

ABSTRACT

Automatic control system is a control system that is needed nowadays, because people are more likely to choose things that are fast, powerful and automatic. But there are still many electronic devices around people that have not had the control system. One of household electronic devices that did not have an automatic control system is the fan. Although there have been a smart air conditioning, but basically the fan is still needed by people. Because the fan is an the economic version of the AC and low power consumption.

Automatic control methods can be implemented in household electronic equipment such as fan. At the end of this task has been made "Smart Adaptive Bladeless Fan to Temperature Through Gate Opening Silicon Controlled Rectifier". The fan is different to conventional fan in general. This fan do not have blades fan actuator on the outside, so it is very safe and wind produced is softer. In this design, the fan is equipped with 2 types of temperature sensors, the room temperature sensor and human detection sensor (PIR); using SCR for fan motor speed control, and fuzzy logic control methods.

Based on the results of this final task design, designed a fan with no blades that can work automatically because it can turn on when detecting the presence of human, spinning according readable temperature range, and lead to the a position a human appropriately. Have a good power efficiency of the power consumption that is under 50 watts. Moreover, this fan has a more futuristic mechanical shape. So, it can be used as an replacement for the economic version of the air conditioning that can work automatically, saving power and futuristic.

Keywords: *Bladeless fan*, SCR, *Human Detector Sensor* (PIR), temperature sensor