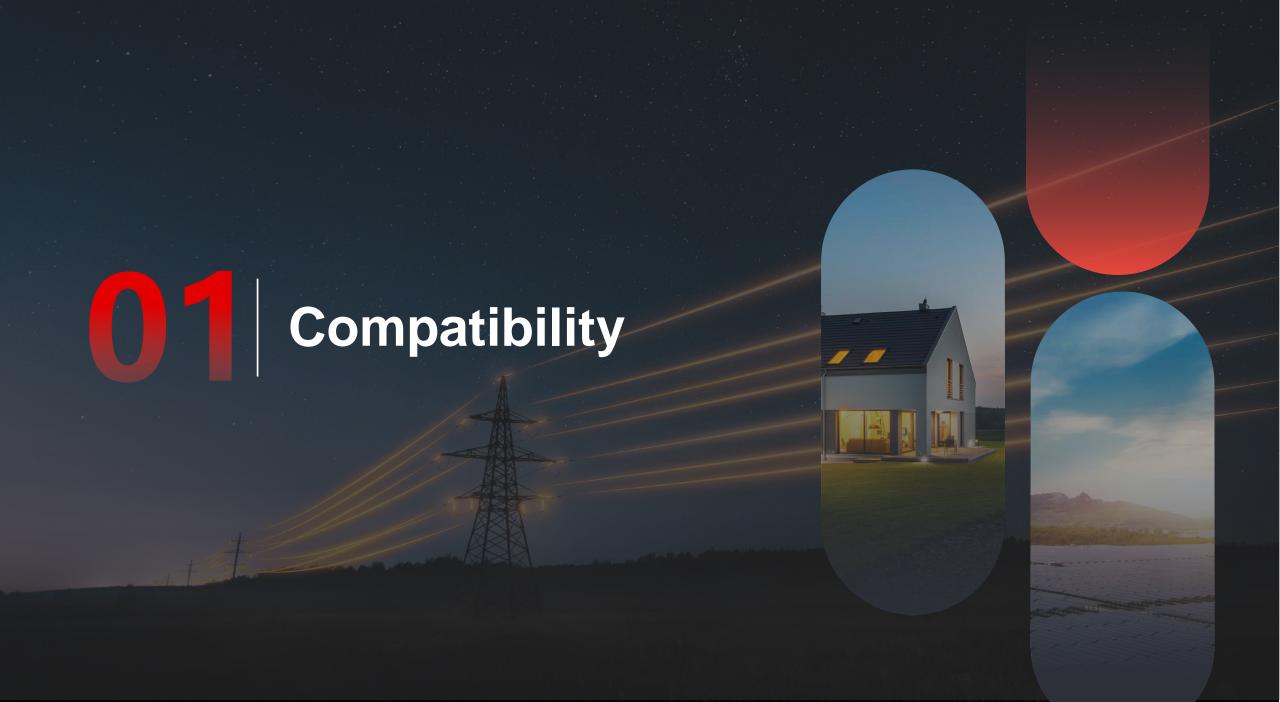


Technical Data		GW8000-ES-C10	GW10K-ES-C10	GW12K-ES-C10
	Nominal Apparent Power Output to Utility Grid(VA)	8,000	10,000	12000
	Max. Apparent Power Output to Utility Grid (VA)	8,000	10,000	12000
	Max. Apparent Power from Utility Grid (VA)	16,500	16,500	16,500
AC Output Data (On-Grid)	Nominal Output Voltage (V)	220/230/240	220/230/240	220/230/240
	Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60
	Max. AC Current Output to Utility Grid (A)	40	50	60
	Max. AC Current From Utility Grid (A)	75.0	75.0	75.0
	Back-up Nominal Apparent Power (VA)	8,000	10,000	12,000
	Max. Output Apparent Power (VA)	8800(16000@10s)	11000(20000@10s)	13200(24000@10s)
AC Output Data (Back-up)	Max. Output Current (A)	40	50	60
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Nominal Output Voltage (V)	220/230/240	220/230/240	220/230/240
	Nominal Output Freqency (Hz)	50/60	50/60	50/60
	Output THDv (@Linear Load)	<3%	<3%	<3%

#### Parameters



Technical Data	GW8000-ES-C10	GW10K-ES-C10	GW12K-ES-C10			
AC Data (Generator)						
Nominal Apparent Power from AC generator (VA)	8,000	10000	12000			
Max. Apparent Power from AC generator (VA)	11,000	12000	12000			
Nominal Output Voltage (V)	220/230/240	220/230/240	220/230/240			
Output Voltage Range (V)	170~280	170~280	170~280			
Nominal AC generator Frequency (Hz)	50/60	50/60	50/60			
AC generator Frequency Range (Hz)	45~55 / 55~65	45~55 / 55~65	45~55 / 55~65			
Max. AC Current From AC generator (A)	50	54.5	54.5			
Nominal AC Current From AC generator (A)	36.4/34.8/33.3	45.5/43.5/41.7	54.5/52.2/50			
Nominal Output Current (A)	36.4/34.8/33.3	45.5/43.5/41.7	54.5/52.2/50			



#### Battery Compatibility – ES Uniq (Type A - International)



ES uniq Compatibity list					
Brand	Series	Model	Note		
		LX U5.4-20			
		LX U5.4-20*2			
		LX U5.4-20*3			
	LXU	LX U5.4-20*4	Maximum number of parallel connections		
GoodWe		LX U5.4-20*5	for LX A batteries is 15.		
Goodvve		LX U5.4-20*6			
	LX A (G1)	LX A5.0-10			
	LX A (G3)	LX A5.0-30			
DYNESS	DL5.0C	DL5.0C			
BYD	BatteryBox LV5.0	LV5.0			





### LYNX A G3

5kWh I Low Voltage Battery

- 150A battery current
- 1.5C Discharge / 1C Charge
- Parallel up to 30 x Modules (150kWh)
- 6000 Cycle Life Span

### Battery Compatibility – ES G2 (Type A – International)



ES Series Compatibity list				
Brand	Brand Series			
GoodWe	SECU-A5.4L	SECU-A5.4L		
Goodwe	Lynx Home U	LX U5.4-L		
	Battery-Box Pro Series	-		
	Battery-Box Res Series	-		
BYD	Battery-Box LV Series	-		
טוט	Battery-Box Premium LVL	LVL 15.4		
	Battery-Box Premium LVS Series	-		
		RESU 3.3		
		RESU 6.5		
LG	DECLLIV Corios	RESU 10		
LG	RESU LV Series	RESU 12		
		RESU 13		
		RESU 6.4 EX		

ES Series Compatibity list				
Brand	Series	Model		
	US2000 Series	US2000		
	US3000 Series	US3000		
	US2000C Series	US2000C		
PYLON	US3000C Series	US3000C		
	Force L1 Series	Force-L1		
	Force L2 Series	Force-L2		
	US5000 Series	US5000		
		DL5.0C		
DYNESS	DYNESS-LV Series	DL5.0X		
		A48100		

Battery Compatibility – ES Series (Type C - Local)



ES Series Compatibity list					
Brand	Battery Model	Note			
BlueNova	BN52V-100-5.2K DU	*Locally Available			
Sunwoda	H4850M-P02	*Locally Available			
UZ	Power Lite L051100-A	*Locally Available			
Freedom Won	LiTE Home   LiTE Business   LiTE Commercial	*Locally Available			
BSL New Energy Technology	B-LFP Series   PowerLine Series	*Locally Available			
REVOV Batteries	R100   B100   R200  B220	*Locally Available			





# SolarGo Commissioning

GOODWE TECHNOLOGIES CO., LTD.

#### System Commissioning



#### Setting Inverter Parameters via SolarGo App

SolarGo app is a smart phone application used to communicate with the inverter via bluetooth, WiFi, 4G or GPRS modules. Commonly used functions are as follows:

- 1. Check the operating data, software version, alarms, etc.
- 2. Set grid parameters, communication parameters, etc.
- 3. Equipment maintenance.
- 4. Upgrade software version.

For more details, refer to SolarGo User Manual. Scan the QR code or visit <a href="https://en.goodwe.com/Ftp/EN/Downloads/User%20Manual/GW\_SolarGo\_User%20Manual-EN.pdf">https://en.goodwe.com/Ftp/EN/Downloads/User%20Manual/GW\_SolarGo\_User%20Manual-EN.pdf</a> to get the user manual.



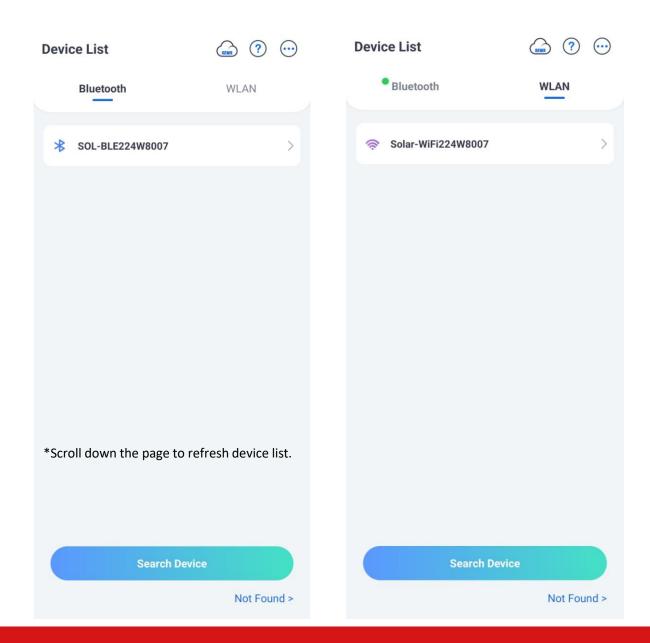
SolarGo App



SolarGo App User Manual

#### SolarGo: Connect to the inverter







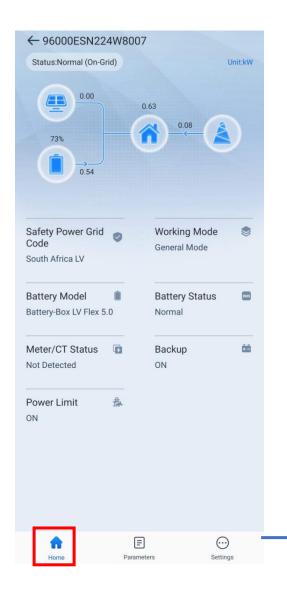
Solar-WIFI \*\*\*\*\*\*\* Password: 12345678



SOL\_BLE\*\*\*\*\*\*\*\*\*\*: last 8 characters of SN

#### • SolarGo: Introduction





#### Bottom menu

#### Overview

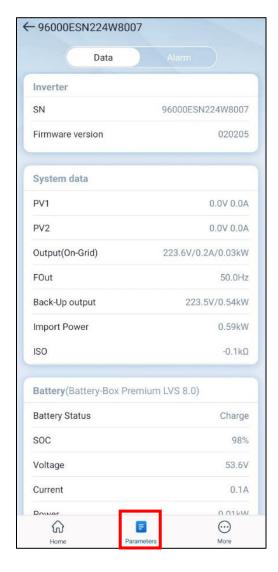
- Check live data
- See current settings

#### **Parameters**

- Check detailed grid settings
- See Alarms and error history

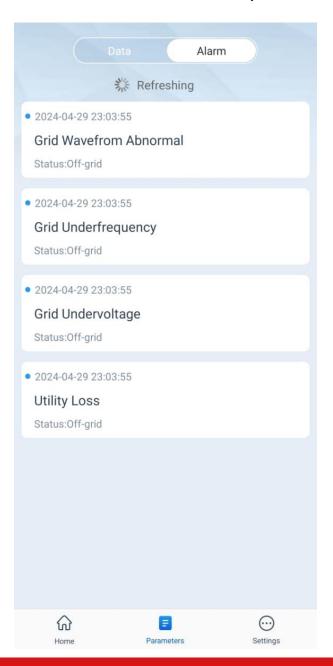
#### Settings

- Grid Settings
- Battery Settings
- Smart Meter Settings



#### SolarGo: Introduction (Alarms)





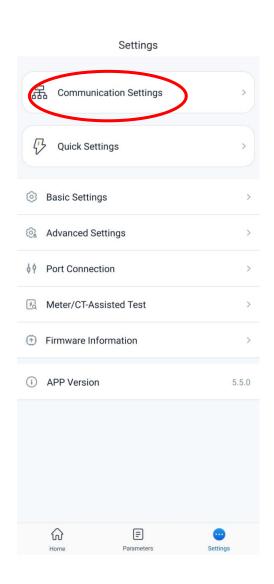
The Alarms tab can be consulted to see the last 100 alarms.

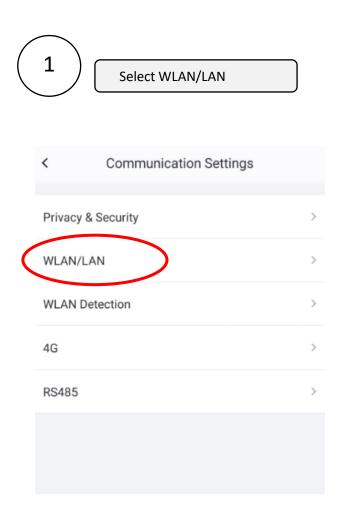
If the grid is connected and we see such grid errors, ensure the following:

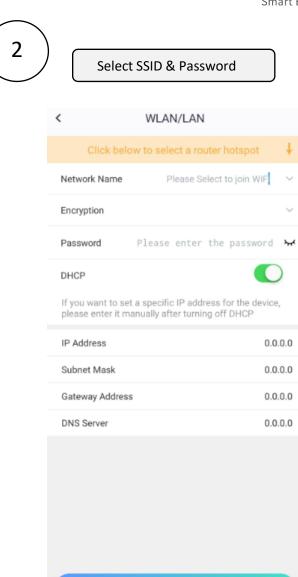
- Correct grid code selected
- Grid voltage is correct for RSA
- Remote shutdown is disabled

#### • SolarGo: Communication Settings (Connecting to WiFi)



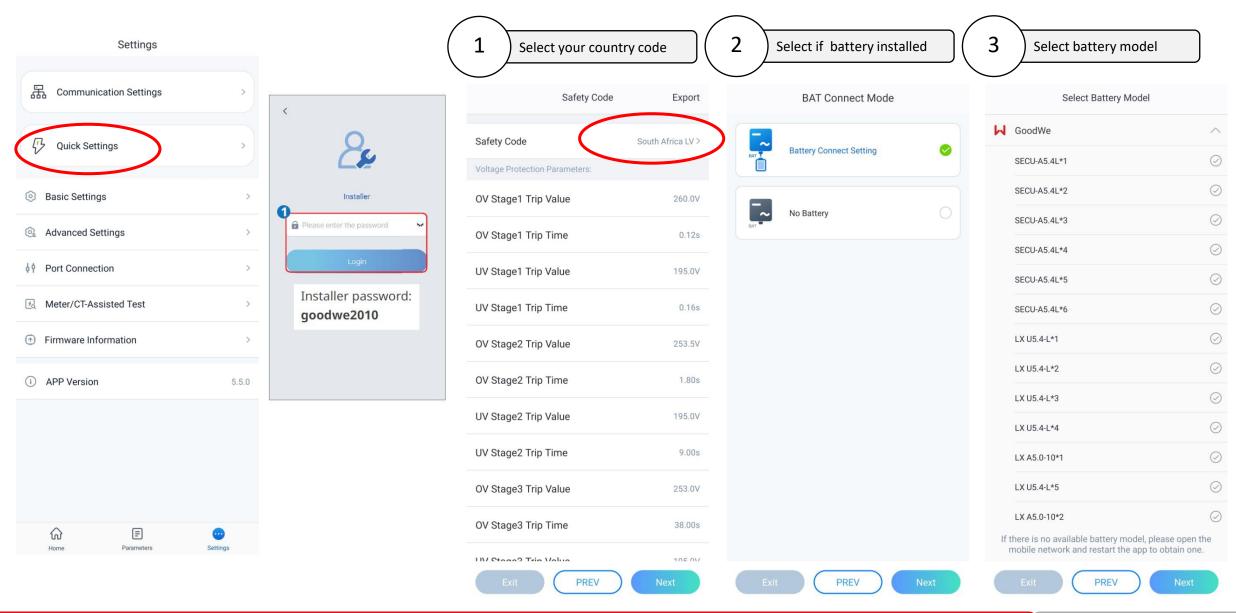






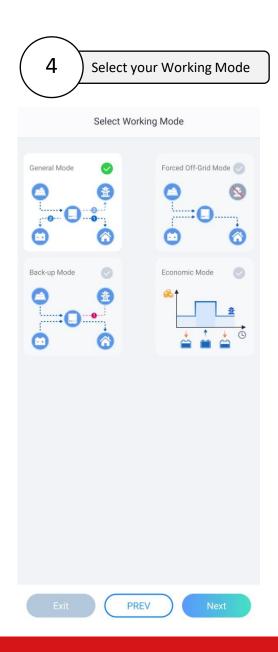
#### SolarGo: Quick Settings

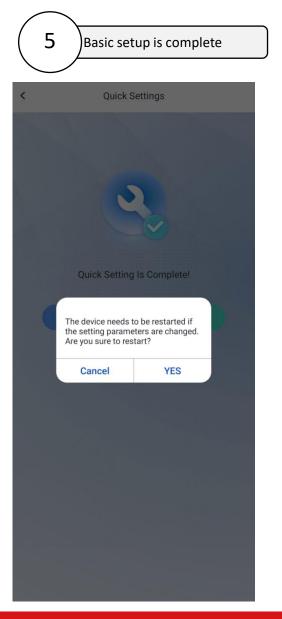




• SolarGo: Quick Settings

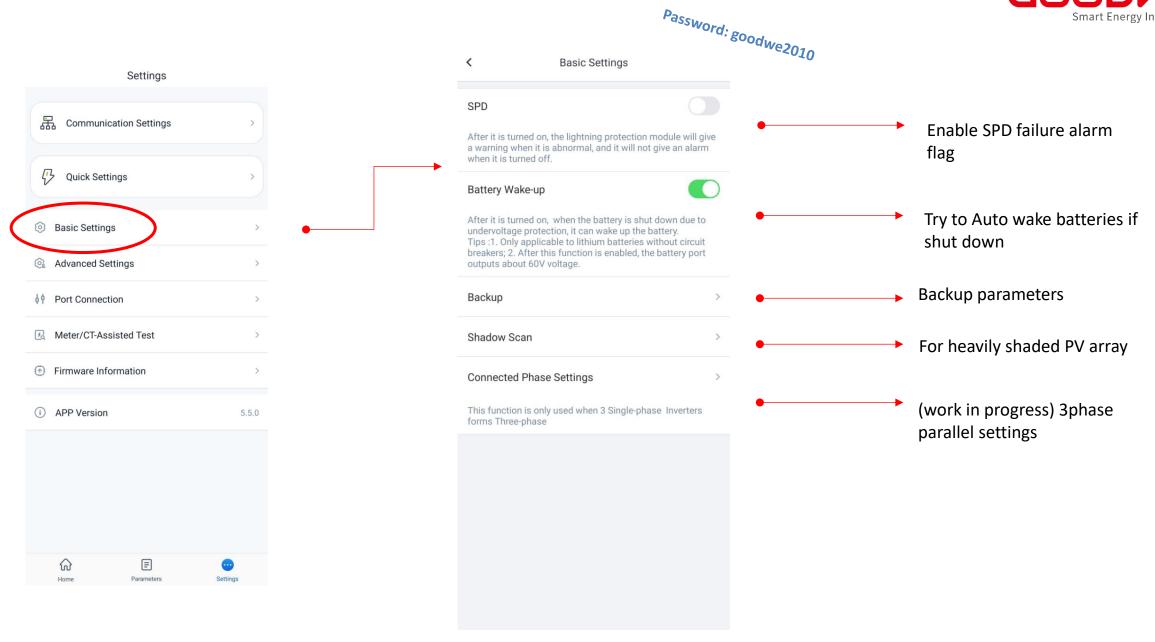






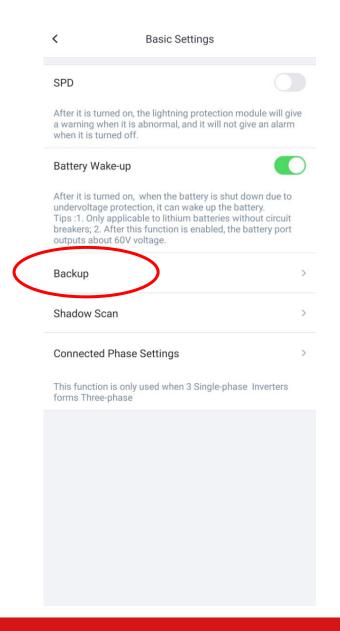
#### SolarGo: Basic Settings

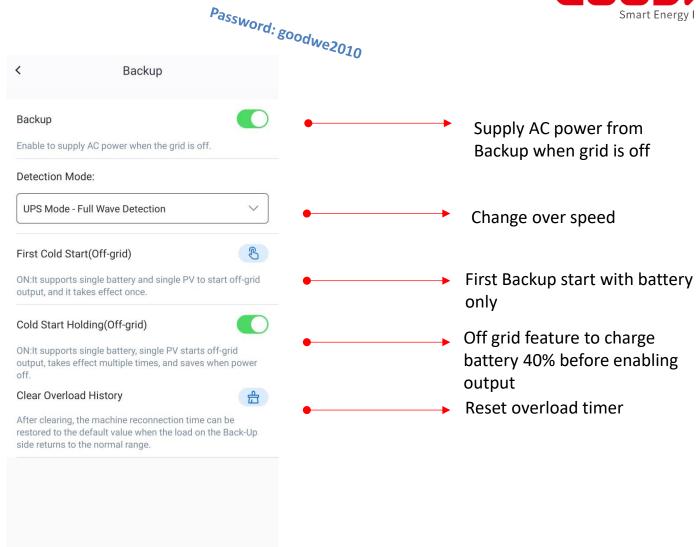




#### SolarGo: Basic Settings



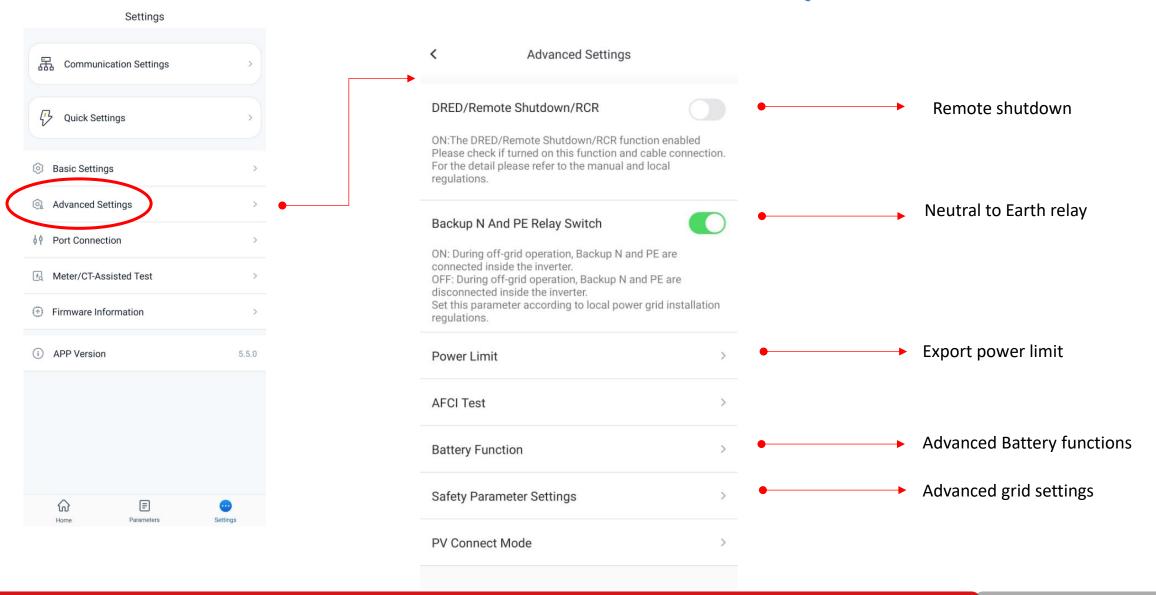




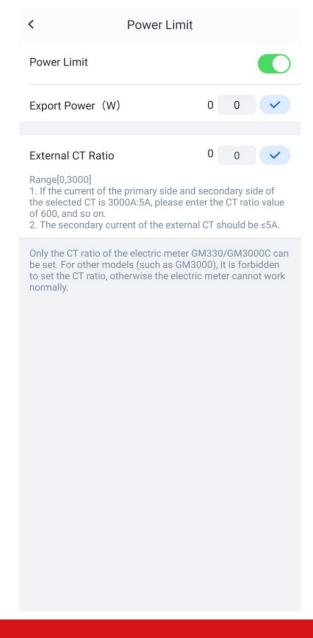
#### SolarGo: Advanced Settings



# Password: goodwe2010



#### SolarGo: Advanced Settings

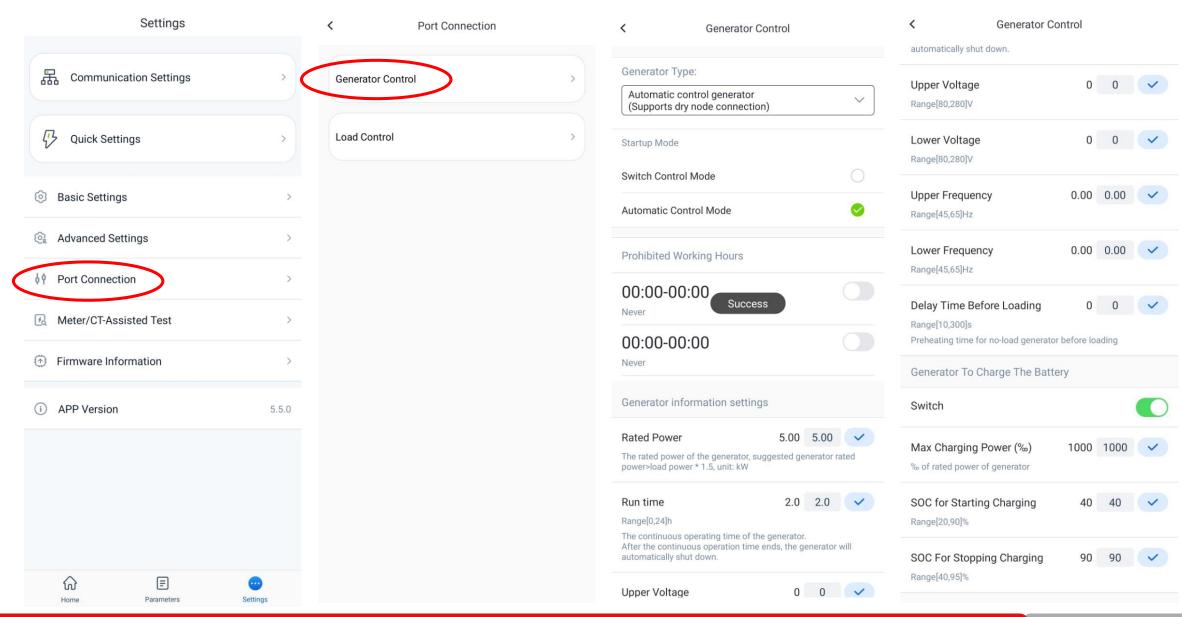




<	Battery Functio	n	Save
SOC Pro	otection		
	on the protection function when n the set threshold	the battery cap	acity is
Depth O	of Discharge	50	50
Set the di applicatio	scharge depth for the battery go, unit: %	rid-connected	
Depth O	of Discharge d)	95	95
Set the ba	attery discharge depth for off-gr	rid applications,	unit: %
ON: Whe	SOC Holding  n the power grid is functionin es to the State of Charge (SO	C) protection le	evel,
ON: When discharge maintain use as a energy is	n the power grid is functionin	C) protection le out further decli power outages can be utilized	evel, ine for . If solar
ON: When discharge maintain use as a energy is charge the	n the power grid is functionin es to the State of Charge (SO ing the battery capacity witho backup power supply during weak or unavailable, the grid	C) protection le out further decli power outages can be utilized	evel, ine for . If solar to
ON: When discharg maintain use as a energy is charge the	n the power grid is functionin es to the State of Charge (SO ing the battery capacity witho backup power supply during weak or unavailable, the grid he battery and sustain the res	C) protection le but further declipower outages can be utilized erved SOC.	evel, ine for . If solar to
ON: When discharg maintain use as a energy is charge the	n the power grid is functionin es to the State of Charge (SO ing the battery capacity witho backup power supply during weak or unavailable, the grid he battery and sustain the res  ate Charging  r Stopping Charging	C) protection le out further declipower outages can be utilized erved SOC.	evel, ine for . If solar to
ON: Wheel discharge maintain use as a a energy is charge the Immedia SOC For Range[0,	n the power grid is functionin es to the State of Charge (SO ing the battery capacity witho backup power supply during weak or unavailable, the grid he battery and sustain the res  ate Charging  r Stopping Charging	C) protection le out further declipower outages can be utilized erved SOC.	evel, ine for . If solar to
ON: Wheel discharge maintain use as a a energy is charge the Immedia SOC For Range[0,	n the power grid is functionin es to the State of Charge (SO ing the battery capacity with backup power supply during weak or unavailable, the grid he battery and sustain the reseate Charging  r Stopping Charging  100]%  ate Charging Power	C) protection le but further declipower outages can be utilized erved SOC.  Charge Co	evel, ine for . If solar to
ON: Whee discharg maintain use as a a energy is charge the Immedia SOC For Range[0,	n the power grid is functionin es to the State of Charge (SO ing the battery capacity with backup power supply during weak or unavailable, the grid he battery and sustain the reseate Charging  r Stopping Charging  100]%  ate Charging Power	C) protection le but further declipower outages can be utilized erved SOC.  Charge Co	evel, ine for . If solar to

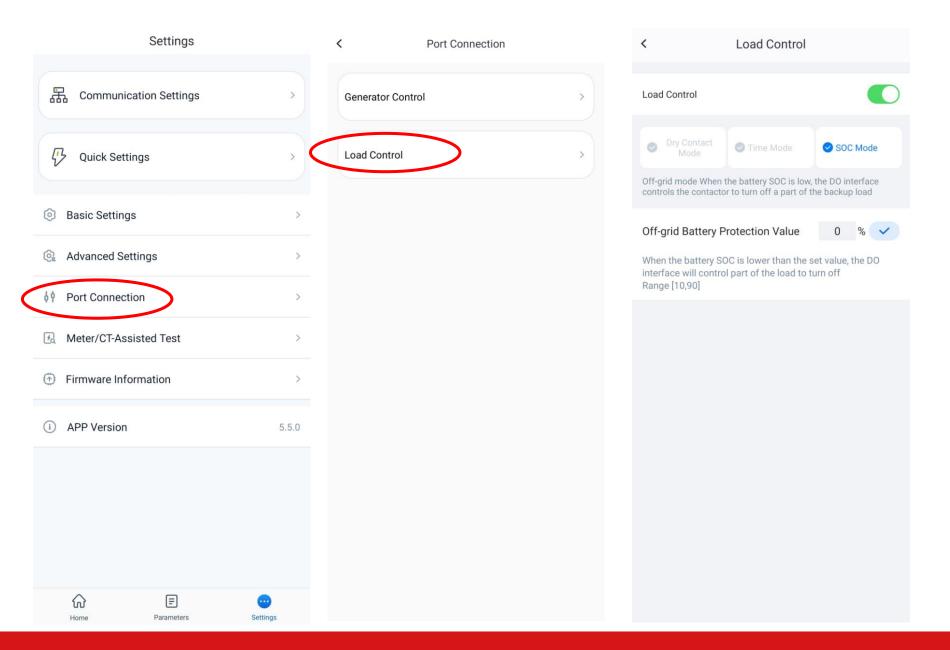
#### SolarGo: Port Connection – Generator Control





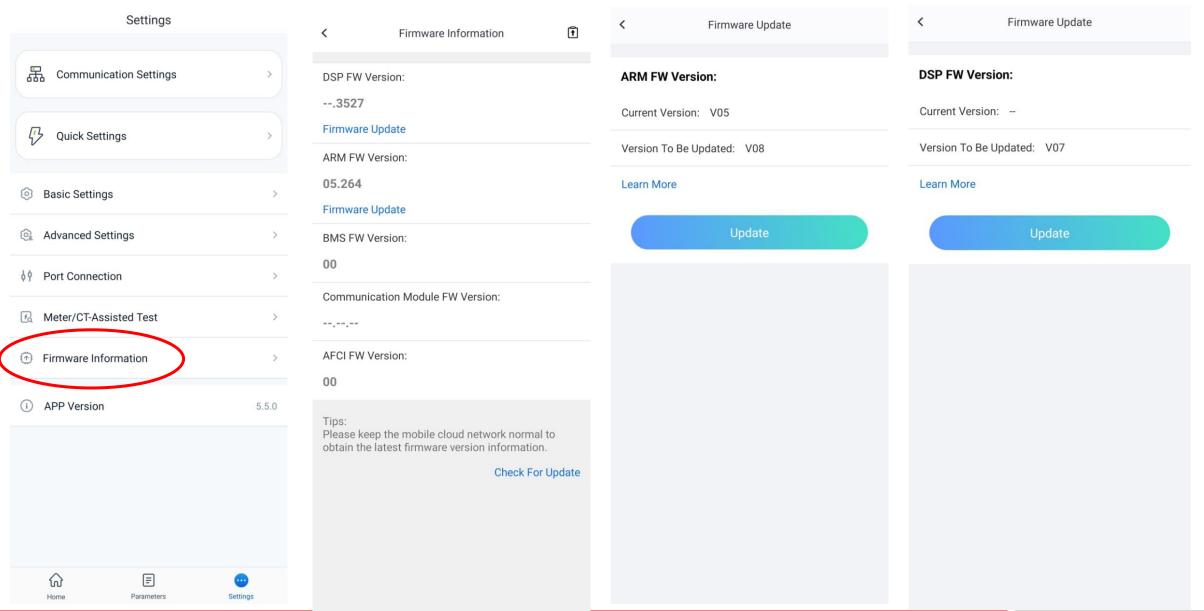
#### • SolarGo: Port Connection – Load Control





#### SolarGo Firmware Update (Bluetooth)



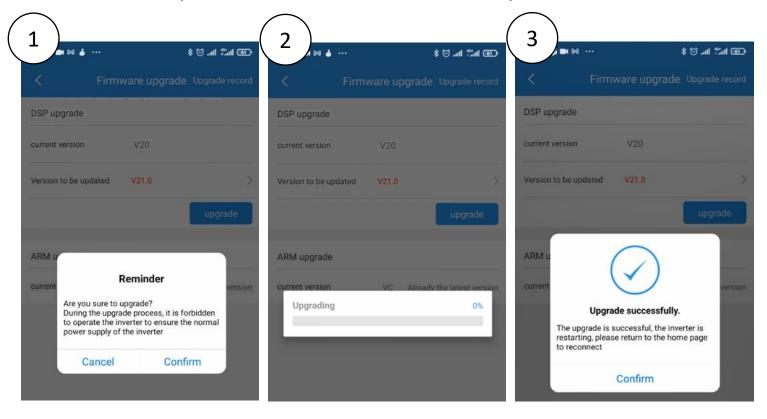


SolarGo Firmware Update (Bluetooth)



8 19 and 15 and 1500

The firmware update takes a few minutes to complete



DSP upgrade

current version

V21 Already the latest version

ARM upgrade

current version

VC Already the latest version

Once the prompt states successful you will have to wait 5 to 10 min until the device physically reboots. Thereafter you will be able to access the settings and confirm if the update was successful.





# SEMS + Application

GOODWE TECHNOLOGIES CO., LTD.







# Ticket Loading & RMA Process

GOODWE TECHNOLOGIES CO., LTD.



# 1. Contact Details

#### 1. Contact Details:



Support hours: 8:00 – 17:00

## **Support Contact Details:**



Support Centre: +27 86 112 6777



WhatsApp: +27 61 537 2576



Email: service.za@goodwe.com



https://goodwetechnology.zendesk.com/hc/en-gb



# 2. Online Ticket Submission





About GoodWe Solutions & Products EcoSmart Home Support & Service

Community







& Cont



#### Downloads

Product Related



#### Warranty

Warranty



#### Support

**FAQs** 



#### Service

Online Support

Monitoring

System Design

Contact us

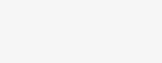


Access what you need

MORE

Social Responsibility Reports

Marketing Collateral



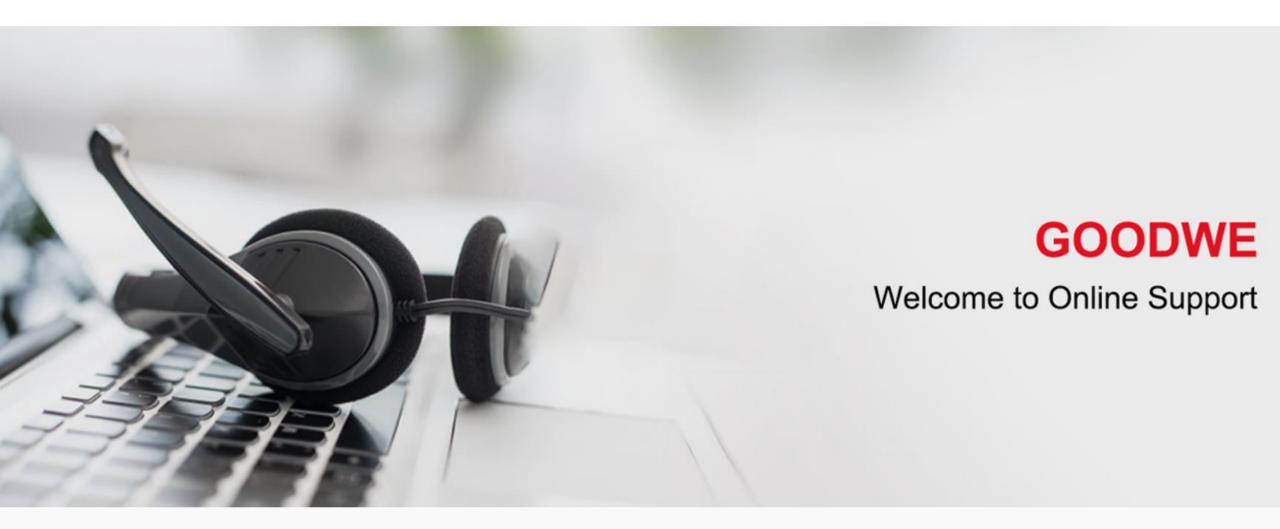
## Top 3 Global

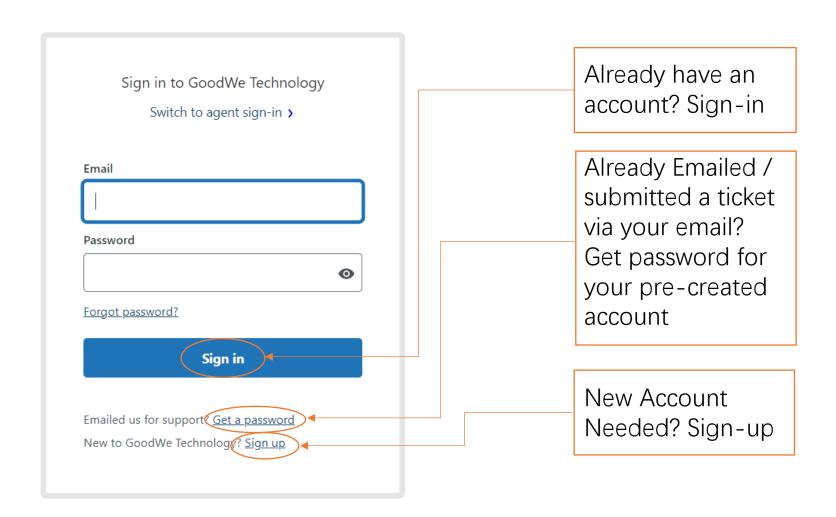
**Energy Storage Inverter Supplier** 





Home Submit a request Sign in





#### **GOODME** Online support

Home Submit a request 🔘 Test Account 🗸

#### My requests

My requests I'm CC'd on Organisation requests

Status:

Q Search requests

Follow

Any

Subject	Id	Requester	Last activity ▼	Status
Ticket Subject – SN – Fault Code	#56470	Requester Name X	1 month ago	Awaiting your reply
Ticket Subject – SN – Fault Code	#275475	Requester Name X	2 months ago	Solved
Ticket Subject – SN – Fault Code	#256452	Requester Name X	4 months ago	Solved
Ticket Subject – SN – Fault Code	#103820	Requester Name X	4 months ago	Solved

#### 2. Online Ticket Submission: (Feedback Required)

#### Good Day

Kindly advise if the issue has been resolved or if you require any further assistance. If we do not receive a reply within the next 24 to 48 hours we will close this ticket.

To follow up and manage your tickets please log in to https://goodwetechnology.zendesk.com/hc/en-gb

Kind Regards Crystalene Chetty

Goodwe Service

GOODWE POWER SUPPLY TECHNOLOGY CO. LTD.

W(chat):+27 61 537 2576 M +27 86 112 6777 E Service.za@goodwe.com



Our Service Team will reach out to you if there has been no activity on your ticket or correspondence after some time.

Within 24 – 48 hours after receiving this feedback the ticket will be automatically closed.

Please be sure to close your ticket or advise the team if your ticket has been resolved.



# 3. WhatsApp Ticket Submission

#### 3. WhatsApp Ticket Submission:



- Step 1: Send a greeting message
- Step 2: Enter Requested details
- Step 3: Your Ticket is created
- Step 4: A Goodwe Support Technician will be in contact with you to assist you through the rest of the process.

To view & manage your ticket -> Log in to the Online Support Web Page / My Requests

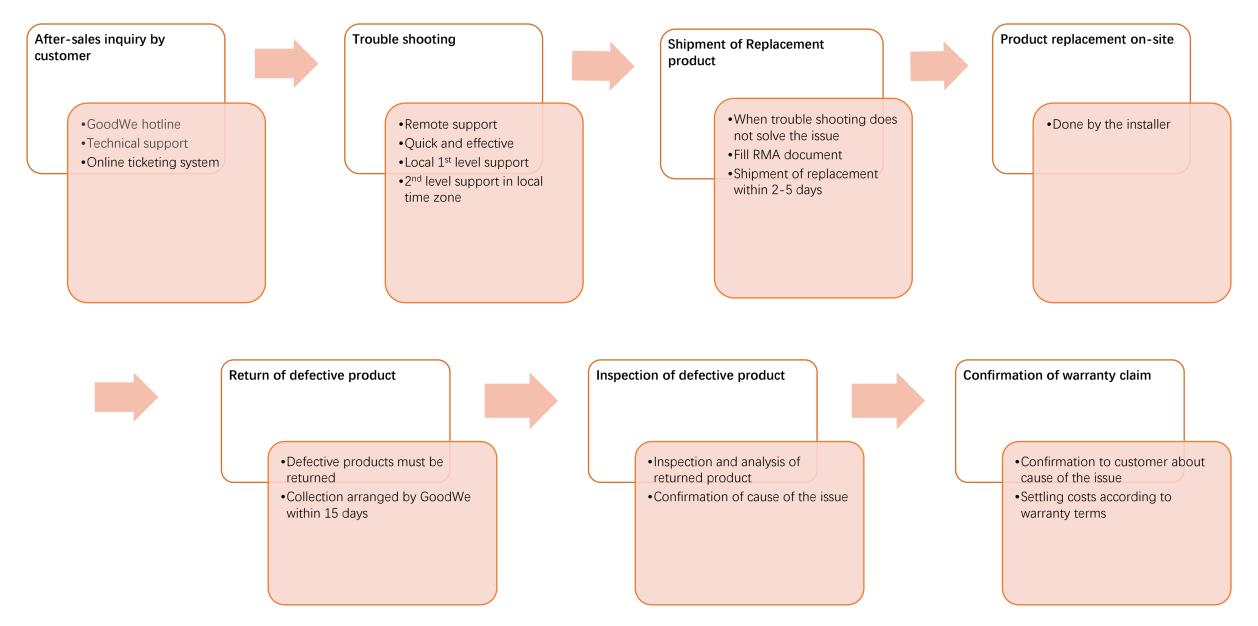


# 4. RMA Process

(Return Material Authorization)

#### 4. RMA Process (Return Material Authorization):





### 4. RMA Process (Return Material Authorization):





- Standard Pictures Required:
  - 1. Warranty sticker & Serial Number from side of inverter
  - 2. Full Installation Picture (Front view of installation)
  - 3. The Bottom of the inverter
  - 4. Measurement from the inverter Neutral (N) to the distribution board Protective Earth(PE)
- Relay Check Failure:
  - 1. Picture Required to confirm site is properly grounded
- If you have the below error code(found on SolarGo) please provide the testing pictures or videos.

#### Isolation / DC High:

- 1. Resistance from Module frame to ground
- 2. Resistance from String insulation to ground

In Order to Validate any possible RMA request, include as much information as possible on RMA Request document.



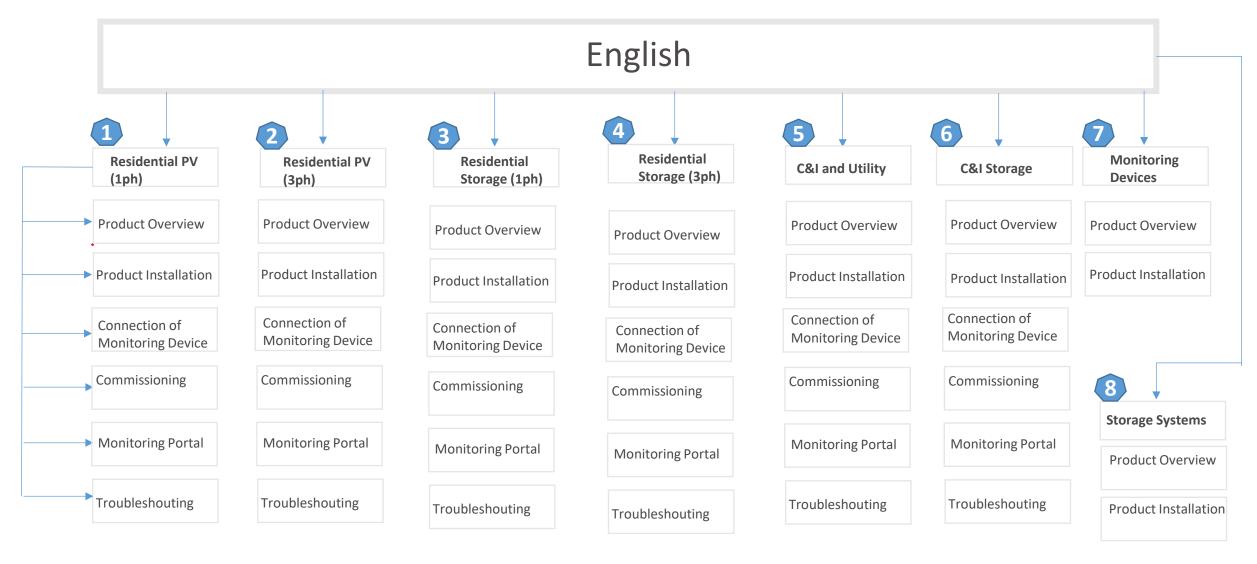


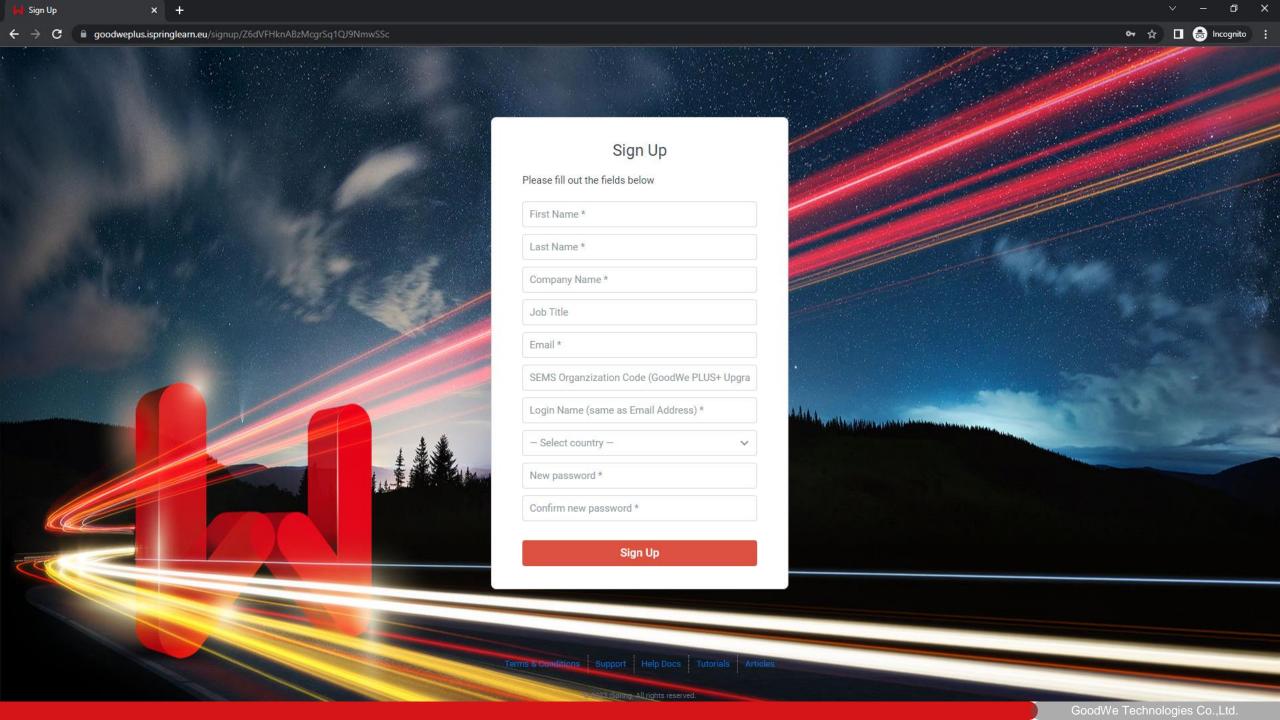
# GoodWe Plus+ 2.0

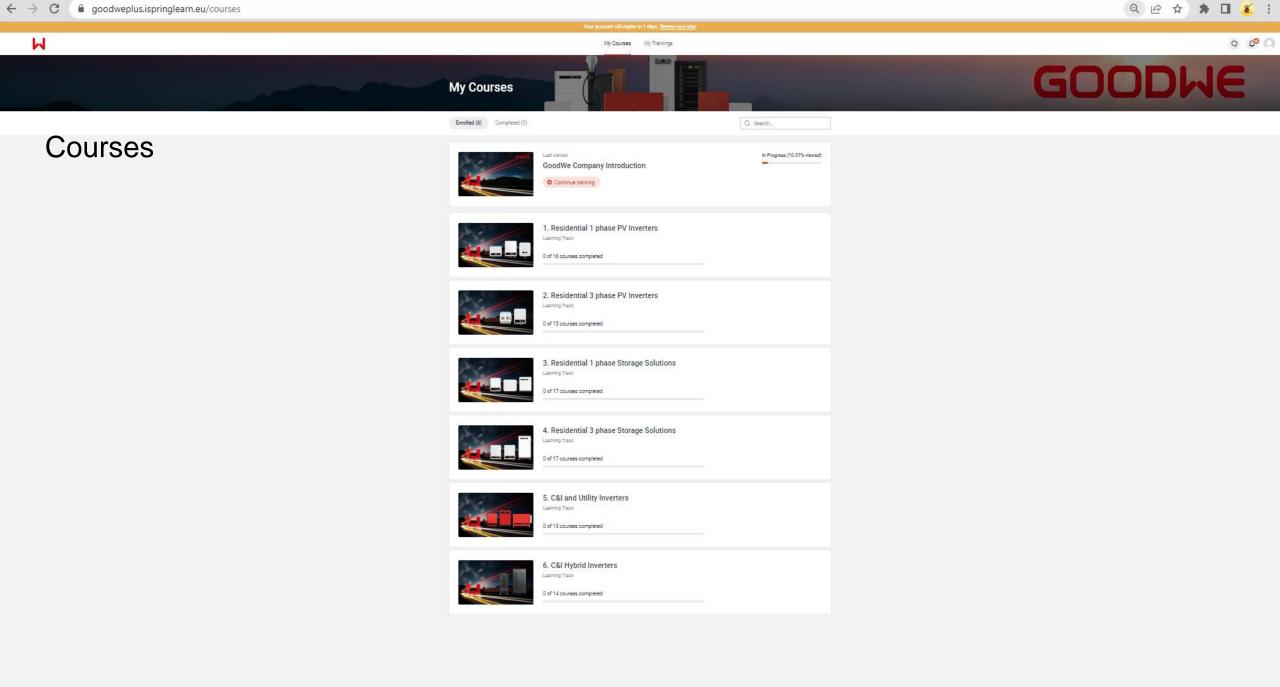
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#### GoodWe PLUS+ 2.0 – Content in Each Section



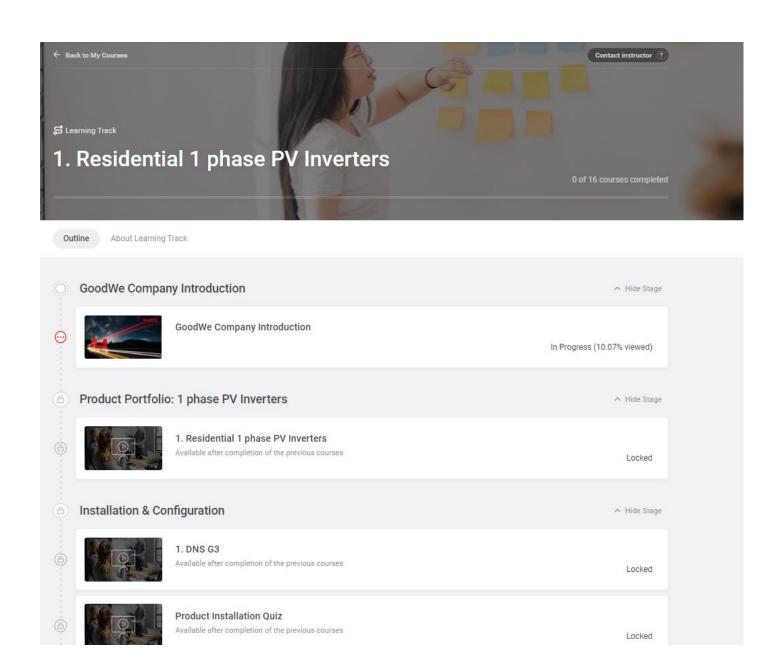






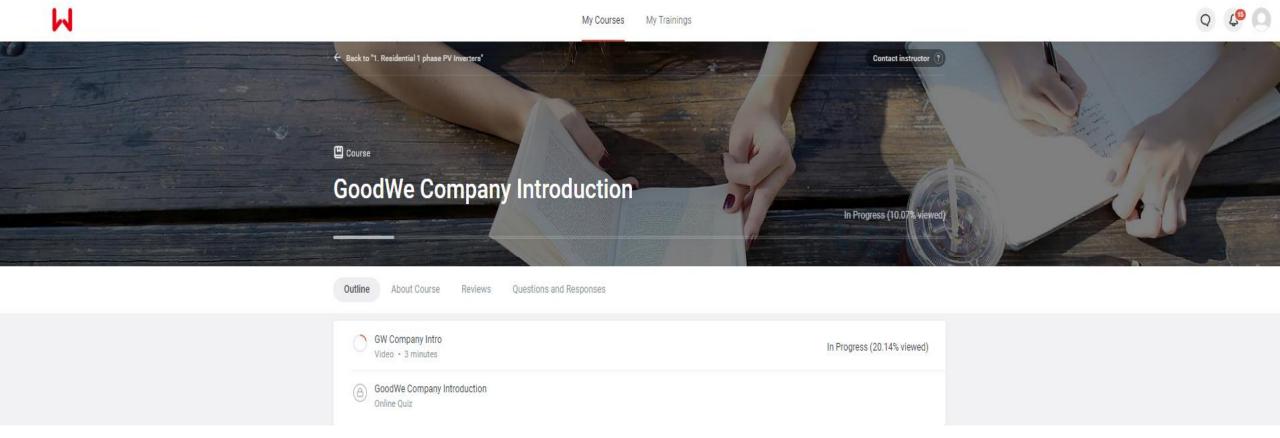
#### Chapters





#### Video and Quiz per chapter





#### Register Now:

https://goodweplus.ispringlearn.eu/signup/Z6dVFHknABzMcgrSq1QJ9NmwSSc





# THANK YOU

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