

Direct Power Control Inverter





Overview

Can artificial intelligence improve direct power control in a photovoltaic generation system?

Volume 9, article number 37, (2024) This paper introduces a novel control algorithm leveraging artificial intelligence to address the key defects of Direct Power Control (DPC) via Grid Voltage Modulation (GVM) strategy enhanced by Neural Network Control (NNC) for a three-phase inverter in a photovoltaic generation system.

What is direct Power Control (DPC)?

Another control strategy called Direct Power Control (DPC) is based on the instantaneous active and reactive power control loops.

What is a dynamic switching table for a 3L NPC inverter?

In [13], a DPC algorithm has been developed for a 3L-NPC inverter with the aim to achieve a fast dynamic control of the power flow on a transmission line. In [14], a dynamic switching table for a grid-connected NPC inverter has been proposed with the aim to enhance its robustness against grid faults.

What is DPC strategy for PWM converter?

Table 3.4 Second vector selection table of DPC strategy for PWM converter In conclusion, Direct Power Control proves to be a powerful approach for controlling induction motor drives, offering significant advantages in terms of dynamic response and reduced complexity compared to traditional control methods.



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