Intelligent sliding mode fault-tolerant control of microgrid

In this paper, the DC microgrid hybrid power system including wind turbine, micro gas turbine generator and storage battery are established to study the protect

Therefore, this paper proposes a secondary multiple fault-tolerant control scheme for a DC microgrid based on a sliding mode observer to ensure the voltage is restored to the rated value and realize the ...

Abstract: This work investigates sensor fault diagnostics and fault-tolerant control for a voltage source converter based microgrid (model) using a sliding-mode observer.

In this paper, a robust autonomous sliding mode control (SMC) scheme is proposed for achieving a globally stable and decentralized power sharing operation of multiple dispatchable units ...

This paper develops an intelligent, i.e., fuzzy logic-based sliding mode control (F-SMC) utilizing a proportional-integral-derivative (PID) type sliding surface to regulate the frequency of...

This thesis reviews key challenges, control hierarchies, fault types, and state-of-the-art IFTC strategies for DCMGs, supported by illustrative diagrams and simulation insights.

Aiming at the false data injection attacks occurring in the microgrid actuators, a fixed-time sliding mode observer is designed, which can quickly and accurately estimate the attack signals ...

Multiple Fault-Tolerant Control of DC Microgrids Based on Sliding Mode Observer.

To enhance the power quality of microgrid inverters and reduce the influence of changes in inductance parameters and external disturbances on the direct power control of the inverter ...

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