Embedded Based Battery Management System for Electric Vehicles

Mr. Sandip Turkane, Aniket Kute, Nikita Narhare, Chetan Musmade

Department of Electronics and Telecommunication Department

Pravara Rural Engineering College, Loni, Ahilyanagar

Savitribai Phule Pune University

Abstract: *To make a pollution free environment the modern civilization is trying to utilize the electricity from the renewable resources for driving the automobiles rather than non-renewable resources such as petrol or diesel. While utilizing the electricity, it storage plays a major role. The charging and the discharging parameters of the electric vehicles battery must be studied in detail and must be kept in a certain limit in order to attain a good efficiency. So the parameters such as the voltage, State of Charge(SOC) of the battery are obtained and monitored. Further the battery performance can have major role played by temperature; the temperature around the battery must be in a certain range in order to get a better battery performance.Hence this parameter is also monitored. Overcharging of the battery faces damage and the emission of thehydrogen gas, this is detected by using a gas sensor. These parameters are sent to the IOT platform such as Thingspeak using the ESP8266 module in order monitor the parameters of the EV battery remotely. Based on the data from the electric battery its strength is determined.*

Keywords: Non-renewable resources, State of Charge, IOT, temperature, hydrogen gas, ESP8266, electric vehicles