



FTMRS SOLAR

Water pump automatic control solar container outdoor power





Overview

This paper proposes a solar-powered portable water pump (SPWP) for IoT-enabled smart irrigation system (IoT-SIS). A NodeMCU microcontroller with a Wi-Fi interface and soil moisture, temperature, and h.

Can a solar-powered portable water pump control IoT-enabled smart irrigation system?

An IoT smart irrigation system (IoT-SIS) is developed to monitor the surroundings and control the pump over the Internet. The IoT-SIS-SPWP system is implemented in a real environment for practical analysis and functionality testing. This paper proposes a solar-powered portable water pump (SPWP) for IoT-enabled smart irrigation system (IoT-SIS).

What is a solar powered water pump?

A solar powered water pump is an eco-friendly, off-grid solution that uses solar energy to move water from wells, rivers, ponds, or tanks—without needing electricity or fuel. Perfect for farms, homes, and remote areas, these pumps are powered by photovoltaic panels and come in both surface and submersible options.

How a portable solar water pump works?

The portable solar water pump was placed in the direction that sunlight incident directly on the solar panel. The solar water pump was connected and controlled by the application on the mobile phone. 3.6. System operational procedure.

How to control a solar-powered water pump over the Internet?

The selected electrical/electronic components need to be connected to form the control circuit installed in the controller box of the developed IoT-SIS-SPWP. This control circuit will be used to monitor and control the fabricated solar-powered water pump over the Internet.



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