

Off-grid system inverter voltage selection





Overview

What is an off-grid solar power inverter?

An off-grid solar power inverter, also known as a stand-alone inverter or solar battery inverter, is a device used in an off-grid solar system. It operates independently of the power grid and can't feed electricity to the grid. It has no provision to tap into the grid electricity.

What is an on-grid inverter?

An on-grid inverter, also known as a grid-tie or grid-connected inverter, is generally used with an on-grid solar system. It automatically sends the excess electricity generated by the solar system into the utility grid via a bi-directional meter. The entire export/import process is known as net-metering.

How much does an off-grid inverter cost?

Such as a 2HP water pump, if an ordinary inverter is chosen, it can be driven with the off-grid inverter of over 5KW. In addition, it is required to be equipped with a battery of more than 200AH. The total cost is over 1500USD. However, if a pumping inverter is used, it only requires 2kW, which costs less than 450USD.

What happens if an elevator motor enters the off-grid inverter?

Because the motor will reverse when the elevator is descending, a counter electromotive force will be generated. When it enters the off grid inverter, it might damage the inverter. If a PV off-grid system is required, it is recommended to add a frequency converter between the inverter and the elevator motor.



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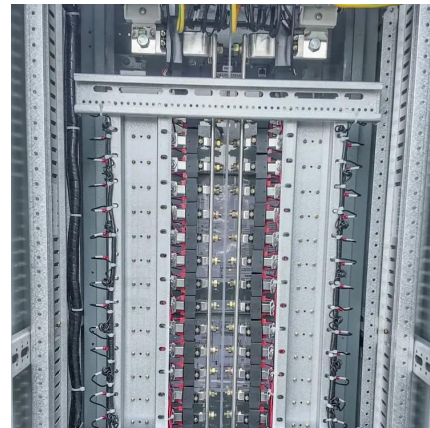


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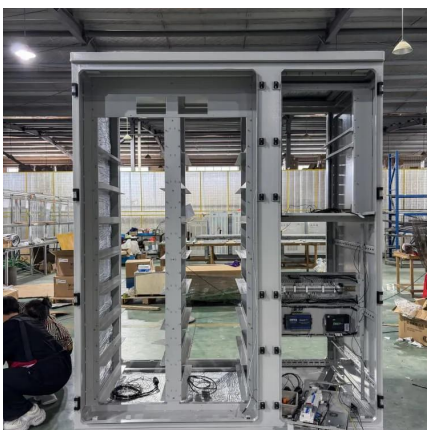
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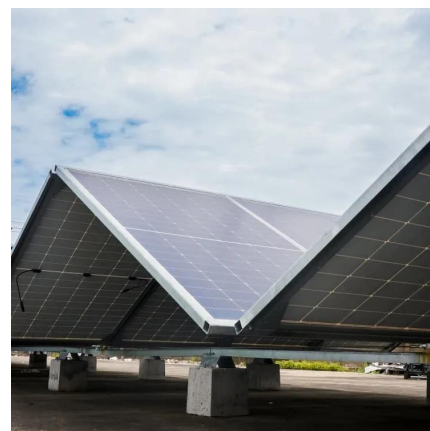
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Load Types and Inverter Power
Selection
Selecting Inverter Waveform and Type
Inverter Selection For Special Application Scenarios
Other Key Factors in Inverter Selection
In off-grid PV systems, loads can be classified into resistive, inductive, and capacitive loads based on their impedance nature. Each type of load has different requirements for inverters, so identifying the type and power of the load is the first step in choosing an inverter.

1. Resistive Loads: Resistive loads are those



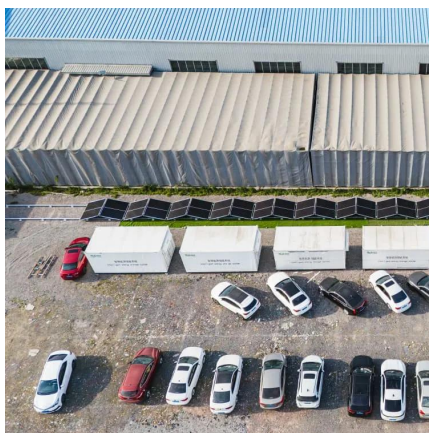
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