

## ***ABSTRACT***

The electricity in this era is important need in Indonesia. The consumption of electricity that excess the maximum apparent power capacity will make trip sudden and caused damage for some electronic devices. So, the monitoring system for power consumption is needed based on priority load and power allocation.

The method that writer used for optimize or maximize the apparent power that already exists is the allocation power and the priority loads. In the power allocation system and priority load using Arduino Mega 2560 as a microcontroller and relays. Priority load occurs when each room uses the same amount of power and the relay cut off the current on the device based on the priority scale. The power allocation system occurs when one of the rooms does not use a large amount of power and the relay connects the MCB between rooms and can distribute power to the room whose needed.

Based on test results, the system could be allocated power and turn off unnecessary loads, thus indicated successful based on the purpose of this study. The allocation power and priority loads succeed on optimize the apparent power that has been given, reduce the over power that caused trip and reduce the damage on electronic devices from over power.

**Keywords :** *Power Consumption*, Priority Loads, Power Allocation.