

Desain *Human Machine Interface* (HMI) Sebagai Pengontrol Motor Induksi 3 Fasa *Forward Reverse* Berbasis *NEXTION 7" HMI UART*"

Nama : Budi Utomo
NIM : 3204191260
Pembimbing : MARZUARMAN,S.Si,.MT

ABSTRAK

Tujuan dari pembuatan tugas akhir ini adalah untuk membuat media pembelajaran praktikum dalam bentuk *Trainer Kit* pengontrolan motor induksi 3 fasa *Forward – Reverse* serta analisa arus *Starting* terhadap variasi tegangan.

Pada penelitian ini menggunakan motor induksi 3 fasa berkapasitas 0,95 Kw atau 950 Watt, 380 Volt dan 4 Pole (Δ). Pengujian dilakukan secara sistem manual, arus *Starting Forward* yang terukur 2,62 A secara perhitungan sama deangn hasil pengukuran dari sensor PZEM004t 2,62 A dan pada saat pengukuran arus *Starting Reverse* terukur 1,34 A dan pada cara perhitungan hasil yang didapatkan sama yng diukur menggunakan sensor yaitu 1,34A pada saat tegangan input 250 Volt. Hasil pengukuran akan muncul pada layar HMI *Nextion*.

Kata Kunci : *Trainer Kit*, Motor Induksi, PZEM004, HMI *Nextion*, Arus *Starting*

***Design of Human Machine Interface (HMI) as controller of
NEXTION 7 UART Based 3 Phase Induction Motor Forward Reverse***

Name : Budi Utomo

NIM : 3204191260

Supervisor : MARZUARMAN,S.Si,.MT

ABSTRACT

The purpose of making this final project is to make practical learning media in the form of a Trainer Kit for controlling 3 phase induction motors Forward – Reverse as well as starting current analysis for voltage variations.

In this study using a 3-phase induction motor with a capacity of 0.95 Kw or 950 Watt, 380 Volt and 4 Pole (Δ). The test was carried out in a manual system, the Starting Forward current which measured 2.62 A was calculated to be the same as the measurement results from the PZEM004t sensor 2.62 A and when the Starting Reverse current was measured it was 1.34 A and in the calculation method the results obtained were the same as measured using a sensor, namely 1.34A when the input voltage was 250 Volts. The measurement results will appear on the HMI Nextion screen.

Keywords : Trainer Kit, Induction Motor, PZEM004, HMI Nextion, Starting Current