

**FAULT CURRENT ANALYSIS IN A DISTRIBUTION
SYSTEM WITH DISTRIBUTED GENERATION**

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ABSTRACT

This paper studies about the symmetrical fault current analysis (3-Phase Faults) in a distribution system with distributed generation and also describes the consequences and operating limitations of installing distribution generator (DG) to electric power systems (distribution system). Transmission line faults can be classified using the bus voltage and line fault current. Monitoring the performance of these two factors are very useful for very useful for power system protection devices. This paper will discuss the changes in fault current by comparing the changes during the fault current occur without distribution generator (DG) and with the distribution generator (DG). So this paper will evaluate fault current due to effect in electric power system with the adding of the distribution generator (DG) in distribution system. The simulation will be implemented on an IEEE 69-bus distribution system by using power system simulation programme for planning, design and analysis of distribution system which is Power System Simulator/Advanced Distribution Engineering Productivity Tool (PSS/ADEPT) software. The results of maximum fault current in a distribution system with the presence of DG might be useful for power system engineer to consider protection devices before installing DG in the system.

KEYWORDS: Fault Analysis, Symmetrical Fault, Distribution System, Distributed Generation

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