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Smart microgrid grounding protection technology

Leveraging the recent strides in artificial intelligence, this paper introduces a novel multi-agent-based protection scheme for DC microgrids.

Improvements for microgrid grounding, such as novel microgrid protection schemes for detection of ground faults with a good grounding source, new power electronics based grounding sources, and ...

The paper focuses on developing microgrid protection using digital protection relays, smart sensors, IoT-based protection, artificial intelligence, and machine learning.

Existing MG grounding schemes include the grounding transformer-based scheme and distributed energy resource (DER) transformer-based scheme. However, the grounding transformer-based ...

This study examines the sustainability of uniform as well as an optimal grounding grid (GG) design for the microgrid (MG), in terms of variations in the top layer (TL), middle layer (ML), and bottom layer ...

This paper presents the state-of-the-art dc microgrid technology that covers ac interfaces, architectures, possible grounding schemes, power quality issues, and communication ...

It is crucial to propose appropriate solutions and future directions for challenges encountered in DCMG protection schemes, such as bidirectional power flow, grounding, and high ...

The proposed work presents a grounding system design that meets the grounding and relaying requirements, like reducing common mode voltage, minimizing the fault current magnitude, ...

This paper presents an extensive review of fault characteristics of DCMGs and the protection challenges. Innovative protection techniques proposed to solve these issues, and ...

Grounding is a critical issue for DC microgrids protection. Different grounding options come with different fault characteristics and influence the configuration and setting of the protection.

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