

# WATERMARK ELECTRONIC MODULE — WEM-DC-T

with Dry Contact Switch and Internal Timer

## IRROMETER®



The WEM-DC-T works in conjunction with irrigation controllers to improve scheduling efficiency based on plant demand. The system will signal the controller to prevent irrigation cycles when the soil moisture is wetter than the adjustable set point. The kit includes two soil moisture sensors. This allows for multiple placement locations, thereby averaging the soil moisture status over a larger area or over deeper root depths. Eleven moisture set points allow for a wide range of variations in plant and soil type.

The WEM-DC-T differs from the standard WEM by providing a dry contact switch closure, is constantly powered and reads sensors on a fixed interval.

### Features:

- Makes existing controllers “SMART”
- Signals the irrigation controller to suspend irrigation cycles based on soil moisture status when irrigation is not necessary
- Easy to install and use
- 11 position switch for variations in plant demand and soil type
- Requires no seasonal adjustments

### WATERMARK Electronic Module — WEM-DC-T

#### Specifications –

COMPATIBILITY: The WEM-DC-T is compatible with 24 VAC irrigation controllers that have a sensor circuit. The module can be used in combination with other climatic sensors (rain, freeze, etc.).

POWER REQUIREMENTS: Input voltage – 24 VAC continuous  
50mA maximum

25mA for 1 second on initial power-up  
15mA in idle while powered if switch closed (indicating irrigation)  
5mA in idle while powered if switch open (indicating no irrigation)

WIRE LEADS: 20 AWG x 12 in. (30 cm)  
6 leads — 2–sensor, 2–power, 2–switch

SWITCH: Output contacts rated AC/DC 100mA 50v maximum and are closed when dry

MATERIALS: ABS plastic case with encapsulated electronics for outdoor operation

#### DIMENSIONS –

HEIGHT: 3 in. (76 mm) – 3.875 in. (98 mm) including mounting tabs  
WIDTH: 2 in. (51 mm)  
DEPTH: 1.50 in. (38 mm) including knob  
WEIGHT: .71 lb. (320 g) — total kit weight includes two #200SS-5 sensors

SETTINGS: OFF and 1 (wet) through 11 (dry)

### 200SS-5 Sensor

#### Specifications –

MATERIALS: ABS plastic caps with stainless steel body over a hydrophilic fabric covered granular matrix with embedded stainless steel electrodes.

#### DIMENSIONS –

DIAMETER: .875 in. (22 mm)  
LENGTH: 3.00 in. (76 mm)  
WIRE LEADS: 20 AWG x 5 ft. (1.5 m) — 2 leads

WARRANTY: One year

ORDERING INFORMATION: Catalog #WEM-DC-T — WATERMARK Electronic Module with Dry Contact Switch and Internal Timer includes — One WEM-DC-T module, two 200SS-5 sensors and instructions, in a clear plastic display package.

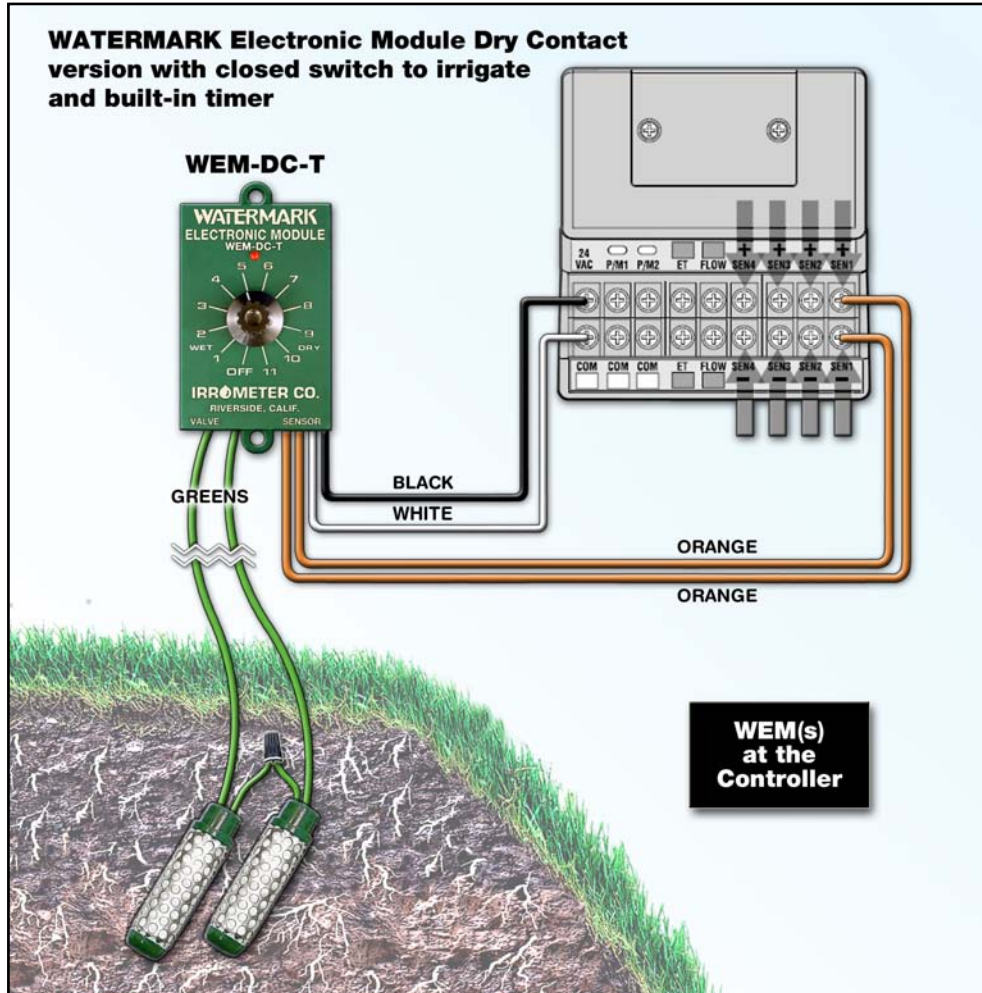
### WATERMARK Electronic Module — WEM-DC-T

OPERATING PRINCIPLE: The WATERMARK Electronic Module with Dry Contact Switch and Internal Timer works in conjunction with a residential or commercial type irrigation controller with a sensor circuit to suspend irrigation when soil moisture status is appropriate for good plant health. The WEM-DC-T requires power from the irrigation controller's 24 VAC transformer connections. The included WATERMARK soil moisture sensors are placed in the root zone of the plant material being irrigated and wired to the WEM-DC-T. The WEM-DC-T reads the attached sensors every 5 minutes and switches accordingly, signaling the irrigation controller when irrigation is not necessary. If the soil is wetter than the set point, the controller will prevent the irrigation cycle.

SPECIFICATION INFORMATION: The irrigation system shall incorporate a soil moisture management device designed to integrate with the irrigation controller to suspend irrigation cycles based on soil moisture status. The soil moisture management device shall be comprised of two Granular Matrix Sensors (GMS) and an adjustable electronic control module. The module shall interpret sensor readings and signal the irrigation controller to prevent irrigation when soil is wetter than desired threshold. The module shall have an eleven position switch to accommodate plant type and soil variations. The device shall be the WATERMARK Electronic Module with Dry Contact Switch and Internal Timer (WEM-DC-T) as manufactured by the IRROMETER Company, Inc. of Riverside, California.

# WEM-DC-T — WATERMARK ELECTRONIC MODULE

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## WATERMARK Electronic Module — WEM-DC-T

This modified WATERMARK Electronic Controller differs from the standard version and is for use with constantly powered applications, i.e. where no power interruption is designed into the system operation. The diagram here illustrates how it would connect to the Hunter ACC controller system in such a fashion. Other controllers or equipment control panels would connect similarly.

- 24 VAC power to the black and white wires.
- Dry contact switch connection to the orange wires, which are closed when the moisture sensors report equal to, or dryer than, the setting on the dial. Switch will be open when wetter than the setting.

This module has an internal timer that re-reads the attached sensors every five minutes and changes the switch position accordingly, if necessary.

Please refer to the instruction booklet included for information on proper sensor installation and placement.

**IRROMETER®**

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