

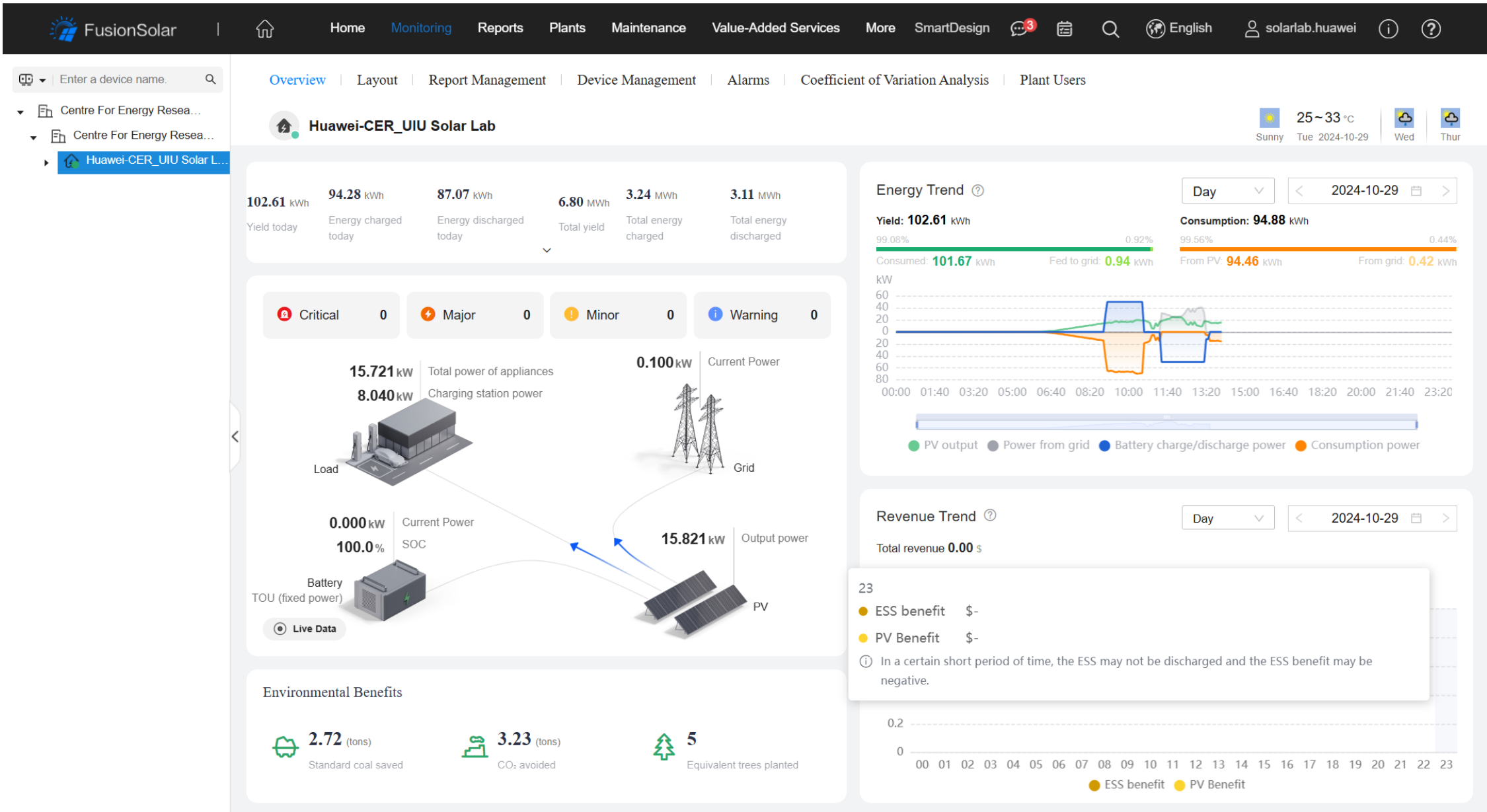
IV Curve Diagnosis_UIU



Security Level:



Fusion Solar Monitoring and Management System



IV Curve license and String Configuration

FusionSolar

HomeMonitoringReportsPlantsMaintenanceValue-Added ServicesMoreSmartDesignEnglishsolarlab.huawei

Configure Strings

1 Select Device

2 Select Module

3 Configure String Settings

4 Confirm

1. Select the devices to be configured. A maximum of 400 devices can be selected.

2. The configuration may vary depending on the device model. Please select devices of the same model.

3. For devices that have been configured previously, the original configuration will be overwritten.

Enter a device name.

Configuration State: AllDevice Model: AllSearchReset

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Huawei-CER_UIU S

Logger-10233552

Inverter_01_Or

Inverter_02

	Device Name	Device Type	Device Model	SN	Plant Name	Communication Device	Configurati...	Operation
	Inverter_02	Inverter	SUN2000-50KTL-M3	6T2419005209	Huawei-CE...	Logger-102335526512	Configured	Modify

Clearing ConfigurationsNext

Configure String Details

Batch applyString quantity8

The Connect and 2-in-1 String checkboxes are selected automatically. You can change the settings b...

Add TemplateParameter Des...

	*Module Manufacturer	Modules Type	String	*Module Qua...	Conn...	2-in-1 String	*Module Type	*Max. Module Power (P...	String Capacity (Wp)
+	Trina Solar	TSM-550DEG19...	PV1	18	☒	☐	Monocrystalline	550.0	9,900
+	User-defined	User-defined	PV2	0	☐	☐	Monocrystalline	User-defined	
+	Trina Solar	TSM-550DEG19...	PV3	19	☒	☐	Monocrystalline	550.0	10,450
+	User-defined	User-defined	PV4		☐	☐	Polycrystalline	User-defined	0
+	User-defined	User-defined	PV5		☐	☐	Polycrystalline	User-defined	0
+	User-defined	User-defined	PV6		☐	☐	Polycrystalline	User-defined	0

CancelSave



LicensePackage_PAL202210250006.zip

Placed Artificial shadow on panel



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Smart I-V Curve DiagnosisSmart Tracking

Diagnosis Task Management

Configure Strings

Module Library Management

Export Management

Self-Learning Configuration

Diagnosis Task Management

Completed

Scheduled

Task Name:

Plant Name:

Inverter Name:

Start time range:

Start date

End date

Search

Reset

The information about executed diagnosis tasks will be stored for 12 months. Please view the diagnosis result in time.

Add Diagnosis Task

Delete

Rerun diagnosis

☐	Task Name	Plant Name	Start Time	Status	Progress	Time used	Operation
☐	I-V curve 29 October with shade	Huawei-CER_UIU Solar Lab	2024-10-29 12:20:22	Finished		00:08:18	
☐	I-V curve 28 October	Huawei-CER_UIU Solar Lab	2024-10-28 11:14:35	Finished		00:08:36	
☐	Test_Inverter2 with Shade5	Huawei-CER_UIU Solar Lab	2024-10-27 13:35:35	Finished		00:08:36	
☐	Test_Inverter2 with Shade4	Huawei-CER_UIU Solar Lab	2024-10-27 13:18:33	Finished		00:02:39	
☐	Test_Inverter2 with Shade3-New 3	Huawei-CER_UIU Solar Lab	2024-10-21 15:04:23	Finished		00:08:52	
☐	Test_Inverter2 with Shade3-New 2	Huawei-CER_UIU Solar Lab	2024-10-21 14:01:06	Finished		00:06:36	
☐	Test_Inverter2 with Shade3-21-10-2024	Huawei-CER_UIU Solar Lab	2024-10-21 13:07:59	Finished		00:08:13	
☐	Test_Inverter2 without Shade 21-10-2024	Huawei-CER_UIU Solar Lab	2024-10-21 12:41:46	Finished		00:02:43	

Total records: 28

1

2

3

>

10 / page

To check the Diagnosis we put a paper to cover up one PV panel of string no. 3 of the inverter and start IV curve diagnosis in Fusion Solar.

IV Curve Diagnosis result and Report

1. Task Information

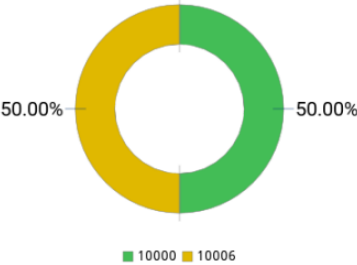
Task Name	I-V curve 29 October with shade	Creation Time	2024-10-29
Plant location	QCXX+6RX, Dhaka	Execution Mode	Now
Total number of strings	2	Number of faulty strings	1
Radiation (W/m²)	639.73(Predictive value)	Module temperature (°C)	59.4(Predictive value)

Note: The irradiance and temperature are calculated based on the IEC 60904/IEC 60891 standard.

2. String Diagnosis Overview

In this task, 1 inverters and 2 strings are scanned, and 1 abnormal strings are detected. The details are as follows:

1) Abnormal component current output (due to shading, glass breakage, or hidden cracks): 1, accounting for 50.0%

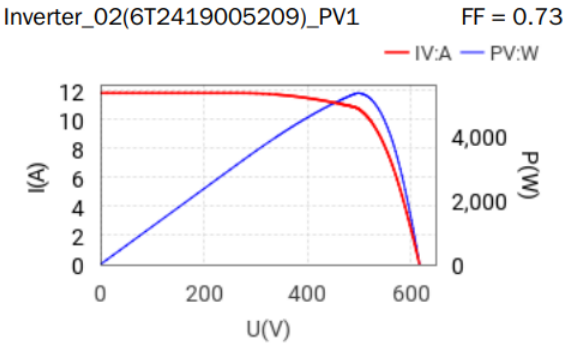


Legend	Fault Type	String Quantity	Percentage	Forecast Annual Yield Loss(kWh)	Fault Description
■	10000	1	50.0%	0	Normal
■	10006	1	50.0%	1985	Abnormal component current output (due to shading, glass breakage, or hidden cracks)

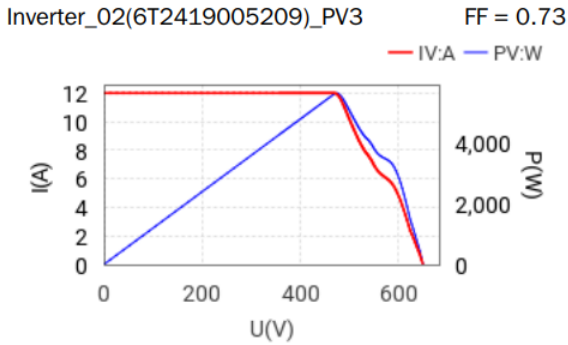
3. PV String IV Curve

During this scanning, the strings for which no valid data is obtained are not displayed.

Communication Device:Logger-102335526512



Isc[A]	11.84	Imp[A]	10.77	Pmax[W]	5364.04
Voc[V]	616.80	Vmp[V]	498.10	Normal string	
Irr[W/m²]	639.73	Tem[°C]	59.41		



Isc[A]	11.99	Imp[A]	11.92	Pmax[W]	5650.57
Voc[V]	649.60	Vmp[V]	474.20	Abnormal component current output (due	
Irr[W/m²]	639.73	Tem[°C]	59.41		

1. IV Curve diagnosis shown that we are getting 1.2% efficiency less generation
2. The actual problem can be found in the I-V curve of the diagnosis report



Microsoft Edge
PDF Document

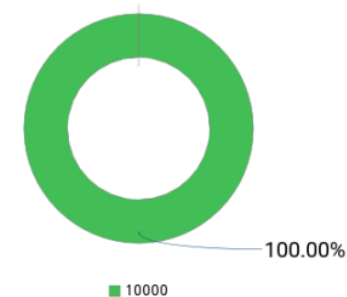
Fault rectification and Diagnosis



Clear the shadow from PV panel and do the diagnosis again. Test result found all panel normal

2. String Diagnosis Overview

In this task, 1 inverters and 2 strings are scanned, and 0 abnormal strings are detected. The details are as follows:

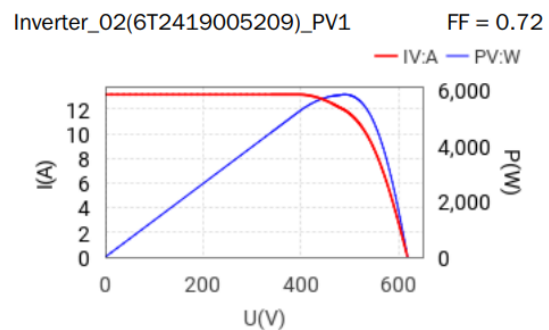


Legend	Fault Type	String Quantity	Percentage	Forecast Annual Yield Loss(kWh)	Fault Description
■	10000	2	100.0%	0	Normal

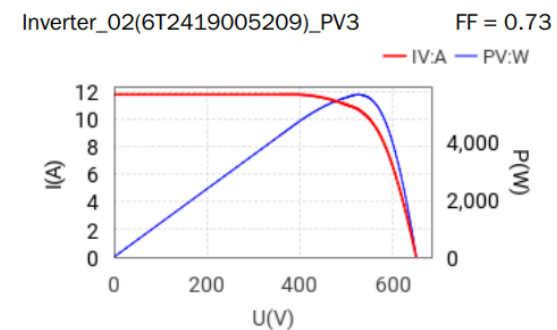
3. PV String IV Curve

During this scanning, the strings for which no valid data is obtained are not displayed.

Communication Device:Logger-102335526512



Isc[A]	13.18	Imp[A]	11.99	Pmax[W]	5834.82
Voc[V]	617.90	Vmp[V]	486.60	Normal string	
Irr[W/m²]	649.42	Tem[°C]	60.21		



Isc[A]	11.75	Imp[A]	10.68	Pmax[W]	5607.53
Voc[V]	650.10	Vmp[V]	525.00	Normal string	
Irr[W/m²]	649.42	Tem[°C]	60.21		

Conclusion

1. IV curve diagnosis license uploaded successfully
2. All the string configured according to physical layout,
3. IV curve perform well
4. Need to do regular diagnosis to get the better result.

Thank you.

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