Automation for your Irrigation System
Controller/Valve to Water ONLY when Necessary

The Adjustable Moisture Level SWITCH is mounted on a tee fitting between the IRROMETER Gauge and the instrument body. It may be preset at the factory or field adjusted to the optimum soil moisture reading. Its function can be compared to that of a thermostat, automatically placing the controller (or solenoid valve) into operation when irrigation is desirable, or keeping it out of operation when there is no need for irrigation.

**Automation with a Controller**

IRROMETER CONTROL STATIONS are installed in representative location(s) to monitor and control the irrigation for the surrounding area. The site(s) must be carefully chosen so as to be representative of the soil types, topography, and sun exposure of the area being controlled. Where acreage is large, soil variations prevalent and topography is a factor, the use of additional manual IRROMETER STATIONS is advisable to monitor these additional variables and to compare readings to the wired IRROMETER CONTROL STATION(S) (Figure 1).

Where more than one valve is used, it is advisable to control each valve separately since each valve irrigates an independent irrigation ‘block.’ IRROMETER CONTROL STATIONS are located in representative sites within each ‘block’ and instruments are wired (in parallel if more than one is being used) to override the individual valve for that ‘block’ (Figure 2). Parallel wiring of instruments assures that each depth of instrument can call independently for water, thus providing water to the exact depth required. Normally 2-3 depths of instruments are installed at each IRROMETER CONTROL STATION with any drip, trickle or other low volume system.

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**IRROMETER**

Optimizing Irrigation . . . Maximizing Conservation . . . Since 1951

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(1/19) #716 LITHO U.S.A.
Controlling All Valves

When a controller is used it should be programmed to water daily and as frequently as possible. For most drip installations two hours on and one hour off, for 24 hours a day is favored. This allows complete water penetration before recycling. Remember, the system will only operate when the IRROMETER CONTROL STATIONS ‘tell’ it to. Any Control IRROMETER can activate and turn on the irrigation system — all Control IRROMETERs must be wet for the system to turn off.

When a controller is used, and all valves are to be controlled, the Automatic Vacuum Switch wires are connected to the controller sensor terminals allowing the controller to stop irrigation. (Figure 3)

The IRROMETER control station must be installed in the area irrigated by the last valve to run in sequence.

If no controller is used, the IRROMETER CONTROL STATION wires are connected to the 24-volt AC power source and solenoid valve (Figure 4).

Note: IRROMETER control stations must be manually overridden to ‘irrigate-in’ fertilizer, or when other manual operations are desired. The Switch wires must be removed and wired to bypass the switch.

Note: The switch is ‘closed’ when the soil water tension is at or drier than the switch set point. The switch ‘closes’ when the tension reaches the switch set point.

Adjustment Instructions for Irrometer AVS-A Switches

Adjusting the Set Point: The Switch is factory preset at 30 cb/kPa if no setting was specified at time of order.

- You will need a 5/64” allen wrench (hex key).
- Remove black rubber plug in the center at the top of the switch housing.
- Insert allen wrench into hole for the adjustment screw.
- For adjustment, turn the screw counter-clockwise to increase the set point (drier setting) or clockwise to decrease (wetter) until desired set point is reached. The range is three total revolutions of the screw. Do not turn more than three total turns from the dry end of the range to the wet end of the range.
- Using the Service Unit pump on the Irrometer, draw the vacuum up slowly until you reach the tension you want to switch at. Then turn the allen wrench until you see the switch close. With the Irrometer de- aired and installed in wet soil or in a bucket of water, the applied vacuum should hold long enough to make the necessary adjustments.
- To determine when the switch is activating, you can connect it temporarily to a voltmeter set to detect continuity or wire it to a solenoid and apply 24VAC to the circuit and observe when the solenoid engages (or the valve opens).
- The switch will open back up within 3 cb/kPa below the set point.

WARRANTY: The IRROMETER COMPANY warrants its products against defective workmanship or materials under normal use for one year from date of purchase. Defective parts will be replaced at no charge for either labor or parts if returned to the manufacturer during the warranty period. The seller’s or manufacturer’s only obligation shall be to replace the defective part and neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or inability to use the product. This warranty does not protect against abuse, shipping damage, neglect, tampering or vandalism, freezing or other damage whether intentionally or inadvertently caused by the user.