Current Status of Master-Slave Control in Microgrid

Overview

Under this control architecture, five main control targets are achieved: (1) frequency self-synchronization of each VCI inverter based on local current phase-angle signals; (2) fault-tolerant capability of all inverters without one-to-all-failure; (3) high. Under this control architecture, five main control targets are achieved: (1) frequency self-synchronization of each VCI inverter based on local current phase-angle signals; (2) fault-tolerant capability of all inverters without one-to-all-failure; (3) high. Index Terms—Autonomous dc microgrid clusters, dis-tributed generation units (DGUs), global power manage-ment, interlinking converters (ICs), master-slave control. Manuscript received 8 March 2024; revised 17 June 2024 and 16 July 2024; accepted 4 August 2024. (Corresponding author: Yi Tang.) Fei. This book chapter presents Model Predictive Control (MPC) strategies for Master-Slave parallel inverters in microgrids. The Master is a grid-forming inverter with an LC output filter, while the Slave is a grid-following inverter with an output LCL filter. Different control schemes,basic control schemes like the centralized,decentralized,and distributed control,and multilevel control sche es like the hierarchal control are discuss Predictive Control (FCS-MPC) for microgrids.

Current Status of Master-Slave Control in Microgrid

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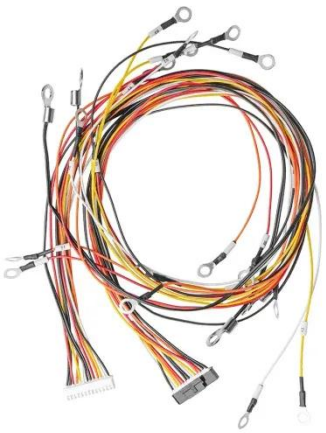

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