



**SolarTech Power Solutions**

**Can 9v drive a 12v inverter**



## Overview

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A 12 volt inverter requires an input voltage between 11 and 14 volts, similar to a car battery. A 9 volt battery does not meet this requirement. This low voltage may prevent the inverter from providing the necessary output voltage. Can a 12V power supply power a 9V device?

When it comes to powering a 9V device, there are alternative options available if a 12V power supply is not suitable or available. One of the most common alternatives is using a DC-DC converter. This device converts the higher voltage from the 12V power supply to the desired 9V output.

### Do I need a 12V inverter?

To do this, you need to connect an inverter to the battery bank. It is important to match the battery bank voltage with an inverter that can handle that same voltage. Simply put, if you have a 12V system, you need a 12V inverter; a 48V system requires a 48V inverter. Standard Pure Sine Wave inverters simply change DC power to AC power.

### What is the difference between 12V and 9V?

A device labeled as 12V requires a power supply that provides a constant 12 volts of electrical potential difference, whereas a 9V device necessitates a 9-volt power source. The variance in voltage requirements stems from the internal components and circuitry of the devices. Different components have specific voltage needs to function optimally.

### How do I convert a 12V power supply to 9V?

Another option is to use a step-down voltage converter or a voltage divider circuit to bring the 12V supply down to the required 9V. These devices can be easily found and are relatively inexpensive. Additionally, it is crucial to double-check and confirm the polarity of both the power supply and the device.

### Can a 12V EI inverter be powered with a 9v battery?

Click on the image for a closer look. Remember to seal any exposed EL wire or connections on the AC side when you are done. ↪ Remote/Mobile Applications: While that datasheet states that the input is between 11V-13V, you can power the 12V EL Inverter with 9V alkaline battery and adapter for remote applications.

Can a 12v plug fit a 9V plug?

While a 12V plug may physically fit into a 9V device, the higher voltage can cause damage or malfunction. It is crucial to ensure that the voltage of the plug matches the device's requirements to avoid potential hazards and preserve the longevity of the device.

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