

DESIGN AND IMPLEMENTATION OF LOW VOLTAGE THREE PHASE MOTOR SPEED CONTROL AND VISUAL MONITORING

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ABSTRACT

This paper focused on the creation of three phase low voltage motor control under 50 volt for Power Electronic Lab Course of vocational education . With HEF 4752 PWM IC and microcontroller based system. Three phase low voltage motor modified from household washing machine motor, operated in three category; low, medium and high speed. Under three phase 32 volt input, the motor runs at RPM 573 in 11.50 volt for low speed, RPM 1104 in 20.50 volt for medium speed, and RPM 2022 in 26 volt for high speed.. The step of frequency and voltage output is not linear with the value of resistor control setting. Motor can be connected in star or delta unloaded mode. In delta connection with resistif virtual ground for the oscilloscope, the voltage shapes are loss of sinusoidal patern

Kata Kunci: *motor control, HEF 4752, three phase, power electronic laboratorium course*