

A Fault Locating System for Extra High Voltage Transmission Lines

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Abstract

Offering a reliable power system is always the main object of Taiwan Power Company (TPC). How to prevent power failure and reduce service interruption period is thus the primary object of engineers.

New digital distance relays have been installed on TPC's extra high voltage transmission lines (345 KV) to replace the old electro-mechanical relays to reinforce its security and reliability of the system protection function. The fault location is an ancillary function of the new digital relays. According to TPC's past experience a bias has been found in the function of fault location of transmission lines. This paper is aimed at offering a new fault locating system model to solve the bias problem.

The new model can not only reduce the bias in the measuring of fault point distance but also establish "A Fault Locating System for Extra High Voltage Transmission Lines" that will help the maintenance staff locate the fault point in a much shorter time.

Keywords : Extra High Voltage Transmission Lines, Digital Distance Relays, Electro-Mechanical Relays, A New Fault Locating System Model ◦