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Current source inverter grid connection



Overview

What is a grid-connected current-source inverter?

The grid-connected current-source inverters (CSIs) act as an interface between renewable energy and the power grid, which has a greater impact on the energy conversion system.

What is the control design of a grid connected inverter?

The control design of this type of inverter may be challenging as several algorithms are required to run the inverter. This reference design uses the C2000 microcontroller (MCU) family of devices to implement control of a grid connected inverter with output current control.

What is a current source inverter?

Compared with the voltage source inverter, the current source inverter has the boosting characteristics, and the AC side does not need a complex and bulky filter unit, but it also has the problem of current control of the DC energy storage inductor.

Why do three-phase grid-connected current-source inverters have resonance?

In the three-phase grid-connected current-source inverters (CSIs), the resonance result from the AC-side CL filter and the quality of the grid-current waveform under the unbalanced and harmonic grid voltage conditions are two issues deserving attention.

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1 Introduction A dc-ac converter consists combination of active switches connected with passive components which acted as interfacing unit between the dc input source and ac ...

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