

#### Automate your Irrigation Controller to Water ONLY When Necessary

#### WATERMARK Electronic Module

The WATERMARK Electronic Module (WEM) can manage an entire controller, a single valve or a group of valves by interrupting the valve common ground wire. This makes it very versatile and provides more flexibility in design and installation. Remote valve locations or problem areas that are difficult to manage can be controlled with the module mounted in the valve box. Multiple valves with similar watering needs can be grouped together and managed as a "hydrozone." Eleven moisture levels allow the user to irrigate based on varying plant moisture requirements and soil types. Two soil moisture sensors, included with the WEM module, are placed at different depths in the root zone adapting to any plant root depth. Installation is simple for retrofit or new construction. Additional versions of the WEM are available for specialized applications. The WATERMARK Electronic Module is the "SMART" way to optimize irrigation and maximize conservation for more complex residential and light commercial landscapes.



## If you're going to imigate the plant — let the plant make the decision!

- · Saves Money, Water & Energy
- Easy to install
- Reduces runoff
- Grows healthier plants
- Reduces fertilizer use
- Protects groundwater
- Curtails pest and disease problems



Sensors in the WEM-B Root Zone. **Battery Versi** 

WATERMARK

**For Use with Battery** owered Valve/Controllers with Sensor Connection

What is a SMART Irrigation **Controller?** 

An irrigation controller is the device that schedules the start and run times of a watering system. With so many variables, such as soil and plant types, sun and wind exposure and sprinkler efficiency, programming conventional controllers can be challenging. Inefficient scheduling leads to many problems including poor plant health and water waste. Irrigation efficiency can be improved through the use of a "SMART" timer or controller. By definition, SMART controllers either estimate or measure depletion of



#### WATERMARK

Soil Moisture Manager



### Multiple Hydrozone System

The most advanced of our Landscape Automation Products is the Multiple Hydrozone System. While the WaterSwitch and the WEM are designed to manage a single valve or a single hydrozone, the Multiple Hydrozone System is designed to manage many different plant types generally in a larger application. Both the MHS (wired) and the W-MHS (wireless) work with your existing AC irrigation controller to eliminate programmed irrigations when plants have adequate soil moisture. The system makes decisions to open or close the valve common wire or signals the controller, based on the plant's demand, controlling up to 48 stations. It is digitally programmable and can report and download data for maximum irrigation management and analysis.

The basic MHS requires a base unit and a pair of WATERMARK Sensors for each hydrozone. The W-MHS requires the base unit and a Transmitter for every two hydrozones. Two pair of WATERMARK Sensors are included with each Transmitter. Either MHS can accommodate up to 16 valves initially and is expandable to 48 with the addition of optional Expansion Boards.

#### Makes Your Controller "SMART"

- Shows last allowed watering
- Reports watering history
- Data can be downloaded for analysis
- Displays percentage water saved

soil moisture. Controllers that estimate moisture depletion are called "ET" clocks (ET is short for evapotranspiration). SMART controllers, that actually measure moisture depletion, use soil moisture sensors in the root zone and manage irrigation based on plant demand. As the plant's root system consumes soil water, moisture is depleted from the soil (and the sensor). The sensor signals a control

module (such as a WEM, WaterSwitch or MHS) connected to the controller so watering is allowed when soil moisture is insufficient or stopped when soil moisture is adequate.

WATERMARK products use this soil moisture measurement technology and can easily be added to conventional controllers to make them "SMART."

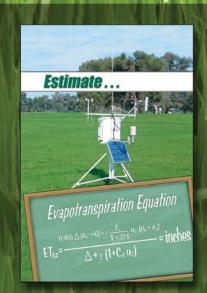


WATERMARK Soil Moisture Sensor and Switch

Our basic Landscape Automation product is designed to help an existing controller get "SMART." It connects to the sensor terminal of a controller and suspends irrigation when the soil is moist enough for good plant health. Four set points allow for variations in plant and soil type. One moisture sensor is placed in a representative area of the landscape that requires the most amount of water or irrigation. Watering needs for other irrigated areas can be made at the controller by scheduling adjustments.

The WS1 comes with one sensor, is simple to install and adjust and requires no seasonal modifications. Being simple on the outside but SMART on the inside makes the WaterSwitch perfect for most basic residential applications!

Since saving water while improving plant health is the goal, irrigating to plant demand just makes sense!









# WATERMARK Manual and Automatic Data Collection



Soil Moisture data is an excellent indicator of irrigation efficiency.
This data can easily be collected at representative root zone depths by the WATERMARK Monitor. Remote access to the collected data is possible with radio or cellular telemetry.





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