

Design of automatic controlling system for tap-water using floatless level sensor

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Abstract:

Water is an essential resource in the world and currently household drinking water is an important asset to save the life due to shortage of water in the earth. This paper describes the design and development process of an automatic control system for tap water using floatless water level sensor which can save wastage of water without the presence of any operator physically. This sensing system utilizes a combination of a solenoid valve, electromagnetic relay (a type of electrical switch), floatless level controller (61F) and electrodes (used to sense the watery level electrically). The developed system can automatically control the water tap accordingly when level sensor can sense the lower level of water tank. Also, the system has ability to activate the relay which starts solenoid valve. The entire process can continue until sense the upper level of water. After that the system deactivates the relay as well as the solenoid which can stop the water flow through tap, when the upper level is sensed. In summary, the developed system is able to control the water tap to protect the wastage of valuable water by this mechanism. This system is low-cost compare to other commercial systems, was tested to assess the success rate of the development. The result shows an autonomous plus robust monitoring system with satisfactory result which is relatively simple to install.

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