

ABSTRACT

With the development of such a rapid age, human needs to electrical devices are increasing particularly in smartphone use. A smartphone requires batteries as an electrical energy source in order to work. Each battery has each other's endurance affected by various factors, one of which is when we do battery charging. When the battery charging process, the State of Charge (SoC) will increase by 100 which if left in a long time will cause the battery to be overwhelmed.

This final task aims to create a charging and power breaking system on smartphones. The system will be designed using microcontrollers, current sensor modules, relays, and smartphones that have an Android operating system.

As for the result of this final task is that the INA219 sensor has an accuracy value of 98.74% with an average error value of 0.64% in performing a flow value measurement on the android smartphone batterra filling process. Then the current set point value in the voltage break in the android smartphone battery charging process amounted to a small amount of 83 mA and a large of 7 mA

Keyword: *Smartphone Android, State of Charge, Android.*