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Thermoelectric Irrigation Module

Salman Mohagheghi and Jamison Olsten

Summary: A control module that activate sprinkler bases on ambient temperature and soil temperature and humidity.

Description: This invention is of a module that can be mounted on or added to sprinkler heads or other irrigation outlets in order to open or close the valve remotely and based on the ambient temperature, soil temperature and soil humidity. It is triggered based on the humidity of the soil without a need for additional humidity sensors. Deployment of this module can help save unnecessary water usage, and allows for implementing a customized, intelligent and decentralized water irrigation system. Using the proposed modules makes it possible for individual sprinkler heads or other irrigation outlets to be turned on and off based on localized ambient temperature as well as soil temperature and humidity without a need for installing additional sensors. The module can be tuned prior to installation so that it triggers based on user preferences for individual watering zones.

Main Advantages of this Invention

- As opposed to similar products in the market, the unit is self-powered and does not need electricity, or on-board battery units, or solar panels.
- The module does not require maintenance, and can be installed with minimum effort.
- Reduces water use. Allows for implementing a customized, intelligent and decentralized water irrigation system.

Potential Areas of Application

- Residential and commercial irrigation
- Agricultural irrigation
- Green houses

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Intellectual Property Status: US provisional patent filed.

Opportunity: We are seeking an exclusive or non-exclusive licensee for implementation of this technology.

For more information contact:
William Vaughan, Director of Technology Transfer
Colorado School of Mines, 1500 Illinois Street, Guggenheim Hall Suite 314, Golden, CO 80401
Phone: 303-384-2555; e-mail: wvaughan@mines.edu