



SolarEdge Site Designer



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Introduction

The Site Designer analyzes your planned PV site location, size and module model, and then recommends the SolarEdge inverter, power optimizer model and optimizer-module configuration most suitable to your site requirements. It also suggests the number of strings per inverter, the number of power optimizers per string and the number of modules per power optimizer.

The Site Designer can verify any site design and supports unequal string-length layouts. In the future it will support multi-orientation systems.

Select from the options in each of the **Location** and **PV** tabs and then display the **Design** and **Summary** tabs for a recommended site design.


At any point while using the Site Designer, you can save the definitions by clicking on the  **File** icon at the top of the window and selecting the **Save Project** option. This icon enables you to load a previously saved project or to create a new project.

Location

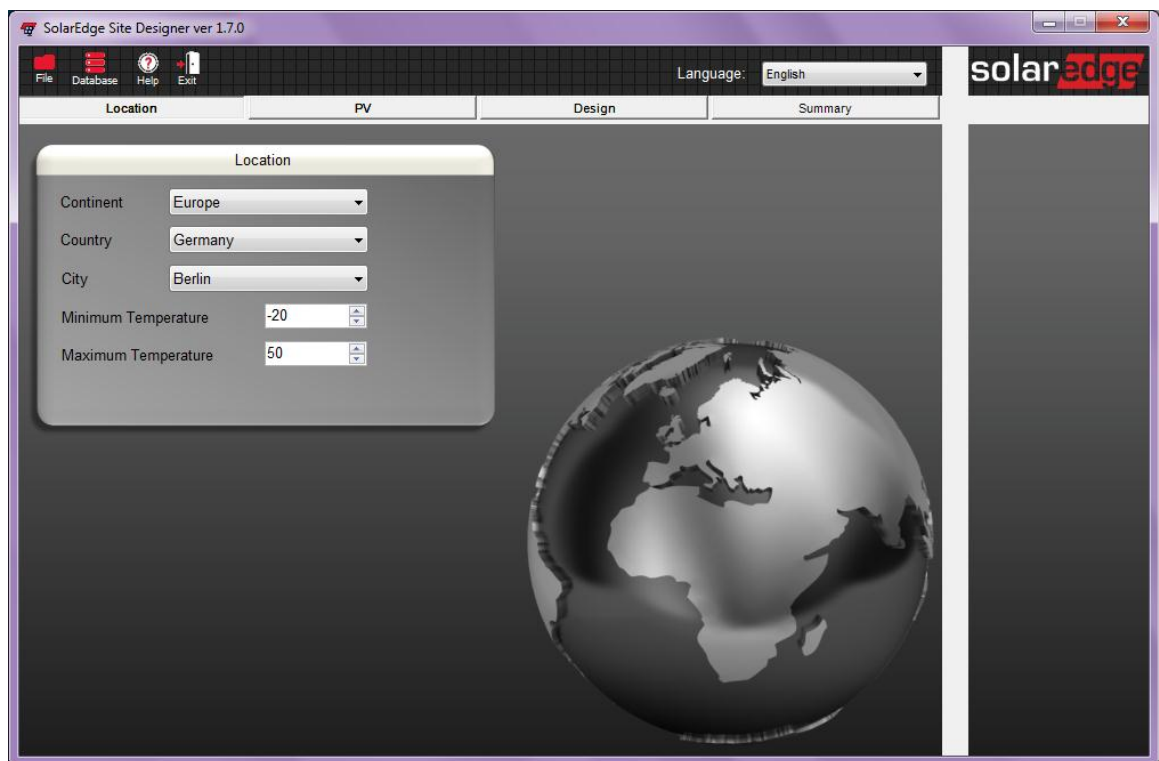
The **Location** tab enables you to define the location of the site, as follows:

- 1 Select the **Continent**, **Country** and **City** from the dropdown fields.

If the location of the relevant site is not available for selection from the dropdown, select the closest city or add a new location by clicking on

the  **Database** icon at the top of the window and then selecting the **New Location** option. You can then send the added location to SolarEdge by clicking the **Database** icon and selecting the **Send my Module / Location Database to SolarEdge** option.

- 2 Optionally, select the **Minimum Temperature** and the **Maximum Temperature** to which the system will be subjected. If these fields are unchanged, default values will be used.




PV

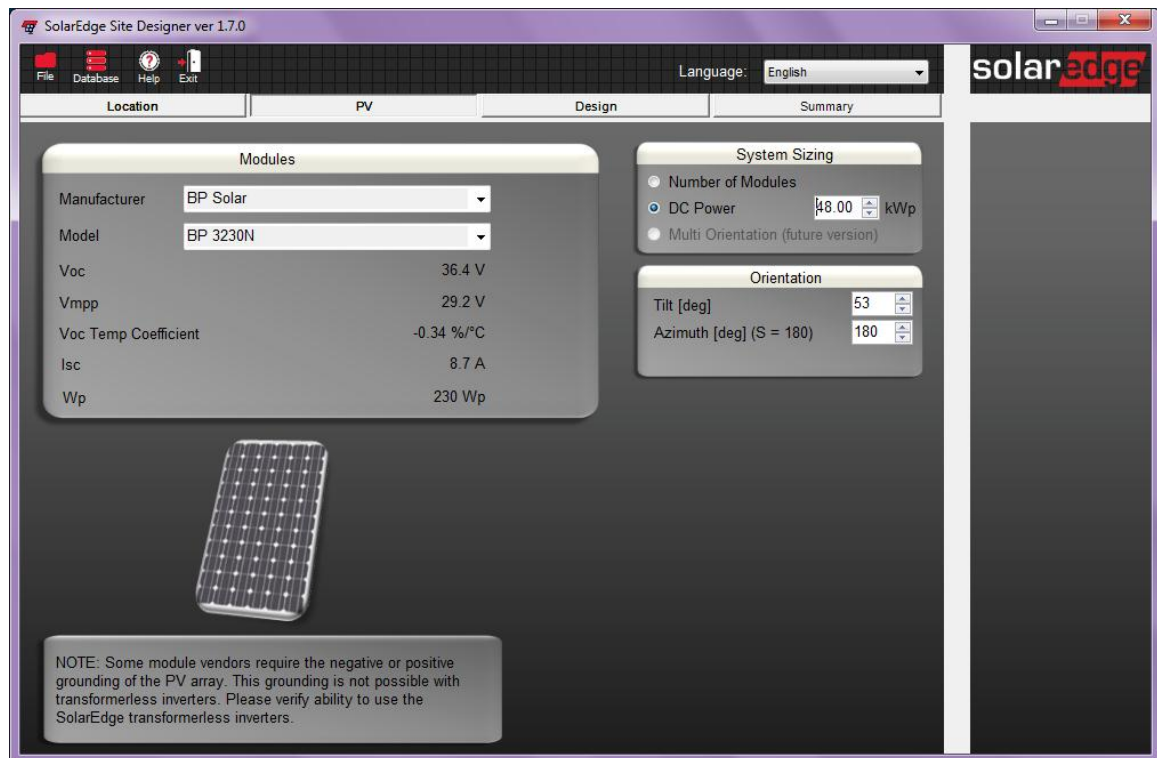
The **PV** tab enables you to define the Photovoltaic (PV) system details.

- 1 Select the **Module Manufacturer** and **Model** from the dropdown fields. The electrical parameters of the selected module are then displayed.

If the PV module used at your site is not available for selection, you

can add it by clicking on the  **Database** icon at the top of the window and selecting the **New Module** option. You can then send the added module to SolarEdge by clicking the **Database** icon and selecting the **Send my Module / Location Database to SolarEdge** option.

- 2 Enter the **System Sizing** information of the site by specifying the total **Number of Modules** or the total **DC Power** in kWp, or by selecting the **Multi Orientation** option (the **Multi Orientation** option will be available in a future version).



Design

After the information in the **Location** tab and the **PV** tab has been entered, the **Design** tab suggests an optimal design for your site.

SolarEdge Site Designer ver 1.7.0

Language: English

Location PV Design Summary

Inverter

Model: SE12.5k

Number of Inverters: 4

Design Result

String Length Limit: 16 - 50

Inverter DC Power: 87.78% ✓

Inverter AC Power: 93.49% ✓

Optimizer

Model: OP250-LV (1 input)

Modules in Series per Input: 1 1-1

Total Number of Modules per Optimizer: 1

Inverter	String	Orientation # 1 Azimuth: 180 Tilt: 53 [Modules (Optimizers)]	Status	Description
1	1	28 (28)	✓	
1	2	28 (28)	✓	
2	1	28 (28)	✓	
2	2	28 (28)	✓	
3	1	28 (28)	✓	
3	2	28 (28)	✓	
4	1	27 (27)	✓	
4	2	27 (27)	✓	

NOTE: In some countries the local codes and regulations might limit the inverter power to a different value than the maximal available power.

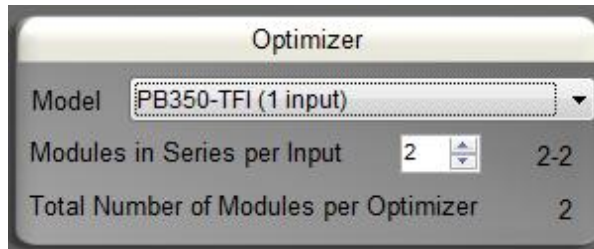
Chosen Inverter

Chosen Optimizer

This tab contains the following sections:

- **Inverter:** lists recommended inverter model and quantity; the user can change the selection.
- **Design Result:** provides string length limits and inverter DC and AC utilization.
- **Power optimizer:** lists recommended power optimizer model and optimizer-module configuration (connection of multiple modules to each power optimizer, in series or parallel); the user can change the selection to any of the permitted configurations.

Example 1:

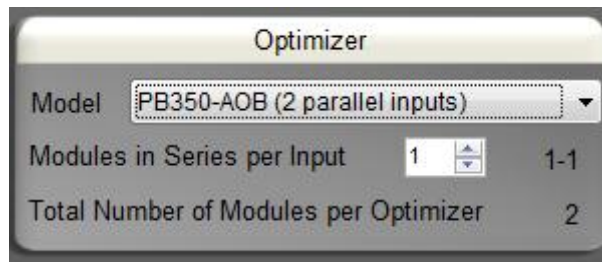


The screenshot shows the 'Optimizer' window with the following settings:

Field	Value	Range
Model	PB350-TFI (1 input)	
Modules in Series per Input	2	2-2
Total Number of Modules per Optimizer	2	

In this example, the recommended power optimizer model is the PB350-TFI, using 1 input. Two modules are connected in series to this input. The number of modules that can be connected to each input is indicated on the right; in this example it says 2-2, meaning no more and no less than two modules may be connected to the power optimizer. The total number of modules connected to each power optimizer, two modules, is also listed.

Example 2:



The screenshot shows the 'Optimizer' window with the following settings:

Field	Value	Range
Model	PB350-AOB (2 parallel inputs)	
Modules in Series per Input	1	1-1
Total Number of Modules per Optimizer	2	

In this example, the recommended power optimizer model is the PB350-AOB, using 2 parallel inputs. One module is connected to each of the inputs.

- System design table: lists the inverters used, the strings connected to each inverter, and the number of modules and power optimizers connected in each string.
- Images of the selected inverter and power optimizer are displayed on the right.

Summary

The **Summary** tab displays a detailed report describing the system you are proposing to install based on the inputs in the **Location**, **PV** and **Design** tabs.

The expected electric parameters of the installed system are displayed next to the product limitations, for convenient comparison. A green checkmark is displayed next to each valid parameter.

If the proposed system design deviates from the recommended product specifications, an orange exclamation mark or a red X is displayed along with a short explanation.

This summary also displays an estimate of the **Total Yearly Energy**.

SolarEdge Site Designer ver 1.7.0

Language: English

Location PV Design Summary

PV-Module

Manufacturer	BP Solar
Model	BP 3230N
Number of Modules	222

Inverter

Model	SE12k
Number of Inverters	4
Max DC Power	12.07 kW ✓ 87.78%
Max AC Power	11.69 kW ✓ 93.49%
Maximum Efficiency	98 %
EU Weighted Efficiency	97.4 %

Optimizer

Model	OP250-LV (1 input)
Total number of optimizers	222
Number of modules in parallel	1
Number of modules in series	1
Maximum Efficiency	99.5 %
EU Weighted Efficiency	98.8 %

Checklist

	Calculated Value	Limit	
Inverter Nominal Fixed Voltage		750 V	✓
Inverter Maximum Voltage		950 V	✓
Optimizer Vin Max	41.97 V	55 V	✓
Optimizer Mpp Max	33.67 V	55 V	✓
Optimizer Mpp Min	26.72 V	5 V	✓
Optimizer Max Input Current	8.02 A	10 A	✓
Optimizer Max Output Current	8.05 A	15 A	✓
Optimizer Min Output Voltage	26.79 V	5 V	✓
Optimizer Max Output Voltage	27.78 V	60 V	✓

Yearly Summary

Total yearly energy estimation	44823.46 kWh
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Please Note: Energy Yields are an approximation and are not guaranteed by SolarEdge

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