



## GS1 Ruggedized Low Cost Volumetric Water Content Sensor

The GS1 is a ruggedized version of our basic, no-frills soil moisture only sensor. It accurately measures volumetric water content in soil or soilless media.

### Monitor More, Spend Less

The longer lifetime of the GS1 helps your budget go a long way. It delivers research-grade accuracy at a price that makes large sensor networks economically practical. Characterize your site with sensors at multiple depths and locations, even if you're on a tight budget.

### Epoxy Body Withstands Tough Field Conditions

This sensor is built to last longer in the field under warmer, wetter conditions. The epoxy body withstands water intrusion and the sensor is built for long-term installation.

### Stainless Steel Needles for Easy Installation

Two stainless steel needles cut through the soil for better soil-sensor contact and easier installation. Needles are also much more durable than our standard sensor blades.

### Full Water Content Range

The GS1 is sensitive across the entire water content range. It can be installed in dry desert soils or in very wet peat. Sensitive to even small changes in water content anywhere from 0 - 100% VWC.

### 70 MHz Frequency Capacitance Technology

This frequency minimizes salinity and textural effects, making the GS1 accurate in most soil or soilless media. Can be used in a variety of conditions with the factory calibration.

### Plug and Log with Decagon Data Loggers

Install the GS1, plug it in to the Em50, set the clock and measurement intervals, and start logging data. No programming required.

### Database and Graph Measurements

Use this sensor with DataTrac 3 to quickly and easily store, access, and compare soil water content data from a large installation.

### Compatible with Many Other Loggers

The GS1 accepts a wide range of input voltages and has an easy-to-read voltage output. Voltage correlates to soil water content through a simple linear relationship, making this sensor easy to integrate into a wide variety of non-Decagon loggers.

### Reasons to Pick the GS1

- You need an inexpensive soil moisture sensor that lasts a long time
- You need to measure VWC only in a harsh environment
- You are setting up a large-scale network of soil moisture sensors

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| <b>MEASUREMENT TIME</b>                          | 10 ms (milliseconds)  |
| <b>ACCURACY</b>                                  | ±0.03 m <sup>3</sup> /m <sup>3</sup> in typical soils, up to 8 dS/m<br><br>With soil-specific calibration: ±0.01 to 0.02 m <sup>3</sup> /m <sup>3</sup> Resolution: 0.001 m <sup>3</sup> /m <sup>3</sup> VWC in mineral soils |
| <b>POWER REQUIREMENTS</b>                        | 3.0 VDC to 15 VDC (absolute maximum) @ 15 mA. Output: 1,000 to 2,500 mV   |
| <b>OPERATING ENVIRONMENT</b>                     | -40 to 50° C <sup>1</sup>   |
| <b>RANGE OF MEASUREMENT</b>                      | 0 to 100% VWC   |
| <b>SENSOR DIMENSIONS</b>                         | 8.9 cm x 1.8 cm x 0.7 cm  |
| <b>CONNECTOR TYPES</b>                           | 3.5 mm (stereo) plug or stripped & tinned lead wires (Pigtail)  |
| <b>CABLE LENGTH</b>                              | 5 m standard; custom cable length available upon request  |
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| <b>CABLE CONNECTOR TYPES</b>                     | 3.5 mm "stereo" plug, or stripped and tinned lead wires (3)   |
| <b>DATA LOGGER COMPATIBILITY (NOT EXCLUSIVE)</b> | <a href="#">Decagon Em50 Series</a> (Em50, Em50R, Em50G, and Em50B), <a href="#">ProCheck</a> ,<br><br>Campbell Scientific (CRX10, CR850, 1000, 3000, etc.)   |