# DESIGN AND CONSTRUCTION OF A 60AMP THREE PHASE AUTOMATIC CHANGE OVER SWITCH.

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#### EE/2007/199

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**AUGUST, 2012** 

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BEING A PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF BACHELOR OF ENGINEERING (B.ENG) DEGREE IN ELECTRICAL / ELECTRONIC ENGINEERING.

CARITAS UNIVERSITY, AMORJI-NIKE ENUGU.

**AUGUST 2012** 

#### APPROVAL PAGE

This project was compiled and presented by AKWARANDU IKECHUKWU, with Registration number EE/2007/199 in partial fulfillment of the requirements for the award of Bachelor Degree in Electrical / Electronic Engineering. **ENGR** C.O. EJIMOFOR (PROJECT SUPERVISOR) DATE ENGR C. O. EJIOMOFOR DATE (H.O.D EEE Dept.)

DATE

(EXTERNAL EXAMINER)

#### **DEDICATION**

I dedicate this project report to Almighty God whose love and grace towards my academic pursuit is endless and to my mother, Prof. MRS BLESSING N.EVOH for her motherly love and contribution.

#### **ACKNOWLEDGEMENT**

My profound gratitude goes to my project supervisor and HOD ,ENGR C.O. EJIOMOFOR for making this project a learning process, others In the trend are Prof. G.C. OCHIAGHA, departmental lecturers and a host of friend in the engineering field .My great thanks goes to DR Louis U. Akwarandu, Arch &MRS C.E. EMELOGU, MR EMEKA UGO, MR .J, OKECHUKWU, ENGR PROMISE CHIJIOKE.

#### **ABSTRACT**

The design and construction of a 60A, 3-Φ automatic power changeover from public utility supply to generator and vice versa was aimed at providing a useful system for use in our homes or offices. The system was achieved with a 66A 3-Φ contactor, 100mA transformers and relays. The system turns on a generator when the public utility (PHCN) is off by cranking the starter and a provision was made to stop cranking when the generator is fully started. A delay was provided to stop the generator five minutes after the PHCN is restored to avoid unnecessary off and on. A display that shows when PHCN or GEN is on was provided.

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