

## MODEL GEO-MPS2

### Maintenance-Free Water Potential and Temperature Sensor

Unlike tensiometers, which need a skilled operator, the dielectric water potential sensor model **GEO-MPS2** needs no care or feeding. Instead, it can simply be packed into a hole, plugged into a data logger, and left to log water potential data. Its extended range makes this sensor ideal for measuring the water potential in natural systems or other drier systems where cavitation of tensiometers is a concern. The added temperature measurements can be used to determine approximate soil water potential in partially frozen soils.

#### APPLICATIONS

- Deficit irrigation monitoring and control.
- Water potential monitoring in the vadose zone.
- Crop stress.
- Waste water drainage studies.
- Plant water availability.



*The MPS-2 measures a wide range of soil water potentials (-10 to -500 kPa (pF 1.71 to pF 3.71) without user maintenance and factory calibration.*

<b>Accuracy</b>	Soil Water Potential: $\pm 25\%$ of reading from -10 kPa to -100 kPa Soil Temperature: $\pm 1^\circ\text{C}$
<b>Resolution</b>	Soil Water Potential: 0.1 kPa Soil Temperature: 0.1 $^\circ\text{C}$
<b>Range</b>	Soil Water Potential: -10 to -500 kPa (pF 1.71 to pF 3.71) Soil Temperature: -40 $^\circ\text{C}$ to 50 $^\circ\text{C}$
<b>Measurement Speed</b>	150 ms (milliseconds)
<b>Equilibration time</b>	10 min to 1 hr depending on soil water potential
<b>Sensor Type</b>	Frequency domain with calibrated ceramic discs, thermistor
<b>Output</b>	RS232 (TTL) with 3.6 volt levels or SDI-12 communication protocol
<b>Operating Environment</b>	-40 $^\circ\text{C}$ to 50 $^\circ\text{C}$
<b>Power</b>	3.6 - 15 VDC, 0.03 mA quiescent, 10 mA max during 150 ms measurement
<b>Cable Length</b>	5 m, custom cable lengths available
<b>Cable Connector Types</b>	3.5 mm "stereo" plug or stripped and tinned lead wires (3)
<b>Sensor Dimensions</b>	9.6 cm (l) x 3.5 cm (w) x 1.5 cm (d)
<b>Warranty</b>	One year, parts and labor