

SPECIFICATIONS

Range:

Volumetric water content:

ϵ_a :1 (air) to 80 (water)

Electrical Conductivity (bulk):

0-23 dS/m (bulk)

Temperature:

-40 to 50 °C

Resolution:

Volumetric water content:

0 to 50% VWC

Electrical Conductivity (bulk):

0.01 dS/m from 0 to 7 dS/m, 0.05

dS/m from 7 to 23 dS/m

Temperature:

0.1 °C

Measurement Time:

10 ms

Power:

3-16 VDC

Output:

Digital 12-bit

Operating Temperature:

-40°C to +50°C

Connector Types:

3.5 mm "stereo" plug or stripped and tinned lead wires

Cable Length:

5 m

Dimensions:

14.5 cm x 3.3 cm x 0.7 cm

Datalogger Compatibility:

Decagon Em50 and Procheck

5TE Sensor

The 5TE is designed to measure the water content, electrical conductivity, and temperature of soil and growing media. Using an oscillator running at 70 MHz, it measures the dielectric permittivity of soil to determine the water content. A thermistor in thermal contact with the probe prongs provides the soil temperature, while the screws on the surface of the sensor form a two-probe electrical array to measure electrical conductivity.

Applications:

Soil salinity monitoring

Features:

The 5TE utilizes a 5 point dielectric calibration to provide dielectric permittivity measurements

Notes:

It is important to avoid air gaps or extremely compact soil around the probe

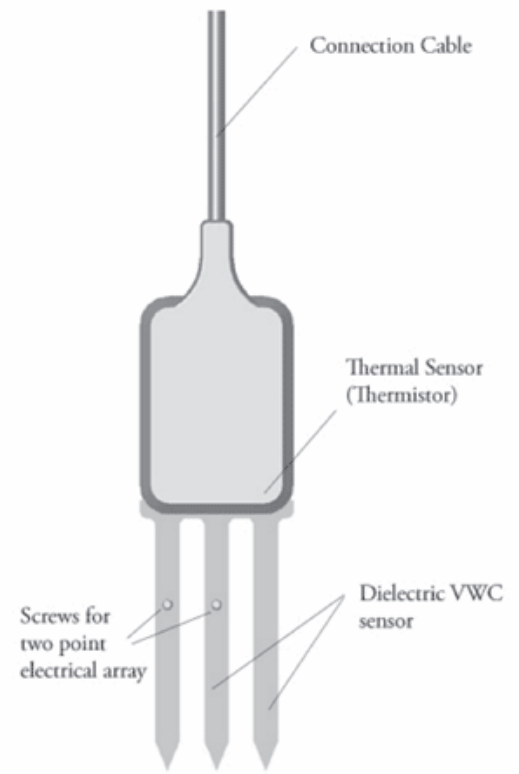


Figure 1: 5TE Components



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