

Technical Presentation

GoodWe with Pylontech



Welcome to SegenSolar – Your Solar PV Distributor



Introducing GoodWe and Pylon, and how to install them

Company Introduction and History



**GOODWE NOW OFFER
ONE OF THE LARGEST
SELECTION OF SINGLE
AND THREE PHASE
ENERGY STORAGE
PRODUCTS IN THE
MARKET ...**

**1000+ EMPLOYEES
OVER 250 R&D
ENGINEERS
150 REGISTERED
PATENTS**

**2ND R&D SET UP,
SEMS MONITORING
LAUNCHED**

**GOODWE UK &
AUSTRALIA,
PARTNERSHIP WITH BYD
AND TUV
ES HYBRID LAUNCHED**

TO DATE
**2 BRAND NEW STATE OF
THE ART PRODUCTION
FACILITIES**
**2GW PRODUCTION
CAPABILITY TO MEET
OUR GLOBAL DEMAND**

**TECHNICAL &
BUSINESS TEAMS ON
EVERY CONTINENT.**

**TUV ALL QUALITY
AWARDED 4
CONSEQUITIVE YEARS**

**IKEA STORES IN THE UK
AND EUROPE SELLING
GOODWE PRODUCTS**

**R&D SET UP
BEFORE ENTRY INTO
INTERNATIONAL
MARKETS
...**



2018

2017

2016

2014-2015

FOUNDED IN 2010

Company Introduction and History

Company intro

Founded in 2009, Pylontech has become one of the key players in the rapidly evolving Lithium Ion battery market. Their products are vertically integrated, which means all components and materials are developed in house. This helps maintain their great quality.

More than 1.5GWh of Pylontech batteries have been installed worldwide (around half a million batteries).

Company history

Since its inception in 2009 Pylontech has widely deployed Grid Level Energy Storage, high capacity PV and Data Centre Power Backup

Applications where Pylontech Technology is deployed spans from Residential through to Large Commercial sites with a global footprint





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Hybrid Installations

Hybrid Inverters

A hybrid inverter incorporates MPPTs, inverter and battery charger in one neat unit.

It's able to use its accurate arraying tracking to extract the maximum energy from the PV array, while also constantly monitoring the AC consumption in the home and diverting excess energy to the battery. This means the stored energy is available later in the evening, and not wasted.

Hybrid inverter installs are perfect for residential systems that seek to enhance a standard PV system by adding storage. This dramatically improves the proportion of self-consumption.

Having stored energy available in the battery can also help to ensure essential loads can still run in the event of grid outages.





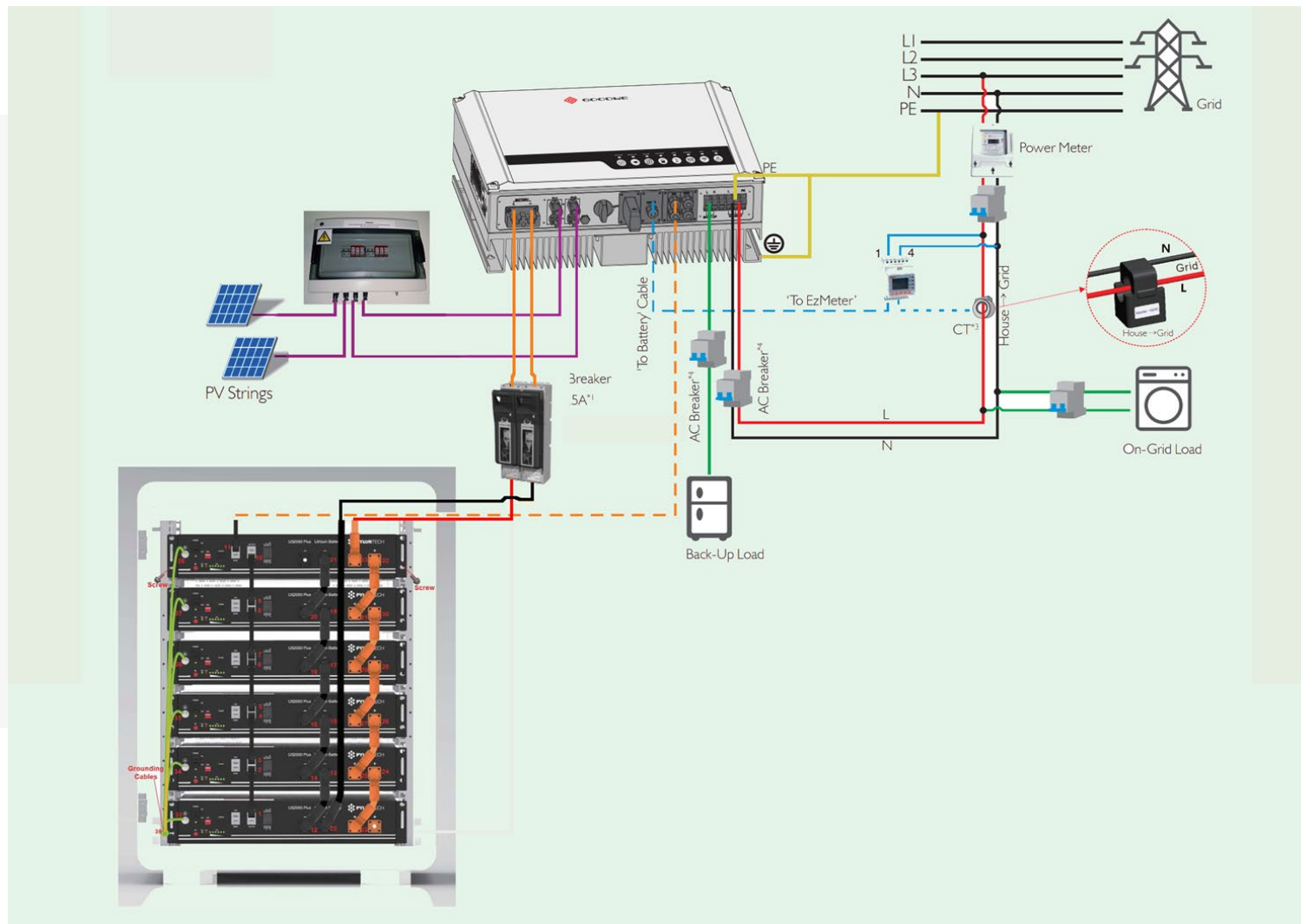
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Detailed component schematic





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

The product ranges



GoodWe ES
ES Hybrid – 4.6kW Rating



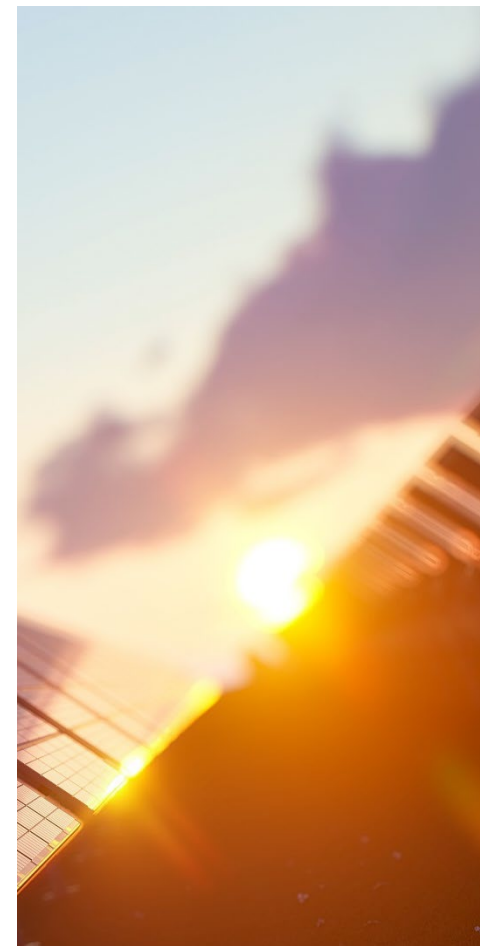
Pylontech US2000
Li-Ion – 2.4kWh Rating



Pylontech US3000
Li-Ion – 3.5kWh Rating



Pylontech Cable Pack
Power and Coms



Key USPs



Intelligent battery management function

Reliable and accurate communication with batteries ensures the best system performance

Grid-tied or grid-independent operation

Suits any installation site

Compatible with many different international and local Li-ion batteries

Has a IP65 dust and water-proof rating

Can be installed outdoors, out of direct sunlight

Easy remote monitoring via PCs, tablets and mobiles

Great for ensuring the best utilisation of energy and helping with maintenance

Fan-less low-noise design

NRS097-2-1:2017 certified and SSEG approved

Can be legally connected to the grid in South Africa.

Capabilities and limitations

Capabilities


- **100A Charge / Discharge Current**
- **4.6kW Backup Capacity**
- **Max PV array of 6.5kW**
- **Max Grid-tie Power of 4.6kW**
- **Excellent build quality and generous capacitor allowance for long product life**
- **Full output power available even at 45°C**



Limitations

- **Must only be installed with Li-Ion batteries that are approved as compatible, such as Pylontech.**
- **Rated discharge power can only be safely achieved with sufficient battery capacity.**

Key USPs



**At least 6000 cycles at 80% DoD or 4500 cycles at 90% DoD
Longer design life achievable for systems that are well-sized for the loads**

Nominal charge/discharge current of 25A per US2000B (1200w)

Nominal charge/discharge current of 37A per US3000B (1770w)

Modular units allow for flexible design and upgrade options

**Simple buckle fixing minimize the installation time and cost
Neat and secure installation are easy**

**Compatible with GoodWe ES and many others
In-house BMS technology allows wide inverter compatibility. SegenSolar will
always only offer combinations that are approved by Plyontech**



GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Product compatibility

Not every Lithium battery works with every charger

Lithium ion batteries are different to lead acid in many ways. One important difference is that the voltage of a lithium battery stays relatively constant regardless of the state of charge, which means it's very hard for a charger to know what current to draw if it relies on the battery voltage.

Instead, the charger should be able to communicate directly with the lithium battery's management system (BMS). This allows the charger to deliver or draw a precise current to make the best use of the battery and not damage it.

GoodWe hybrid inverters are fully compatible with Pylontech lithium batteries.





Pylontech compatibility list

| | | Low Voltage | | | | | | | | | |
|-------------------|--|--------------|-----------|---------|-----------------------|--------------|---------------|--------------|---|-----------------------|---------------|
| Inverter | | Battery | | | Communication | Cable Supply | Coupling type | Application | Key Features | Firmware Ver. | Installation |
| Brand of Inverter | Type | US2000B/Plus | Phantom-S | US3000B | | | | | | | |
| Victron | Multi / Quattro 48V (via Venus-device) | | | | CAN | RJ45 | DC | On/off-grid* | Activation: Yes; Force charge: Yes | 422/V2.15 | Wall mounting |
| SolaX | SK-SU, SK-TL, SK-BMU | | | | CAN/RS232 | RJ45 | DCAC | On-grid | Activation: PV only; Force charge: Yes | | Wall mounting |
| Goodwe | GW-BP/SBP GW-ES/EM | | | | CAN | RJ45 | DCAC | On-grid | Activation: Yes; Force charge: Yes | | Wall mounting |
| IMEON | IMEON 3.6 & 9.12 | | | | CAN | RJ45 | DCAC | On/off-grid | Activation: Yes; Force charge: Yes | V1.7.6.5 | Wall mounting |
| Studer Innotec | Xtender 48V serie VarioString serie VarioTrack 48V serie | | | | CAN | RJ45 | DC | On/off-grid | Activation: No; Force charge: Yes | R652 | Wall mounting |
| Selectronic | SPMC in 48V | | | | CAN | RJ45 | DC | On/off-grid | Activation: No; Force charge: Yes | | Wall mounting |
| Voltronic | Infinisolar series 48V Axpert series 48V** | | | | RS485(9600) | RJ45 | DC | On/off-grid | Activation:Yes Force charge: Yes | V1.00/00.32 | Wall mounting |
| Sofar | ME3000SP, HYD series | | | | RS485(115200)/ CAN | RJ45 | AC | On-grid | Activation: No; Force charge: Yes | V1.2 | Wall mounting |
| Solis | RHI-3K~5K-48ES | | | | CAN | RJ45 | DC | On/off-grid | Activation: PV only; Force charge: Yes | 90009 | Wall mounting |
| Redback | SH4600 | | | | RS485(115200) | RJ45 | DCAC | On-grid | Activation: PV only; Force charge: No | | Vertical |
| Lux Power | LXP Hybrid/ACS series | | | | CAN | RJ45 | DCAC | On-grid | Activation: Yes; Force charge: Yes | AA1.0 | Wall mounting |
| Sungrow | SH5K | | | | CAN | Terminal | DC | On-grid | Activation: 30mins; Force charge: Yes | V13 | Wall mounting |
| Delios | DLS/C series DLS AC series | | | | CAN | RJ45 | DCAC | On/off-grid | Activation: No; Force charge: Yes | A 1.30; B 1.18; C1.27 | Wall mounting |
| MLT | Oasis 448, 648 | | | | N/A | N/A | AC | Off-grid | Activation: No; Force charge: Yes | V2.19 | Wall mounting |
| Steca | Solarix PLI 5000-48 | | | | N/A | N/A | DC | Off-grid | Activation: Manual; Force charge: No | | Wall mounting |
| SolarMax | ES series AC series | | | | CAN | RJ45 | DCAC | On/off-grid | Activation: No; Force charge: Yes | A 1.30; B 1.18; C1.27 | Wall mounting |
| Kehua | SPH5000-BL | | | | CAN | RJ45 | DCAC | On-grid | Activation: Yes; Force charge: Yes | V1.00.013 | Wall mounting |
| GMDE | SolDate 3700TL+BM024 | | | | RS485(9600) | RJ45 | DCAC | On-grid | Activation: No; Force charge: Yes | V2.0.1 | Wall mounting |
| Dowell | iPower | | | | RS485(9600)/CAN | Terminal | DCAC | On-grid | Activation: PV only; Force charge: Yes | V3.03 | Wall mounting |



GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Unpacking the Pylontech battery

Each Pylontech battery comes with cable accessories included in the box, used for connecting battery modules together:

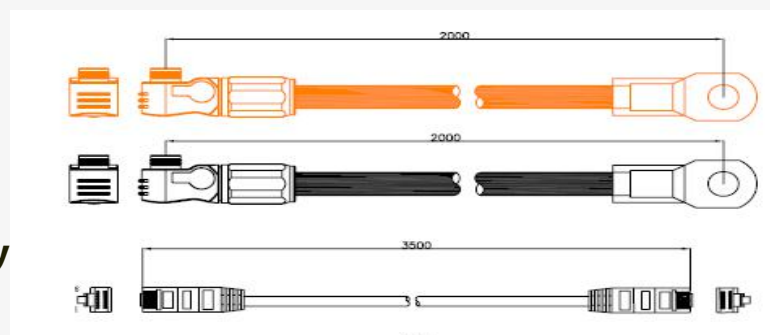
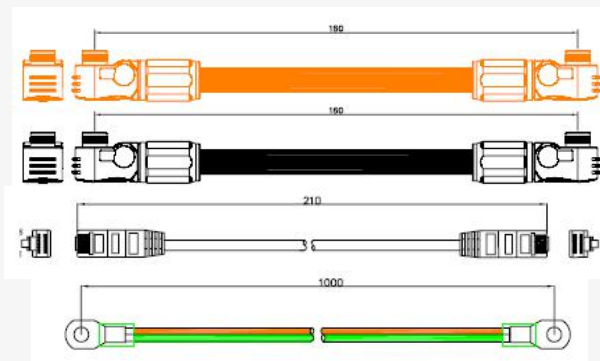
- Power cables
- Communication cable
- Earthing cable

For each stack of Pylontech batteries, a Cable Pack (CAB-PK-PYLON) should be purchased separately. It consists of two long power cables and one communication cable.

The Cable pack must be purchased from SegenSolar separately and is not included with the battery.

The power cables are rated for 120A.

A maximum of 5 battery modules can be connected with one cable pack





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Pylontech batteries into stacks or cabinets

Pylontech battery units are very easy to incorporate into a tidy installation, either by using the simple pairs of brackets and stacked, or by using one of SegenSolar's range of cabinets .





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Installing a GoodWe Hybrid with Pylontech



- **Hybrid inverter overview & main components**
- **Sizing the battery bank correctly**
- **Firmware Upgrade**
- **Commission the inverter**
- **Wiring**
- **Fault finding**
- **System monitoring**
- **Pylon Application Note and Documents**
- **Warranty**



GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Sizing the battery bank correctly

The GoodWe inverter does not make use of the overload capability of the Pylontech battery.

The inverter will turn off the back-up circuit should the battery bank nominal current be exceeded.

For the US2000B this current is 25A per battery, 37A for the US3000B.

For the 4.6kW ES inverter, a minimum of four US2000B or three US3000B units would be needed to get the rated AC output.

Pylon units can be discharged to 89% of their rated nominal capacity.

When designing a bank, remember to include losses from the inverter and cables.

Remember to size your battery bank so that it's large enough to easily deliver enough energy to fulfil the AC loads you expect to be running. This is particularly important for smooth operation in backup mode.



GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

GoodWe Hybrid overview





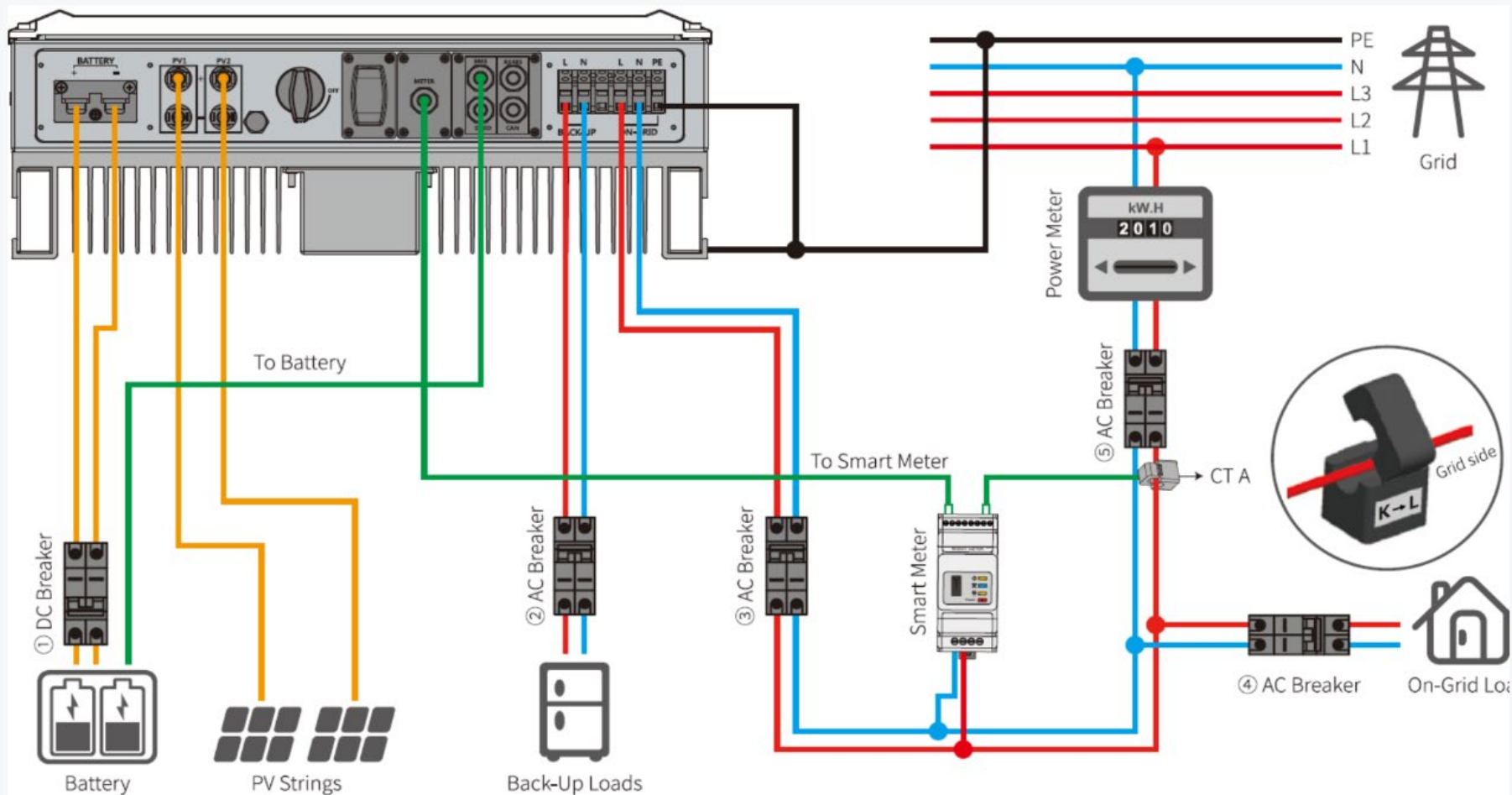
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

GoodWe Hybrid block diagram





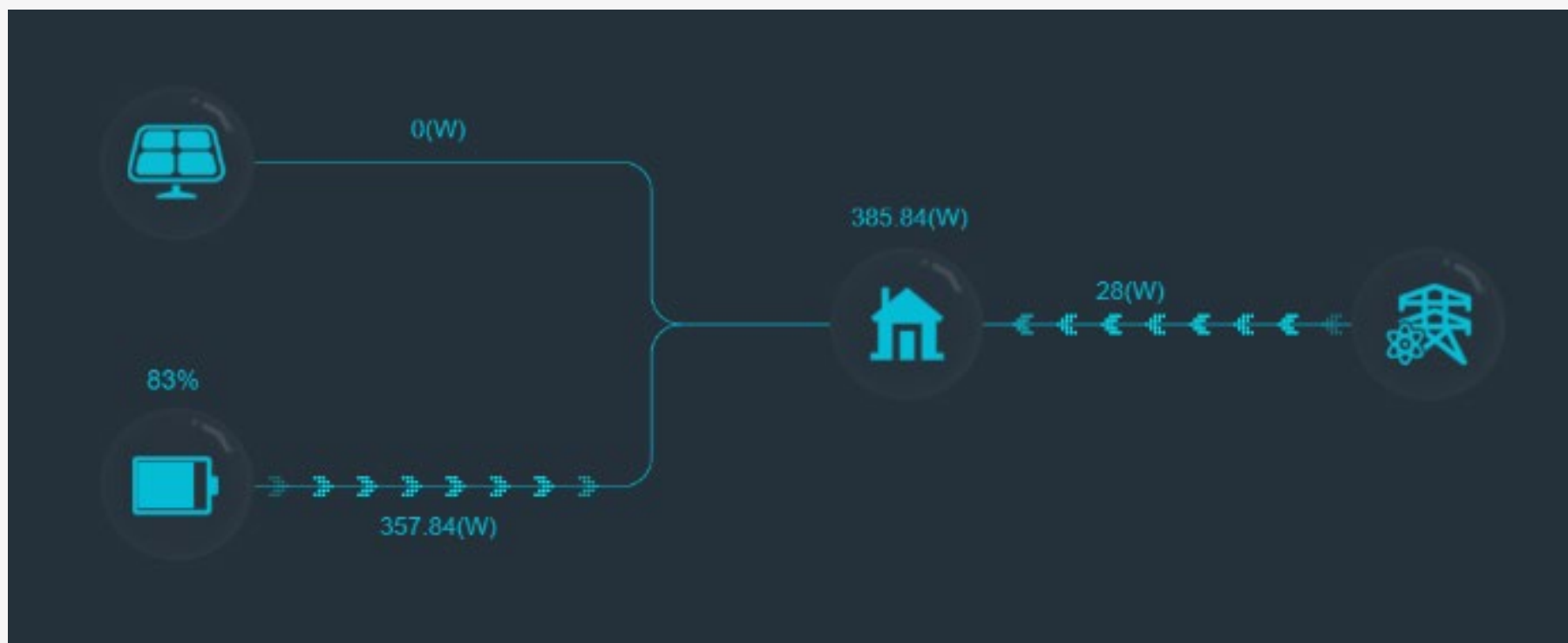
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

GoodWe Hybrid energy flow schematic





GOODWE
your solar engine



PYLONTECH

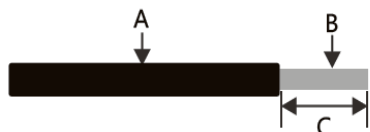
SegenSolar
(Pty) Ltd

Before starting the GoodWe Hybrid install

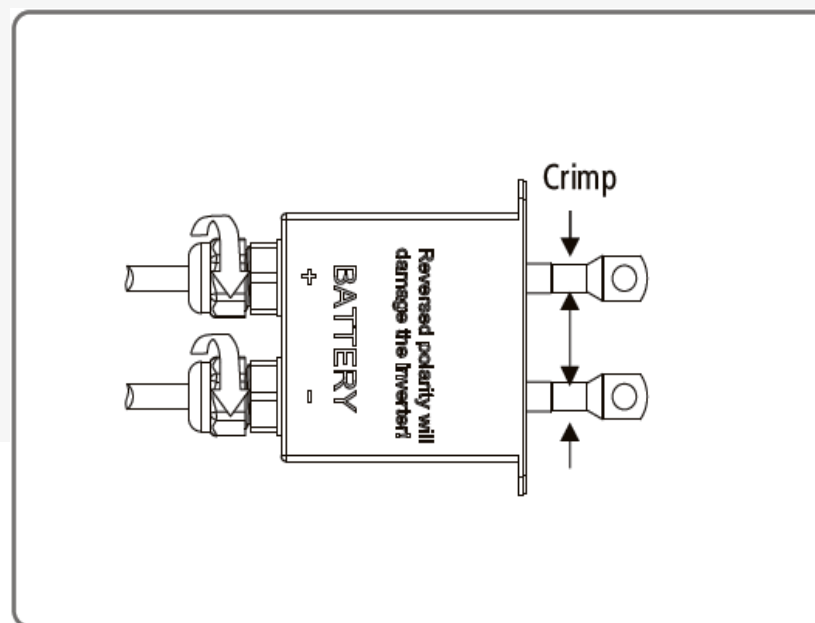
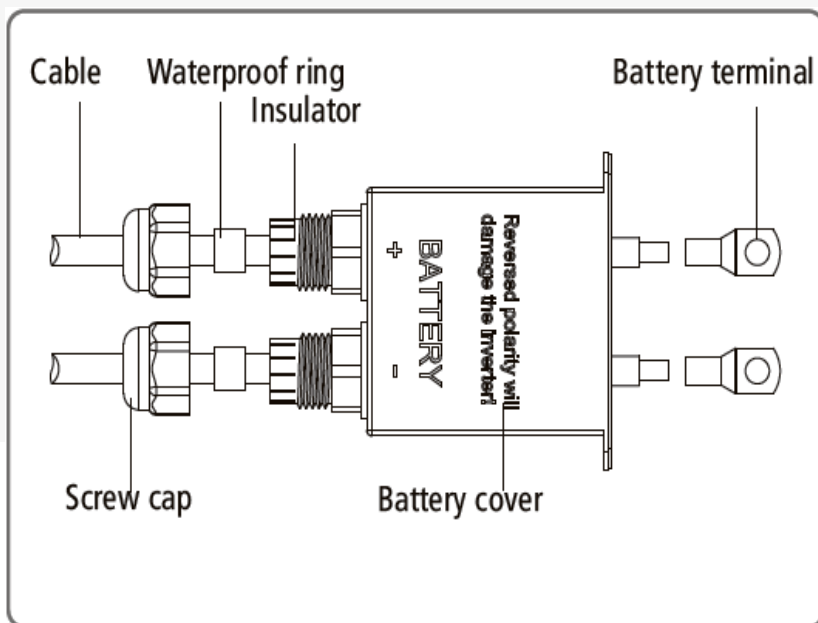
- **After unpacking, please check the product and packing list, if the product is damaged or there is missing components, please contact SegenSolar.**
- **Before installation, ensure that the battery is turned off.**
- **Double check the polarity, do not swap around the positive and negative leads.**
- **Do not connect the battery directly to AC.**
- **The embedded BMS in the battery is designed for 48VDC, please DO NOT connect batteries in series.**
- **Battery system must be well grounded with a resistance less than 1Ω.**



Battery cable connections



| Grade | Description | Value |
|-------|--------------------------------------|----------------------|
| A | O.D. | 10~12mm |
| B | Conductor Material Sectional Area | 20~25mm ² |
| C | Bare Wire Length | 10mm around |





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

The EzMeter

- **Standard accessory with the inverter, included in the inverter packaging.**
- **Controls energy exported to the grid and the work modes of the Energy Storage system.**
- **Communicates with the ES inverter via a RS485 cable.**
- **LED on the bottom left blinks to indicate the system is running**
- **Equipped with CT clamp for current measurement**





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Updating GoodWe ES firmware

Always check with Segen to see if a newer version of the inverter firmware is available

Having the most up to date firmware is always advisable. It ensures that your system benefits from recently-added improvements to the inverter software or bug resolutions.

Should your inverter be connected to Sems portal and the last two digits of the firmware are 06 or greater you can contact Segen to update your firmware remotely

USB Cable: Type A male to Type A male





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Step 1: Remove the Meter Cover / Antenna block





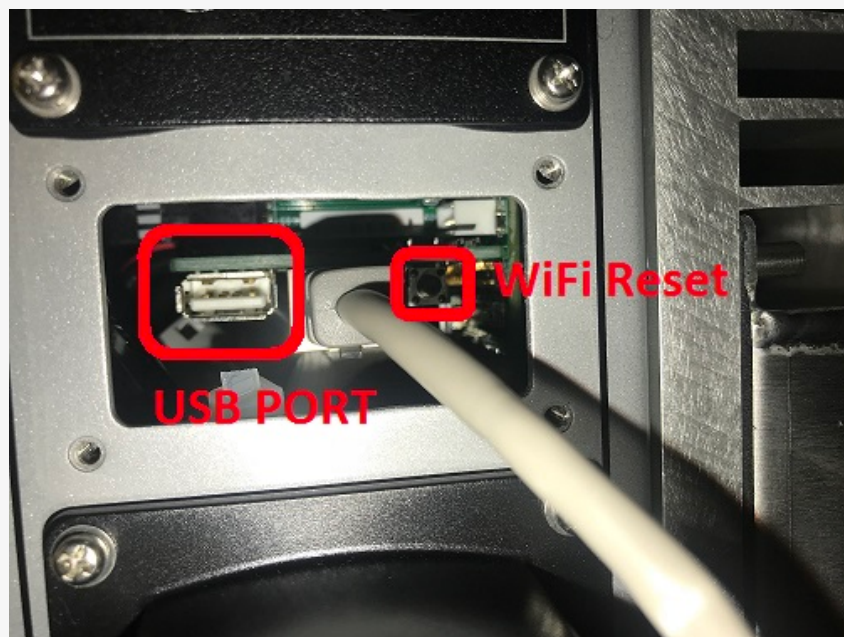
GOODWE
your solar engine



PYLONTECH

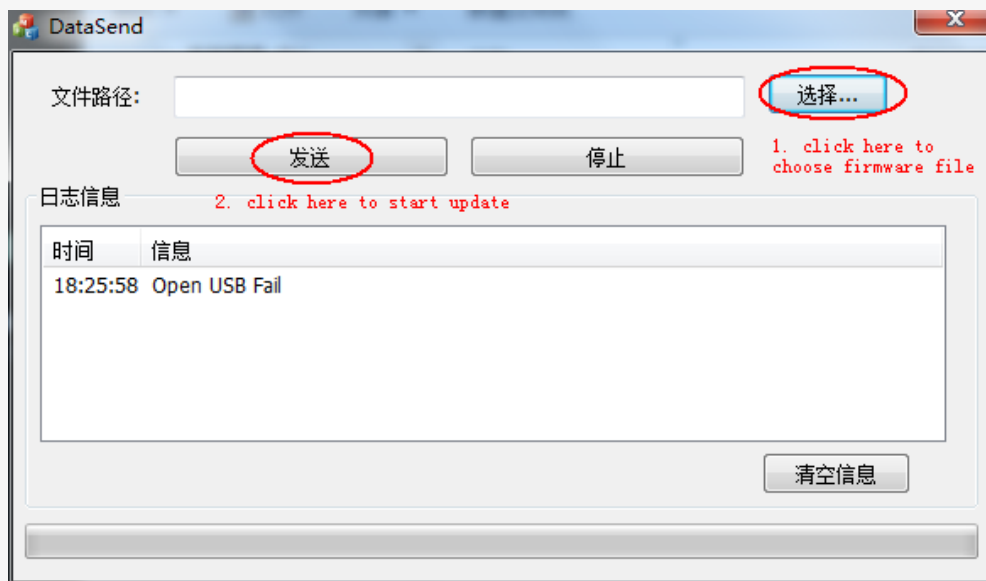
SegenSolar
(Pty) Ltd

Step 2: Plug the USB cable into the USB port





Step 1: Open the ARM software tool- Datasend



Update tool

1. Open the email and save the DataSend tool and the .bin file to your computer
2. Open the DataSend tool.
3. Click on the first button indicated and select the .bin file saved on your computer.
4. Click on the second button indicated and wait for the application to display that its completed.



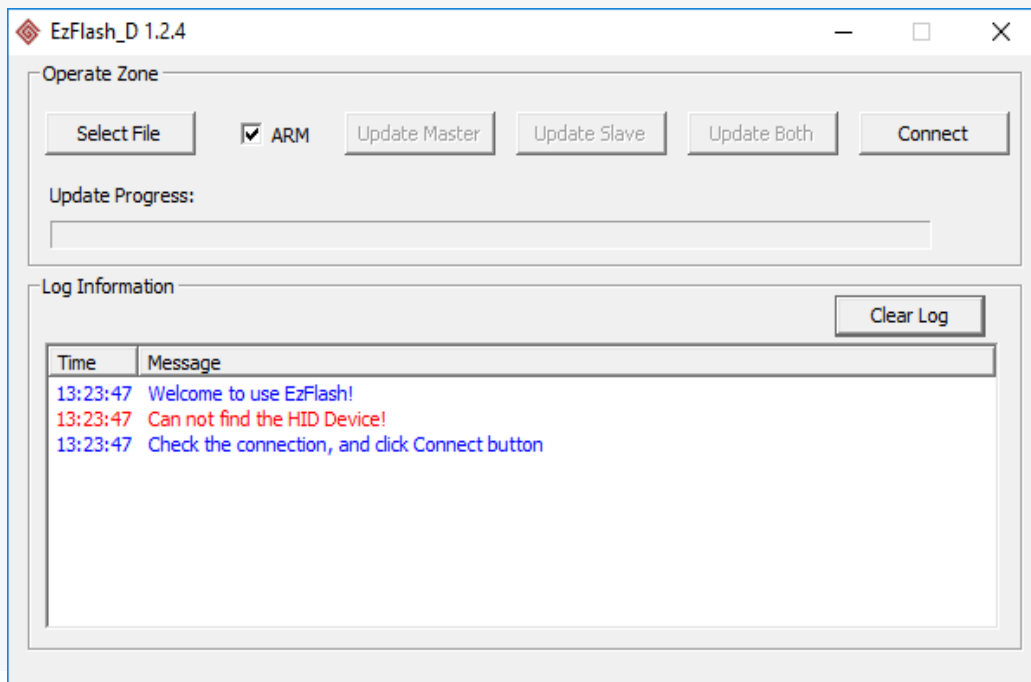
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Step 2: Main DSP update - EzFlash

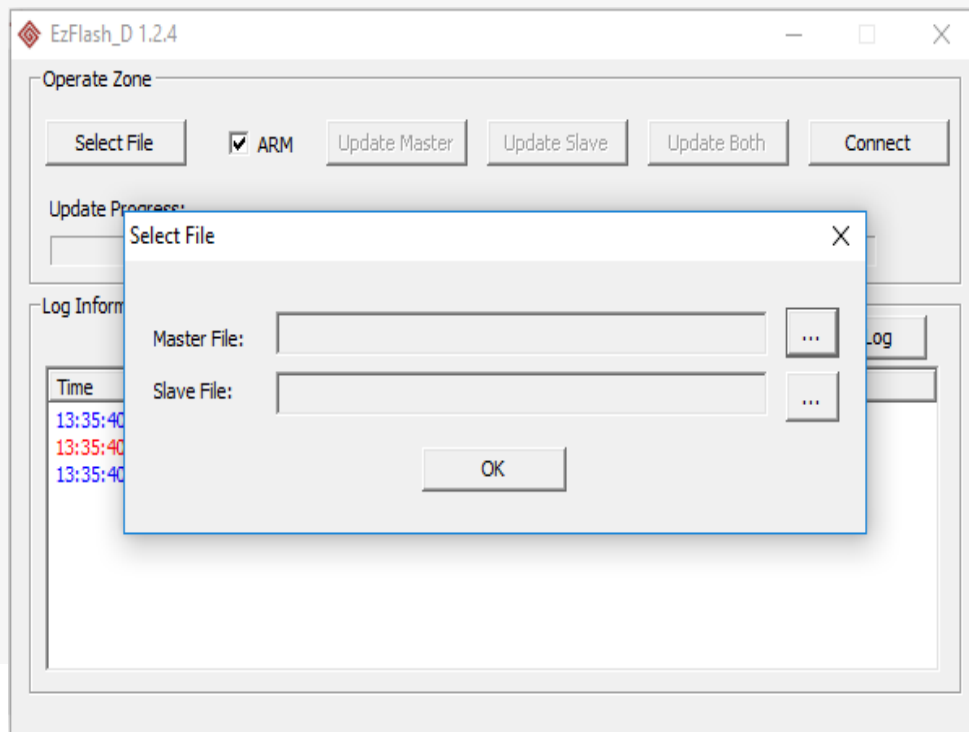


Update tool

1. Open the EzFlash application
2. Tick the box marked ARM
3. Click connect to test inverter connection



Step 4: Main update



Update tool

1. Select the slave and master files.
2. Click the update both button

Selecting these files incorrectly will cause the update to fail and result in returning the device for repairs

3. Press OK and then start the update by pressing "Update Both"



Step 3: Main update

| Time | Message |
|----------|---|
| 10:08:54 | Slave cpu update in progress... |
| 10:09:06 | Erase Start! |
| 10:09:13 | Erase End! |
| 10:09:13 | Programming in progress ,DO NOT interrupt it! |
| 10:09:21 | Programming complete,start verify! |
| 10:09:29 | Verify complete! |
| 10:09:29 | Slave cpu update successfully! |
| 10:09:29 | Reset complete! |

Update tool

Wait for the update to complete. It takes about 10 minutes.



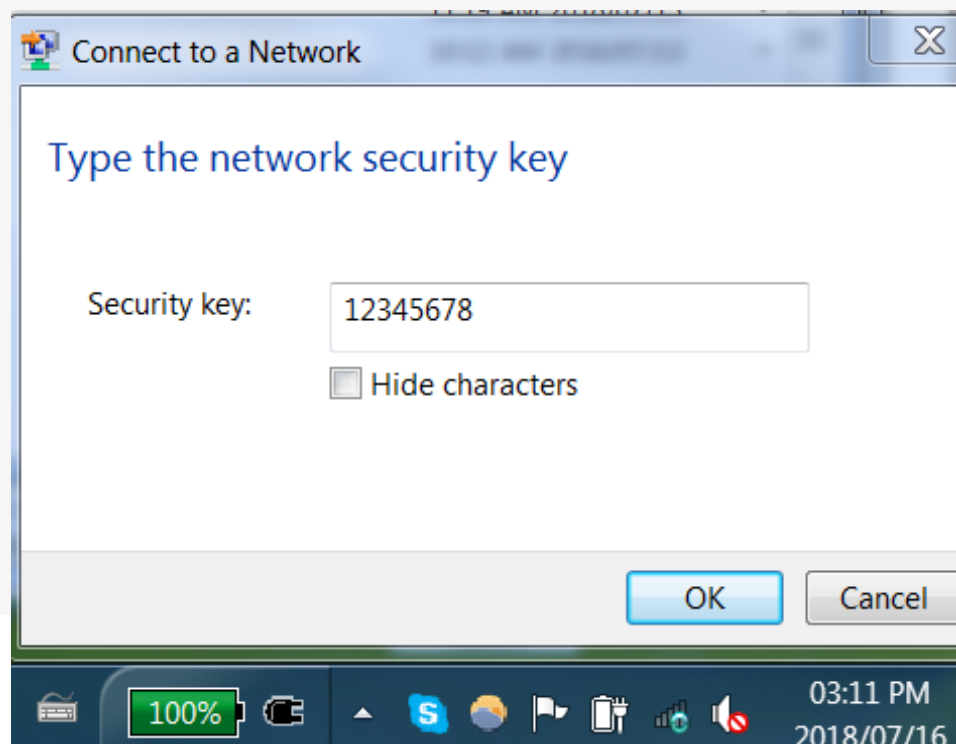
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Updating WiFi Firmware



Connect to the SolarWiFi network
Enter the security key: 12345678



10.10.100.253/index_en.html

Segen Activities SegenSolar Pty Prod Segen Warehouse

中文 | English

Wizard
Advanced
Management

Device information

| | |
|----------------------|--------------------|
| Firmware version | V1.0.3 |
| MAC address | F0FE6B927276 |
| Wireless AP mode | Enable |
| SSID | Solar-WiFi18100018 |
| IP address | 10.10.100.253 |
| Wireless STA mode | Enable |
| Router SSID | WiFi_Burn-in2 |
| Encryption method | WPA2PSK |
| Encryption algorithm | AES |
| Router Password | WiFi_Burn-in |

Cannot join the network, maybe caused by:

router doesn't exist, or signal is too weak, or password is incorrect.

★**Help:** Wizard will help you to complete setting within one minute.

Start Setup



Wizard

Advanced

Management

1.

Restart device

★**Important:** After restart ,config will take effect.
It is recommended to restart after completing all configurations.
Restart will interrupt the network for a very short period.
Are you sure to restart now?

OK

Restore factory setting

★**Important:** After restoring factory settings, all user's configuration will be deleted.

You can reconfigure it on <http://10.10.100.253>.

Account and password are both "admin".

Are you sure to restore now?

OK

Upgrade Software

Current version: **V1.0.2** 2.

Firmware file: **Choose File** 3. No file chosen

Upload 4.

Browser UI

Enter IP address into the browser

10.10.100.253

1. Click on Management

2. Check the current version

3. Select the firmware file

4. Click on upload and wait for the process to complete



WiFi configuration

1. Preparation –

- **Laptop / Desktop with Wi-Fi**
 - **Inverters pre 2019**
 - **tcp.goodwe-power.com port: 20001**
 - **Inverters post 2019**
 - **www.goodwe-power.com port:80**

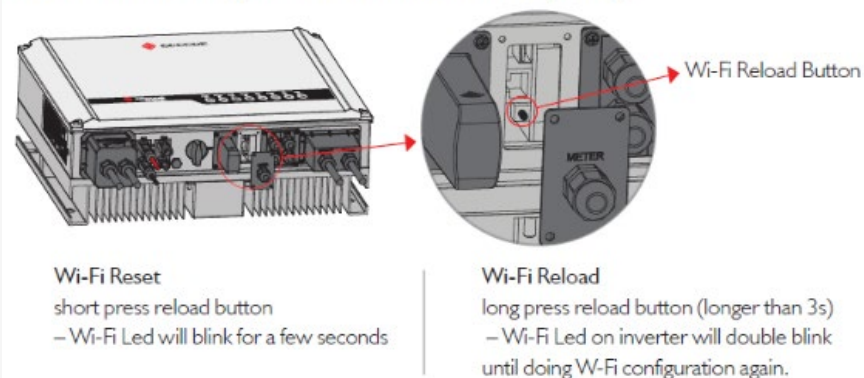
1. Open network settings on your laptop browse the following Wi-Fi Connection: **Solar-WIFIXXXXXXXX** (XXXXXXXX – represents the last 8 characters of the inverters serial number)

2. Connect to the Solar-WIFIXXXXXXXX network

1. **Password: 12345678**
2. **Reset the ES Inverter if the Wi-Fi is not available**

1. **The reset is located behind the meter cable.**

Wi-Fi Reset means restarting Wi-Fi module, Wi-Fi settings will be reprocessed and saved automatically. Wi-Fi Reload means setting Wi-Fi module back to default factory setting.



NOTE: Wi-Fi Reset & Reload function are only used when:
1. Wi-Fi losses connection to internet or cannot connect to PV Master App successfully
2. Cannot find "Solar-WiFi signal" or have other Wi-Fi configuration problem
3. Please do not use this button if Wi-Fi monitoring works well



GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

WiFi configuration

3. Open browser and login:

1. 10.10.100.253
2. Windows Security Box Opens
 1. Username: admin
 2. Password: admin

4. Click "Start Setup"

5. Choose your router from the available list

- Refresh the list if you do not see your network
- If your Wi-Fi signal is not strong enough it is recommended to add an extender in the location to boost the signal strength and ensure good connectivity

Windows Security

Microsoft Edge

The server 10.10.100.253 is asking for your username and password. The server reports that it is from USER LOGIN.

Warning: Your username and password will be sent using basic authentication on a connection that isn't secure.

Username

Password

☐ Remember my credentials

OK Cancel

Click on start Setup

Wizard
Advanced
Management

Device information

| | |
|----------------------|---------------------|
| Firmware version | V1.0.3 |
| MAC address | F0FE6B855198 |
| Wireless AP mode | Enable |
| SSID | Solar-WiFi17900102 |
| IP address | 10.10.100.253 |
| Wireless STA mode | Enable |
| Router SSID | Home Network Access |
| Encryption method | WPA2PSK |
| Encryption algorithm | AES |
| Router Password | A1231234123B |

Cannot join the network, maybe caused by:
router doesn't exist, or signal is too weak, or password is incorrect.

★Help: Wizard will help you to complete setting within one minute.

Start Setup

Please select your current wireless network:

| SSID | BSSID | RSSI | Channel |
|---|-------------------|------|---------|
| <input type="radio"/> Home Network Access 1 | EE B0 CE B 40 C6 | 28 | 4 |
| <input type="radio"/> Home Network Access | B0 6E BF DE AE 49 | 40 | 10 |
| <input type="radio"/> AP_634348221 | AC CF 23 1B E4 34 | 82 | 10 |
| <input type="radio"/> Home Network Access | 38 D5 47 BC C7 48 | 11 | 10 |

Refresh

★Note: When RSSI of the selected WiFi network is lower than 15%, the connection may be unstable, please select other available network or shorten the distance between the device and router.
If your wireless router does not broadcast SSID, please click "Next" and add a wireless network manually.

Back Next



WiFi configuration

6. Fill in the password of the router, then click "Next"
 - Successful connection will pop up and say "Save Success"
7. Click Save.
 - Make sure the password, Encryption Method/Algorithm is correct and the same as the router which the inverter is connected to.
 - When the Wi-Fi is installed correctly, the Wi-Fi LED on the inverter will change from double blink to quarter blink then to solid LED, which means the inverter has successfully connected to the SEMs portal.

Add wireless network manually:

| | |
|----------------------|--|
| Network name (SSID) | <input type="text" value="Home Network Access"/> |
| Encryption method | <input type="text" value="WPA2-PSK"/> |
| Encryption algorithm | <input type="text" value="AES"/> |

Please enter the wireless network password:

| | |
|----------|-----------------------------------|
| Password | <input type="password"/> |
| | <input type="checkbox"/> Show psk |

★Note: case sensitive for SSID and Password.
Please make sure all parameters of wireless network are matched with router, including password.

Back

Next



GOODWE
your solar engine



PYLONTECH

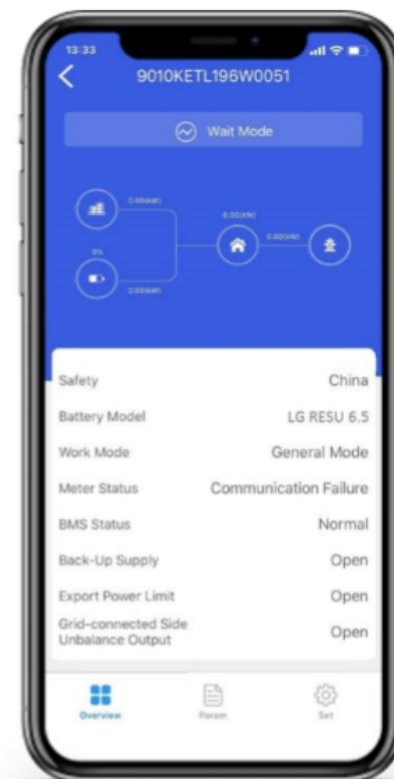
SegenSolar
(Pty) Ltd

Commissioning the ES inverter

PV Master is GoodWe self-designed application for installers and users to do in GoodWe hybrid systems:

- System Commissioning
- Local Monitoring
- System Diagnosing
- Troubleshooting Assistance

PV Master supports both android and iOS systems and multiple languages like Chinese, English and German. Functions inside shows up differently based on different inverter models.





GOODWE
your solar engine



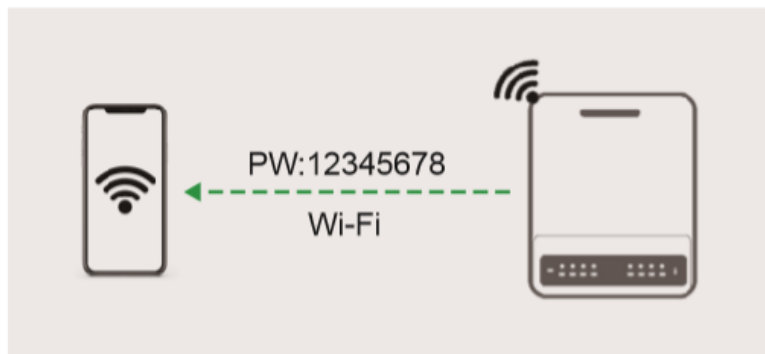
PYLONTECH

SegenSolar
(Pty) Ltd

Wireless connection

PV Master App is only usable if your smart phones connected to GoodWe hybrid inverter by Wi-Fi

- By Wi-Fi: support direct connection to inverter Wi-Fi signal (Solar-WiFi *****) or connect smart phone(s) and inverter(s) in the same intranet system



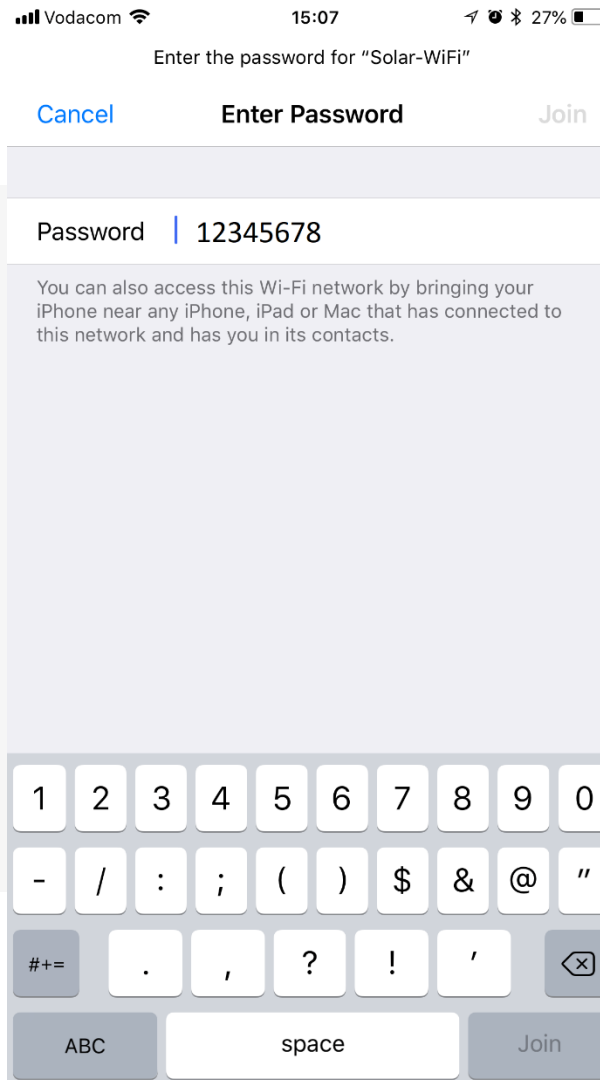
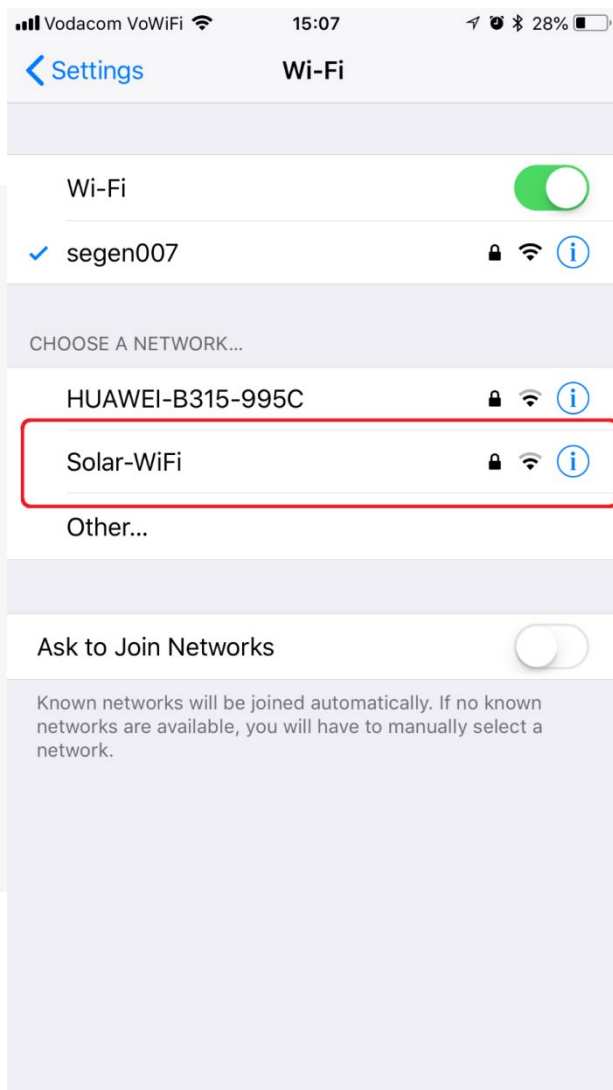


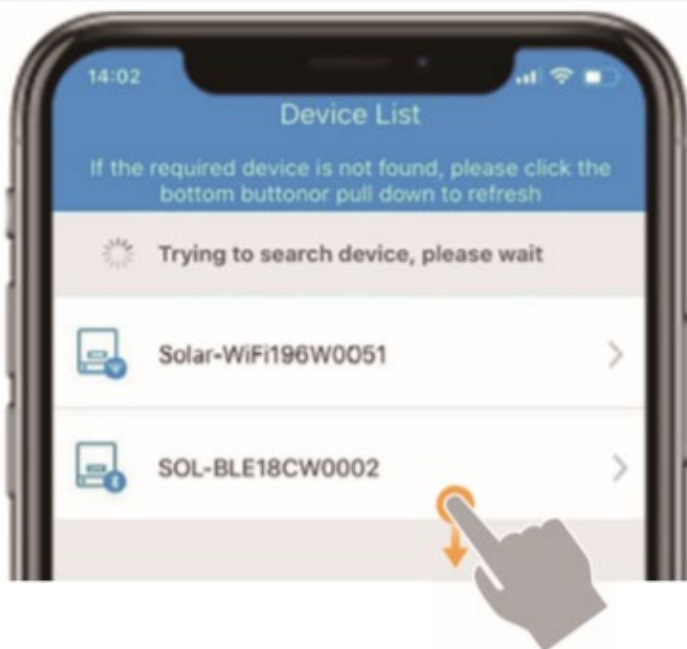
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd



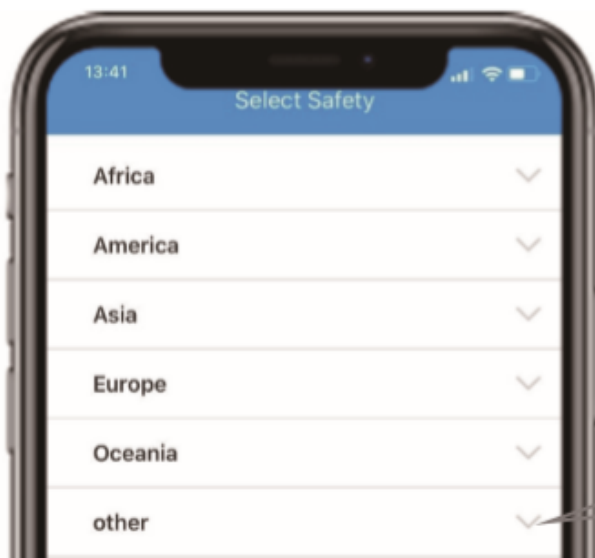


- “*****” means the last 8 characters of the inverter serial No.
- Scroll down the page to refresh device list
- Click the device to do further commissioning
- If cannot see the device by refresh, please reboot PV Master to check again.



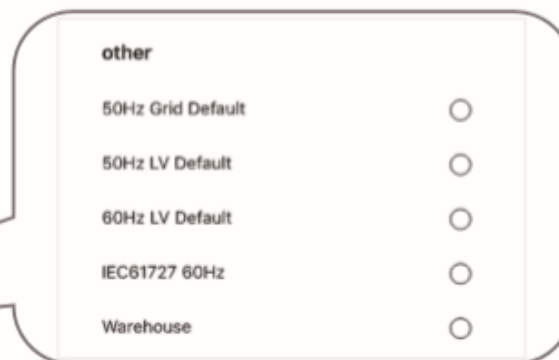
Basic settings

Steps: Connect "Solar-Wi-Fi" → Open App → *Choose the inverter you want configure* → Click "Set" → "Basic Setting" → Choose "Safety Country" → Select operation mode → Select battery model → CT Test



→ Select Safety Code:

Please select the right safety code based on your installation area. If it is not on the list, then please find one in "Other"





➔ **Select Operation Mode:**

Here is 4 commonly used operation modes, which has its own operation logics as below:

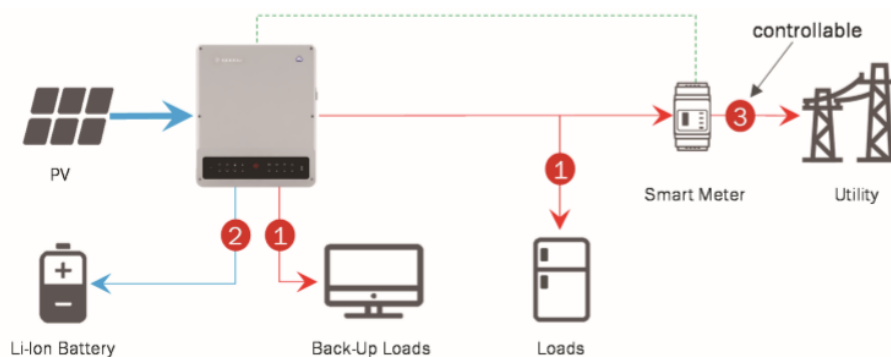
A. General Mode

General Mode is to maximize self-use of PV power and minimize importing power from grid, and the default logic as below:

- a. PV power is used to supply loads in priority (both Back-Up loads and On-Grid loads), then charge battery. And, if there has exceeded power, will export to grid (Controllable)
 - *Back-Up loads and On-Grid loads are supplied together with same priority*
- b. (If load power is higher) load will consume from PV power in priority, and battery do supplement, then, if still not enough, buy power from utility



PV Supply Priority:





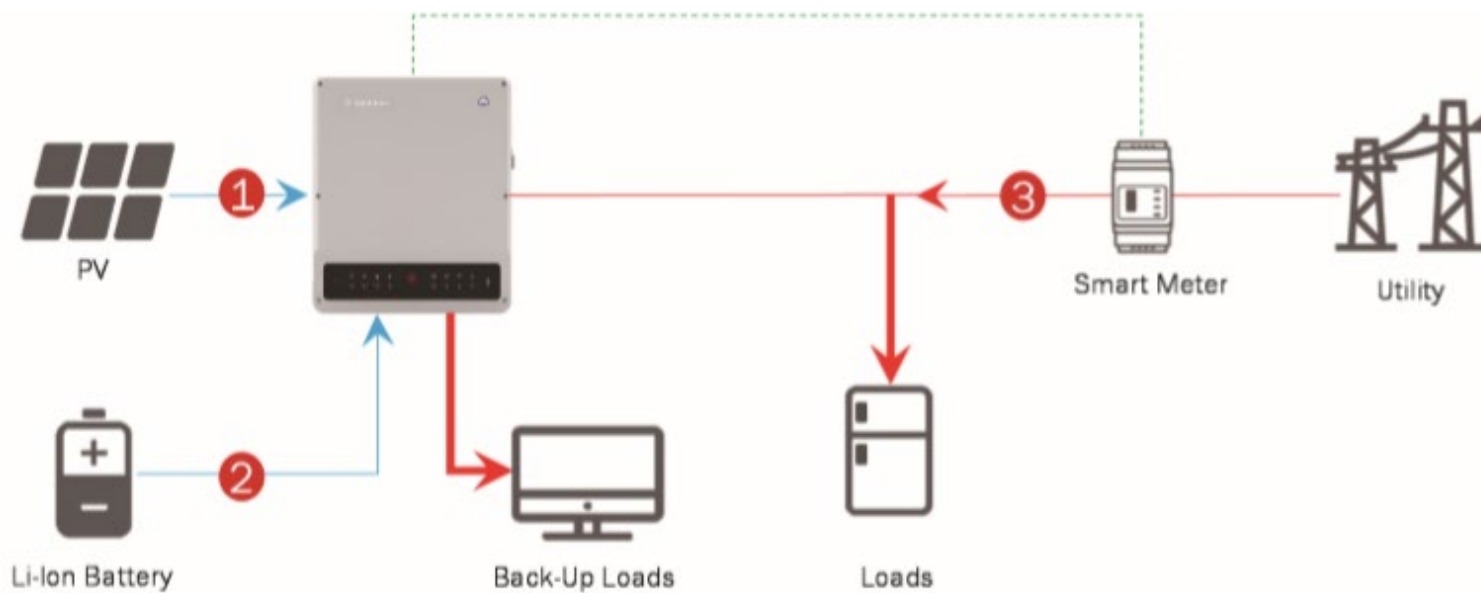
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Load consumption priority





GOODWE
your solar engine



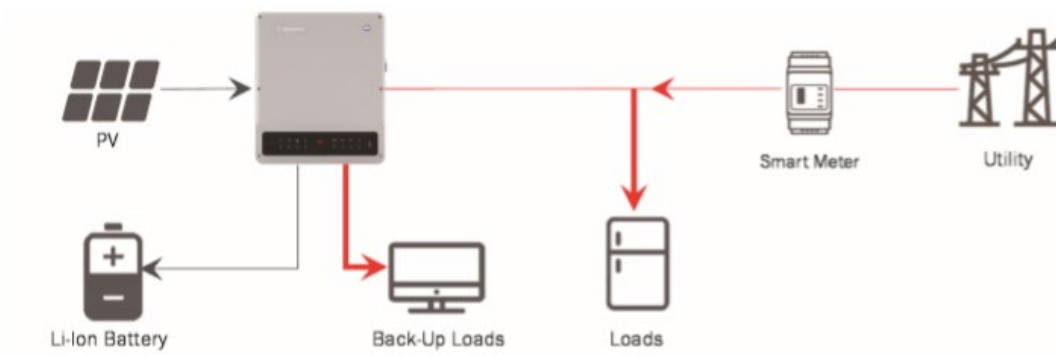
PYLONTECH

SegenSolar
(Pty) Ltd

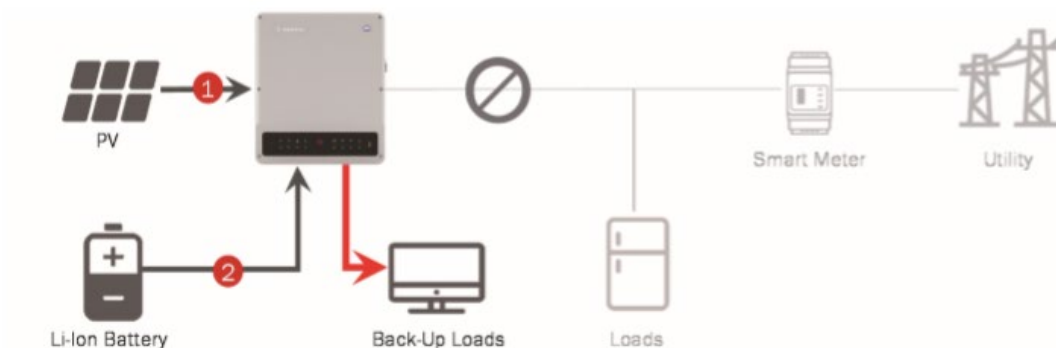
Back up mode

Back-Up mode is to save power into battery for emergency use during utility outage. Under back-up mode, battery will stay at charge statuses, if utility is available, to make sure the battery has enough power reserved. During utility outage, battery charge/discharge will follow default logic to supplement PV supply to loads or charge if PV power is higher than loads.

System Logic When Utility is Available:



System Logic During Utility Outage:





GOODWE
your solar engine



PYLONTECH

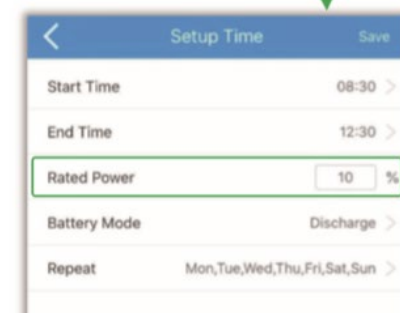
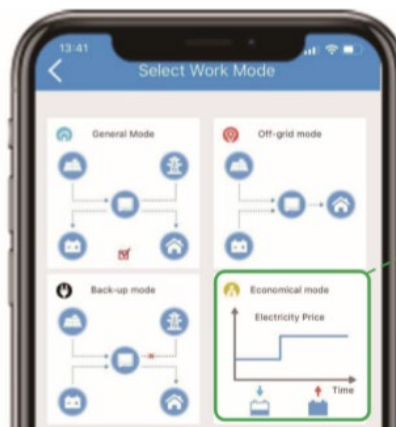
SegenSolar
(Pty) Ltd

Off-grid mode

Off-Grid mode means the inverter will not connect to the grid at all. There will be no electrical connection between the solar PV array and the inverter.

Economical mode

Set customisable charge/discharge times. This is useful if there are peak grid tariffs and you wish to avoid the battery being depleted during those periods.



There are 4 editable different repeating logic, for each, you can set different date(s) and charge/discharge logics.

Rated Power: means the max charge power (%Pn) from grid or max discharge power from battery



GOODWE
your solar engine




PYLONTECH


SegenSolar
(Pty) Ltd


Selecting the lithium battery

Vodacom VoWiFi 13:29 43%

Select Battery Model

 LG

 PYLON

 ALPHA

PYLON US2000A

PYLON US2000B*1

PYLON US2000B*2

PYLON US2000B*3

PYLON US2000B*4

PYLON US2000Plus*1

PYLON US2000Plus*2

PYLON US2000Plus*3

PYLON US2000Plus*4

Previous

Start



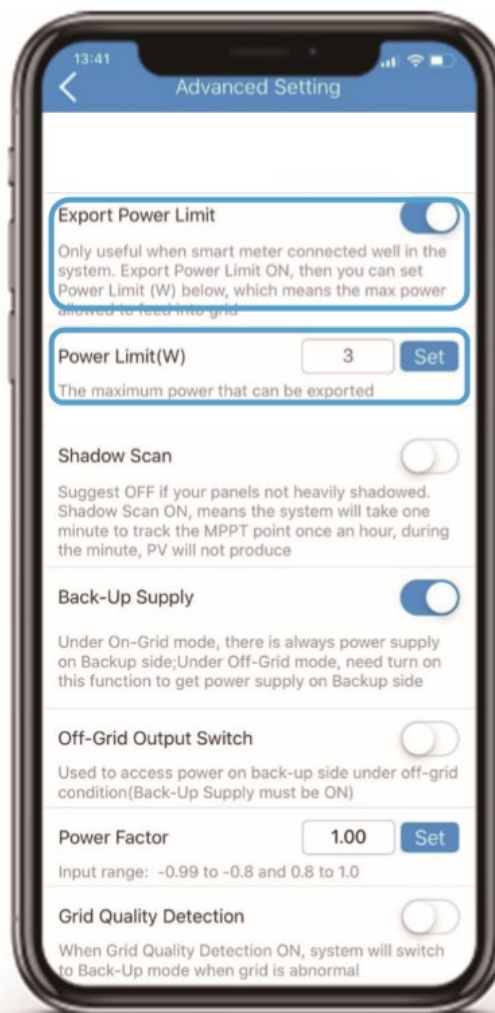
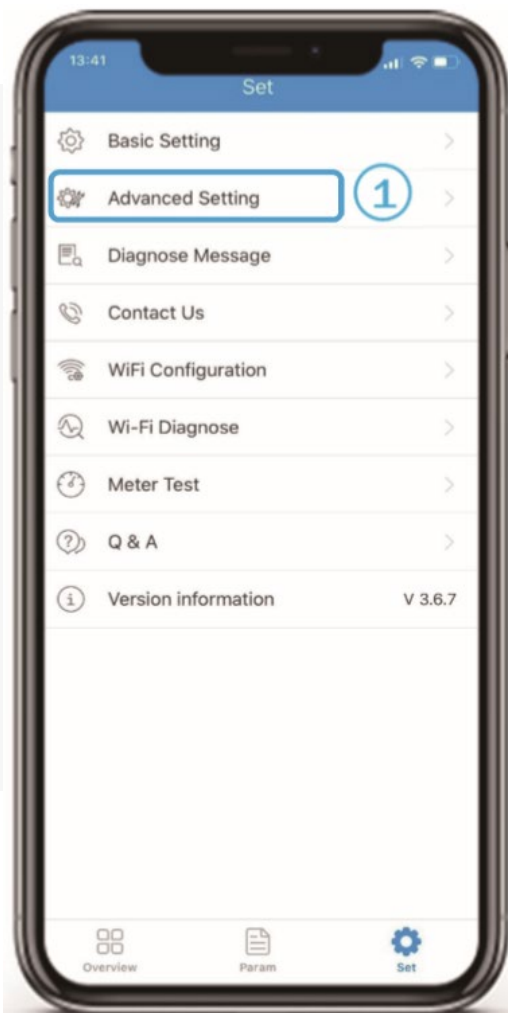
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Advanced settings



Turn on 'Export Power Limit'

Set 'Power Limit' value, which is the maximum amount of power that be exported to the grid



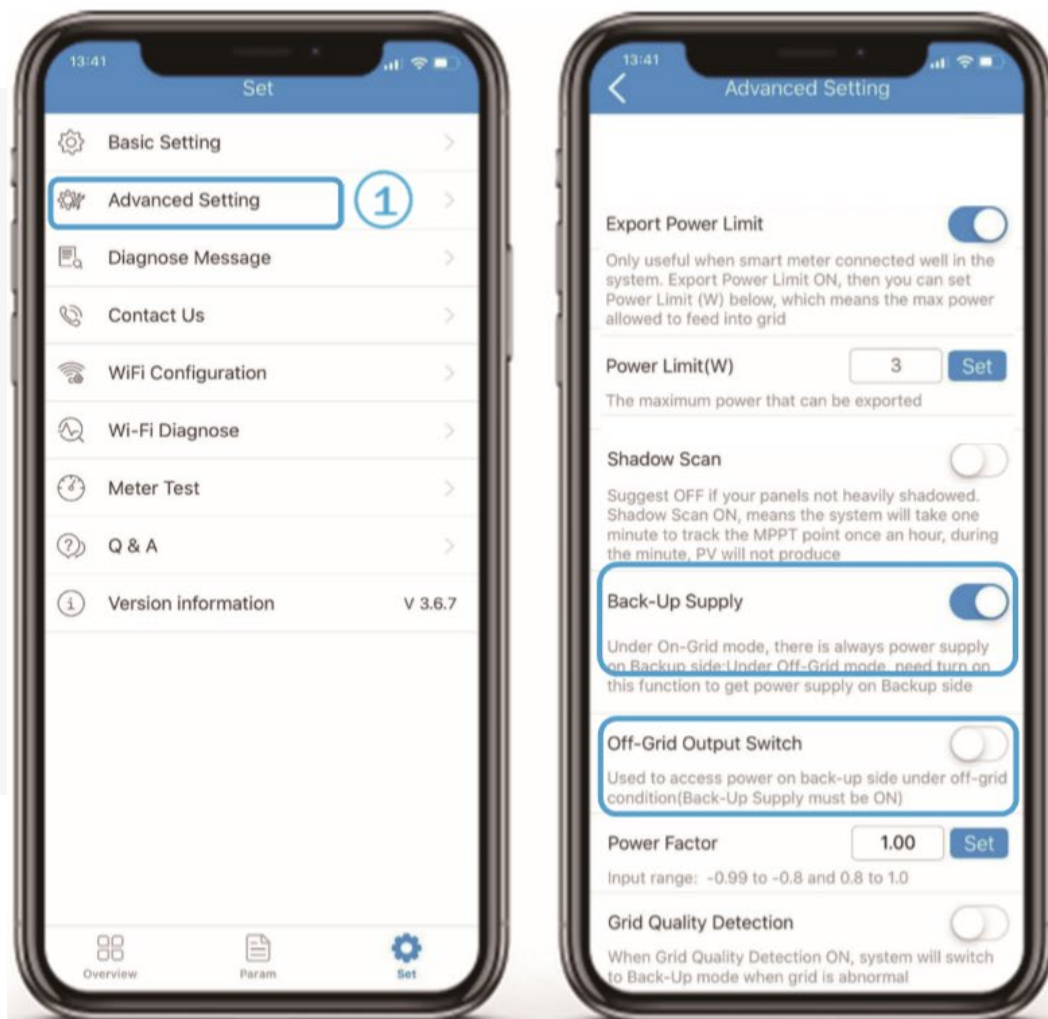
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Advanced settings



→As default, Back-Up Supply function stays ON.

→If you want have power supply on Back-Up side (on-grid or off-grid), this function should always be ON

→As default, Back-Up Supply function stays OFF.

→Should also turn this ON if need power supply during utility outage

→This function works only if “Back-Up Supply” function is ON



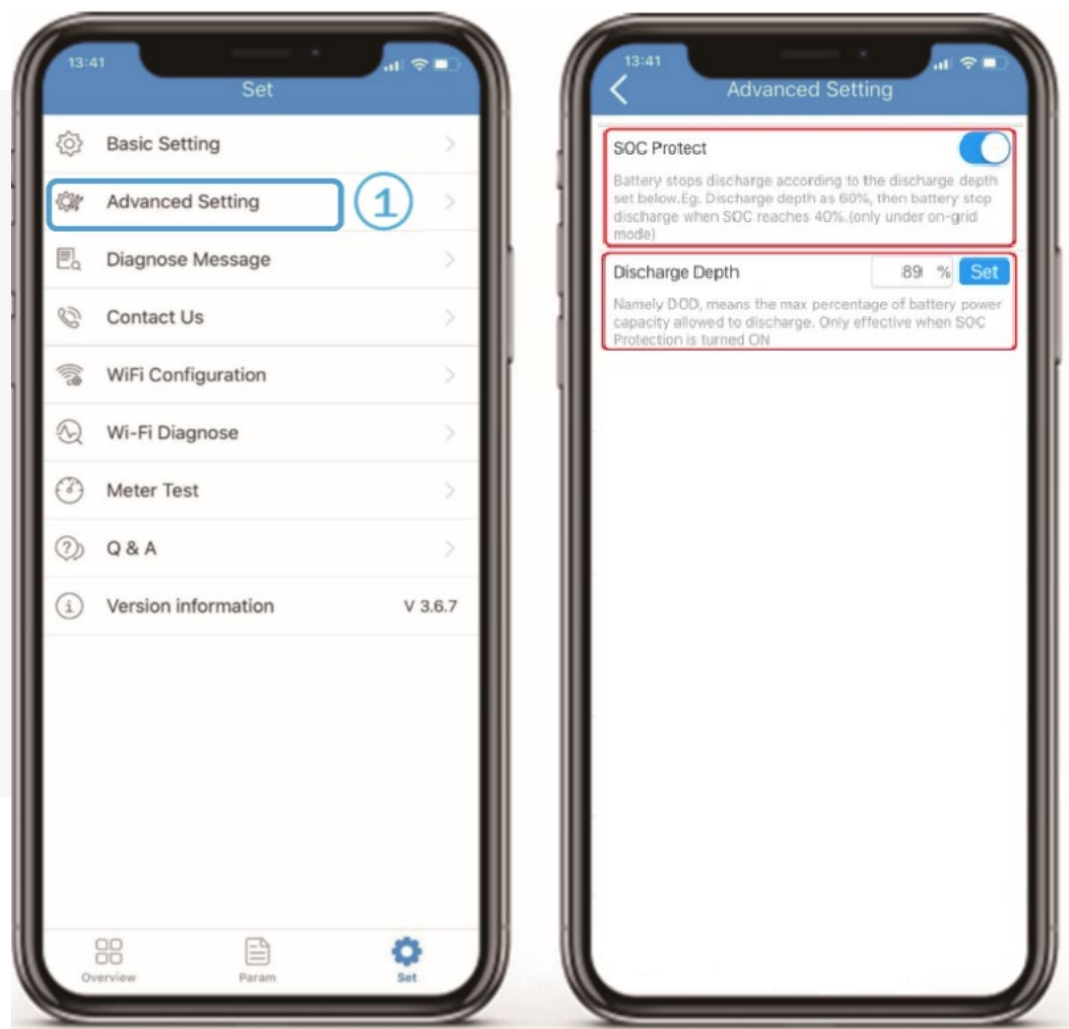
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Advanced settings



Enable 'SOC Protect' and set the Depth of Discharge to improve the lifetime of the Pylontech battery.

Manufacturer-recommended defaults are already set.



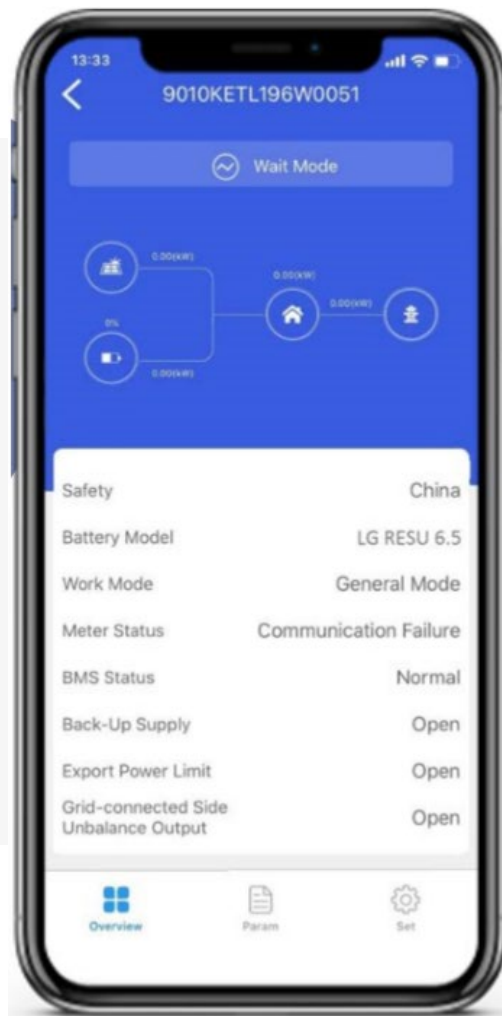
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Commissioning complete





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

System monitoring portal

<http://semsportal.com/>

The screenshot shows a web browser window with the address bar displaying "hk.semsportal.com/Home/Login". The page features the Goodwe and PylonTech logos at the top left, and the SegenSolar logo at the top right. The main heading is "Rich Common Reports" with subtext: "Flexible range selection: Plants, locations or organizations", "Free time dimension: Monthly, annual or user-defined", and "Generate reports quickly to meet your needs". Below this is an illustration of two people interacting with large data screens. On the right, there is a login form with fields for email (kylejoubert@segensolar.co.za) and password, a "Log in" button, a "Register" button, a "Remember" checkbox, and a "Forgot Password" link. At the bottom left, there is a "Customer Satisfaction Survey" button.



GOODWE
your solar engine




PYLONTECH

SegenSolar
(Pty) Ltd

Register an account

Select 'End User' and complete the form.

Visitors will need to create an End User account

 kylejoubert@segensolar.co.za

Log In

Register

☒ Remember

[Forget Password](#)

End user [Need a company account?](#)

* E-mail

* Password

* Confirm

Should be 8-16 characters, include at least one letter and one number.

☐ I'm an adult, I have read and agree "GOODWE User Terms" and "GOODWE Data Protection Claims"

Cancel

Register

With * is required

Scan the QR code to download App: SEMS Portal



 iOS




 Android


Website Record Number:16050124-1,Su ICP


Register an installer account


Contact SegenSolar for an installer account



Installer accounts can view all connected installations, so you can maintain a portfolio of sites. This makes it easy to identify issues remotely at certain sites, or for using as a sales tool for new customers.

 My Account
My Account

 Organization Structure
Organization Structure

 Plant Setup
Plant Setup
Device Management

 Operation Record
Operation Record

Distributor code Search  

SegenSolar Pty

Organization Info Account List Role Permissions PV plant ownership

Organization

Distributor code

Representative /

Email



GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Add an inverter

The Serial Number and Check Code will be required to register an inverter. Both can be found on the inverter name plate.

New Inverter

Inverter

Please enter the inverter name

S/N

Please enter the S/N number

Checkcode

Please enter the Checkcode

Cancel

Submit



Add a station

Continue and complete the details, click 'Submit'

The system will then prompt to add an inverter to the plant

- Plant Setup
 - Plant Setup
 - Device Management
- Operation Record
 - Operation Record
- Push Setting
 - Push Setting
- System Setting
 - System Setting

+

*Plant

Creation Date

*Capacity kW

Classification

*Location

Longitude

Latitude

Detailed Address

Distributor code
Keep it empty if you don't know the installer's code

*Profit Ratio

*Battery Capacity kWh

Amount of solar panles

Cancel

Submit



GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Add a station

Go into Plant Setup and add the owner's email



My Account

My Account



Organization Structure

Organization Structure



Plant Setup

Plant Setup

Device Management



Operation Record

Operation Record



Push Setting

Push Setting



System Setting

System Setting

Owner:

Add

Email

Operation

Please click "Add" to add the owner information

Visitor:

Add

Email

Operation

Please click "Add" to add the visitor information

Plant Info:





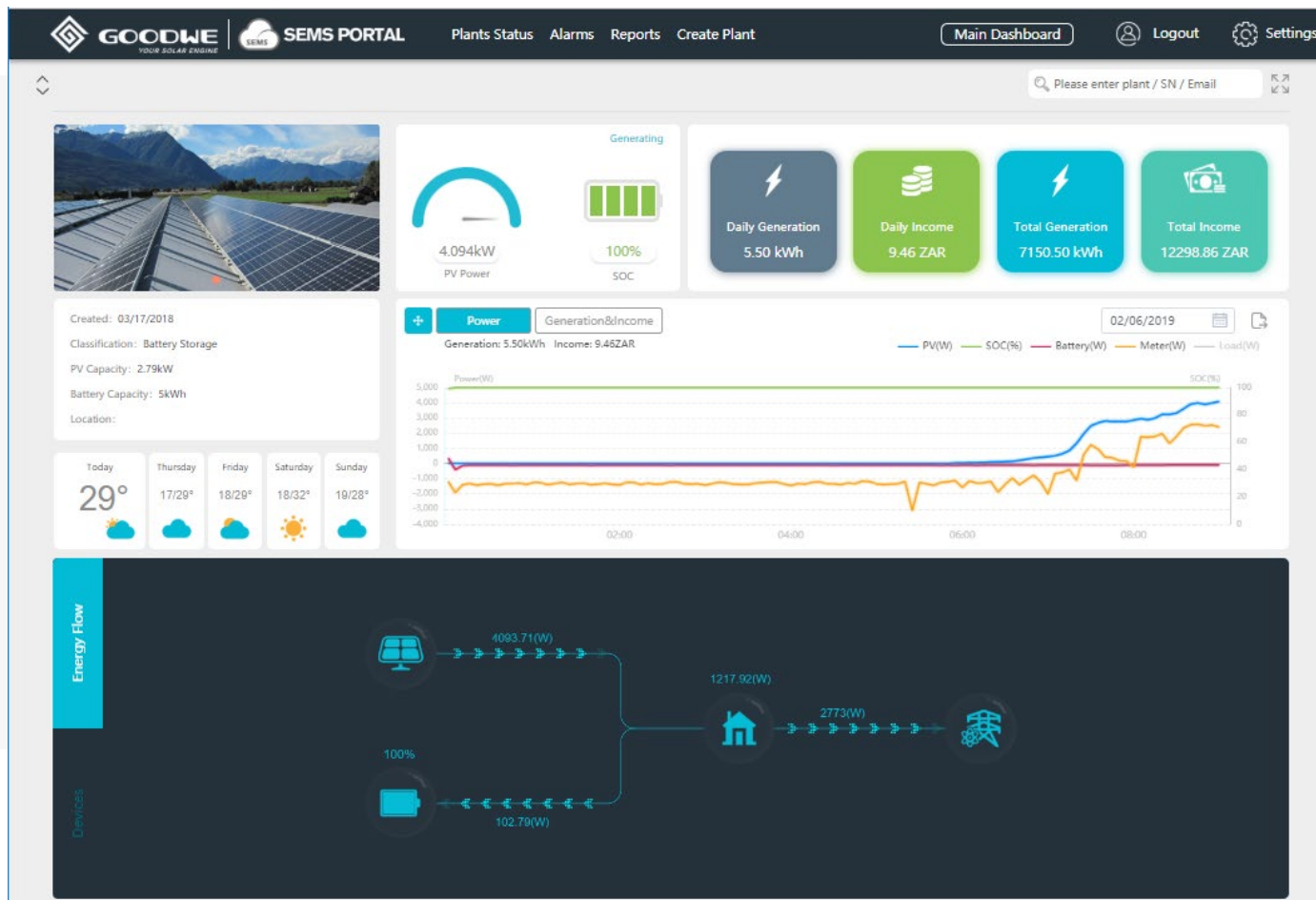
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Monitoring platform





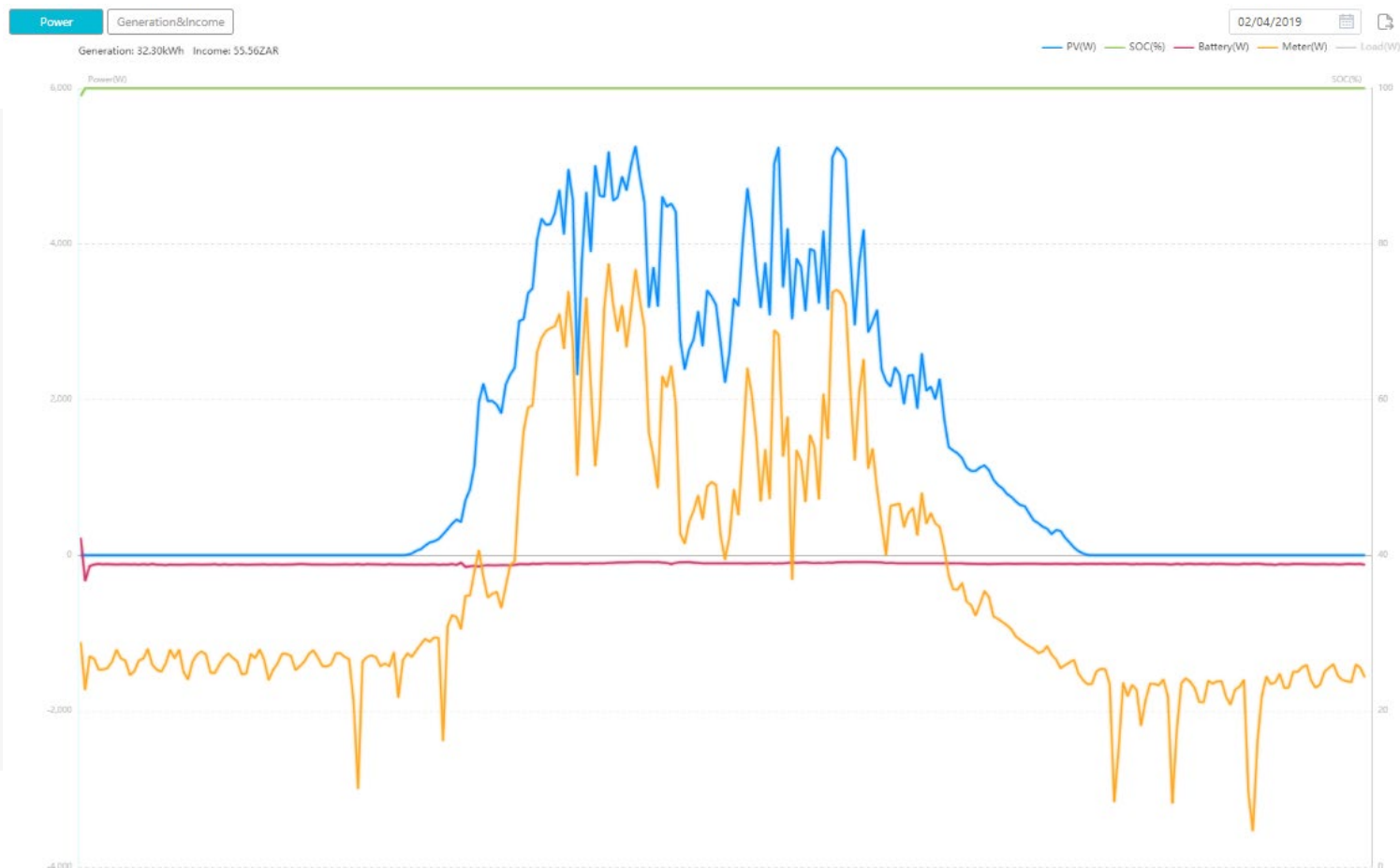
GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

System overview





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Monitoring app



English ▼

Reinierru@segensolar.co.za

••••••••

☒ Remember

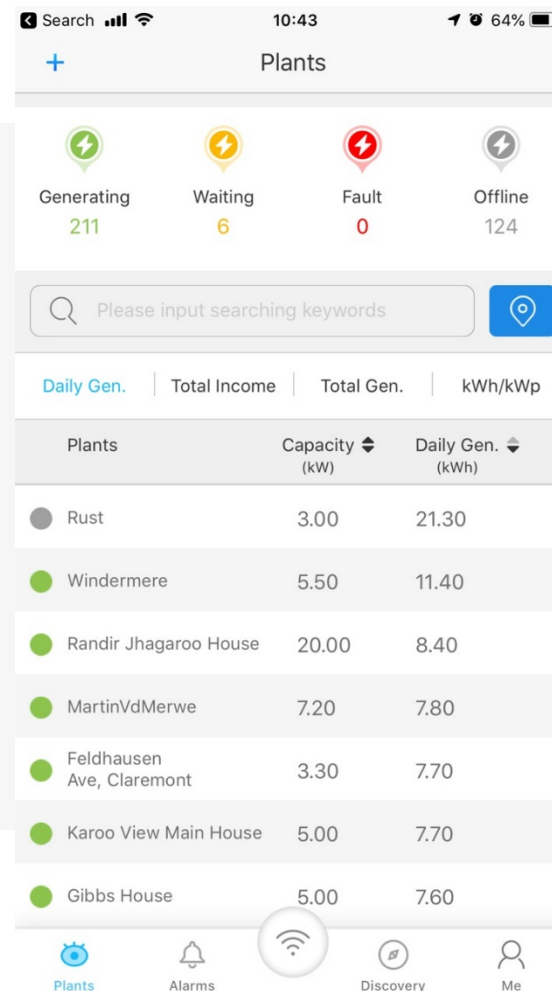
[Forget password?](#)

Login

[Register](#)

[Wi-Fi Configuration](#)

SEMS PORTAL V2.1.3





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Monitoring app

Search 09:46 72% 1976

Generating

Power:0.03 (kW) SOC:68%

KPI



Daily Generation
2.80(kWh)



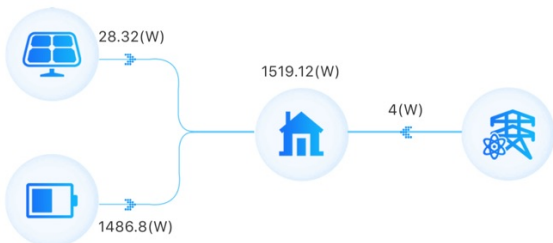
Total Generation
3.51(MWh)



Daily Income
3.64(ZAR)



Total Income
4568.98(ZAR)



PV Generation:2.80kWh



Consumption of Load:2.90kWh



Operation Data

Today Day Month Year

02/11/2019

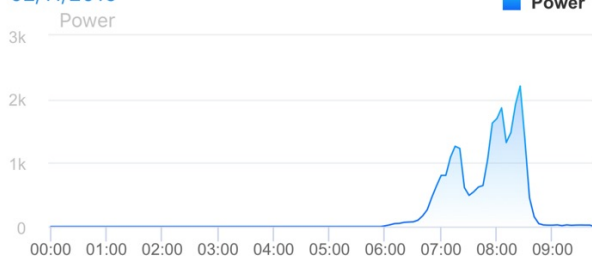


Search 09:46 72% 1976

Operation Data

Today Day Month Year

02/11/2019



Environment Contribution



CO2 Reduction(Ton)
3.50



Planted Trees
192



Coal Savings(Ton)
1.42



Address:

Connected: 05/18/2018

Capacity: 5.90(kW)

Battery Capacity: 20.0(kWh)

Today



Tues.

27/16°

Wed.

29/16°

Thur.

-/-°

Fri.

-/-°

Search 09:46 71% 95048ESU17900101



Monitoring

Configure

Daily Generation **2.8kWh**
Total Generation **3514.6kWh**
Output Power **1373W**
Output Voltage **243.1V**
Back-up Output **243.1V/1843W**
PV Input 1 **135.9V/0.1A**
PV Input 2 **147.3V/0.1A**
Battery (Discharging) **53.1V/28A/1487W**
SOC **68%**
Warning (BMS) **Normal**
Charge current limit (BMS) **94A**
Discharge current limit (BMS) **94A**
SOH **99%**
Inner Temperature **34.2°C**
Firmware Version **121206**



GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Troubleshooting common issues

Unit reading export even though export is disabled.

- **Check CT direction**
- **Check meter communication**

Unit not communicating to batteries.

- **Check cable, must be plugged into CAN port**
- **Check addressing switches**
- **Check settings for correct battery selection**

PV Master not connecting or getting setup failed message.

- **Ensure WiFi dongle firmware is latest version**
- **Ensure PV Master is latest version**

Unit not connecting to WiFi, SEMS portal showing “offline”

- **Inverter firmware and WiFi firmware should be updated with latest version**

Product warranty



Warranty

GOODWE ES series inverters come standard with a manufacturer's warranty of 66 months (5.5 years) from the date of production from JIANGSU GOODWE POWER SUPPLY TECHNOLOGY Co., Ltd (hereinafter referred to as GOODWE).

The accessory products include Antenna, EzConverter, EzMeter and EzLogger come standard with a manufacturer's warranty of 30 months (2.5 years) from the date of manufacturing from GOODWE.

For inverters (GOODWE ES series), and the accessory products, the warranty can be extended within 24 months (2 years) from the date of manufacturing. Please obtain the warranty extension price list form GOODWE Sales for further information.



Product warranty



Warranty

Pylontech batteries include a 7 year warranty, subject to the battery being operated in the appropriate conditions described in the installation manual and warranty document.

All Pylontech documents are available to download from the product pages on SegenSolar's portal.

Extended warranty at no extra cost

When you complete your installation, make sure to register the Pylontech batteries on their support site to qualify for an additional three years of cover for free:

<http://www.pylontech.com.cn/service/support>





GOODWE
your solar engine



PYLONTECH

SegenSolar
(Pty) Ltd

Local support / RMA process

Local support

SegenSolar provide the first line of support for GoodWe and Pylontech enquiries. For any installation problems, please ensure you call our team while you're on site with the equipment. That way our way team can assist.

GoodWe have experienced technical operatives based in South Africa, which ensures that any cases that require manufacturer support get dealt with without delay.

The robust BMS communication between the GoodWe and Pylon units enables thorough fault finding of the Pylontech battery through the GoodWe.

RMA process

In the event of a suspected faulty GoodWe or Pylontech product, SegenSolar's technical team will ask you to complete a short RMA form to gather the essential site info.

They will then arrange to test the products in the lab and quickly produce a report indicating the problem.



Thank you

To recap on today's webinar please visit our portal

