Voltage Phase Shift criterion and Correlation Coefficients Method Simultaneous Application for Increase in Fault Type Diagnostic Accuracy of Distribution Network

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protection of modern power systems, method of fast, valid and authentic division falts are necessary for doing utilization. In the other hand, valid information about type of falt is required to algorithms of determination falt's place. In this dissertation, concurrent using criterion of shift phase and voltage angle and method of correlation coefficient was suggested to increasing accuracy and valid in the determination of type distribution network's falts. Fast feeder. was used to determination of change shift angle by measuring primary three phase voltages and in the second method, the purpose is determination of correlation coefficient by that can distinguish the type of falt that just depend on measured three phase in the primary of feeder. Simulation studies were carried out on a simulated test system in the Digsilent software to estimate of suggested model for distinction and classification falt, then output data was analyzed the Matlab software. Achieved numerical results show this fact that first method was so proper and resistant to type of falts and was presented correct answer but second method presented incorrect answer to different type of falts because it depend on current and as, in the distribution network, existence of scattering resources put effect on current prolate network. Then in the great diffusion of scattering production need to a complement method because we can't be depend on correlation coefficient method to determination type of falt, based on this reason first method, using change shift phase angle for determination type of falt, by second method are complementary each other. This mean in the each condition of network, neither in its presence nor absence it could be used to determination the type of falt.

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