

PROBE SM100

WATERSCOUT

Spectrum[®]
Technologies, Inc.



Precise measurement of soil water content.

Capacitive sensor

Any type of soil

Analog output voltage

Robust and reliable

DESCRIPTION

The maintenance of a good water balance in the soil is essential for plants production. Underwatered plants suffer from nutrient deficiencies and wilting. Conversely overwatered plants are more susceptible to disease pressure and less tolerant of dry conditions later in their life cycle. Extreme overwatering will suffocate the plant and cause the roots to die.

Placing at multiple depths, the SM100 is the key to helping determine when and how much to water.

CHARACTERISTICS

PRECISION	SOIL VOLUMETRIC WATER CONTENT (VWC) 3% (VWC) @ EC < 8ms/cm Reading range from 0% up to saturation.
RESOLUTION	Water content : 0,1%
OUTPUT SIGNAL	Water content : 0,5 to 1,5V for an excitation at 3V.
POWER SUPPLY	3 to 5V DC @ 6 to 10mA
CABLE LENGHT	1,8m or 6m depending on model (extendable up to 15m)
DIMENSIONS	Detection area : 6 cm x 2 cm
TEMPERATURE	From 0.5 to 80°C
WIRING COLOR	RED : Output voltage humidity WHITE : V + Excitation (from 3 to 5V regulated) BLACK : GND (Ground)

INSTALLATION

The sensors should be located in the effective root zone and in places that will give a representative picture of the soil water condition of the field.

Typically, one or two sensors should be installed in the root zone. If installing only one sensor, it should be placed in the middle of the root zone.

When two sensors are installed at the same site, it's recommended to place one sensor at the top of the root zone and a second at the bottom. An advantage of installing multiple sensors is that it allows you to see how much irrigation and rainwater is moving through the soil profile.

The SM100 is sensitive to the ground adjacent to the sensor. Therefore, good contact between the ground and the sensor is important. Stones and air pockets next to the sensor will affect the accuracy of the readings. Because it's sensitive to differences in dielectric permittivity, the sensor shouldn't be installed in or near metal.

The SM100 can be buried and installed either vertically (refer to the manufacturer's instructions).