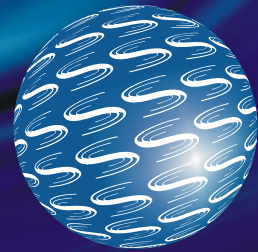


Sensors

'proven quality, enduring value'



The Technology

Sentek sensors utilize capacitance based technology to provide near continuous measurements within the soil profile.

By creating a high frequency electrical field around the sensor, extending through an access tube into the surrounding soil, the sensors detect the changes in dielectric constant, or permittivity, of the soil over time. At high frequency the measurement is affected predominantly by water molecules. The greater the amount of water, the smaller the frequency measured between the two brass rings of the sensor.

Soil Moisture Sensor

The soil moisture sensor gives an output in volumetric water content (mm of water per 100mm of soil measured). This is converted from a scaled frequency reading using a default calibration equation, which is based on data obtained from numerous scientific studies in a range of soil textures. User defined, or site specific calibration equations can be applied to each individual sensor to provide a very high level of accuracy.

Sentek's soil moisture sensor is suitable for use in all soil types under all conditions of soil water content, from saturated to oven dry.



TriSCAN™ Sensor

The TriSCAN sensor provides measurements of both soil water and salinity. By employing a patented measurement technique the TriSCAN sensor is able to distinguish between soil water content and salt content.

This information is then processed using a Sentek derived model to calculate soil volumetric ion content (VIC) separately from the Volumetric Water Content. The TriSCAN sensor is designed for fertilizer and salinity management in research, agriculture and environmental applications. The TriSCAN sensor is optimised for one of agriculture's most common soil textures of sands and sandy loams, and is currently not suitable for clays.



Specifications

Sensor Type	Calibrated Accuracy	Precision	Reading Range	Radial Sphere influence	Axial Sphere of influence	Sensor Diameter
Soil Moisture	$R^2 \geq 0.992$	$\pm 0.003\%$ vol	Oven dry to saturation	99% of reading within first 10 cm of outside wall of access tube	100% of reading contained within 10cm	EnviroSCAN: 50.5mm EasyAG: 26.5 mm
TriSCAN	$R^2 \geq 0.992$ (moisture) $\pm 8.06\%$ EC at 4-20% moisture range and 0-4.9 mS/cm	$\pm 0.003\%$ vol	Oven dry to saturation (moisture) 0-17 dS/m (salinity)	99% of reading within first 10 cm of outside wall of access tube	100% of reading contained within 10cm	EnviroSCAN: 50.5mm EasyAG: 26.5 mm

Diviner 2000 • EnviroSCAN • EasyAG • TriSCAN • SentekPlus • SentekRT6 • SentekSolo • IrriMAX • Sentek SoluSAMPLER

Your local distributor is:

Sentek sensor

technologies

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