
Given that the photovoltaic (PV) output is usually intermittent and fluctuating, the grid-connected PV inverter may often operate at half load or even light loa

Grid-interfacing inverters act as the interface between renewable resources and the electric grid, and have the potential to offer fast and programmable responses compared to synchronous ...

Today, most installed inverters act as grid-following (GFL) units whose ac outputs mimic a current source by following the measured grid voltage with the use of a phase-locked loop (PLL) [1].

The dual-feedback control combining inverter current control and capacitor-current active damping is widely applied for LCL -type grid-connected inverters. This paper ...

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 ...

This study introduces a novel approach for detecting and classifying open-circuit faults (OCFs) in three-level neutral point clamped ...

This study introduces a novel approach for detecting and classifying open-circuit faults (OCFs) in three-level neutral point clamped (3-L-NPC) inverters connected to the grid.

Proper inverter management in grid-connected PV systems ensures the stability and quality of the electricity supplied to the grid. An appropriate control strategy is necessary ...

To investigate the harmonic characteristics of a photovoltaic (PV) system connected to the weak grid, a passive impedance network is constructed using the impedance model of a ...

In this paper, an improved control method is proposed by introducing a compensation unit. The compensation unit can effectively ...

To provide over current limitation as well as to ensure maximum exploitation of the inverter capacity, a control strategy is proposed, and performance the strategy is evaluated based on ...

In this paper, an improved control method is proposed by introducing a compensation unit. The compensation unit can effectively compensate the system"s phase ...

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