

## FUNCTION BASED OPTIMIZED PROTECTION SCHEMES FOR DISTRIBUTION SUBSTATION

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### ABSTRACT

Protection engineers face difficulties to choose the suitable protection scheme in the practical life. They can find, in some cases, the need to choose inordinate protection schemes. In this paper, by using MATLAB SIMULINK some of the most common protection functions are simulated. The model introduced in this paper has subjected to different types of faults and the results are monitored to ensure the reliability of the model. This simulation of the protection relay enables to have full control to choose and also to modify any protection scheme and to monitor its results so it can save cost and time to make an optimum selection of the protection schemes.

**KEYWORDS:** Multifunction Relays, MATLAB SIMULINK, Micro Processor Based Relay, Protection, Differential Protection, Voltage, Restrained over Current Protection, over Frequency Protection, Under Frequency Protection