



esi
ENVIRONMENTAL
SENSORS INC.



“Water is the key resource when it comes to the performance of an infield.”

-Tim Ernst, Former Supervisor of Sports Turf, City of Kitchener



ESI Soil Moisture Sensors enable you to precisely irrigate your sports facilities

Accurate knowledge of the moisture in the soil at your facility can help you to:

- Increase satisfaction with your facility by increasing turf quality
- Decrease resource costs associated with man power, water, fertilizer, and energy
- Decrease injuries associated with a lack of resiliency in the playing surface
- Differentiate your facility as a leader in environmental practices and efficient water use

ESI soil moisture sensors are internationally recognized for their accuracy and reliability

According to the Irrigation Association, the use of Evapotranspiration (ET) data will save an average of 5 to 15% in water use whereas Soil Moisture Sensors will help save an average of 15 to 30% in water use.

ET only accounts for part of the story of what happens to water – what happens above the ground. Different soil types lose differing amounts of water at varying speeds. Understanding what happens to water in the ground will help you to make effective management decisions that optimize energy and water use, while ensuring a high quality facility.

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ESI Sports Field Solutions

Gro-Point™ provides accurate, cost effective soil moisture measurement. **Gro-Point™** can be deployed in irrigation sensitive zones to enable you to take full control of your precision irrigation needs. **Gro-Point™** responds immediately and accurately to changes in soil moisture. The sensor is designed to remain in the soil permanently. **Gro-Point™** is rugged, easy to use, and maintenance free. Manufactured in stainless steel with all electronics sealed in water-proof epoxy, **Gro-Point™** provides years of reliable service.

Gro-Point™ can be used with a hand-held display reader. The unit can also be used to verify accurate function of individual sensors. Information can be downloaded directly to a laptop in the field using appropriate cable connections or downloaded to a data shuttle and transferred to a computer at the user's convenience. A radio-telemetry system can be used to take and transmit readings from the **Gro-Point™** sensors to a centralized PC. This decreases the amount of manual labor associated with the acquisition of data from the sensors.

Gro-Point™ can be combined with a sophisticated, computerized control system, capable of interfacing with a wide variety of irrigation equipment, including pumps, valves, filters, fertilizer injectors, soil moisture sensors and weather station sensors. Unique irrigation scheduling abilities allow for time based, demand and deficit irrigation, based on soil moisture or other environmental parameters.

Gro-Point™ Sensor Specifications

Sensor Options

- GP-SS for sandy soils
- GP-MS for most soils
- GP-HS for saline & clay soils

Moisture Range

- 8 - 42% (0.08 - 0.42m³/m³)

Temperature Range

- Operating: 32 to 150°F (0 to 65°C)

Power Requirements

- Standard: 5.5 - 18 VDC, 10 - 20mA (max)

Output

- Standard format: 0.5 - 5.0mA
- Optional formats: 0 - 2.5V, 4 - 20mA

Connection

- Standard: 3 Pin, IP66/IP68 rated environmental connector

Accuracy

- <1% (+/- 0.01m³/m³)

Mechanical

- Weight: 1.15 lb (525g)
- Dimensions: 3.75" x 1.5" x 9.5" (9.5 x 3.8 x 24 cm)

