

The logo for SUNGROW, featuring the word "SUNGROW" in a bold, orange, sans-serif font. The background of the slide is a light gray with a series of white, glowing hexagonal outlines that recede into the distance, creating a sense of depth and perspective.

SUNGROW

Clean power for all

SUNGROW POWER SUPPLY CO., LTD.

Streamlining Service and Warranty with iSolarCloud - Tips

Presenters – Graham Smith & Jeet Singh Sethi

Sungrow Presenters



Graham Smith

Senior Service Engineer

CEC Accredited Solar Installer and
Designer




Jeet Singh Sethi

Technical Service Engineer

Electrical Engineer

Contents

- **Sungrow Service Overview**
- **iSolarCloud App / Web Portal**
- **iSolarCloud Features**
- **Case Studies**



Sungrow Service Team

Service Team Overview

Sungrow: Local Support

Over **8 years** local support & service experience since 2012 with experienced local service engineers;
Built national service networks to help customers for warranty enquires and installers for troubleshooting;
Our team has achieved so far

- Successfully support over 2K solar installers for installation and troubleshooting in past 8 years
- Successfully completed commissioning for over 3 MWh ESS projects across Australia and American Samoa



3 Levels of Support

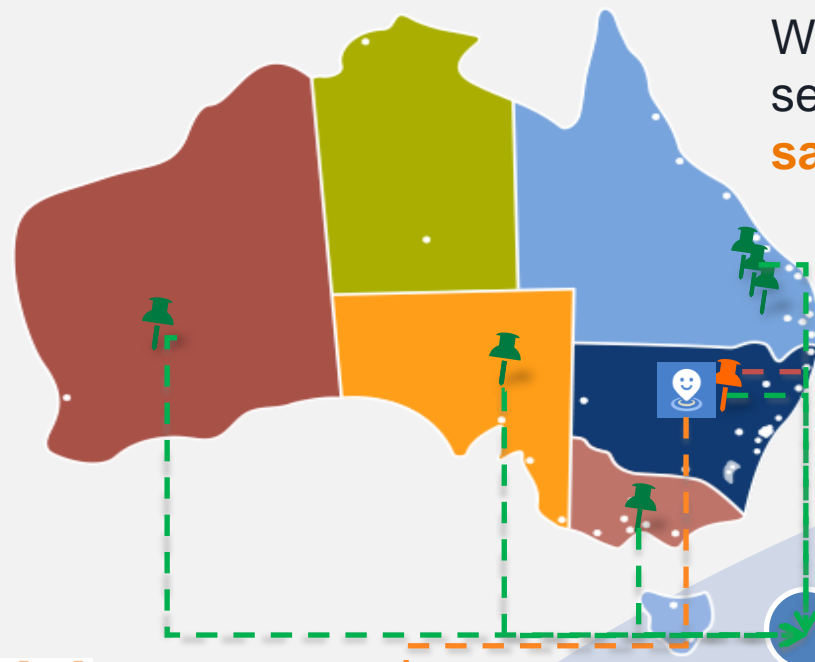
Sungrow: Service Strategies

National Approved
Service Partners
in major Australian
cities

With three levels of service strategies, our service team aim to achieve **our customer satisfaction**.



Sungrow Australia Group Pty Ltd
Suite 1703, 99 Mount St.
North Sydney NSW 2060
Phone: 1800 786 476
service@sungrowpower.com.au



Service Call Centre

Remotely assist customers
throughout Australia

Local Service Network

Located in major capital
cities for field service support

Local Repair Centre

Test and repair defective
inverters

Local Spare Parts Warehouse

Manage backup inverters,
spare parts and outbound
& inbound logistics



Sungrow facilities

Fully equipped workshop, Spare Parts and Test Centre at our warehouse in Pendle Hill NSW



Sungrow: Proactive Plans

Online knowledge base reference library

Regular training webinars and share 'Tech Tips'

Training center - Practical 'hands-on' training in:

- Connection and set-up
- Troubleshooting



[Knowledge Base](#) > [Hybrid System](#)



[Troubleshooting](#)

[Videos for SH5K+/SH5K-20](#)

[Videos for SH5K/SH5K+ Non-EPS](#)

[User Manual](#)

Technical Notes

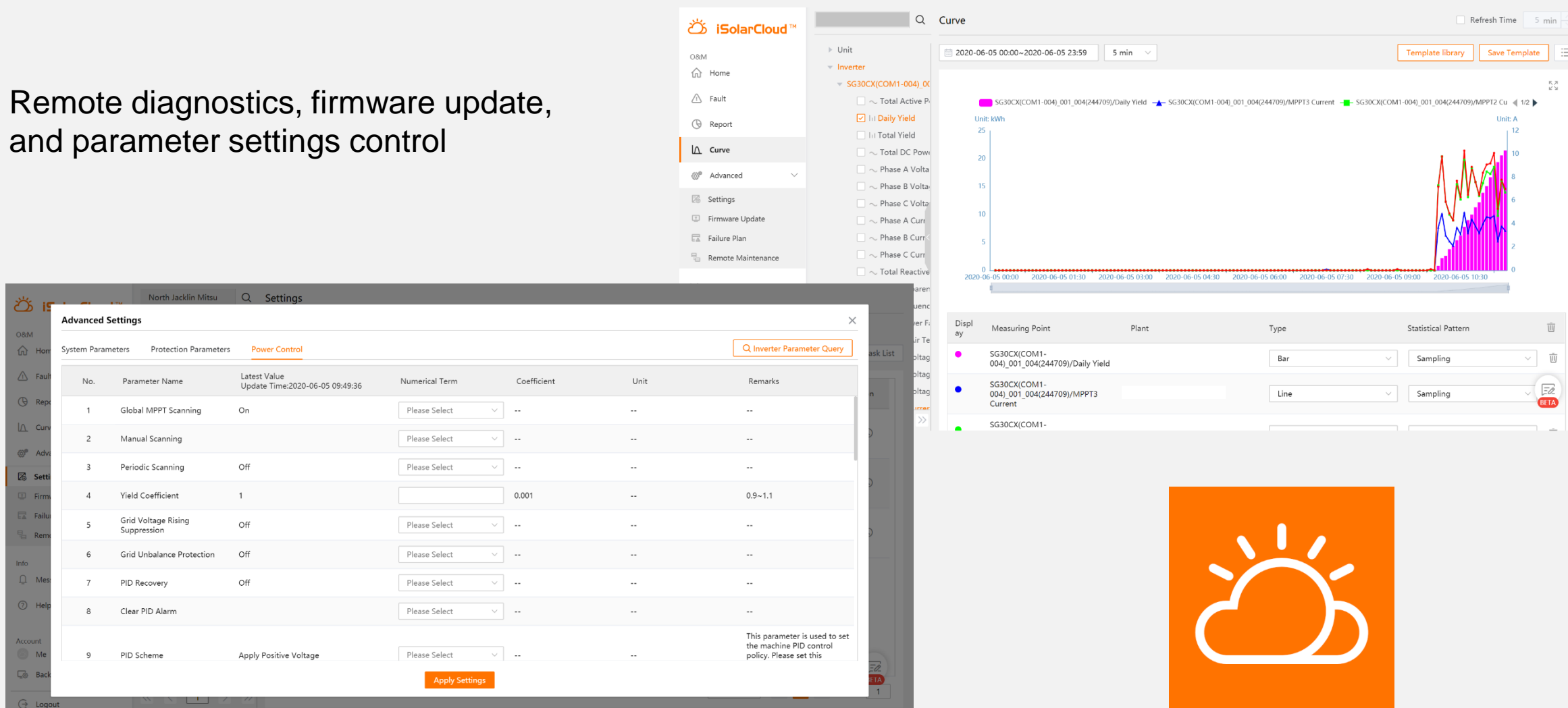
- [SH5K-30 Release and Comparison](#)
- [SH5K-20 Release and Comparison](#)
- [Approved battery declaration](#)
- [SH5K+ Non-EPS Comparison](#)
- [SH5K+ \(V044\) Firmware Release](#)
- [SH5K+ \(V045\) Firmware Release](#)
- [Local Firmware Upgrade \(iSolarCloud\)](#)
- [Firmware Update Instruction via a Laptop](#)

General Information

- [Power Quality Response Mode Settings Guide](#)
- [Error Code List](#)
- [Access Error Codes](#)
- [Menu Tree](#)
- [SH5K+_Technical Data](#)
- [Grid Tied Inverters_Overvoltage](#)

iSolarCloud

Remote diagnostics, firmware update,
and parameter settings control

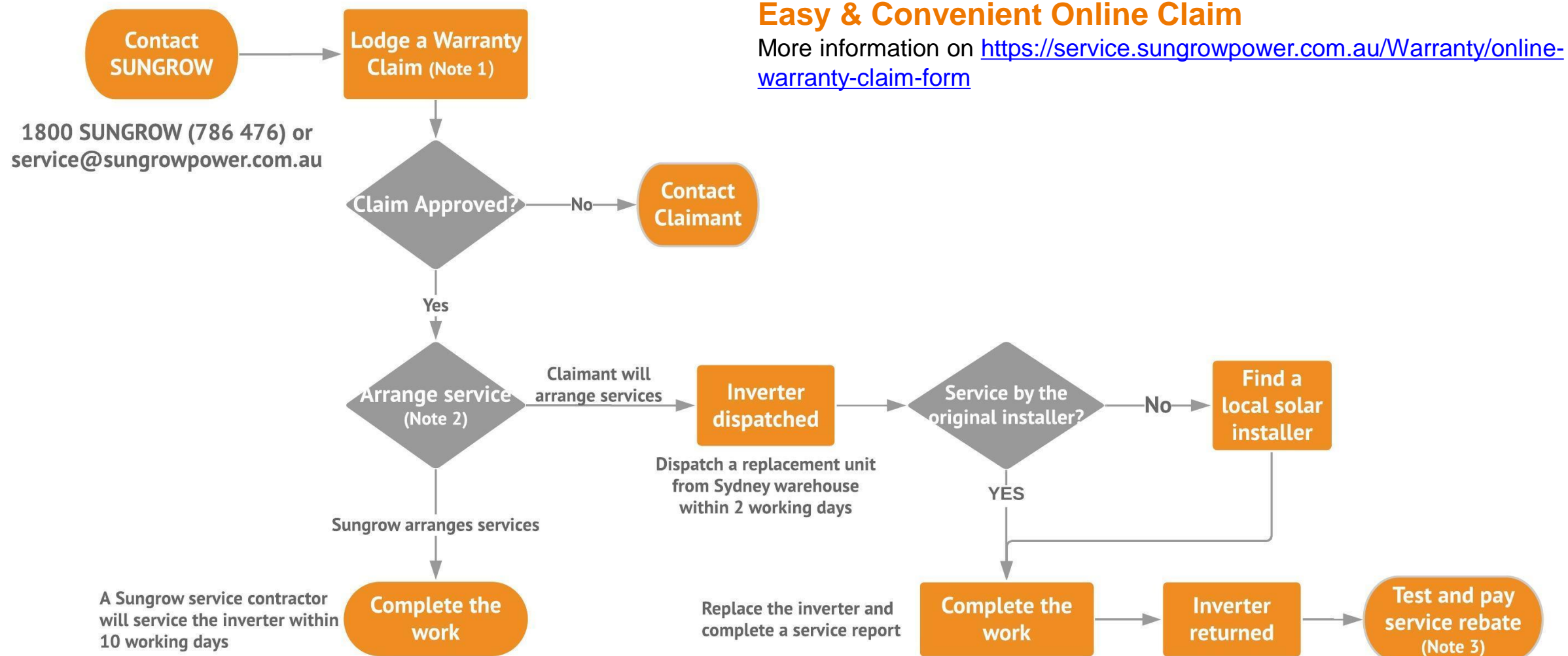


R&D – International collaboration and support

Sungrow Australia Service staff have a direct line to R&D at the main China HQ, with dedicated staff to assist resolve problems, and take feedback for product improvement solutions.



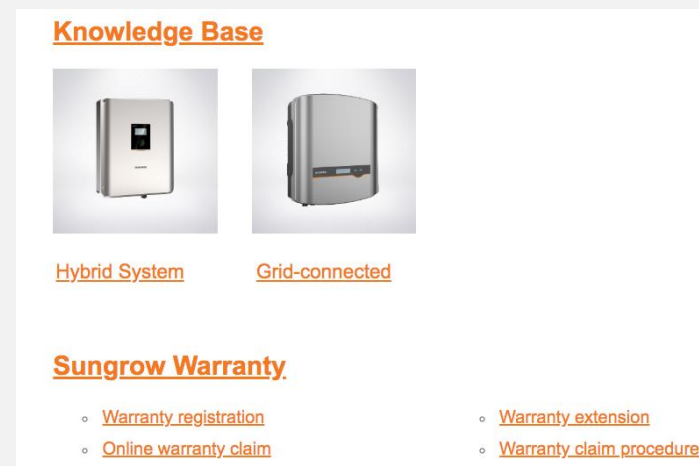
Easy Online Warranty Claim Procedure



Support Channels

Access the service website for troubleshooting and service-related documents:

<https://service.sungrowpower.com.au>




If you have any enquiries about our products or service, you can give us a call if you are on site or send emails with details, our service team will reply you shortly.

Service support hotline: 1800 SUNGROW (786 476)

Sales enquiries: info@sungrowpower.com.au

Service enquiries: service@sungrowpower.com.au

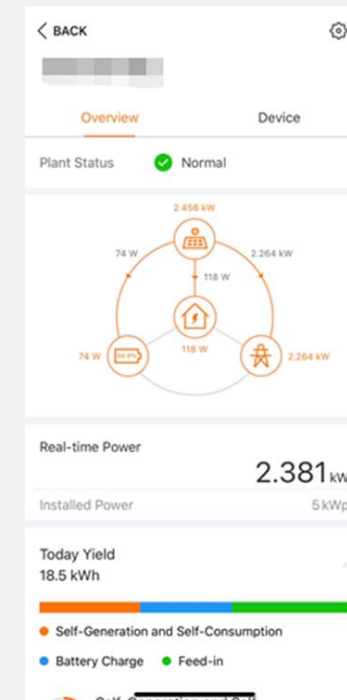
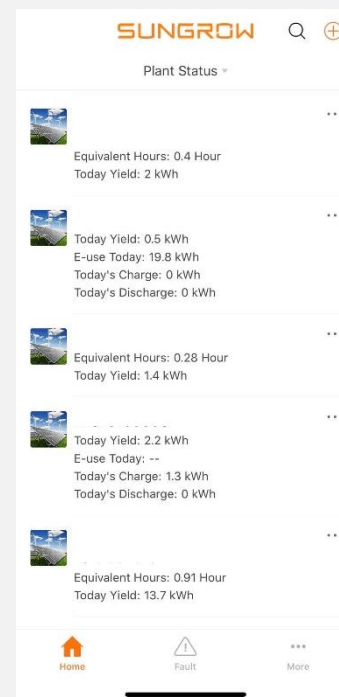
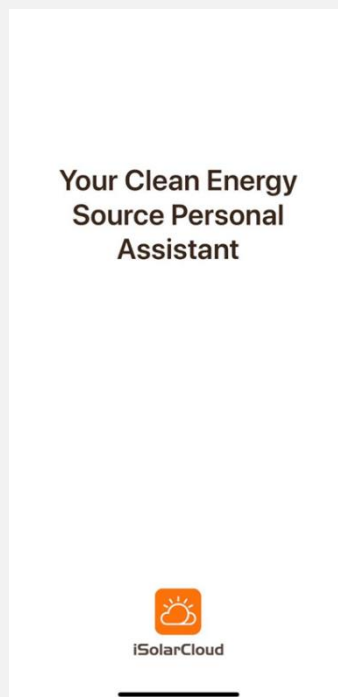
- **Provide supporting documents**
- **Troubleshooting**
- **Advise solutions**



iSolarCloud App / Web Portal

Viewing information on iSolarCloud
app and web portal

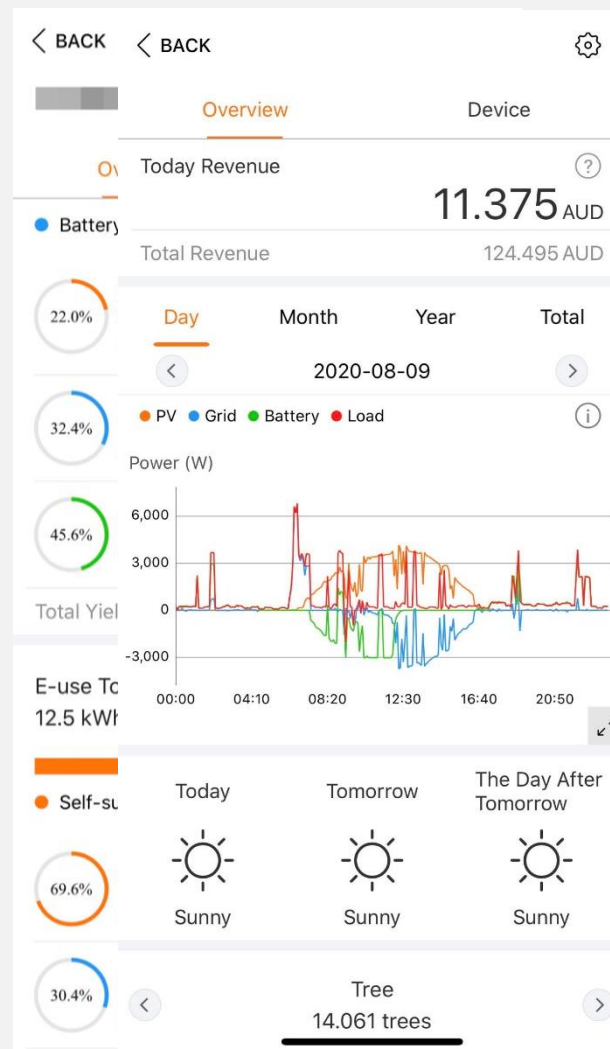
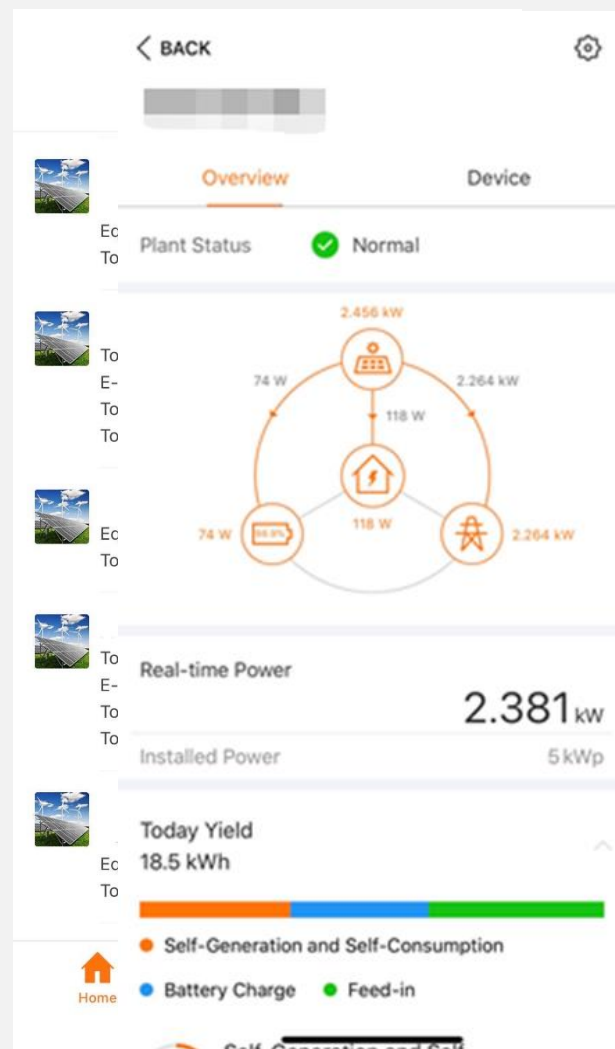
Integrated management and efficient O&M: iSolarCloud APP



Function

- Applicable to Android and iOS system
- Energy generation, operation status and revenue display
- Plant monitoring, alarm report , service dispatching, parameter setting, etc.
- FAQ, local monitoring while no Internet

App Overview



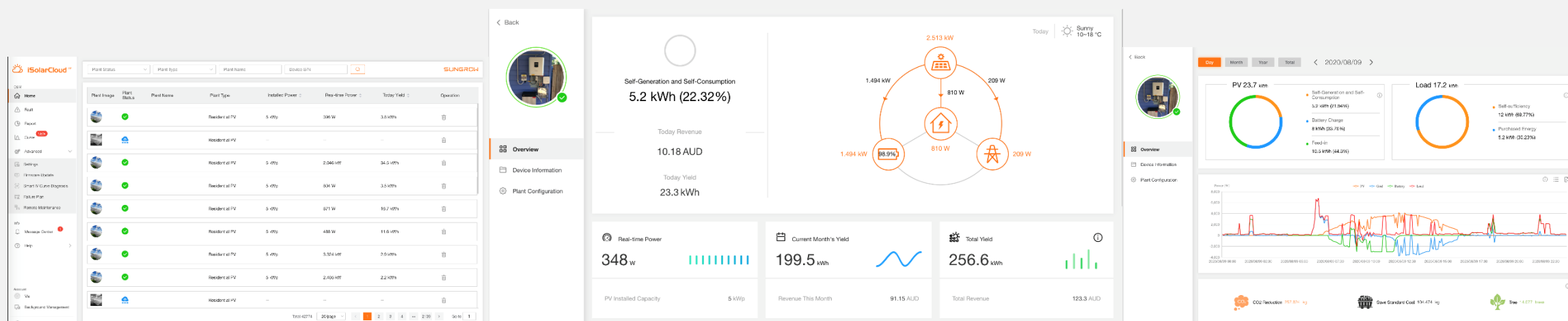
SH5K_001_001

Current: **General Information** Active Fault Settings Adva

SH5K_001_001 Data Update Time: 2020-08-10 16:05:00

| | | |
|---------------------|----------------|-----------|
| MPPT1 | Device Status | ✔ |
| MPPT1 | Parameters | |
| WIFI | PV Information | ^ |
| MPPT1 | MPPT1 Voltage | 231.6 V |
| MPPT1 | MPPT1 Current | 3.9 A |
| MPPT2 | MPPT2 Voltage | 180 V |
| MPPT2 | MPPT2 Current | 2.2 A |
| Total DC | Total DC Power | 1.27 kW |
| Daily PV | Daily PV Yield | 25.1 kWh |
| Total PV | Total PV Yield | 258.4 kWh |
| AC Voltage | AC Voltage | 238.3 V |
| AC Current | AC Current | 5.7 A |
| Battery Information | | ^ |
| Battery | Battery | 57.5 V |

Integrated management and efficient O&M: iSolarCloud Web



Function

- Energy generation
- Data processing and analysis
- Geographic Information System
- Firmware upgrading
- Real time alarm Management
- Quick trouble shooting

Power Plant Level Monitoring

Home page can also display load Information, data curve, and energy saving information

O&M

- Home
- Fault
- Report
- Curve NEW
- Advanced
- Settings
- Firmware Update
- Smart IV Curve Diagnosis
- Failure Plan
- Remote Maintenance
- Info
- Message Center 1
- Help
- Account
- Me
- Background Management
- Logout

Plant Status
Plant Type
Plant Name
Device S/N

| Plant Image | Plant Status | Plant Name | Plant Type | Installed Power | Real-time Power | Today Yield | Operation |
|-------------|--------------|------------|----------------|-----------------|-----------------|-------------|-----------|
| | ✓ | | Residential PV | 5 kWp | 396 W | 3.8 kWh | |
| | ⚠ | | Residential PV | -- | -- | -- | |
| | ✓ | | Residential PV | 5 kWp | 2.046 kW | 34.5 kWh | |
| | ✓ | | Residential PV | 5 kWp | 804 W | 3.5 kWh | |
| | ✓ | | Residential PV | 5 kWp | 871 W | 16.7 kWh | |
| | ✓ | | Residential PV | 5 kWp | 488 W | 11.6 kWh | |
| | ✓ | | Residential PV | 5 kWp | 3.324 kW | 2.9 kWh | |
| | ✓ | | Residential PV | 5 kWp | 2.405 kW | 2.2 kWh | |
| | ⚠ | | Residential PV | -- | -- | -- | |

Total 42774
20/page
1 2 3 4 ... 2139 >
Go to 1

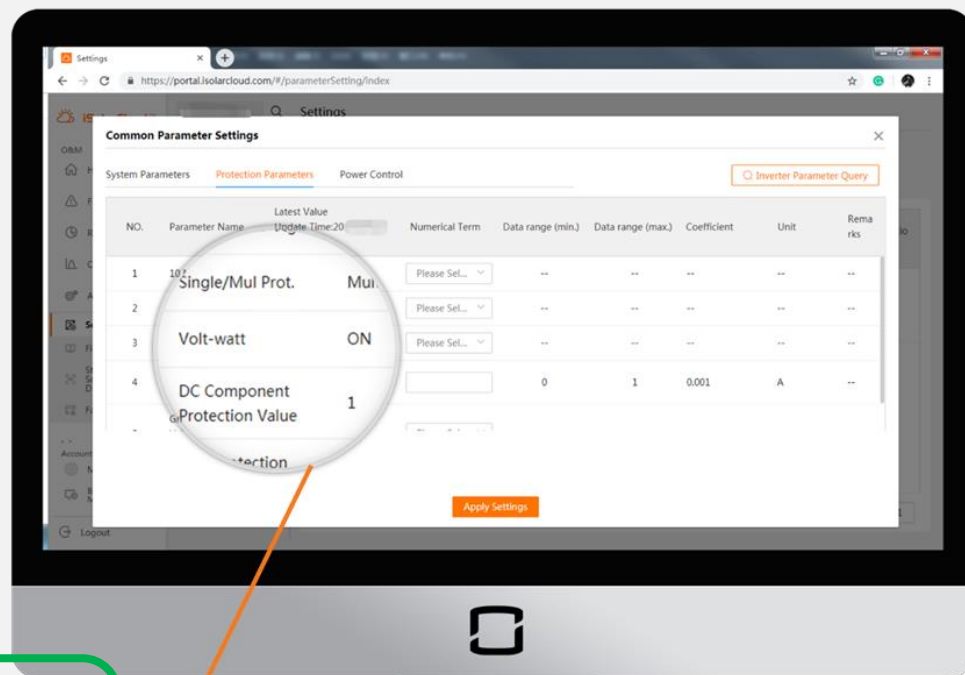
Public



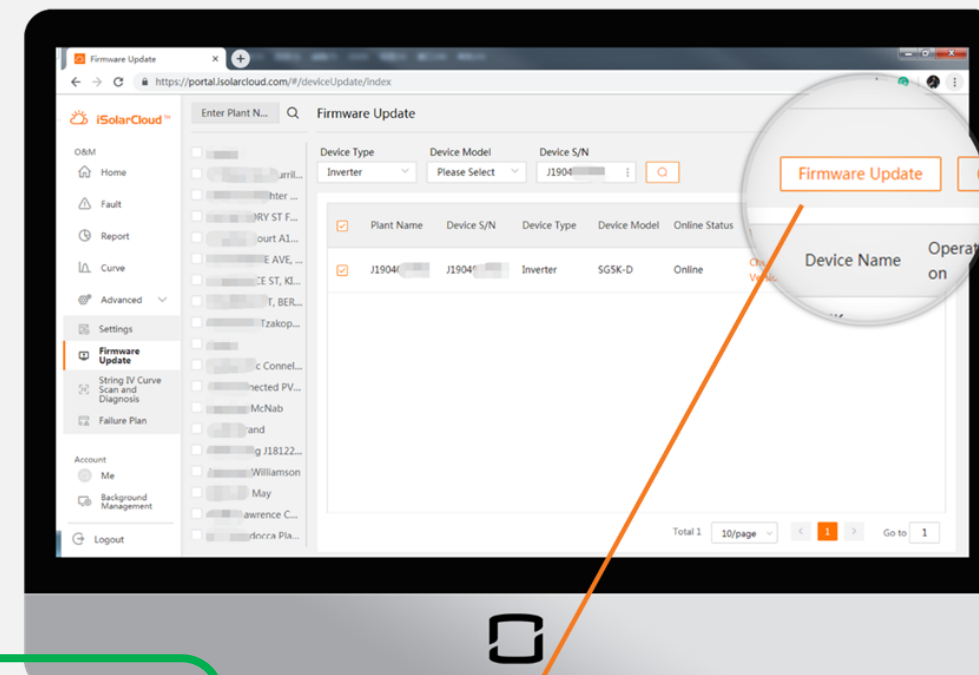
iSolarCloud Features

Various Features of iSolarCloud to assist with managing plants

Parameter Settings and Firmware Upgrades from your desktop



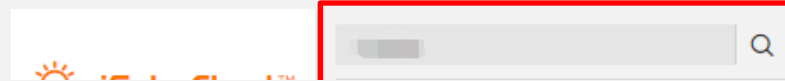
Remote
Parameters
Setting



One-click
Firmware
Upgrading

...and many more!

Viewing the parameters



Settings

Inverter

Device Model

Country/Regi...

Grid Frequency

Device S/N



Initial Grid Connection

Common Parameter Settings

Task List

| <input checked="" type="checkbox"/> | Plant Name | Device Name | Initial Grid |
|-------------------------------------|------------|----------------|--------------|
| <input checked="" type="checkbox"/> | [REDACTED] | SG8K-D_001_001 | Already Set |

Parameter Query

Task Name: 2020-08-11 11:35 Inverter Remote Parameter Qu...

Instruction Valid Period: 0.5 h

Note: When the inverter parameters are queried, the parameter setting is not affected. Click "Cancel" to exit the inverter parameter query function.

Cancel

Confirm

Version No. Device Interval Operation

CR0-1.0.5.0-AR0-1.0.15.0



Message Center

Help

Viewing the parameters

Common Parameter Settings

| System Parameters Protection Parameters Power Control | | | | | | | | | |
|--|--------------------------------------|---|----------------|-------------------|-------------------|-------------|------|---------|--|
| No. | Parameter Name | Latest Value Update Time:2020-06-12 16:01:33 | Numerical Term | Data range (min.) | Data range (max.) | Coefficient | Unit | Remarks | |
| 1 | Reactive Power Regulation Mode | PF | PF | -- | -- | -- | -- | -- | |
| 1-1 | PF | 0.9 | | -1 0.8 | -0.8 1 | 0.001 | -- | -- | |
| 2 | F-max Start | 50.25 | | 50.2 | 52 | 0.01 | Hz | -- | |
| 3 | Frq Stop | 52 | | 51 | 52 | 0.01 | Hz | -- | |
| 4 | F-max Derating Ramp | 40 | | 16.7 | 100 | 0.01 | % | -- | |
| 5 | Curve | Curve B | Please Select | -- | -- | -- | -- | -- | |
| 6 | Recovery Frequency | 50.15 | | 50 | 52 | 0.01 | Hz | -- | |
| 7 | Power Recovery Time Delay | 60 | | 0 | 1,200 | 0.1 | s | -- | |
| 8 | Power Response Time | 0 | | 0 | 2 | 0.01 | s | -- | |
| 9 | DRM Switch Enable | | Please Select | -- | -- | -- | -- | -- | |
| 10 | Power Regulation at Grid Overvoltage | On | Please Select | -- | -- | -- | -- | -- | |

Changing the Parameters

Settings

Inverter

☒

☒

Advanced Settings

Protection Parameters

Power Control

Q Inverter Parameter Query

| No. | Parameter Name | Latest Value Update Time:2020-07-10 17:17:59 | Numerical Term | Coefficient | Unit | Remarks |
|-----|-------------------------------|---|----------------|-------------|------|-----------|
| 1 | 10-min Overvoltage Protection | ON | ON | -- | -- | -- |
| 1-1 | Protection Value | 257 | 258 | 0.1 | V | 230~264.5 |

Settings

Task Name:

2020-08-11 11:22 Remote Parameter Setting

Instruction Valid Period:

0.5 h

Cancel

Confirm

Apply Settings

Remote Firmware Upgrades

Some settings may require a firmware upgrade

Firmware Update

Task Name

2020-08-11SG5K-DInverterCR0-2.0.2.0-AR0-1.0.15.0Firmware Update

Note: After the task has been generated, please go to Device Upgrade > View Task History to view the details of the upgrade task.

Confirm

Remote Firmware Upgrades

Firmware Update

Inverter ^

Device Model v

Device S/N

⋮

Q

Firmware Update

⌚

- Inverter
- Energy Storage System
- Data Logger
- Communication Module

| Device S/N | Device Type | Device Model | Online Status | Current Version | Device Name | Operation |
|------------|-------------|--------------|---------------|-----------------|----------------|-----------|
| A200 | Inverter | SG8K-D | Online | Check Version | SG8K-D_001_001 | ⌚ |

Remote Firmware Upgrades

Firmware Update ✕

Task Name

2020-08-11 12:45 SG5K-D Inverter Remote Update

Single Device Update Timeout

1 h ▼

Cancel

Confirm and Update

Online update currently only available for Crystal G2 Inverters

Faults

Fault Detail



Fault Information

| | | | |
|----------------------|----------------|-------------------|-----------------------------------|
| Device Type : | Inverter | Alarm Name : | Meter/CT reverse connection alarm |
| Faulty Device : | SG5K-D_001_001 | Device Model : | SG5K-D |
| Fault Type : | Alarm | Fault Code : | 84 |
| Source : | System Note | Processing Time : | |
| Fault Details : | | | |
| Processing Opinion : | | | |

Repair Advice

Cause

Reverse connection at the input/output port of the energy meter, or the meter is connected to a wrong terminal.

Corrective measures

- 1.Check whether the polarity of the energy meter is reversed according to the prints on the cable connection port, and correct the connection if not.
- 2.Check whether the energy meter is connected to a wrong terminal other than the grid-connected point. If so, correct it.
- 3.If the fault is not caused by the foregoing reasons and still exists, please contact Sungrow Service.

Close Fault

Curve

Curve

☐ Refresh Interval

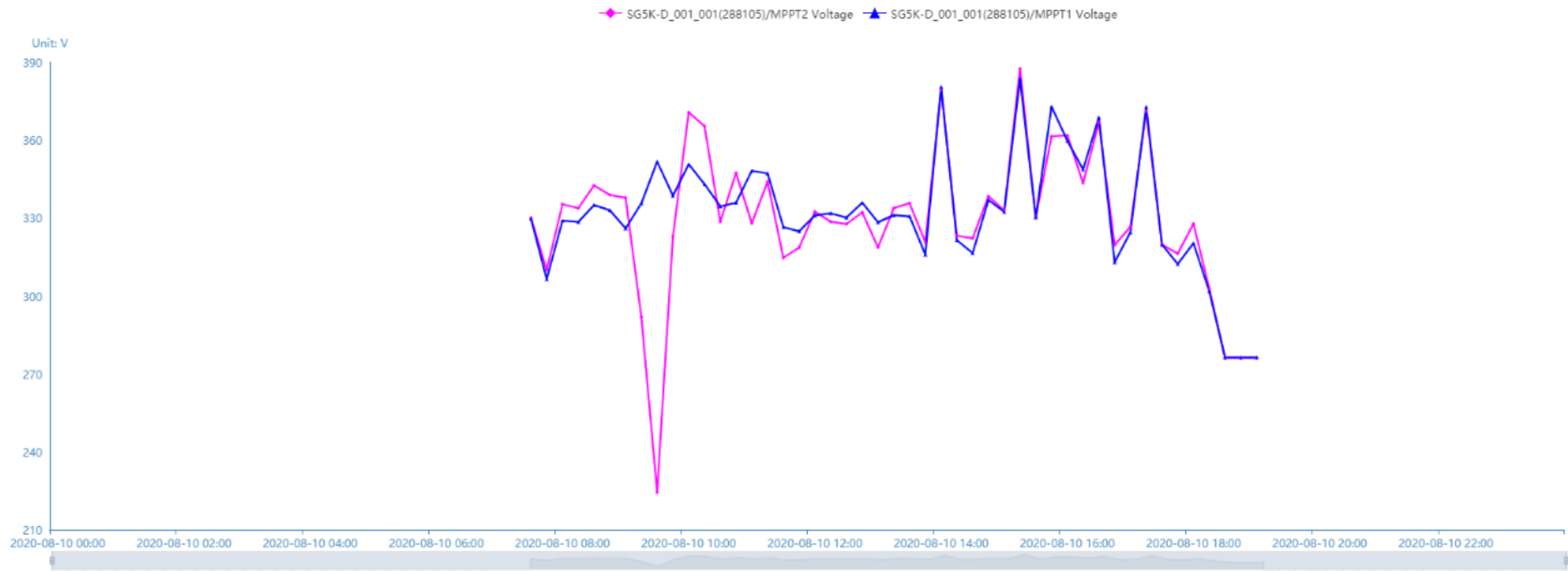
5 min

 2020-08-10 00:00~2020-08-10 23:59

15 min

Template library





| Displ ay | Measuring Point | Plant | Type | Statistical Pattern | |
|----------|--------------------------------------|--------|------|---------------------|--|
| ● | SG5K-D_001_001(288105)/MPPT2 Voltage | A20010 | Line | Sampling | |
| ● | SG5K-D_001_001(288105)/MPPT1 Voltage | A20010 | Line | Sampling | |



Case Studies

Identifications of faults through
iSolarCloud

Case Study 1 – Error message on a SG15KTL-M Inverter

The screenshot displays the Sungrow monitoring interface for device **SG15KTL-M_001_001**. The **Active Fault** tab is selected and highlighted with a green box. The interface shows the following details:

- Plant Name:** B200
- Device Model:** SG15KTL-M
- General Information:** Active Fault (highlighted), Closed Fault, Chart
- Time Range:** 2019-08-19 ~ 2020-08-19
- Fault Classification:** [Search icon]
- Alarm Level:** ☒ Important, ☒ Secondary, ☒ General
- Alarm Processing Status:** ☒ Unconfirmed, ☒ Pending, ☒ Processing, ☒ Resolved

| Device Name | Fault Type | Fault Level | Status | Fault Classification | Fault Code | Reporter | Occurrence Time |
|-------------------|------------|-------------|-------------|----------------------|------------|----------|---------------------|
| SG15KTL-M_001_001 | Alarm | Important | Unconfirmed | PV Abnormal Alarm | 549 | system | 2020-08-19 11:45:31 |

At the bottom right, the pagination shows **Total 1**, **10/page**, and **Go to 1**. A **BETA** badge is visible in the bottom right corner.

iSolarCloud™

O&M

- Home
- Fault
- Report
- Curve
- Advanced

Info

- Message Center
- Help

Account

- Me
- Background Management
- Logout

B200

ActiveClosed

2019-08-19 ~ 2020-08-19Alarm Name

Refresh Interval5 min

Batch Close

Fault Detail

X

Fault Information

| | | | |
|----------------------|-------------------|-------------------|-------------------|
| Device Type : | Inverter | Alarm Name : | PV Abnormal Alarm |
| Faulty Device : | SG15KTL-M_001_001 | Device Model : | SG15KTL-M |
| Fault Type : | Alarm | Fault Code : | 549 |
| Source : | System Note | Processing Time : | |
| Fault Details : | | | |
| Processing Opinion : | | | |

Repair Advice

Cause

Short-circuit, open loop, or low current.

Corrective measures

1.Check whether the corresponding module is sheltered. If so, remove the shelter and ensure module cleanness.
2.Check the module for abnormal aging.
3.If the fault is not caused by the foregoing reasons and still exists, please contact Sungrow Service.

Close Fault

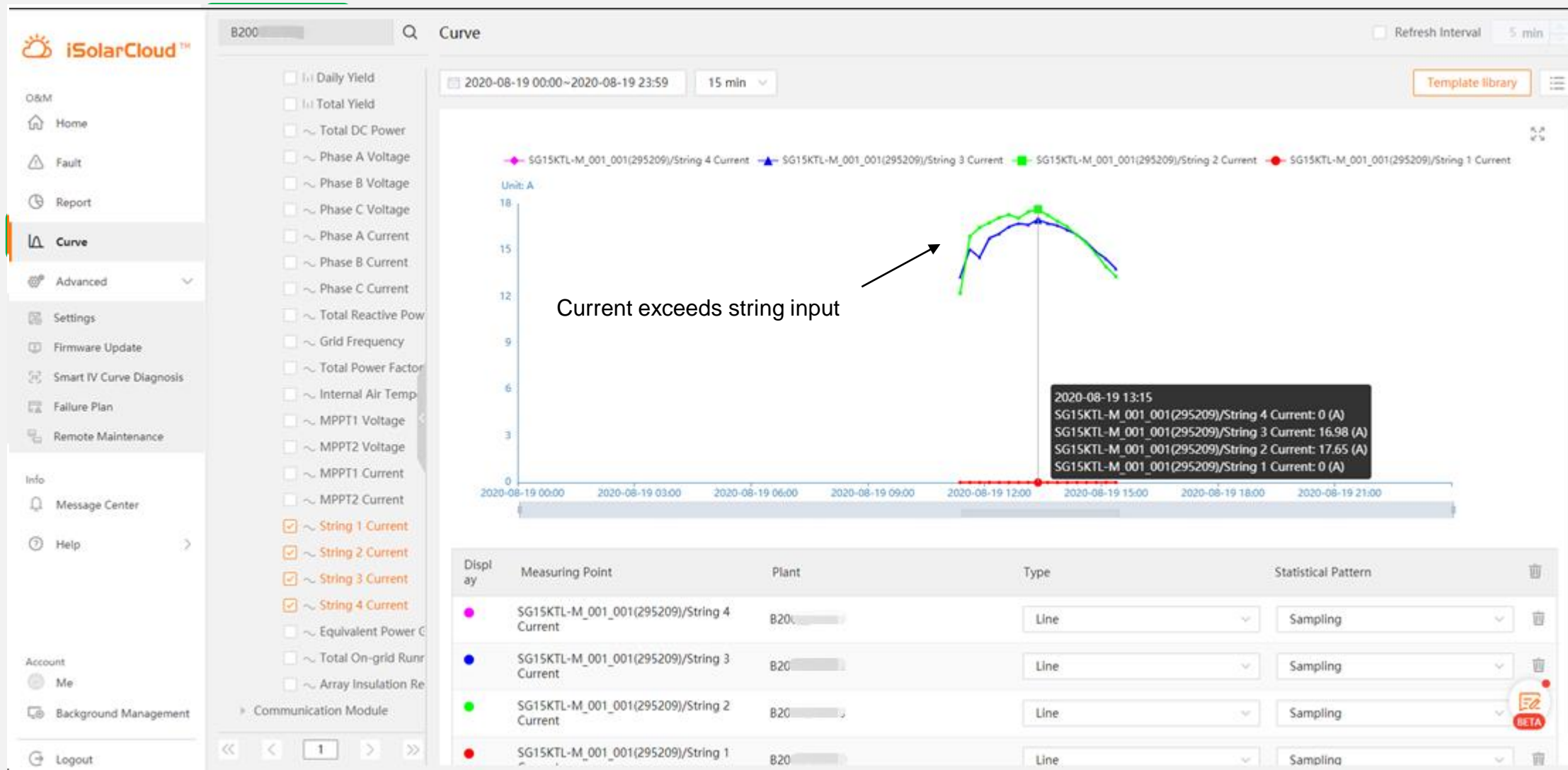
TimeOperation

19 11:45:31X

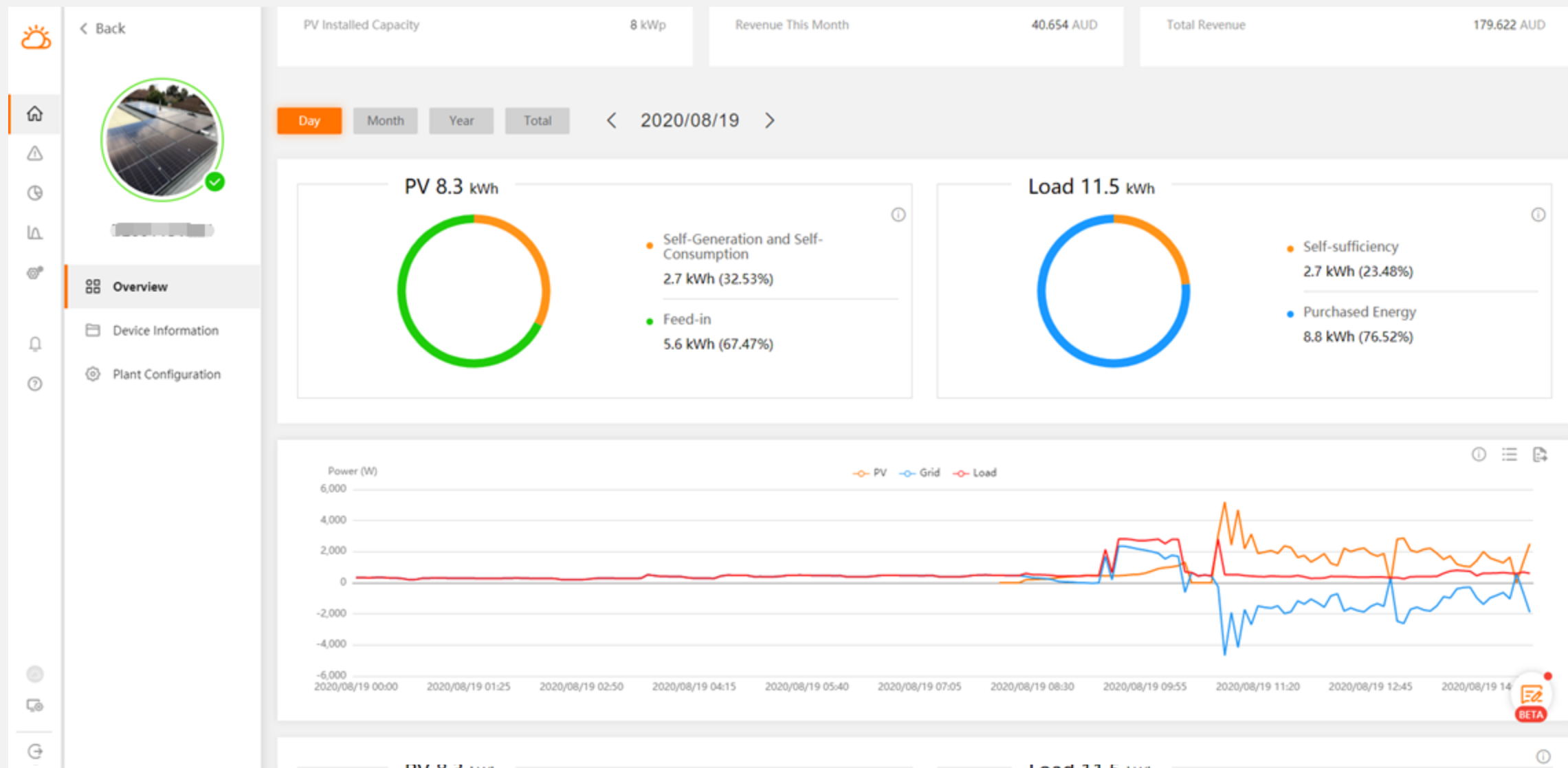
<<1>>

Total 110/page<1>Go to1

BETA



Case Study 2 – Low output on an SG8K-D Inverter



☀️

< Back

Device S/N

Device Name

Device Type

Device Status

🔍

SG8K-D_001_001

Plant Name: B200 Device Model: SG8K-D

General Information

Active Fault

Closed Fault

Chart

📅 2020-08

Fault Classific...

🔍

Alarm Level:

☒ Important

☒ Secondary

☒ General

| Device Name | Fault Type | Fault Level | Status | Fault Classification | Fault Code | Reporter | Occurrence Time |
|----------------|------------|-------------|--------|---------------------------|------------|----------|---------------------|
| SG8K-D_001_001 | Fault | Important | Closed | Grid Overvoltage | 14 | system | 2020-08-19 14:29:06 |
| SG8K-D_001_001 | Fault | Important | Closed | Grid Overvoltage | 14 | system | 2020-08-19 13:08:00 |
| SG8K-D_001_001 | Fault | Important | Closed | Grid Overvoltage | 14 | system | 2020-08-19 12:57:15 |
| SG8K-D_001_001 | Fault | Important | Closed | Grid Overvoltage | 14 | system | 2020-08-19 11:03:55 |
| SG8K-D_001_001 | Fault | Important | Closed | Grid Overvoltage | 14 | system | 2020-08-19 10:53:16 |
| SG8K-D_001_001 | Fault | Important | Closed | Grid Overvoltage | 14 | system | 2020-08-19 10:26:39 |
| SG8K-D_001_001 | Alarm | Important | Closed | Meter Communication Alarm | 514 | system | 2020-08-19 10:15:06 |
| SG8K-D_001_001 | Fault | Important | Closed | Grid Overvoltage | 14 | system | 2020-08-18 16:04:06 |
| SG8K-D_001_001 | Fault | Important | Closed | Grid Overvoltage | 14 | system | 2020-08-18 15:54:02 |
| SG8K-D_001_001 | Fault | Important | Closed | Grid Overvoltage | 14 | system | 2020-08-18 15:40:10 |

Total 257

10/page

<

1

2

3

4

...

26

>

Go to

1

🏠

⚠️

🕒

📊

🔧

🔔

🔄

⚙️

🔍

📄

🔑

🚪

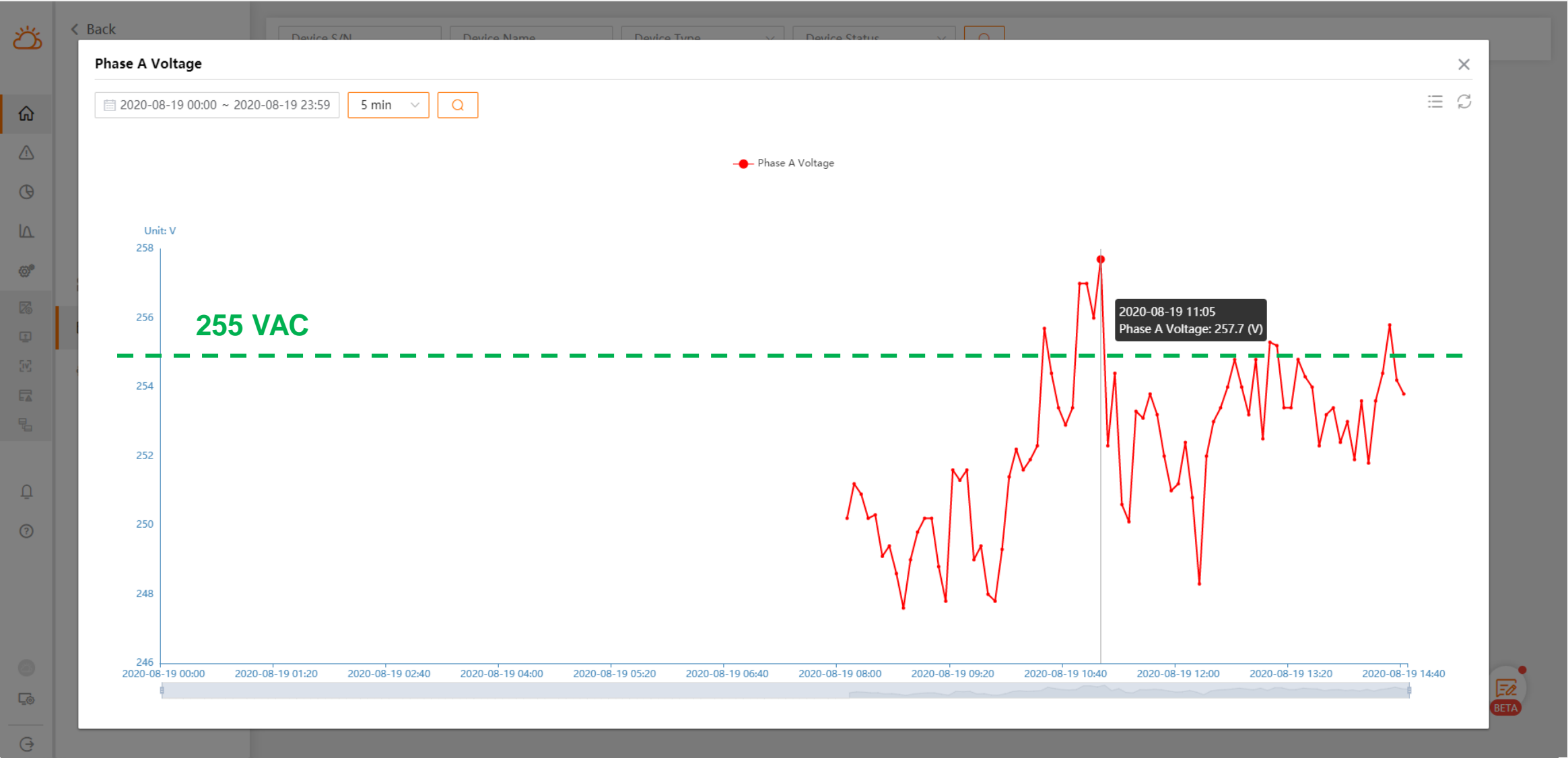
🔒

🔧

📝

BETA

Analyze grid voltage



Finding a solution - Example

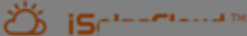
The screenshot displays the 'Advanced Settings' window in the SUNGROW iSolarCloud interface. The 'Protection Parameters' tab is active, showing a table with one parameter: '10-min Overvoltage Protection'. The table has columns for No., Parameter Name, Latest Value, Numerical Term, Coefficient, Unit, and Remarks. The 'Numerical Term' column contains a dropdown menu with 'Please Select'.

Advanced Settings

Protection Parameters Power Control Q Inverter Parameter Query

| No. | Parameter Name | Latest Value | Numerical Term | Coefficient | Unit | Remarks |
|-----|-------------------------------|--------------|----------------|-------------|------|---------|
| 1 | 10-min Overvoltage Protection | | Please Select | -- | -- | -- |

Apply Settings

 B200 Settings

O&M

Home

Fault

Report

Curve

Advanced

Setting

Firmware

Smart

Failure

Remote

Info

Messa

Help

Account

Me

Backg

Logout

Advanced Settings

Protection Parameters

Power Control

Q Inverter Parameter Query

Task List

| No. | Parameter Name | Latest Value Update Time:2020-08-19 13:53:20 | Numerical Term | Coefficient | Unit | Remarks |
|-----|-------------------------------|---|----------------|-------------|------|-----------|
| 1 | 10-min Overvoltage Protection | ON | ON | -- | -- | -- |
| 1-1 | Protection Value | 255 | 255 | 0.1 | V | 230~264.5 |

Settings

Task Name:

2020-08-19 13:55 Remote Parameter Setting

Instruction Valid Period:

0.5 h

Cancel


Confirm

Apply Settings

BETA

1

Confirming the setting

 is

O&M

Home

Fault

Report

Curve

Advance

Setting

Firmware

Smart

Failure

Remote

Info

Message

Help

Account

Me

Background

Logout

B20C

Settings

Task List

2020-07-19 ~ 2020-08-19

Task Name

| No. | Task Name | Operating Time | Completion Time | Operator | Task Status | Operation |
|-----|--|---------------------|---------------------|---------------|--|--|
| 1 | 2020-08-19 13:55 Remote Parameter Setting | 2020-08-19 13:55:38 | | SungrowGraham | Executing | View Cancel Task |
| 2 | 2020-08-19 13:53 Inverter Remote Parameter Query | 2020-08-19 13:53:12 | 2020-08-19 13:53:20 | SungrowGraham | Successful: 8 Piece Failed: 0 Piece Timeout: 0 Piece Cancel: 0 Piece | View |
| 3 | 2020-08-14 09:32 Inverter Remote Parameter Query | 2020-08-14 09:32:09 | 2020-08-14 09:33:26 | SungrowGraham | Successful: 58 Piece Failed: 0 Piece Timeout: 0 Piece Cancel: 0 Piece | View |
| 4 | 2020-08-11 14:36 Inverter Remote Parameter Query | 2020-08-11 14:36:40 | 2020-08-11 14:37:47 | SungrowGraham | Successful: 161 Piece Failed: 0 Piece Timeout: 0 Piece Cancel: 0 Piece | View |
| 5 | 2020-08-10 13:56 Inverter Remote Parameter Query | 2020-08-10 13:56:47 | 2020-08-10 13:57:05 | SungrowGraham | Successful: 182 Piece Failed: 0 Piece Timeout: 0 Piece Cancel: 0 Piece | View |
| 6 | 2020-08-10 13:55 Remote Parameter Setting | 2020-08-10 13:55:58 | 2020-08-10 13:55:59 | SungrowGraham | Successful: 1 Piece Failed: 0 Piece Timeout: 0 Piece Cancel: 0 Piece | View |
| 7 | 2020-08-07 16:02 Inverter Remote Parameter Query | 2020-08-07 16:02:20 | 2020-08-07 16:02:23 | SungrowGraham | Successful: 50 Piece Failed: 0 Piece Timeout: 0 Piece Cancel: 0 Piece | View |
| 8 | 2020-07-24 14:30 Inverter Remote Parameter Query | 2020-07-24 14:30:52 | 2020-07-24 14:31:13 | SungrowGraham | Successful: 182 Piece Failed: 0 Piece Timeout: 0 Piece Cancel: 0 Piece | View |
| 9 | 2020-07-20 11:35 Inverter Remote Parameter Query | 2020-07-20 11:35:48 | 2020-07-20 11:37:56 | SungrowGraham | Successful: 58 Piece Failed: 0 Piece Timeout: 0 Piece Cancel: 0 Piece | View |

Total 9

10/page

<

1

>

Go to

1

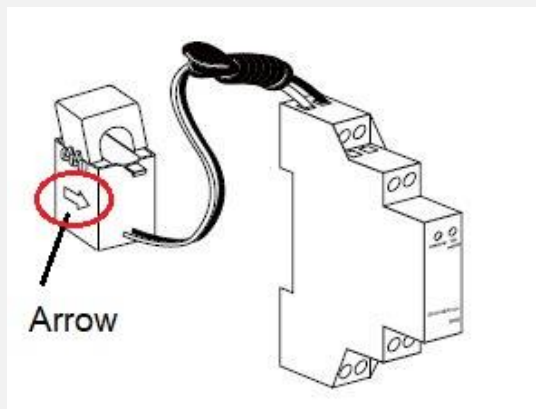
Case study 3 – Consumption monitoring

Sungrow have recently introduced load consumption monitoring for grid connect inverters. This applies to the Crystal G2, and the new 3-phase range of residential inverters

The dongle must be V25, V31 or later.

In order for the data to be visible on the iSolarCloud, an energy meter must be connected.

Energy meters are also required for export control



S100 Single 3 Phase meter



DTSU666 3-Phase energy meter

[< Back](#)

Home

Warning

History

Data

Settings

Overview

Device Information

Plant Configuration

Device S/N

Device Name

Device Type

Device Status

SG5K-D 001 001

Inverter

Daily Yield
2.2 kWh

Total Active Power
1.32 kW

WiFi V31 001 247

Communication Module

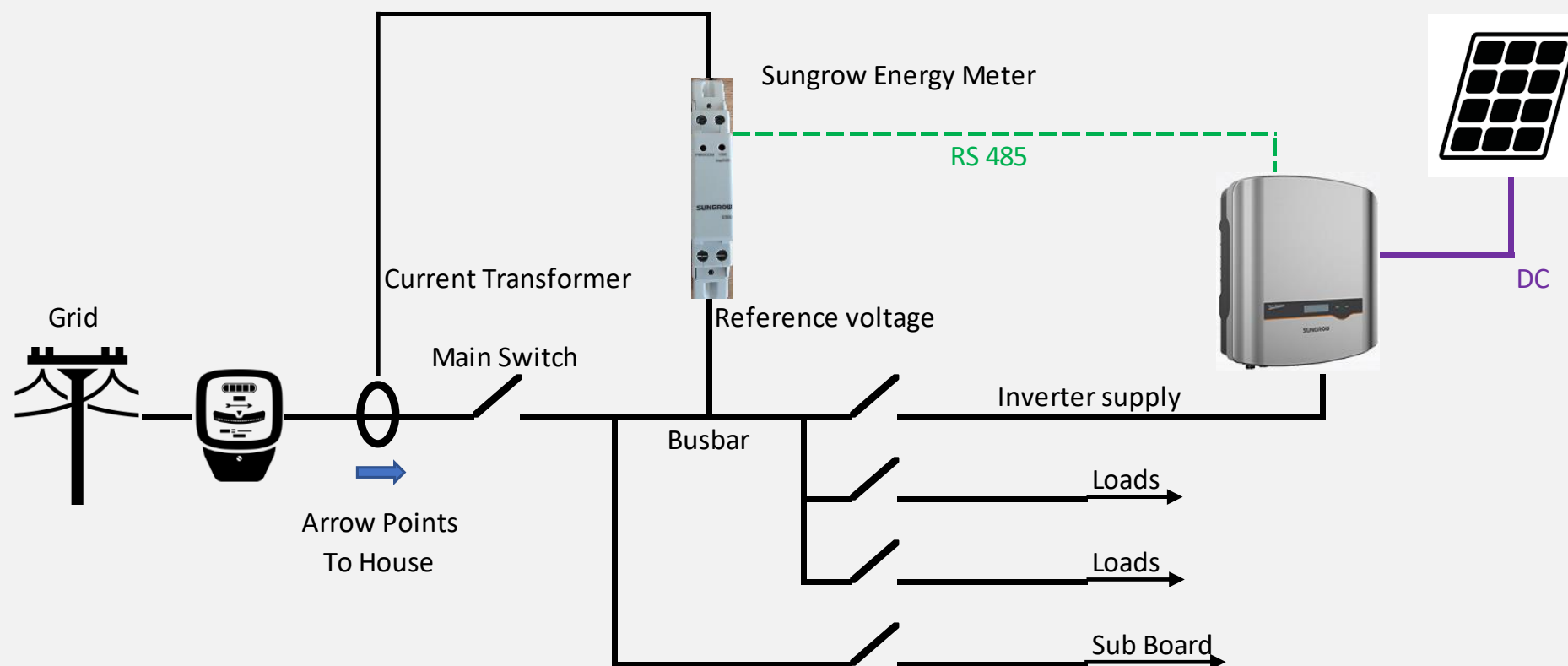
Work Status
OK

WLAN Signal Strength

No Meter



Installing an S100 energy meter in the main switchboard



iSolarCloud once an energy meter has been fitted

*Firmware may require updating

The screenshot displays the iSolarCloud web interface. On the left is a sidebar with navigation icons: a sun, a home, a triangle, a clock, a line graph, a gear, a bell, and a question mark. Below these are three menu items: 'Overview' (with a grid icon), 'Device Information' (with a folder icon and highlighted), and 'Plant Configuration' (with a gear icon). The main content area features a search bar at the top with filters for 'Device S/N', 'Device Name', 'Device Type', and 'Device Status', followed by a magnifying glass icon. Below the search bar are three device cards:

- SG8K-D 001 001** (Inverter): Shows 'Daily Yield' as 7.9 kWh and 'Phase A Voltage' as 252.2 V.
- SG Smart Meter 001 001** (Meter): Shows 'Meter Active Power' as -4.22 kW and 'Forward Active Energy' as 10.6 kWh. An arrow points to this card with the text 'Energy meter now shown in Device Information'.
- WiFi V31 001 247** (Communication Module): Shows 'Work Status' as OK and 'WLAN Signal Strength' with a signal icon.

At the bottom left, the word 'Public' is visible. At the bottom right, there is a 'BETA' badge with a document icon.



AU Team

Thank you

□ 2012

Founded in

□ 15+

Lovely Members

□ 500MW

Being Installed in AU



Thank You