**عنوان مقاله:**

Utilization of Particle Swarm Optimization Method in Over Current Relay Protection Coordination in Distribution System Consist Of Distributed Generation Units

**محل انتشار:**

اولین کنفرانس ملی پژوهشهای کاربردی در صنعت آب و برق (سال: 1399)

تعداد صفحات اصل مقاله: 6

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**خلاصه مقاله:**

Industry progress and population growth have increased demand for electrical energy. The desire to use renewable energy resource as a clean, cheap and Eco-friendly energy has led to more and more generation units connected to the system. Connection of generation units to a power system that has been operated for years can create challenges for power system, such as bidirectional power flow, fault current rate variations, different fault current rate indifferent operating scenarios and inefficiencies of the previous protection scheme against the current conditions of the power system .In this paper, a protection scheme based on Directional Over Current (DOC) relay has been presented . The proposed scheme for a distribution system including several Distributed Generation (DG) units in Aalborg Denmark has been studied. In this distribution system, several wind farms and one Combined Heat and Power(CHP) unit are connected to the distribution system. The directional overcurrent relay protection coordination has been optimized as alinear optimization problem with the Particle Swarm Optimization (PSO) method in MATLAB and the results are shown the capabilityof this method in online calculation. In this research, test distribution system is modeled in DIGSILENT and to examine all the condition,DIGSILENT and MATLAB are connected through

**کلمات کلیدی:**

Directional OverCurrent Relay, Distribution System, Distributed Generation unit, Particle Swarm Optimization Method

**لینک ثابت مقاله در پایگاه سیویلیکا:**

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