

ABSTRACT

In the process of distributing electrical energy, of course there are disturbances or noise that exist in the transmission section, there are 2 types of disturbances, namely internal disturbances and external disturbances, internal disturbances are disturbances that occur from within the system itself, while external disturbances are interference that occurs outside the system. To solve this problem, a protection system is needed to secure it from interference. One of the protection systems which uses a distance relay / distance relay. The working principle of this distance relay itself is by comparing the impedance measured by it, where this measurement is done to find out the impedance of each distance zone. In this test, the constant test current method is used, in which the zone graph is just a click away to simulate the disturbance. In zone 1 interference, the relay will work without delay (in-stant), in zone 2 interference, the relay will work with a delay time of 0.4 sec, and in zone 3 interference, the relay will work with a delay time of 1, 6 sec. Zone 2 will work when Zone 1 or the substation opposite it does not respond to a disturbance.