# <u>geotec</u>

# Soil Moisture Measurements Stevens GroPoint Soil Moisture Probes

Stevens GroPoint Probes simplify volumetric soil moisture content measurements across multiple depths using a single probe. Designed for vertical installations, the probe is available with multiple sensor segments (each 15 cm long). GroPoint provides true soil profiling quantification, measuring the average moisture content across the entire length of each segment. This unique technology allows monitoring of water movement through the soil continuously, rather than at discrete sensor depths. These sensors are designed to install quickly with minimal soil disruption using an insertion pilot rod and slide hammer tool.

#### **FEATURES**

- Lightweight and sleek design
- Low power operation suitable for dedicated applications
- One SDI-12 address used to read all segments (optional RS-485)
- Patented TDT technology for scientific-grade accuracy and stability
- User-calibrated moisture readings using 3rd-order polynomials
- · Fully potted electronics for excellent durability
- Configure with or without temperature temp sensors placed every 1 or 2 segments

#### ACCESSORIES

Creating a pilot hole is achieved using the slide hammer and a 22-inch insertion pilot rod. These accessories help with installation and reduces soil disruption to further enhance soil moisture content accuracy.



#### CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc. 2650 East 40th Avenue • Denver, Colorado 80205 (303) 320-4764 • FAX (303) 322-7242 email: sales@geotechenv.com • website: www.geotechenv.com



## **OPERATION**

Time Domain Transmission (TDT) method is based on fieldproven reliability for 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 measurement.



## Soil Moisture Measurements

**Stevens GroPoint Soil Moisture Probes** 

### **SPECIFICATIONS**

MOISTURE	
Measurement Range	8% to 40% of VMC
Accuracy	2% to 5% for most soils, accuracy depends on soil
Repeatability	<0.2%
TEMPERATURE	
Measurement Range	-20°C to +70°C (-4°F to 158°F)
Accuracy	±0.5°C
ELECTRICAL	
Output	SDI-12 V1.3 (RS485 optional)
Connection	Bare wire (optional 4 pin, IP66/IP68 rated environmental connector)
Input Voltage	6 to 14 VDC max. 18 VDC
Current Consumption	Quiescent: <0.5mA Active: 15-20 mA (depending on number of segments) for 100 mS
Warm-up Time On Power Up	<1 second
ENVIRONMENTAL	
Operating Temperature	-20°C to 70°C (-4°F to 158°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
PHYSICAL	
Length	Each segment is approximately 15 cm (5.9") long. Total length is the number of segments multiplied by 15 cm. For example, a 3-segment probe is about 45cm long.
Probe Weight	2 segments: 292 g (10.3 oz.) 3 segments: 351 g (12.4 oz.) 4 segments: 408 g (14.4 oz.) 5 segments: 468 g (16.5 oz.) 6 segments: 526 g (18.6 oz.) 8 segments: 642 g (22.6 oz.)
Cable Weight	38 g per m (0.42 oz. per foot)
Standard Cable	5 m (16.3 ft.) 4xAWG22 dual-shielded, twisted pair, rated for direct burial
Warranty	1-year limited parts and labor



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