

MOISTURE SENSOR



INSTALLATION



making water work

since 1986

MOISTURE SENSOR

FIELD INSTALLATION

PLACEMENT DECISION

Calsense makes the placement decision of the moisture sensor. A note to the contractor to contact Calsense in determining sensor placement should be listed on the plans or in the specification. It is required that the contractor complete the necessary requirements before Calsense flags the moisture sensor locations. The requirements are as follows:

- Irrigation controller installed and operational.
- RCV field wires connected to the irrigation controller in sequence according to plan.
- All lateral systems complete, with heads on, and RCV's wired.
- Plant material in shrub areas planted.

The contractor should contact Calsense a week in advance when scheduling an appointment for sensor flagging.

Calsense Field Service Technicians provide on-site evaluations of the project area. The Field Service Technicians determines groups of similar areas and flags where a moisture sensor should be installed. The amount of wire necessary to connect the moisture sensor is determined by the distance between the valve and the area it irrigates. Instructions on how to install a moisture sensor is also given. There is no additional cost for this service. By physically viewing coverage, types of heads, soil types, exposures, and varying plant materials, proper sensor placement is assured.

PLACEMENT GUIDELINES

The following guidelines are followed by Calsense Field Representatives in placing sensors:

- A location representative of the areas being controlled.
- Placed in the root zone of healthy plants.
- Irrigated evenly from two sprinkler heads on the same valve.
- Not quickly flooded during irrigation
- Not subject to damage or disturbances during area maintenance.

- When controlling slopes it is located two-thirds up from toe of slope.

INSTALLATION GUIDELINES

Installation of moisture sensors shall be the responsibility of the contractor. Proper sensor installation is extremely important. Moisture sensors must be installed correctly to achieve accurate moisture readings. All sensor locations should be marked on plans, as well as in the field. Correct sensor placement and installation should be verified before the project is signed-off. The project inspector should call Calsense before the project is signed-off. Calsense recommends the following 'Note to Contractor' a designer might place on plans:

Correct sensor placement and installation are very important. Calsense determines sensor placement and instructs on how to install a moisture sensor, sensors are then installed by the contractor. Sensor placement and installation will be verified before the project is signed-off.

The contractor shall provide all moisture sensors required.

The Calsense Moisture Sensor is wired in parallel with station solenoids so the moisture data is transmitted over the same wires that are used to operate the station solenoids. There are no additional wires run from the valve to the irrigation controller.

The choice of groups of stations controlled by the same sensor is done solely within the controller program so there is no additional wire run between valves to form station groups. The ability to move valves assigned to the moisture sensor within the software of the controller is easy to understand and provides the most flexible system possible.

MOISTURE SENSOR WIRE

The Calsense Model 1000-S Moisture Sensor uses #14 AWG direct burial wire to connect to remote control valves.

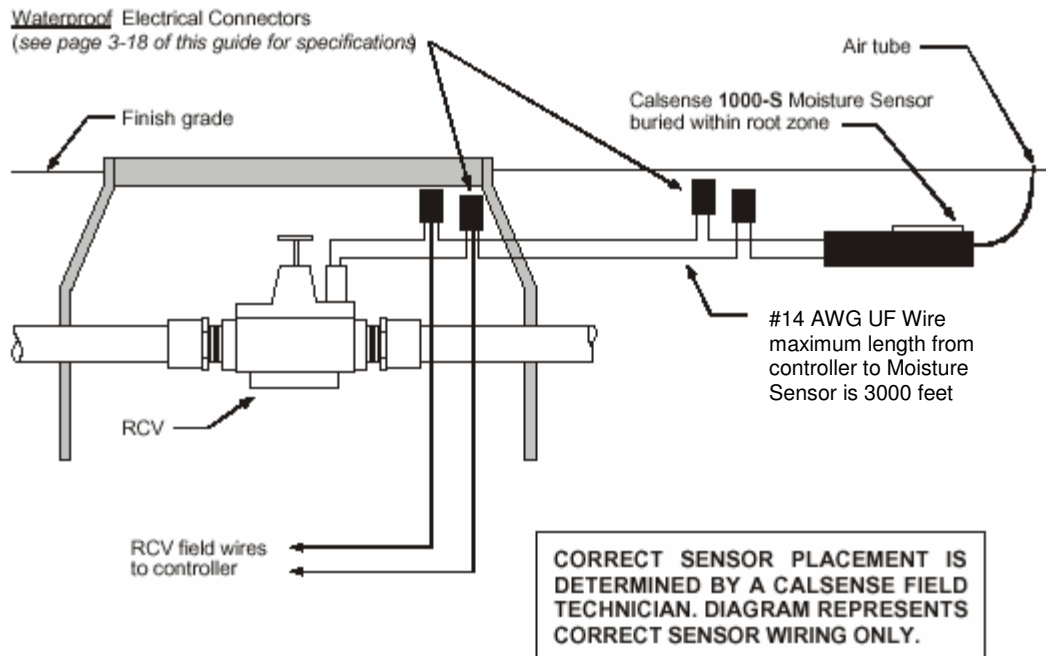
- The maximum wire run between moisture sensor and irrigation controller is 3000 feet.

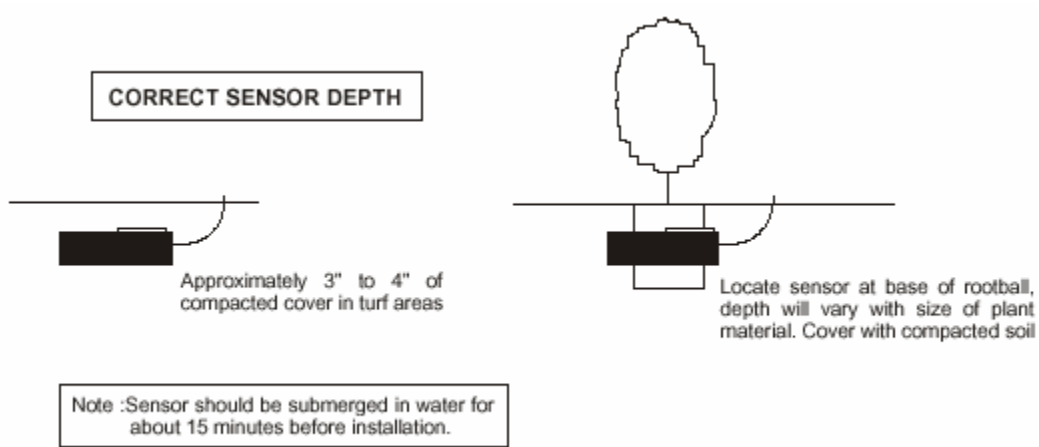
- Because the Moisture sensor sends electronic pulses back to the controller, all electrical connections must be waterproof and resist moisture entry.
- It is intended that all wire runs between RCV's and moisture sensors be direct pulls and have no splices, except at the sensor location.
- Calsense recommends using Spears DS-100 connectors with Spears DS-300 sealant or #M Scotchlok No. 3570 connector sealing pack.

MOISTURE SENSORS WRITTEN SPECIFICATIONS

- 1). Be of the solid-state tensiometer type.
- 2). Include data transmission circuitry which sends moisture level readings back to the irrigation controller using valve field wires.
- 3). Entire unit encased in epoxy.
- 4). Require no calibration for the life of the sensor.
- 5). Unaffected by temperature, salinity or changes in pH.
- 6). Accurately transmit moisture levels up to 3000 ft. using 14 AWG wire.

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