

Pilot Directional Protection Scheme Using Wireless Communication

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Abstract : This paper presents a scheme for the protection of loop system from all type of faults using the direction of fault current. The presence of distributed generation in today's system increases the complexity of fault detection as the power flow is bidirectional. Hence, protection scheme specific to this purpose needs to be developed. This paper shows a fast protection scheme using communication which can be fiber optic or wireless. In this paper, the possibility of wireless communication for protection is studied to exchange the information between the relays. The negative sequence and positive sequence directional elements are used to determine the direction of fault current. A PSCAD simulation is presented and validated using commercial SEL relays.

Keywords : smart grid protection, pilot protection, power system simulation, wireless communication

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