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## VH400 Soil Moisture Sensor Probes

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### Products:

Soil Moisture Sensors
Liquid Level Sensors
Soil Temperature Sensors
Relative Humidity (RH) Sensors
Controller Boards
Universal Sensor Display
Digital Soil Moisture Meters
Data Loggers and Readers
SDI-12 Protocol Products
Flow Control
Accessories

Our VH400 series soil moisture sensor probes enable precise low cost monitoring of soil water content.

Because our probe measures the dielectric constant of the soil using transmission line techniques, it is insensitive to water salinity, and will not corrode over time as does conductivity based probes. Our probes are small, rugged, and low power.

Compared to other low cost sensor such as gypsum block sensors, our probes offer a rapid response time. They can be inserted and take an accurate reading in under a second.

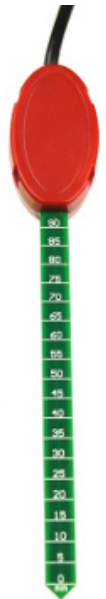
Probes come in standard cable lengths of 2 meters, 5 meters and 10 meters.

### Soil Moisture Sensor Probe Applications

- Irrigation and sprinkler systems.
- Moisture monitoring of bulk foods.
- Rain and weather monitoring.
- Environmental monitoring.
- Water conservation applications.

### Soil Moisture Sensor Probe Features

- Extreme low cost with volume pricing.
- Not conductivity based.
- Insensitive to salinity.
- Probe does not corrode over time.
- Rugged design for long term use.
- Small size.
- Consumes less than 7mA for very low power operation.
- Precise measurement.
- Measures volumetric water content (VWC) or gravimetric water content (GWC).
- Output Voltage is proportional to moisture level.
- Wide supply voltage range.
- Can be buried and is water proof.
- Probe is long and slender for wider use, including smaller potted plants.






VH400 - Soil Moisture Sensor Probe

### Other Vegetronix Products of Interest

- [Soil Moisture Meter](#)
- [Universal Sensor Display](#)
- [Soil Moisture Sensor Relay Boards](#)
- [Water Level Sensors](#)
- [Soil Temperature Sensors](#)
- [Voltage to Current Loop Translators](#)
- [SDI-12 Protocol Translators](#)
- [Data Loggers](#)
- [Extension Cable for VH400 Probes](#)

## Soil Moisture Sensor Probe Pricing and Ordering Info

[Contact us](#) for pricing information.

ORDER INFO			
Part Number	Description	Price	Purchase
VH400-2M	Soil Moisture Sensor - 2 meter cable	\$39.95	
VH400-5M	Soil Moisture Sensor - 5 meter cable	\$45.95	
VH400-10M	Soil Moisture Sensor - 10 meter cable	\$55.95	

## Soil Moisture Sensor Relay Boards

The quickest way to evaluate if the VH400 series is right for you is to also order some of our sensor relay boards. The [relay boards](#) accept input from a single sensor and control a solid state or mechanical relay. The relay contacts can be configured to close when wet, or open when wet. The dry/wet threshold is easily set by an on board variable resistor, which can be tuned with a small screwdriver. With our relay boards, within minutes you'll be using your VH400 soil moisture probe to control, valves, alarms or home automation systems.

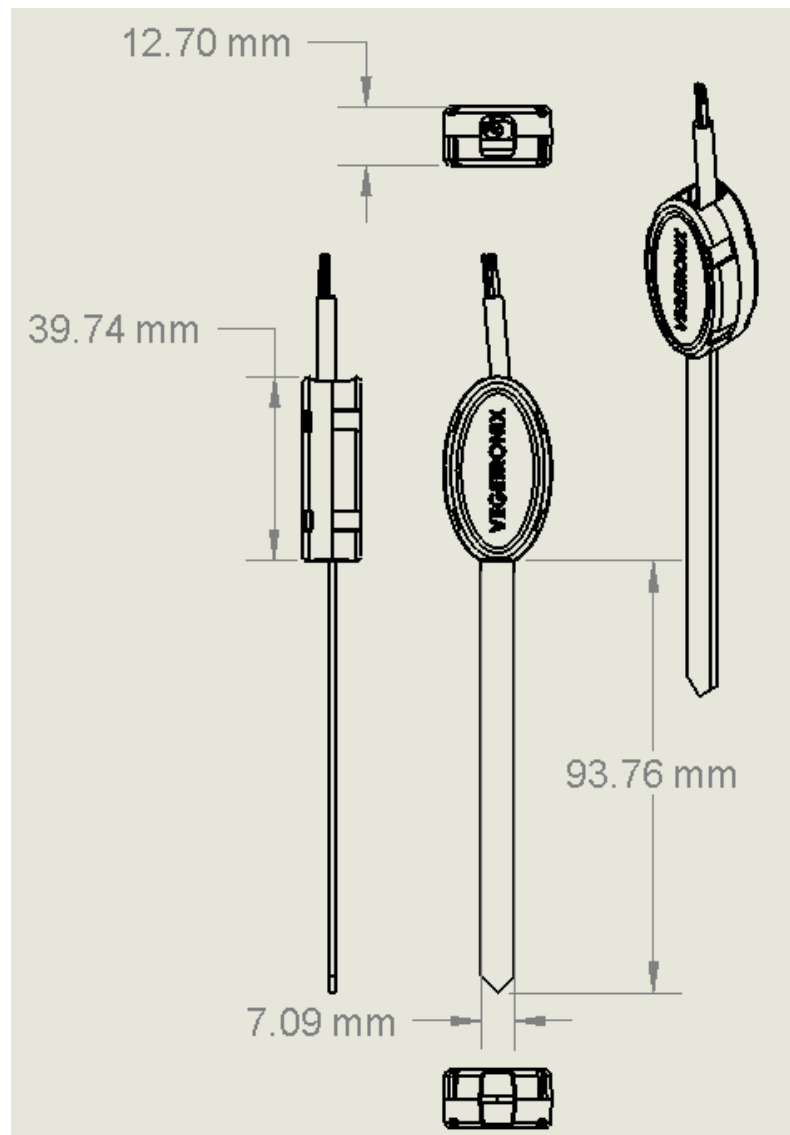
## Soil Moisture Sensor Probe Specifications

VH400 Sensor	
Power consumption	< 7mA
Supply Voltage	3.5V to 20 VDC.
Dimensions	See drawing below.
Power on to Output stable	400 ms
Output Impedance	10K ohms
Operational Temperature	-40°C to 85°C
Accuracy at 25°C	2%
Output	0 to 3V related to moisture content
Shell Color	Red
Voltage Output Curves	<a href="#">Curves</a> , <a href="#">Piecewise linear equations</a>

## Soil Moisture Sensor Probe Wiring Table

Bare	Ground
Red	POWER: 3.5V to 20 VDC.
Black	OUT: (0 to 3V related to moisture content.)

## VH400 Soil Moisture Sensor Probe Drawing



VH400 Soil Moisture sensor Drawing

## Soil Moisture Sensor Probe Technical Literature

See our [Soil Moisture Sensor Probe Application Notes](#) for reference designs and information on how to use the soil moisture probe in larger systems.

## How to Get Started with the Soil Moisture Sensor Probe

The best way to get started is to purchase a few low cost soil moisture sensor probes and try them out in your application.

**BUY NOW**

## Usage Tips

- Bury the sensor at root level. Since the sensor takes an average across the blade, for a precise reading at a particular depth, bury it horizontally such that water will not pool up on the blade.
- Many PLC's have a 24V output, which is too high for the VH400 sensor. A resistor voltage divider can be used to drop the voltage in half. To do this, use two 600 ohm 1/4W resistors in series, tied from the 24V to ground. The center of the resistors can be tapped to supply 12V. Note that this is not a very power efficient solution.

## Soil Moisture Sensor Instructional & Promotional Videos

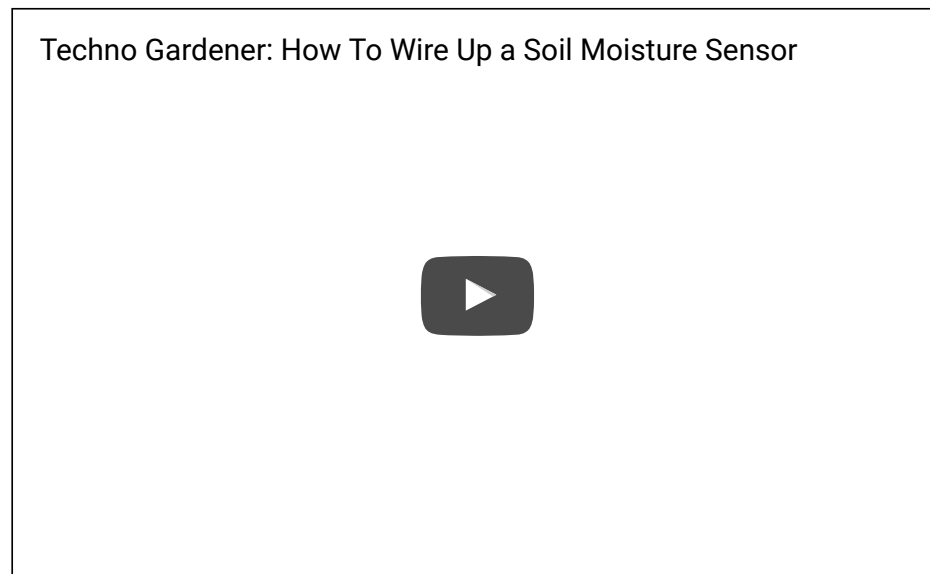
### Soil Moisture tutorial

The Techno Gardener gives a basic tutorial on soil moisture, explaining capillary action, gravitational water, water holding capacity, field capacity, plant available water, and wilting point for plants.



### How To Wire Up a Soil Moisture Sensor

The Techno Gardener shows you how to wire up a Vegetronix soil moisture sensor to a digital multimeter.



### Soil Moisture Sensor as Water Level Sensor

The Techno Gardener demonstrates how a Vegetronix soil moisture sensor can be used as a water level sensor.

Techno Gardener: Soil Moisture Sensor as Water Level S...

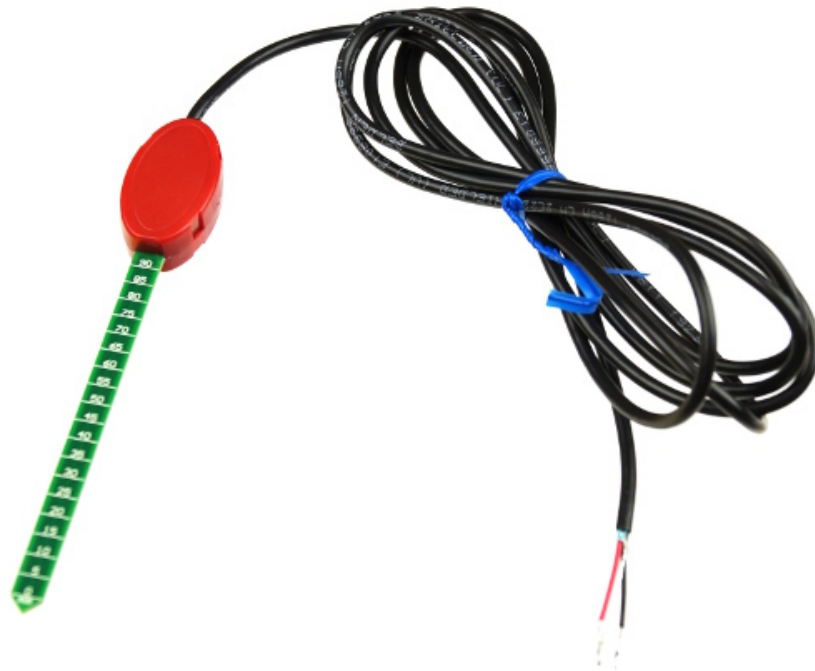


### **Soil Moisture Sensor Detects Clammy Hands**

The Techno Gardener shows you how a Vegetronix soil moisture sensor can also be used to detect the moisture in your hands. It blows away gypsum block sensors with it's instantaneous moisture readings.

Techno Gardener: Soil Moisture Sensor Detects Clammy...





**Still have questions?**

**[See our VH400 Soil Moisture Sensor Probe FAQ page.](#)**

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***Call us now at 801-938-4264***

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