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Abstract
This thesis is researched the controls system by the electricity of solar energy car; It mainly is the result which is worth to the solar energy MPPT module, motor on the solar energy car and various parameters of battery to make the solar energy car reach an appearance manifestation. On the usage of system core, this research will be produced with a single Micro chip PIC 18F4620 to achieve retrieve the parameters. Distinguish the parameter wanted to retrieve among them for: Motor electric current, motor speed, MPPT module electric current, battery electric voltage, battery electric current, battery temperature .After finishing retrieving six parameter values, again make use of a graphic LCD display to present a data. The pilot of solar energy car can understand a solar energy car well in the usage of current conditions. Therefore, the origin studies medium, at the appearance used by pilot, is designed by retrieve various parameter of what MPPT module, motor and the value acquired by battery. Can let thus pilot clear car current function, then achieve effectively control. In addition, for the sake of various function of further well exertive car, the SD Card equiped on the solar energy car, can help the road that we go by all of the solar energy cars gaining various parameter a value, be used as a saved it use. By this design, not only can be used as a regulatory basis in the days to come for the parameter enactment of solar energy car ,but also make its function more perfect. The purpose could even know the part of breakdown from it, then abbreviated manpower, time depletion to attaining by maintain quickly. The way that this thesis designs is SD Card to is provided by the system which saved at that time of memory space, and it can make to analysis data by computer of the signal data that the SD Card saved, the PIC 18F4620 and the SD Card are used SPI mode of the series transmission to communicate. So hereafter be a solar energy car drive, the solar energy car electricity controls system can simultaneously carry on a solar energy car of system supervision, part again give the signal information saved record in the SD Card, hereafter can carry on analysis through the SD Card, after can make the function of solar energy car to more and more promote.
Key words: MPPT, solar, signal chip, graphic LCD
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