

FAULT DETECTION SCHEME FOR DISTRIBUTED AND INTER-CONNECTED POWER SYSTEM USING SHANNON WAVELET ENTROPY

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ABSTRACT

The Protection scheme is suggested for the detection of various faults in the Distributed Generation System and also for the detection of various faults in the interconnected network at different locations. In this method, positive components of currents are retrieved at fault location and are decomposed to get detailed coefficients of wavelet transforms. The concerned singular value matrices, and expected entropy values are calculated. Based on the Wavelet Shannon Entropy calculated. Indexes are defined to detect the fault. 'Haar' Wavelet Transform is used for the extraction of frequency components. The major priority of the protection scheme proposed is to reduce the tripping time to 10ms from the inception of fault occurrence. The proposed scheme for the detection of various faults is investigated in MATLAB-SIMULINK software environment.

KEYWORDS: *Detection of Faults, Wavelet Shannon Entropy, Haar Wavelet, Distributed Network, Inter-Connected Network*

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