

Performance Test of PLTS Cart Energy with Low Voltage Disconnect System XH-M609 and Multimeter Display PZEM 021-031-051. Mokhammad Nuruddin, S.T, M.Si as chief counselor.

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ABSTRACT

Renewable energy is a thing that will continue to innovate as it develops Era. Solar energy is one of the most important potentials of the renewable energy sources in this country, because Indonesia is an area that is passed by the equator irradiated by the sun every year. Seeing the potential of the manufacture of independent electrical energy based on solar energy, it is possible to make research on energy sources in the community on a small scale. The aim of this research is to create a PV mini-grid system for street vendors to create independent energy by utilizing the sunlight. This PLTS uses Solar Panels with a capacity of 400 Wp equipped with an energy storage media (battery) with a capacity of 200Ah. In this research, the control system is designed to facilitate the street vendors to monitor the PLTS energy cart. The control system used is PZEM 021-031-051 and Low Voltage Disconnect XH-M609. Technical planning is expected to fulfill the electricity needs of street vendors. The result of the study showed that the capacity of PLTS is able to produce energy of 1436 Wh and fulfill the load power requirements to be used by street vendors.

Key words : *PLTS, Solar Panels, PZEM 021-031-051, Low Voltage Disconnect XH-M609.*