

عنوان مقاله:

Comparison Between FT and CWT for Detecting HIF in Order to Provide a New Detection Method

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خلاصه مقاله:

In this paper, the Fourier transform (FT) and continuous wavelet transform (CWT) to detect high impedance fault (HIF) in order to present a detection method in distribution networks is compared for detecting. The current amplitude of HIF is low, causing the overcurrent relay to fail or to delay. The proposed algorithm is based on Fourier transform and wavelet transform of three-phase current waveforms to extracts high frequency waveform information. Then the absolute sum of the coefficients for each sample is calculated during the last cycle. Based on the results obtained from the simulation, the appropriate method is selected. In other words, several simulations have been carried out for HIF and their wavelet and Fourier transform coefficients have been calculated and selected with respect to one detection threshold coefficients. The proposed algorithm also probes the normal fault as well as the different modes of sudden load increasing in order to avoid overlap between these three states. The simulation is performed using MATLAB software. The results show that the proposed method detects all HIF and is able to detect sudden load increasing.

کلمات کلیدی:

Fourier transform, High impedance fault, Wavelet transform

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