

SolarTech Power Solutions

Three-phase inverter double closed loop



Overview

What happens if inverter side current is used for closed-loop control?

When the inverter side current is used for closed-loop control, the phase difference between the grid connected current and the grid voltage will be caused due to the filter capacitor, and the power factor will be reduced , and the LCL resonance peak cannot be well suppressed.

What is a three-level grid-connected inverter?

5. Conclusion In this paper, a T-type three-level grid-connected inverter is used as the interface between the distributed power supply and the power grid, and the parameter design of the current double closed-loop control system is given, and the grid-connected control strategy is simulated.

What are the disadvantages of a current double closed loop PI current tracking control?

In view of the disadvantages of the slow response speed of the traditional current control and the failure to eliminate the influence of the LCL filter on the grid-connected current by using current PI control alone, a current double closed loop PI current tracking control is proposed.

What is double-current closed-loop control strategy?

Therefore, the double-current closed-loop control strategy is introduced, which takes the capacitor current as the inner loop and grid-connected current as the outer loop.

What are the control modes of inverters?

The control modes of inverters can be divided into two categories: voltage type control and current type control [6, 7]. The grid connected current of voltage control mode is open-loop control, resulting in poor dynamic performance of the system. In practice, this method is barely applied.

Can SVPWM modulation module drive a three-phase inverter?

This paper innovatively uses script module programming of plescs software to build the SVPWM modulation module which drive the three-phase inverter while realizing the closed-loop control. This research will be beneficial to the application of the new driving mode control inverter in practical production. 1.

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