ABSTRAK

Sistem kelistrikan pada bangunan gedung perkantoran, universitas bahkan industri pada umumnya dipakai sistem 3 fasa. Pendistribusian sistem 3 fasa pada panel listrik di upayakan seimbang tiap fasanya. Tapi pada kenyataannya banyak terdapat, pembagian arus listrik tidak seimbang, mengakibatkan terjadi arus beban tidak seimbang masing-masing fasa dan menimbulkan arus pada fasa netral. Beban arus listrik tidak seimbang, mengakibatkan tidak efisiensinya pemanfaatan arus listrik secara optimal. Dalam penelitian ini, dikaji tentang perancangan sistem pembagian beban listrik 3 fasa menggunakan Arduino Mega 2560 dan Sensor Arus ACS712 30A, dimana sistem yang dirancang dan dibangun akan bekerja secara otomatis dalam pembagian beban listrik 3 fasa tersebut, sehingga mengantisipasi agar MCB (Mini Circuit Breaker) induk PLN tidak mengalami trip pada MCB akibat kelebihan beban arus listrik yang melewati MCB induk PLN tersebut. Hasil pengukuran besar nilai beban arus listrik yang melewati MCB 3 fasa akan tampak dan tampil pada LCD (Liquid Crystal Display) berukuran 4 x 20.

Kata kunci *: Arus Listrik 3 Fasa, Arduino Mega 2560, Sensor Arus ACS712 30A, MCB (Mini Circuit Breaker).*

ABSTRACT

Electrical systems in office buildings, universities and even industries are generally used in a 3 phase system. The distribution of 3 phase systems on electrical panels is attempted to be balanced every phase. But in reality there are many, the distribution of electric current is not balanced, resulting in unbalanced load currents of each phase and generating currents at the neutral phase. Electric current load is not balanced, resulting in inefficient efficiency of the utilization of electric current. In this study, the study of the analysis of the distribution of 3-phase electric current using Arduino Mega 2560 and ACS712 30A Current Sensor, where the system designed and built will work automatically in the distribution of 3-phase electric current, thus anticipating the MCB (Mini Circuit Breaker) the mains of the National Electric Company did not experience a trip on the MCB due to the overload of electricity that passed the main MCB of the PLN The measurement results of the load value of the electric current passing through the 3 phase MCB will appear and appear on a 4 x 20 LCD (Liquid Crystal Display).

Keywords: *3 Phase Electric Current, Arduino Mega 2560, ACS712 30A Current Sensor, MCB (Mini Circuit Breaker).*

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