

SolarInvert Energy Solutions

Determination of inverter reference power



Overview

What is a reference design for a single-phase inverter?

Addressing these challenges and needs, a reference design of a single-phase inverter has been introduced by Texas Instruments (TI). The reference design utilises a C2000 microcontroller (MCU) to control a single-phase inverter (DC/AC). It offers dual operational modes for the inverter.

What is a voltage source inverter (VSI)?

An IMPORTANT NOTICE at the end of this TI reference design addresses authorized use, intellectual property matters and other important disclaimers and information. Voltage source inverters (VSIs) are commonly used in uninterruptible power supplies (UPS) to generate a regulated AC voltage at the output.

What is a voltage source inverter?

Voltage source inverters (VSIs) are commonly used in uninterruptible power supplies (UPS) to generate a regulated AC voltage at the output. Control design of such inverter is challenging because of the unknown nature of load that can be connected to the output of the inverter.

How do I set up a voltage source inverter?

To get started: Confirm that no power source is connected to the design. Confirm that the output filter is correct for the mode that the device will run in. For example, voltage source inverter uses an LC filter. The L2 and L2N slot must be jumper wired as shown in Figure 11.

What makes a good inverter design?

High-efficiency, low THD, and intuitive software make this design attractive for engineers working on an inverter design for UPS and alternative energy applications such as PV inverters, grid storage, and micro grids. The hardware and software available with this reference design accelerate time to market.

What is the power rating of a large inverter?

The power rating of a large inverter for WP or central PV inverters could be approximately 10 MW. The key manufacturers design the utility-scale solutions using 1.5 MW to 2.5 MW with paralleled connections to achieve the required output power.

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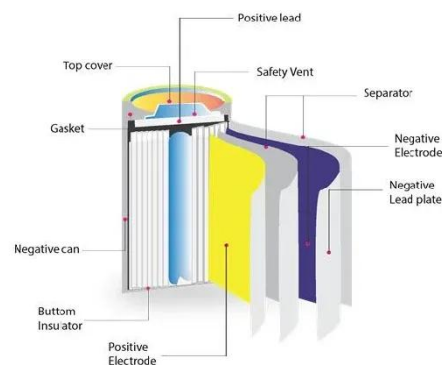
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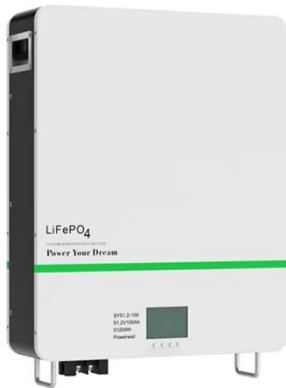


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Power determination

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