Smart IV Curve Diagnosis on FusionSolar7

Huawei Technologies Co. Ltd.

Version	Created by	Date	Remarks
01	Huawei e84081311	4.06.2021	IV Curve

This document describes how to create an IV curve diagnosis task and view the diagnosis result details on FusionSolar 7.

Prerequisites

- **The license status of the commercial and utility device to be scanned is normal.**
- **The inverter connection mode must be Huawei inverters**
- **SmartLogger+FusionSolar to ensure smooth scanning.**
- **The Smart Energy Center with an optimizer cannot be scanned.**
- **A maximum of 200 Smart Energy Centers can be used for IV curve diagnosis.**
- **The Smart Energy Centers in the IV curve diagnosis task cannot participate in other diagnosis tasks.**
- **The inverter with an optimizer cannot be scanned. Do not select this type of device.**

Requirements for IV curve diagnosis:

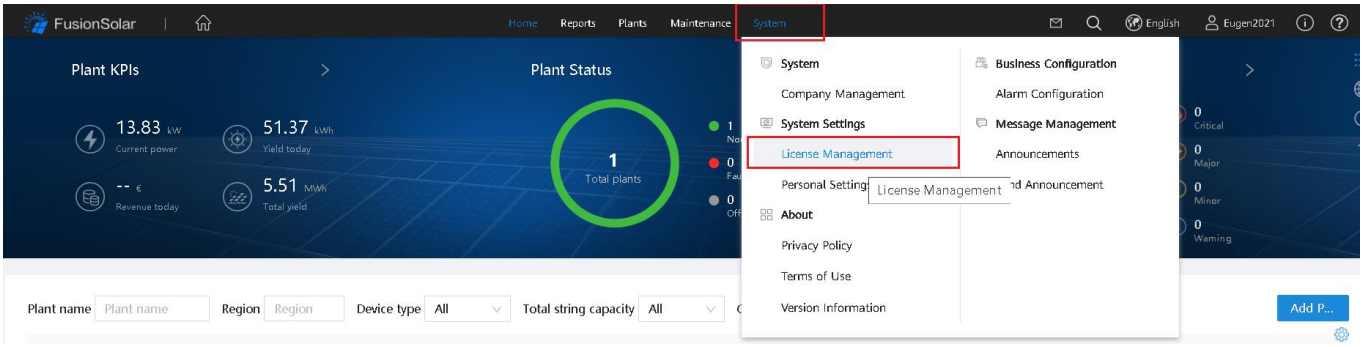
- **Cleaning status of the strings must be consistent during diagnosis.**
- **2. The solar irradiance must be above the lower limit (400 W/m²) during I-V curve diagnosis.**
- **3. String configuration information must be correct.**
- **4. Inverters connected to optimizers do not support I-V curve diagnosis.**
- **A maximum of 200 inverters can be diagnosed at a time (about 10 minutes).**
- **It is recommended that strings be cleaned before diagnosis to reveal the actual status of the diagnosed modules.**
- **You are advised to perform diagnosis between 11:00 am and 13:00 pm. Ensure that the front and rear rows of the strings are not blocked.**
- **You are advised to start I-V curve diagnosis when the device power is not limited. If I-V curve diagnosis is started when the device power is limited, the irradiation prediction and diagnosis result may be inaccurate.**

Procedure

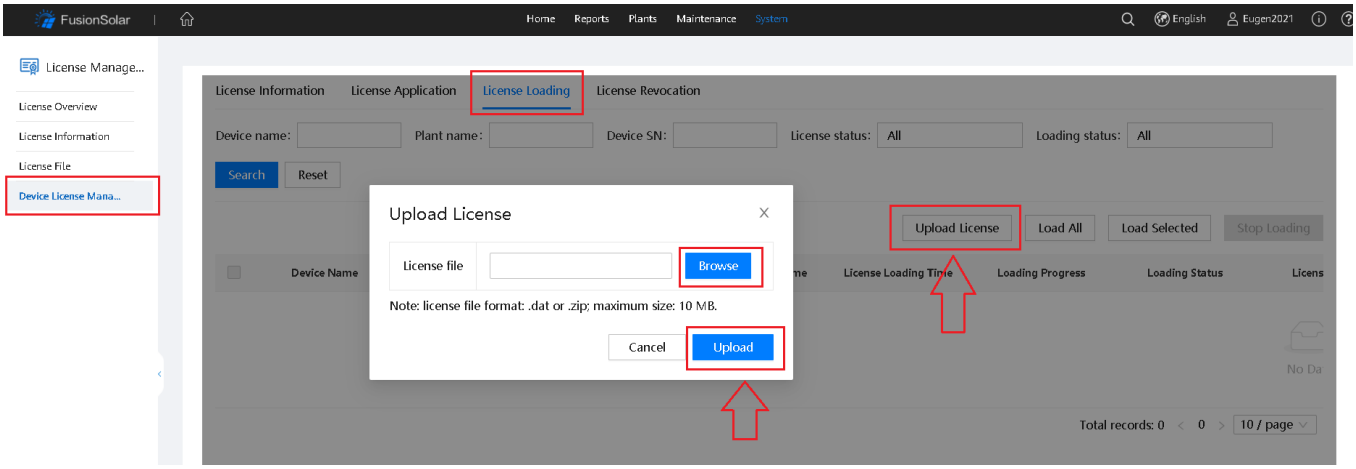
1. Import the license for commercial and utility inverters

If you have a residential inverter skip this step.
Contact your Huawei distributor to purchase license for commercial and utility inverters.

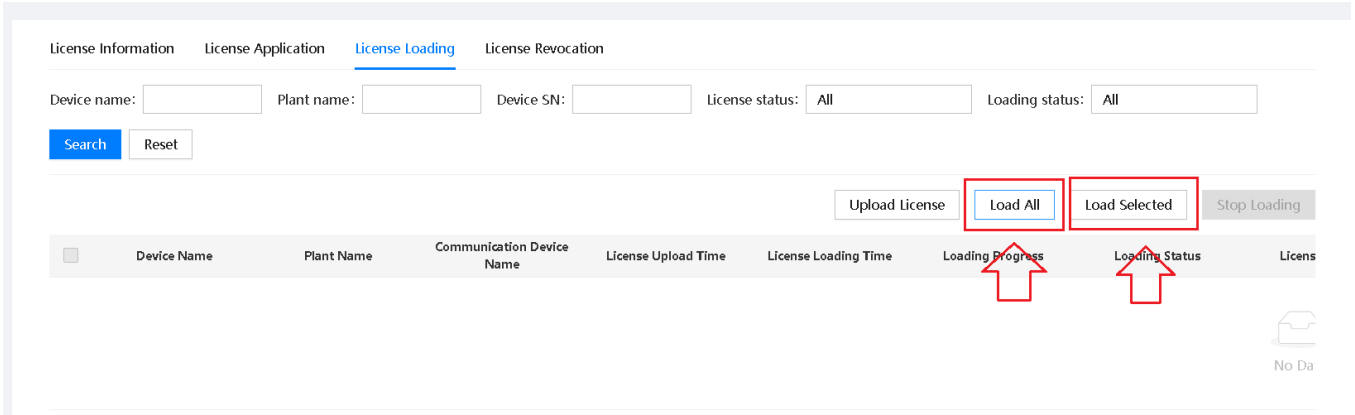
From the home page choose **System** and select the **License Management**



Upload the license: select **Device License Management→License Loading→Upload License→**Browse and choose the license**→Upload**

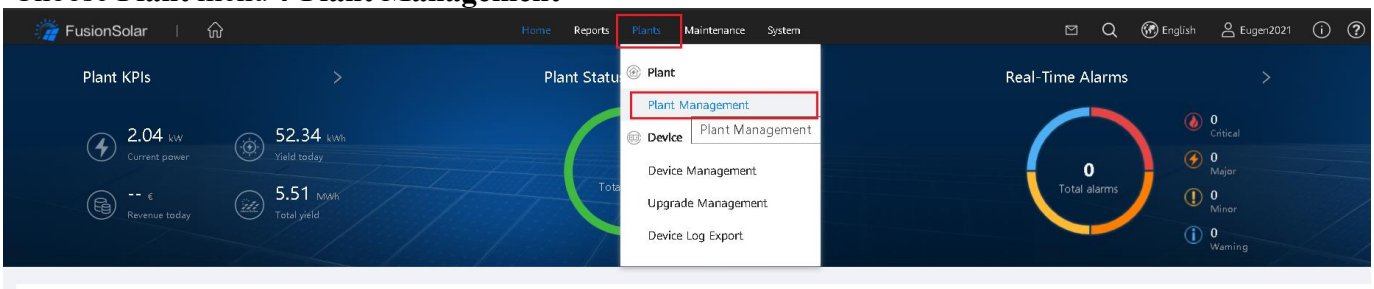


Load the license: after the license was uploaded load the license. Choose **Load All** if you have the license for all the inverters or choose **Load Selected** if you have license only for some inverters

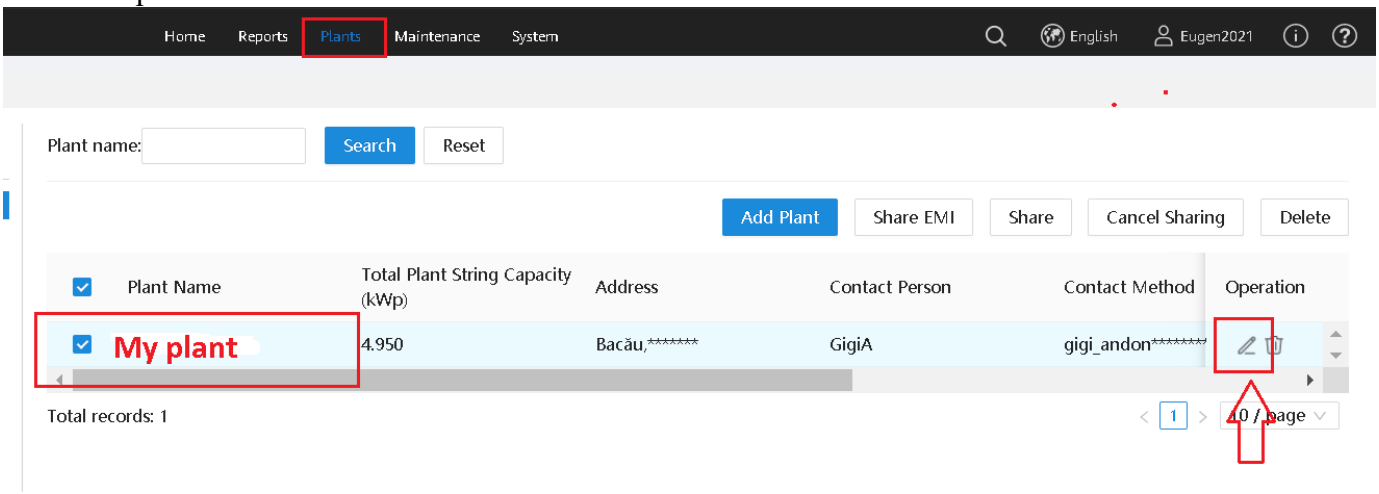


2. Set the string capacity

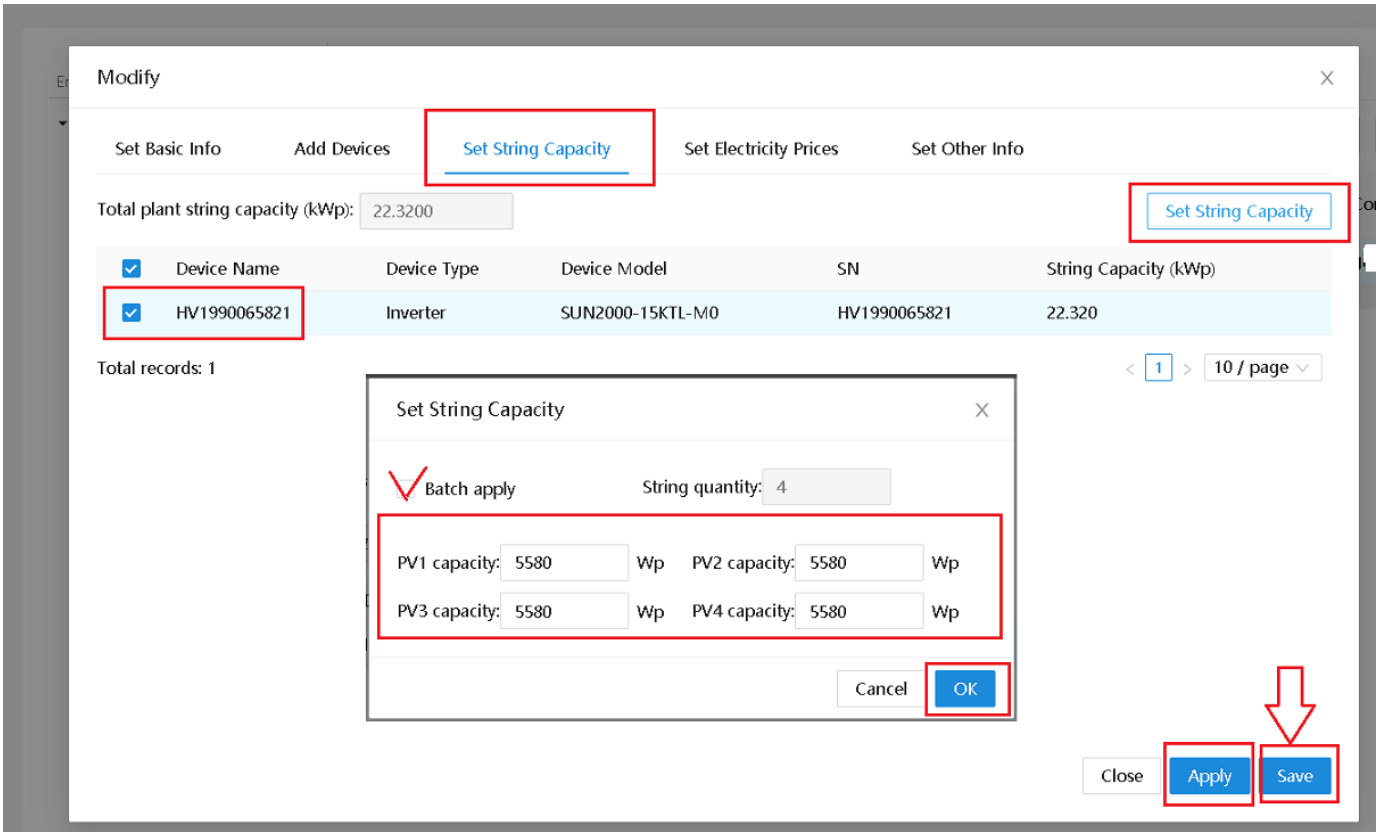
Choose **Plant** menu→**Plant Management**



Select the plant and choose **Edit**:

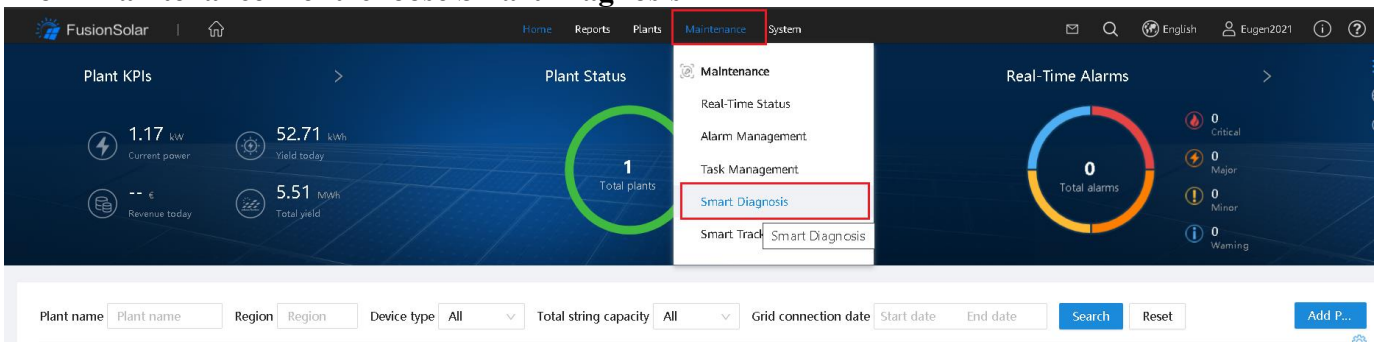


From **Set String Capacity** select the inverter and choose **Set String Capacity**→set string capacity for each string or select **Batch apply** if all are the same→**Apply**→**Save**

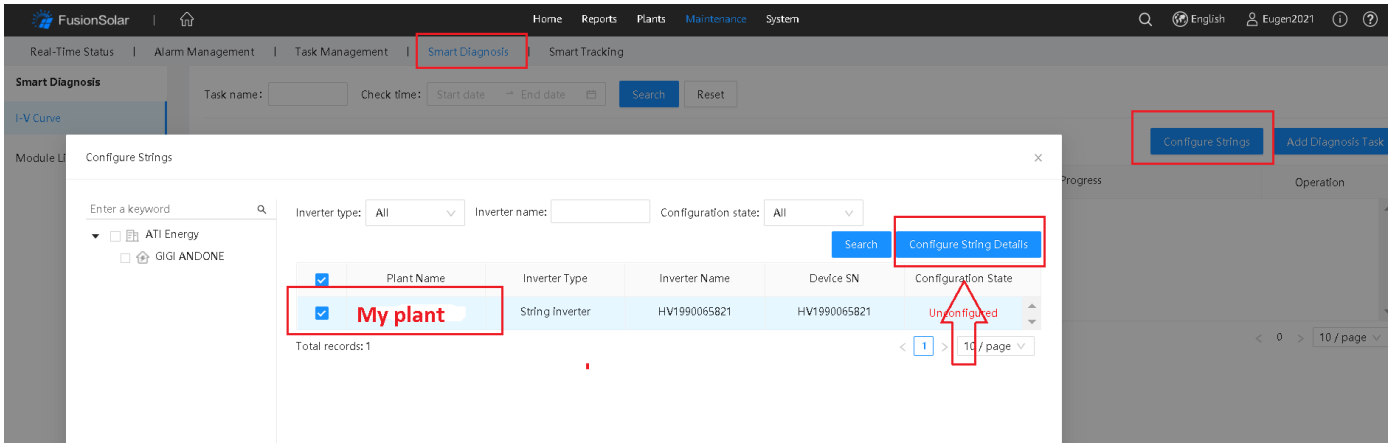


3. Configure sting details

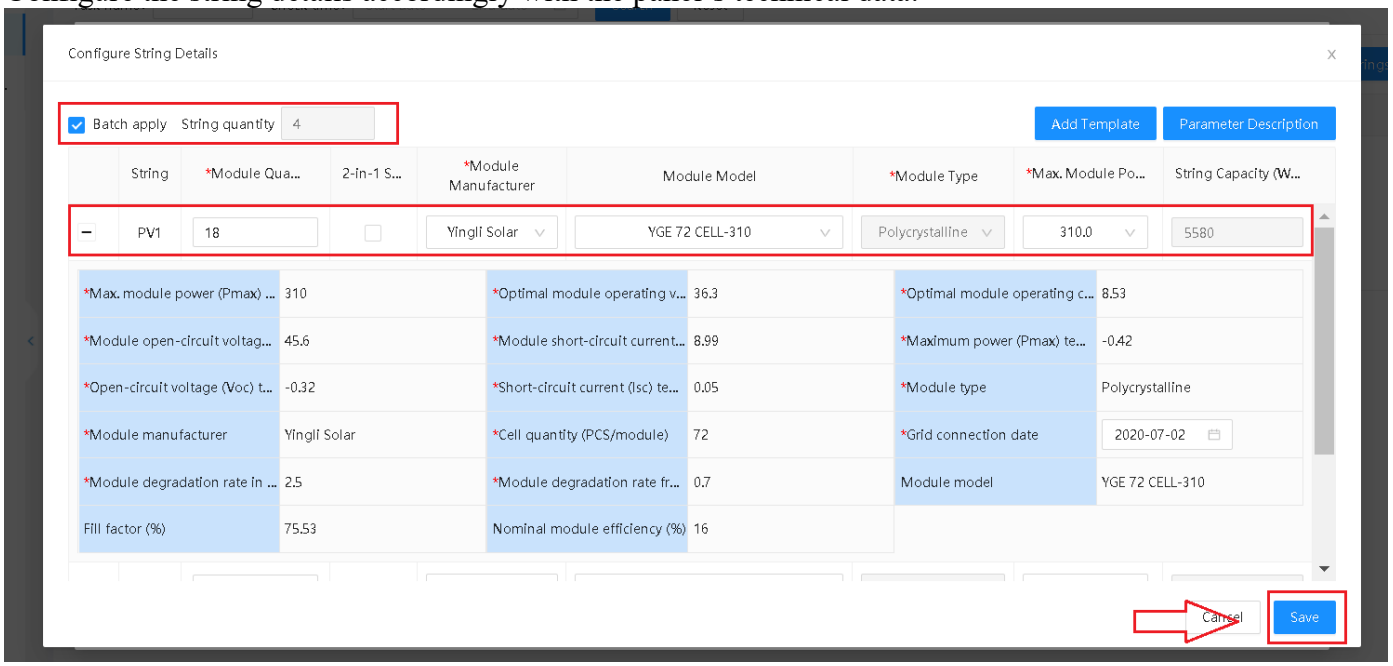
From Maintenance menu choose Smart Diagnosis



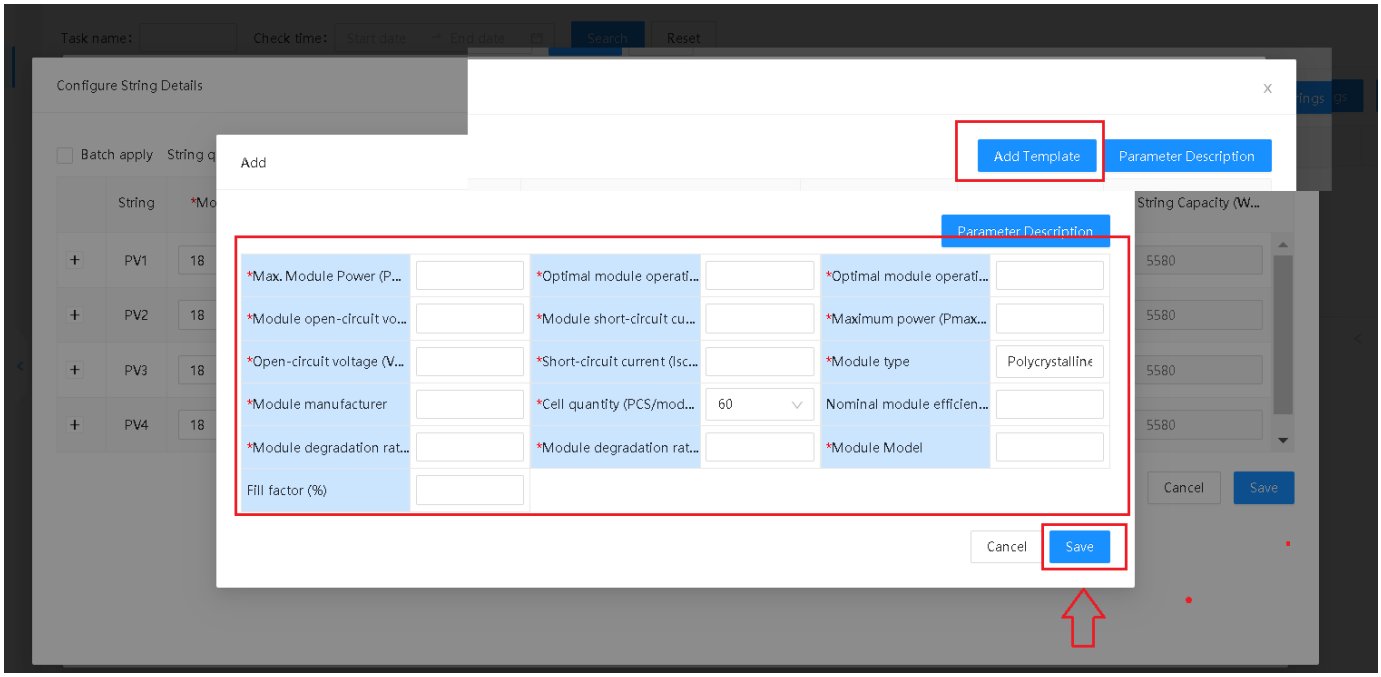
From **Smart Diagnosis** tab choose **Configure Strings**→select the plant→**Configure Stings Details**



Configure the string details accordingly with the panel's technical data:

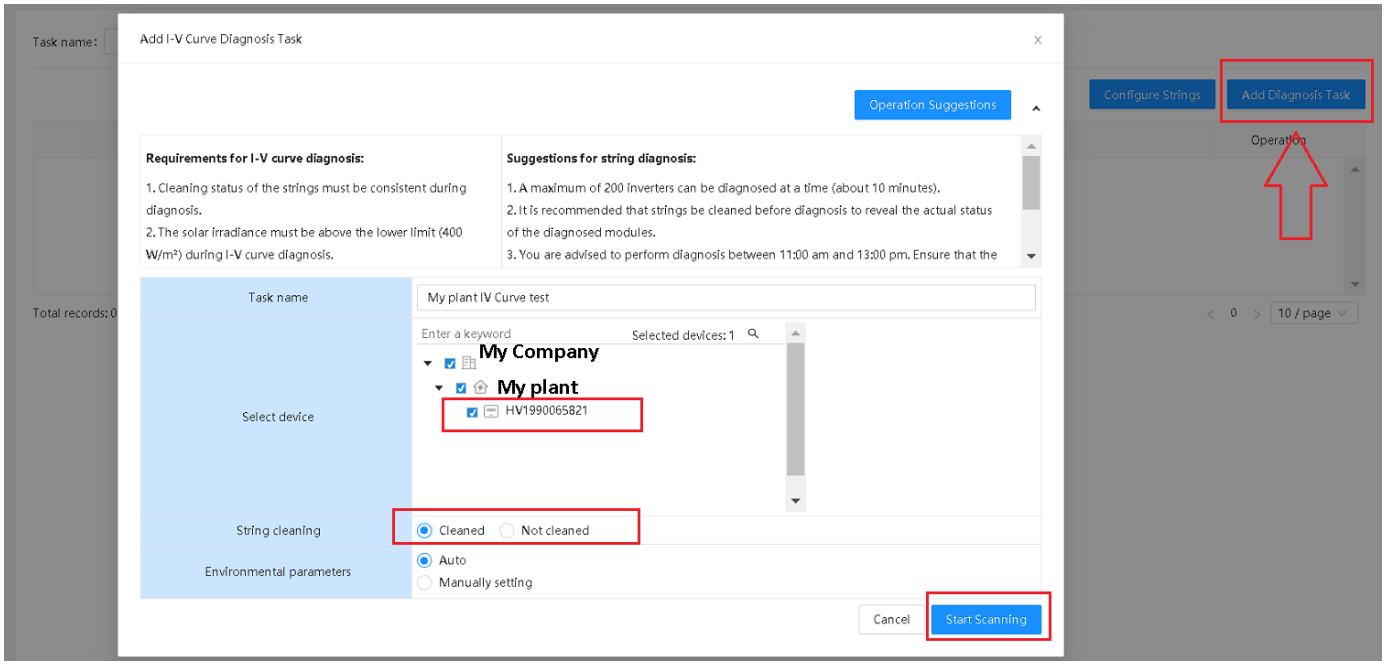


Add a template if your panel is not in the list.
From **Configure String Details** choose **Add Template**→fill the panel technical details and save.
After this operation you should find your panel model in the list.



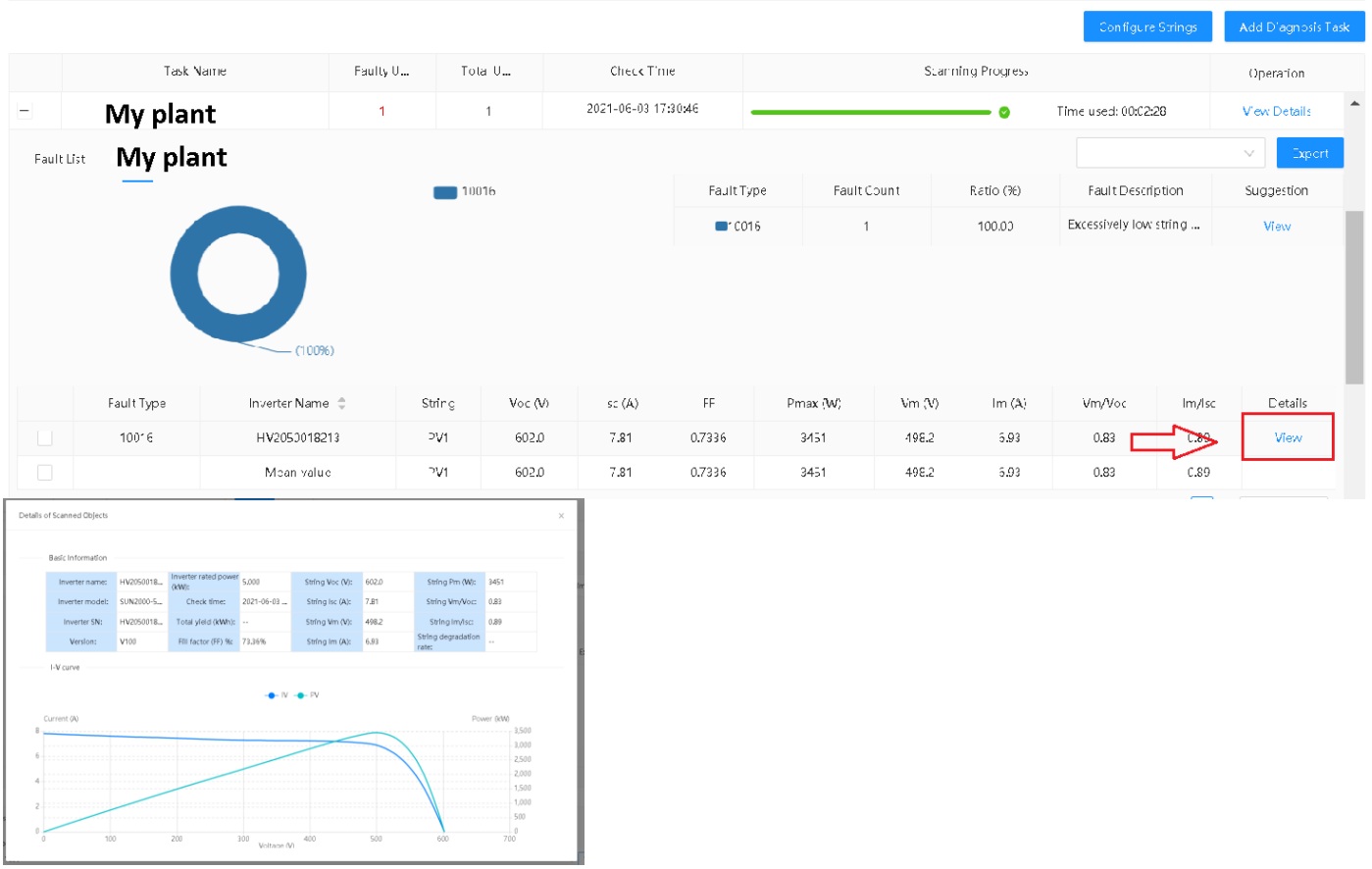
4. Add diagnosis task

From **Smart Diagnosis** menu choose **Add Diagnosis Task**→select the inverter→**Start Scanning**



5. View and export scanning results

Check in the task list the result:



Export the IV Curve report: