

SolarInvert Energy Solutions

Principle of Grid-connected Drift Technology for Communication Base Station Inverter



Overview

What are the control objectives of grid-connected inverter?

The grid-connected inverter can distribute the active and reactive power according to the control. Therefore, the control objectives are designed as tracking active power and reactive power. The parameters of devices and circuits are shown in Table 13.1.

What is grid-connected PV system control diagram for a three-phase inverter?

The grid-connected PV system control diagram for a three-phase inverter is depicted in Fig. 2.5. It involves the application of a cascaded control loop. The external loop consists of controlling the active and reactive power by PQ controller. It may also consist of indirect control through a DC-link voltage controller.

What is a grid based inverter?

In this mode, the inverter is connected to the grid at PCC and it transfers the generated power from the DC side to the AC side, i.e., grid and AC loads (Ahmed et al. 2011). The voltage reference is taken as per the grid side requirements for inverter controller.

What are the control structures for single-phase grid-connected inverters?

The control structures for single-phase grid-connected inverters are mostly classified into three categories: (1) control structure for single-phase inverter with DC-DC converter, (2) control structure for single-phase inverter without DC-DC converter, and (3) control structure based on Power Control Shifting Phase (PCSP).

How is a grid-connected inverter system simulated?

The test system is described shown in Fig. 13.6, the grid-connected inverter system is simulated using Matlab/Simulink. The simulation model mainly includes the main circuit module and the control module of a three-phase two-

level inverter. The grid-connected inverter can distribute the active and reactive power according to the control.

How a grid connected inverter works?

Along with that, it keeps a track on harmonics and reduces the harmonics as per grid standards (Zmood and Holmes 2003). Inverter switches play a significant part in implementing the control technique. When grid-connected inverters intentionally separate themselves from the PCC, through opening the controlled switch, they operate autonomously.

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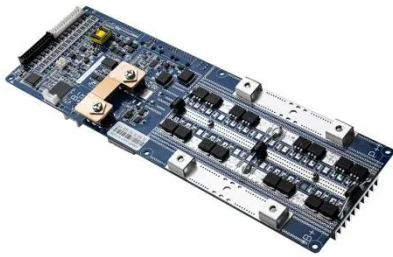
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