CaTeC
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EC-5 Soil Moisture Sensor

The EC-5 Soil Moisture Sensor meets the needs of those who are looking for an all-around ideal soil moisture sensors. The EC-5 obtains volumetric water content by measuring the dielectric constant of the media through the utilization of capacitance/frequency domain technology. In addition, the EC-5 sensors incorporate a high frequency oscillation, which allows the sensor to accurately measure soil moisture in any soil or soilless media with minimal salinity and textural effects.

The EC-5 continues to be our lowest-cost soil moisture sensor enabling those researchers on a tight budget to monitor soil moisture in multiple locations and depths. In the field, the robust design of the EC-5 allows the sensor to be pushed directly into undisturbed soil. However, the compact design of the EC-5 makes it possible to measure volumetric water content in labs and greenhouses. Factory calibrations are included for mineral soils, potting soils, rockwool, and perlite.

EC-5 Soil Moisture Sensor Applications:

- Watershed characterization
- Vadose zone monitoring
- Plant-soil-water interaction studies

Specifications	
Range: 0-100% VWC	**Power:** 2.5 to 5 V possible, (3 V typical)
Output: Voltage, correlated linearly (soil) or polynomially (growing media) with VWC	**Resolution:** 0.1% VWC (mineral soil) 0.25% VWC (rockwool)
Measurement Time: 10 ms	**Cable Length:** 5 m
Temperature: -40°C to +50°C	**Dimensions:** 8.9 cm x 1.8 cm x 0.7 cm
Connecor Types: 3.5 mm "stereo" plug or stripped and tinned lead wires (3)	
Accuracy: *Mineral Soil:* ±4 % VWC, All mineral soils, up to 8 dS/m ±2 % VWC soil specific calibration, up to 8 dS/m *Rockwool:* ±3% VWC, 0.5 to 8 dS/m *Potting Soil:* ±3% VWC, 3 to 14 dS/m	**Datalogger Compatibility (not exclusive):** *Decagon:* Em50, EM50R, ProCheck, ECH_2O Check *Campbell Scientific:* CR10X, 21X, 23X, CR1000, CR3000, etc. *Other:* Any data acquisition system capable of switched 2 to 5 V excitation and single ended voltage measurement at 12 bit or better resolution.