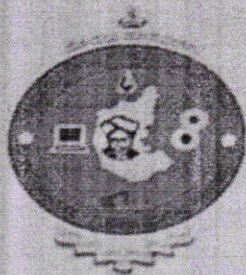


VISHVESVARYA TECHNOLOGICAL UNIVERSITY "JNANA
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A PROJECT REPORT ON
"THREE PHASE LINE FAULT DETECTOR"
SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF
THE AWARD OF DEGREE OF
BACHELOR OF ENGINEERING
IN
ELECTRICAL & ELECTRONICS ENGINEERING

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2022-2023

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CERTIFICATE

This is to certify that the technical seminar report entitled "THREE PHASE LINE FAULT DETECTOR" successfully carried out by KAVYA G(1SV19EE003) SYEDSAIFULLA(1SV19EE018) The bonafide students of SHRIDEVI INSTITUTE OF ENGINEERING AND TECHNOLOGY TUMKUR-572106, in partial fulfilment for the award of degree of Bachelor Of Engineering In Electrical And Electronics Engineering Of The Visvesvaraya Technology University, Belagavi-560014 during the year 2022-2023. All the corrections/suggestions indicated for the internal assessments have been incorporated in report. The technical seminar report has been approved as it satisfies the academic requirements in respect to the technical seminar work prescribed for the said degree.

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ABSTRACT

Electricity has become the most sought after amenity for all of us. Gone are the days when electricity would be only limited to cities. It is now reaching to every distant parts of the world. So we have now a complex network of power system. This power is being carried by the transmission lines. These lines travel very long distances so while carrying power, fault occurring is natural. These faults damages many vital electrical equipment like transformer, generator, transmission lines. For the uninterrupted power supply we need to prevent these faults as much as possible. So we need to detect faults within the shortest possible time.

These relays are more reliable and have faster response than the traditional electromechanical relays and Static relays. They have increased range of setting, high accuracy, reduced size, and lower costs, along with many other functions, such as fault event recording, auto-resetting, etc. This project is about designing the Numerical relay where the fault is detected when the input value exceeds the reference value set in the relay which then gives ENCS the trip signal to the circuit breaker.

The Electric Power System is divided into many different sections. One of which is the transmission system, where power is transmitted from generating stations and substations via transmission lines into consumers. Both methods could encounter various types of malfunctions is usually referred to as a "Fault". Fault is simply defined as a number of undesirable but unavoidable incidents can temporarily disturb the stable condition of the power system that occurs when the insulation of the system fails at any point. Moreover, if a conducting object comes in contact with a bare power conductor, a short circuit, or fault, is said to have occurred. The causes of faults are many, they include lighting, wind damage, trees falling across transmission lines, vehicles or aircraft colliding with the transmission towers or poles, birds shorting lines or vandalism. In this study, the causes and effects of faults in the overhead transmission lines were the focus of the research. Some of the many causes of faults and some detection methods will be discussed


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