

**ANALYSIS OF MONITORING SYSTEM EFFECT OF SUPPLY
VOLTAGE ON STARTING CURRENT STAR DELTA 3 PHASE
INDUCTION MOTOR 1.1 KW POWER**

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Abstrack

Three-phase electric motors have large initial current characteristics, but this can be overcome by several adjustment methods, one of which is a star (Y)-triangle (Δ) starting system, the goal to be achieved in this study is the manufacture of a star (Y)-triangle (Δ) connection control system, the researcher uses a three-phase electric motor manually and automatically using a power supply module as the effect of the voltage, to find out which is more stable where the initial spike in the rotation of the electric motor is in the starting process, the difference in current, power and speed of the electric motor, things that distinguish the use of the circuit, knowing the occurrence of overshoot between manual circuits. The data collection method in this study is the monitoring method. by varying the value of the voltage from 250 V, 300 V, 350 V and 380 V. The results showed that the control circuit for the influence of the star (Y)-triangle (Δ) supply voltage of a three-phase induction motor can work well at a voltage of 380 V. Motor starting current electricity using the star starting method (Y) 6.5 A with a nominal current of 1.5 A and a power of 3030.87 Watt- The triangular starting current method (Δ) is 20.5 A and a nominal current of 12.5 A and a power of 6100.98 Watt, obtained RPM starting 2977 module rpm, tachometer rpm 3130 RPM with a speed difference of 153 RPM. This shows that this star delta circuit is to minimize the starting inrush current, where the motor requires a large initial torque when starting, and there is no overshoot in all circuits during the study.

Keywords : 3-phase motor, Effect of supply voltage, starting current of star delta.