Microgrid dual protection access

To address this issue, this study proposes a new optimal twin-setting OCR coordination scheme for phase and ground events using standard and nonstandard tripping characteristics.

This solution offers high autonomy, fault tolerance, and robustness against multiple fault types under various topology scenarios. This paper presents a systematic review of the current ...

In this paper, a novel optimal protection coordination scheme is proposed, one which enables a common optimal relay setting which is valid in both operating modes of the microgrid.

This work proposes an adaptive dual-setting scheme for the optimal protection coordination of hybrid AC/DC microgrids (HMG), utilising a novel hybrid relay characteristic. The ...

With new standards like IEEE 2030.7-2023 and California"s SB-100 mandates, dual protection microgrid access is shifting from "nice-to-have" to "unless you enjoy fines."

This work aims to fill this gap by developing a novel optimal dual-setting protection scheme based on the nonstandard tripping characteristics of overcurrent relays for highly sensitive ...

In this paper, a quaternary protection scheme implemented with dual-directional overcurrent relays (dual-DOCR) and a protection control strategy is developed for protecting against faults in ...

Due to bidirectional power flow and intermittence of some renewable sources in microgrids, conventional protection methods are prone to failure. Aiming at improving them, this ...

By utilizing advanced technologies such as digital-twin technology and hardware-in-the-loop (HIL) testing, the proposed scheme enhances fault management and relay coordination.

Microgrids are inherently dynamic systems due to their ability to operate grid-connected or islanded, with different system requirements in each operational mode.

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