

# String voltage and inverter voltage





## Overview

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What is the minimum string size of a PV inverter?

The minimum string size, then, is 15 modules. The maximum string size is the maximum number of PV modules that can be connected in series and maintain a voltage below the maximum allowed input voltage of the inverter. The Module Voc\_max is calculated using the coldest temperature when the modules produce the highest expected voltage.

How do you calculate a minimum string length for an inverter?

Once you find this voltage, find the minimum start-up or MPPT voltage for the inverter and calculate the minimum string length.  $(\text{Inverter Min Voltage}) / (V_{\text{low}}) = \text{Minimum String Length}$  Ensure that the highest voltage during the lowest temperature is within the inverter's max and near the upper MPPT range.

How does a string inverter work?

Most modern string inverters have a multiple power point tracking (MPPT) that operates within a specific voltage range. Checking the minimum voltage does two things: Checking the maximum voltage does two things: Checking the maximum Isc or maximum current does one thing: Checking the maximum connected power is below the inverter's max.

How to calculate inverter voltage?

$(\text{Inverter Min Voltage}) / (V_{\text{low}}) = \text{Minimum String Length}$  Ensure that the highest voltage during the lowest temperature is within the inverter's max and near the upper MPPT range. Find the low ambient temperature for the site and calculate the high voltage per module using the Voc and Tvoc with the following equation:



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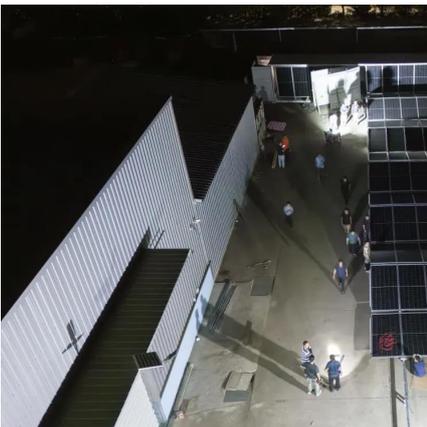
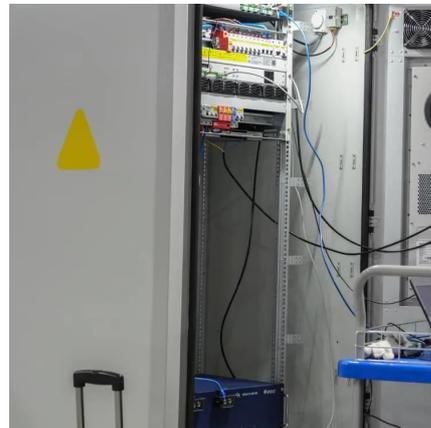


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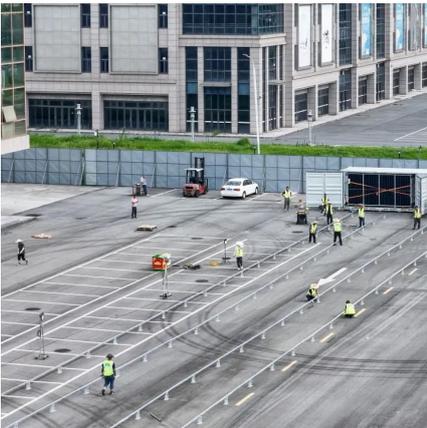
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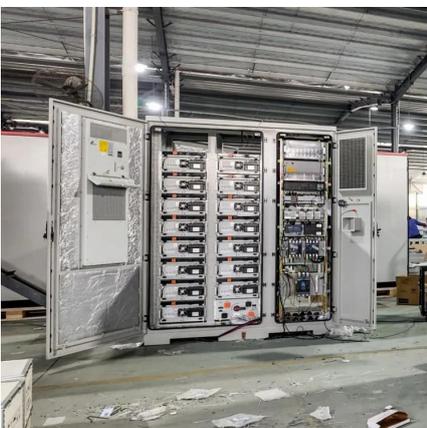
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## Stringing PV inverter , AE 868: Commercial Solar Electric ...

As PV designers, and when stringing the PV inverter with the PV string, we should make sure that the MPP voltage doesn't fall below the lowest voltage at the average high temperature and ...



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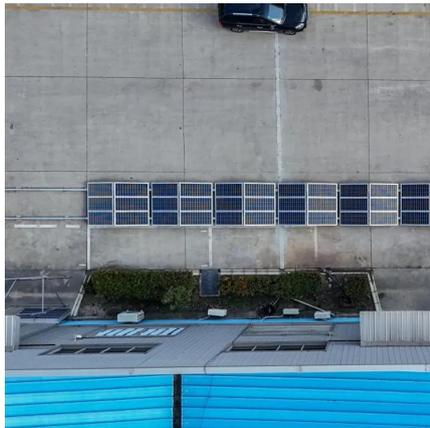
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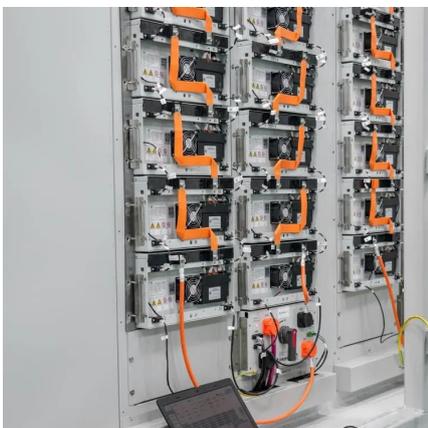


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