Microgrid background detection

ABSTRACT The concept of microgrids (MGs) as compact power systems, incorporating distributed energy resources, generating units, storage systems, and loads, is widely acknowledged ...

A comprehensive end-to-end microgrid protection solution that offers a range of functionalities--from data collection to fault detection, localization, and isolation.

This paper presents decision tree-based protection solutions that combine fault detection and fault type classification in a fully inverter-based microgrid, using local measurements with-out any communication.

Following the detection of a fault, this section introduces the data-driven microgrid fault localization method. Generally, fault localization is treated as a multiclass classification problem by assigning ...

Simulation results show that the proposed scheme, combining ML and MAS, outperforms previous methods, achieving high fault detection and classification accuracy and exceptional protection ...

Accordingly, the reliable protection of MGs considering uncertainty in RESs is crucial for planners and operators. This paper uses data analysis to extract knowledge from locally available...

This critical study provides valuable information for researchers and professionals aiming to refine fault detection and isolation methods and improve the efficiency of DC microgrid systems.

Examines a wide variety of difficulties posed by DER penetration and the resulting impact on conventional protection schemes. Investigates various protection strategies for MGs, ...

Effective protection schemes are essential to ensure the reliability, safety, and resilience of microgrids under various fault conditions. This study addresses a new advancement in microgrid ...

The thorough examination of renewable energy production, battery storage, fault detection signals, and machine learning model performance provided useful insights into the efficiency and constraints of ...

Web: https://www.ovalventures.co.za