Enhancement Effects of the STATCOM on the Distance Relay Protection

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Abstract

Distance relay characteristics built depending on the line impedance and faults impedance. The relay response to the fault in the normal condition but when a Static Synchronous Compensator (STATCOM) added to the grid the characteristic of relay must be change and the relay may not response to the faults. In this paper, a sample 9 buses IEEE system was investigated to show the distance relay response when STATCOM was added. MATLAB-PSAT was used to show the effect of STATCOM that location in the middle and end points of the transmission line. The results observing of different fault resistance and various locations on the characteristics of the relay.

References


**Index Terms**

Computer Science Circuits and Systems

**Keywords**

Distance Relay, STATCOM, MATLAB-PSAT.