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Title: Distance protection of wind power generation system

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Distance protection provides fast fault clearance time, improved sensitivity and selectivity. Nowadays its applications include collection networks of Wind Farms (WF) which normally have resistive ...

Although the report addresses coordination with wind turbine generator protective devices and static VAR sources, protection of the wind turbine generators and static VAR sources themselves is not ...

Grid concerns provide an enhanced distance protection approach that can precisely calculate the fault line distance. The method consists of two primary parts: phasor rectification and ...

The simulation in PSCAD/EMTDC environment shows that the performance of the distance relay is greatly influenced at the point of common connection of the wind generator.

In this paper, impacts of WF situations created by wind speed variation, number of available turbines and their control system have been modelled on the Z₂ seen impedance of distance relays installed ...

This paper has demonstrated the importance of re-looking at the distance protection for protecting lines fed by renewable generation. The major issue is due to the change and variations in fault current ...

The distance protection based on the measured impedance with fundamental frequency is widely applied in the ac power system. In this work, an improved distance protection method based ...

The increasing penetration of DFIG-based wind farms into high-voltage power systems has introduced new challenges for the coordination of distance protection relays.

The performance of conventional protections is seriously challenged by different fault characteristics of wind turbine, compared to the synchronous generators.

Distance protection of wind power generation system

This study will be considering selected factors which influence the proper functioning of distance protections in the distribution networks with the wind farms connected to the power system.

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