

# Stevens GroPoint Profile

## Multi-Segment Soil Moisture Profiling Probe

The Stevens GroPoint Profile provides effective soil moisture measurement over multiple depths using a single probe. This probe's Time-Domain-Transmission (TDT) technology provides volumetric soil moisture readings (percentage of water in the soil) at multiple depths. The Stevens GroPoint Profile can be deployed in irrigation zones to provide an understanding of water movement through the soil by accurately tracking relative changes in soil moisture throughout the soil column.

Sleek and lightweight, it is quickly and easily installed vertically with minimal soil disruption using a pilot rod and slide hammer tool. The GroPoint Profile takes average volumetric soil moisture measurements over each segment, with each segment of approximately 6 inches (15 cm).



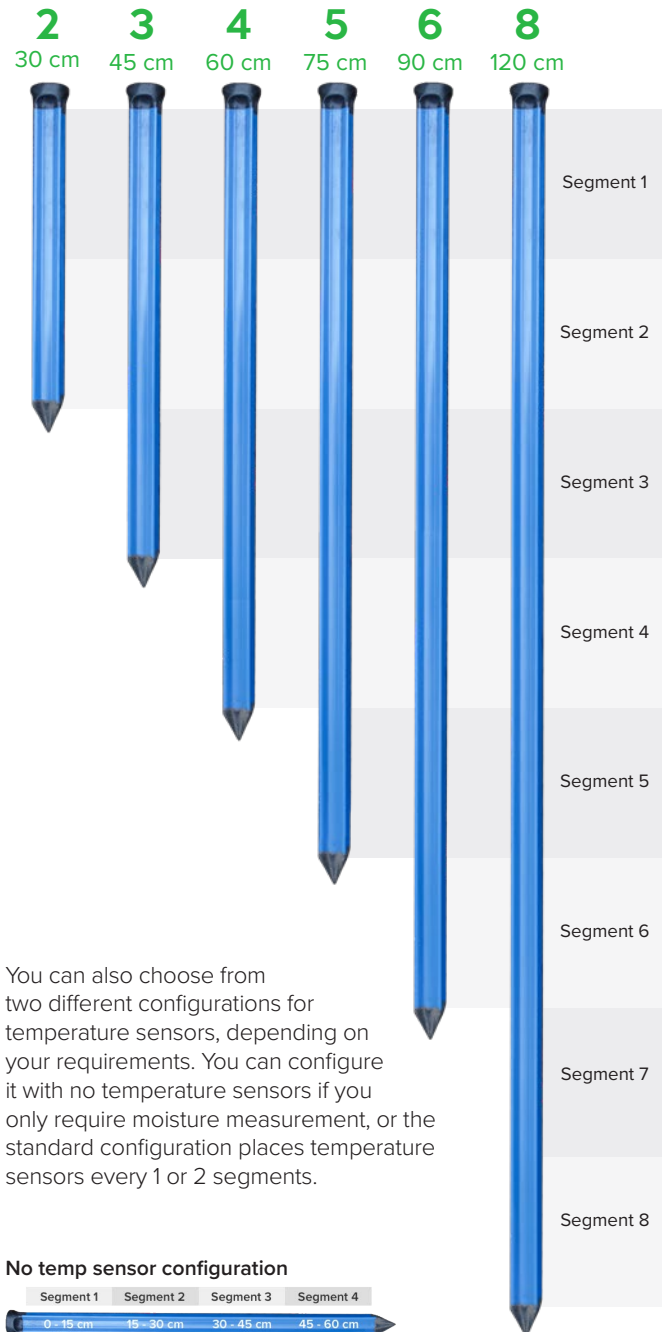
**STEVENS**  
MEASUREMENTS TO MIND

# An Accurate and Cost-Effective Soil Profiling Solution

- Eliminates need for multiple sensors and cabling systems.
- Installs quickly and easily without excavating.
- One SDI-12 address is used to read all segments, providing for simplified installations. Optional RS-485 output.
- Moisture readings can be user-calibrated with 3rd-order polynomials to meet custom requirements.
- Low power requirements—suitable for remote, autonomous applications.
- Patented TDT<sup>5</sup> technology for scientific-grade accuracy and excellent long-term stability of measurements.
- Fully potted electronics for excellent durability.

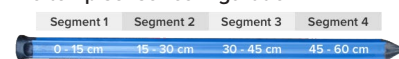
The GroPoint Profile is based on the field-proven Time Domain Transmission (TDT) method for reliably measuring changes in soil moisture. Like Time Domain Reflectometry (TDR), TDT also characterizes the time of travel of an electromagnetic signal through soil, but instead of being reflected, the signal propagates around a set path length. The high frequency and helical wave guide provides stability and precision to the measurements.

Choose the number of segments that are right for your application.

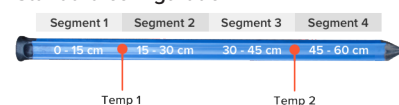


You can also choose from two different configurations for temperature sensors, depending on your requirements. You can configure it with no temperature sensors if you only require moisture measurement, or the standard configuration places temperature sensors every 1 or 2 segments.

#### No temp sensor configuration



#### Standard configuration



# Simplify Measurement of Soil Moisture at Multiple Depths

This **single GroPoint Profile probe** installed without excavation is equivalent to **4 separate probes**. It will measure soil moisture at 4 different depths.

Create a pilot hole the exact size required for the probe using the slide hammer tool attached to a sturdy steel pilot rod. This makes installation quick and easy, and provides minimum soil disruption, further increasing measurement accuracy.




**Segment 1**  
Average volumetric soil moisture content measured over 15cm (5.9")

**Segment 2**

**Segment 3**

**Segment 4**

  
**Analyze water movement through the soil.**



## TECHNICAL SPECIFICATIONS

### MOISTURE

<b>Measurement range</b>	7% to 42% of volumetric moisture content
<b>Output unit</b>	Volumetric percent
<b>Repeatability</b>	< 0.2%

### TEMPERATURE

<b>Measurement range</b>	-20°C to +70°C
<b>Storage temperature</b>	-40°C to +85°C
<b>Accuracy</b>	±0.5°C from 0-25°C to 100°C
<b>Sensors</b>	1 thermistor per 2 segments
<b>Output</b>	SDI-12 v.1.3 (RS-485 optional)
<b>Connection</b>	Flying leads (optional 4 pin, IP66/IP68 rated environmental connector)
<b>Input voltage</b>	6 to 14 VDC, max. 18 VDC
<b>Input current</b>	15mA (0.1 mA idle). Max. 100 mA
<b>Current consumption</b>	Quiescent: <0.5mA Active: 15-20 mA (depending on number of segments) for 100 mS

*Specifications subject to change.*

Stevens GroPoint Profile is ideal for a multitude of agricultural applications including vineyards, row crops, and orchards as well as silviculture and research to better manage irrigation practices, increase plant/crop quality and yield, and reduce fertilizer run-off.

## About Stevens Water

With a focus on simplicity, innovation and efficient solutions, Stevens Water are experts in hydrological and environmental monitoring. We've been providing complete water monitoring solutions since 1911.



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