

Visvesvaraya Technological University, Belgaum



A Project Report

On

PROTECTION OF THREE PHASE MOTOR

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Submitted in partial fulfillment of requirements for the award of the Degree of

Bachelor of Engineering

In

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ABSTRACT

“Protection of three phase motors” is one of the latest advancements in electrical machines. This paper focuses on several advancements as line dropout, single phasing, overload damage and reverse phasing, present in the existing systems using 3 based, which is designed to work in difficult environmental conditions. This drive integrates several facilities with built frequency cut-off along with auto-starter and off-timer. This controller circuit possesses major parts viz., phase sequence counter and latch, motor on-off timer and power supply circuit. The phase sequence checker designed with decade counter and timer IC continuously watches for the phase permits the operation only if the frequency lies between 42Hz and 50Hz. The second part protects the motor from overload and line dropping.

This controller also supports motor on-off timer circuit and counter along with the provisions of power supply.

The fabricated project protects the motor from any of these faults like change in phase sequencing, single phasing earth fault in winding and protects the motor from further damages due to over load and fault.

When any one of this fault occurs, this system opens the all circuit of ‘DOL started or Star Delta-started and disconnects the motor from all the three phases.