

## **Power transformer protection using microcontroller-based relay**

### **ABSTRACT**

Protection of power transformers is a very challenging problem in power system relaying. Since it is very important to minimize the frequency and duration of unwanted outages, this is a high demand imposed on power transformer protective relays. Various relaying principles have been proposed and used to protect transformers against different types of faults. Relays that use over current, over flux and overheating principles protect the transformers against overloads and externally applied conditions. Differential relays protect the transformers against internal fault. In this research, software and hardware of microcontroller based relay system has been explained and designed. The design implementation and testing of the system are also presented.

**Keyword:** Power transformer protection, inrush current, differential protection