

# **DESIGN OF 3 PHASE ELECTRIC VOLTAGE AND CURRENT MONITORING WITH DATALOGGING SYSTEM BASED ON ARDUINO NANO MICROCONTROLLER**

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## **ABSTRACT**

*Electricity has become a basic need to support industrial interests. It takes a voltage and current monitoring tool to know the electrical conditions in the form of voltage and current when electrical equipment in the industry is operating. The purpose of this research is to make a voltage and current monitoring tool, especially in an industrial environment. To support the manufacture of this tool, several electronic components are used in the form of a ZMPT 101B voltage sensor, a current sensor SCT013, an Arduino nano microcontroller, an RTC to know the calculation of time in real time, an SD Card to store measurement results that can be accessed again using a desktop, and a 16x2 LCD. to display the measurement results.*

*From the results of tests that have been carried out in the brickwork industry using 3-phase electricity, the monitoring tool has an average error of  $V_R$  4.3% and  $I_R$  7.84%,  $V_S$  1.31 % and  $I_S$  6.3%,  $V_T$  2.25% and  $I_T$  8.18%, which are categorized as still at a reasonable level.*

**Keywords:** *Monitoring, ZMPT 101B, SCT013, 3-phase electricity*