

Smart I-V Curve Diagnosis on the NetEco 1000S



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The smart I-V curve diagnosis function allows you to check the health status of strings for the inverters connected to the NetEco 1000S.

Pre-requisites

- You have logged in to the NetEco 1000S.
- You have logged in as the system administrator, manager, or installer.
- String parameters have been configured for inverters.
- The inverter license controls the smart I-V curve diagnosis function. To ensure that smart I-V curve diagnosis works properly, perform scheduled inspection and import the inverter license file.

Suggestions and Restrictions

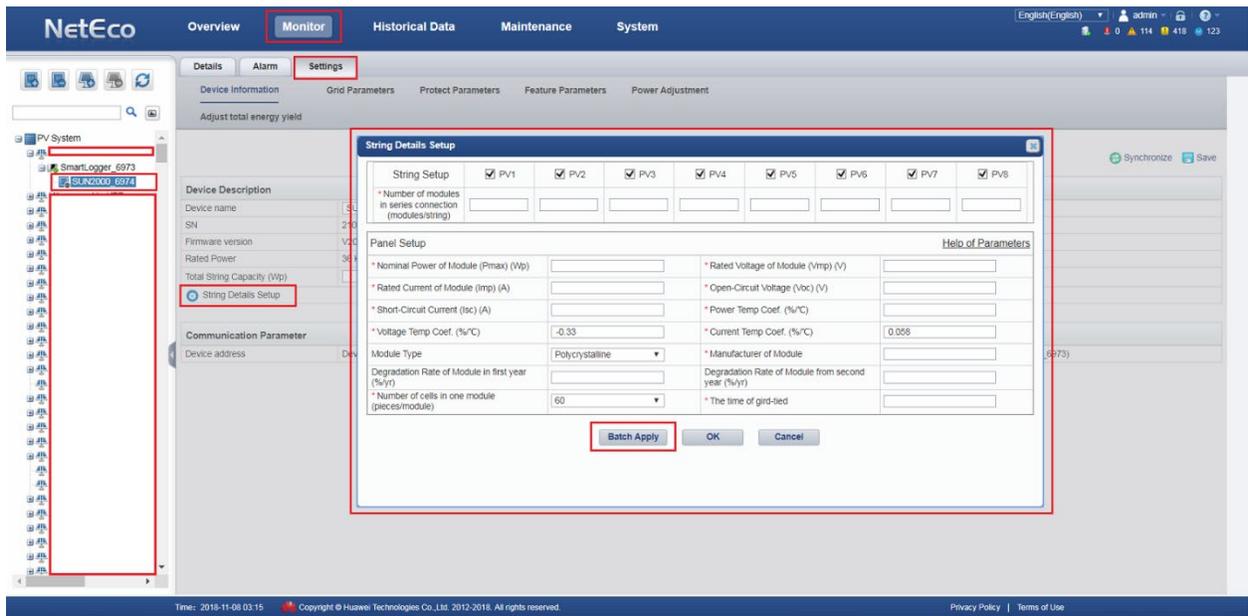
The following conditions should be met to ensure normal use of the Smart I-V Curve Diagnosis function; otherwise, scanning will fail or be abnormal:

- The day is sunny with stable sunlight. The irradiance is at least 600 W/m².
- The cleaning status of PV modules is consistent for a diagnosis task.
- The PV modules are clean and dry. Recommended: start the function after PV modules are cleaned or heavy rain has stopped.
- The PV modules in the same array have an identical type and model. Every PV string has the same number of PV modules connected in series.
- Currently, the supported type of PV modules is common mono crystalline silicon or common polycrystalline silicon.

Procedure

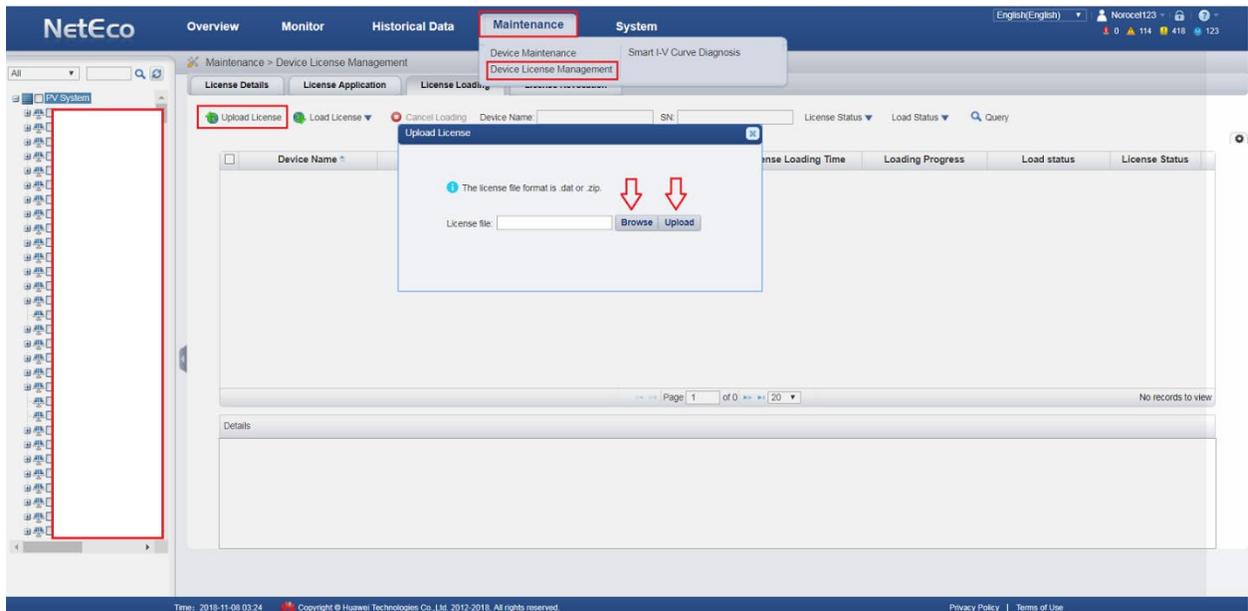
Step 1 Setting string details

Choose Monitor menu→select one inverter→Settings→String details setup→fill the requested data for your PV panel installed→Batch Apply

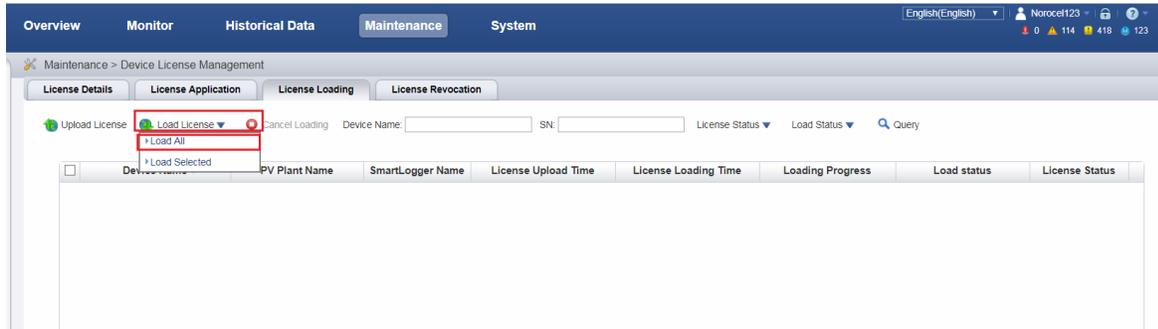


Step 2 Loading license

Choose Maintenance → Device License Management → Upload License → Browse the file from your computer and Upload

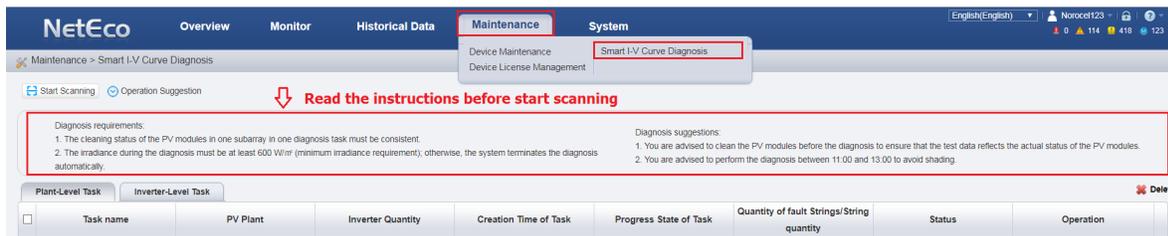


After you upload the license select Load License→Load all and confirm



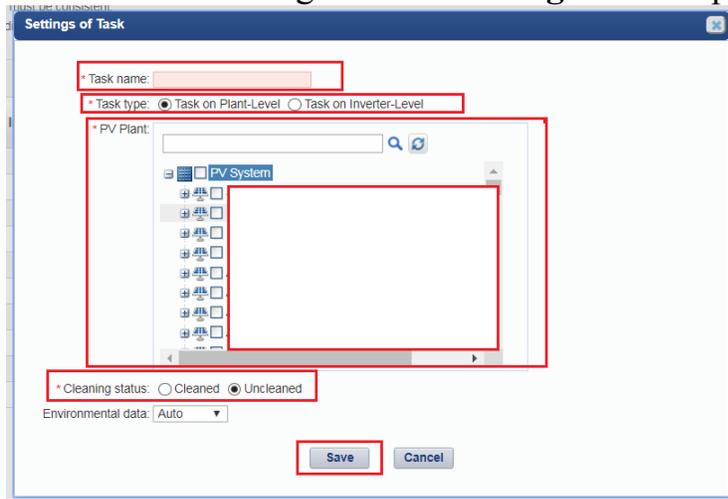
Step 3 Smart I-V Curve Diagnosis

Choose **Maintenance**→**Smart I-V Curve Diagnosis** from the main menu. The **Smart I-V Curve Diagnosis** page is displayed:



Step 4 Start Scanning.

Click Start Scanning and The **Settings of Task** page is displayed:



- **Task name:** Set this parameter to a string of a maximum of 64 characters.
- **Task type:**
 1. Task On Plant-Level: The health check applies to strings for all inverters connected to a PV plant.
 2. Task On Inverter-Level: The health check applies to all strings for an inverter.
- **PV plant:** In the PV plant area, select the SmartLoggers or inverters to be scanned.
 1. An unlimited number of SmartLoggers can be scanned simultaneously.
 2. A maximum of 100 inverters can be scanned simultaneously.
- **Cleaning status:** Specifies the cleaning status of a string. Select a value as required.
- **Environmental data:**
 1. Auto: The system will automatically calculate the values of Irradiance and Temperature of panel.
 2. Manually: You need to manually enter the values of Irradiance and Temperature of panel.
- Click Save**

After a task is set, smart I-V curve diagnosis starts immediately:



Plant-Level Task	Inverter-Level Task	Task name	PV Plant	Inverter quantity	Creation Time of Task	Progress State of Task	String quantity	Quantity of fault Strings	Status	Operation
<input type="checkbox"/>	<input type="checkbox"/>	test1	-	13	2017-12-21 11:26:51	<div style="width: 35%; background-color: green;"></div> 35%	0	-	In progress	 
<input type="checkbox"/>	<input type="checkbox"/>	SmartLogger_22	wy	13	2017-12-21 11:26:51	<div style="width: 35%; background-color: green;"></div> 35%	0	-	In progress	 

Step 5 View the diagnosis result and diagnosis details.

1. View the diagnosis result

Click under  Operation column. The diagnosis task execution result is displayed:

View Result						
<input type="checkbox"/>	Inverter	String	PV plant	Task Status	Health condition	Operation
<input type="checkbox"/>	SUN2000_29	PV1	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_29	PV2	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_29	PV3	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_29	PV4	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_29	PV5	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_29	PV6	zxc	Successful	Moderate current mismatch in string.	Read The Details
<input type="checkbox"/>	SUN2000_29	PV7	zxc	Successful	Moderate current mismatch in string.	Read The Details
<input type="checkbox"/>	SUN2000_29	PV8	zxc	Successful	Invalid string.	Read The Details
<input type="checkbox"/>	SUN2000_30	PV1	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_30	PV2	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_30	PV3	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_30	PV4	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_30	PV5	zxc	Successful	Open circuit of string.	Read The Details
<input type="checkbox"/>	SUN2000_30	PV6	zxc	Successful	Moderate current mismatch in string.	Read The Details

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2. View the diagnosis details

Click Read The Details. The diagnosis details are displayed:

