



DATALOGGERS

Irrigation Control - Using Tensiometers and the DataHog Logger

The DataHog2 logger can record measurements from up to 8 tensiometers (field size or mini size) but it can only control irrigation from up to 4 sensors.

The relay output option of the DataHog gives an on / off switch output according to a user set threshold of soil moisture. The actual value of this threshold depends on the plant or crop, soil type and conditions and the preferred watering regime.

The switch output can be for an individual tensiometer only. The DataHog is not able to switch the relay output on the average reading of several tensiometers.

As tensiometers respond quite slowly to changes in soil moisture (ideal for natural soil moisture changes) then they are best used to trigger the start of irrigation only. If irrigation is set to stop when the tensiometer reads saturated soil, the system will probably have been over watered due to the slow response of the tensiometer.

So a typical system will start irrigation when triggered by the tensiometer reading, but then continue for a set time only. There should be a delay in the system, e.g. one or two hours, to prevent the DataHog and tensiometer from triggering another irrigation event before the tensiometer has had time to equilibrate with the new wetter soil moisture.

The DataHog relay output switches cannot be connected directly to mains solenoid irrigation controls. A "slave relay" interface system must be added to switch these valves. This interface can incorporate the irrigation timing and "delay before next event" as described above. Skye is unable to offer such an interface as each irrigation system has individual requirements and a general purpose instrument would not be suitable for every application. This interface is quite a simple device for most electricians and so should not be difficult to install on site.



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