ADAPTIVE MULTI-FUNCTION TRANSFORMER DIFFERENTIAL PROTECTIVE RELAY

By

Ahmed El-Sayed Hassan Saleh

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree Of
MASTER of Science
in
Electrical Power and Machines Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Under the supervision of

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Title of Thesis:

Adaptive Multi-Function Transformer Differential Protective Relay

Key Words:

Adaptive ، Differential ، Protective ، Relay ، Transformer.

Summary:

This thesis presents a new relay model for the transformer differential protection. The thesis focuses on some operating condition which cause differential relay mal-function. It proposed a self-adaptive differential characteristic that help to avoid such relay mal-function. It also introduced a transformer Internal fault model to investigate the performance of the proposed relay model during internal faults using PSCAD/EMTDC software program.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Ahmed El-Sayed Hassan Saleh Date:

Signature:

Dedication

This work is gratefully dedicated to:

My parents, my wife, my little son Omar and my little daughter Aisha

Acknowledgments

*"All the praises and thanks be to **Allah**, who has guided us to this work, and never could we have found guidance, were it not that Allah had guided us"*

Then, I would like to express my sincere gratitude and appreciation to my supervisors; Prof. Dr. Hany Elghazaly and Prof. Dr. Mahmoud Gilany (Cairo University) for their guidance, valuable advice, suggestions, and precious comments that improved the whole thesis besides their encouragement and patience and throughout the period of the research.

Finally, I can't forget to express my deep thanks to my parents, and my wife, for their kind support, strong encouragement and patience.

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