

WATERMARK

SOIL MOISTURE SENSOR



Save Water!  Better Quality!



Features

- Range From 0-200 Centibars
- Fully Solid State
- Will Not Dissolve in Soil
- Not Affected by Freezing Temperatures
- Internal Compensation for Commonly Found Salinity Levels
- Inexpensive
- Easy to Use
- No Maintenance

Benefits

- Produce Better Quality and Yields
- Avoid Excessive Leaching of Fertilizers
- Save Water
- Save Energy
- Save Money

WATERMARK DIGITAL METER

- Digital Readout
- Converts Electrical Resistance Reading of Sensor to Centibars of Suction
- Accuracy and Stability
- Convenient to Use
- One Meter Reads All Sensors
- Manual Temperature Compensation

IRROMETER

COMPANY, INC.

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SUGGESTED PLACEMENT DEPTHS FOR IRRIGATOR AND WATERMARK SENSORS

The following are suggested placement depths for various crops based on **deep, well drained soils**. Instruments may be angled or set more shallowly in lighter or shallow soil. With drip or trickle irrigation 12", 24" depths recommended, with an added 36" depth on deeper rooted crops.

CROP	Shallow Instrument (Inches)	Deep Instrument (Inches)	For Extra Depth, Set at (Inches)	CROP	Shallow Instrument (Inches)	Deep Instrument (Inches)	For Extra Depth, Set at (Inches)
Alfalfa	18-24	36-48	60-70	Melons	18	36	
Almonds	24	48	72	Milo	24	48	
Apples	20	40	60	Mint	12	24	
Apricots	24	48	72	Monterey Pines, Firs	12	24	
Artichokes	18	36		Mums	12	(Placed 4-6")	
Asparagus	18-24	36-48		Mustard	18	36	
Avocados	12	24	36	Nectarines	18	36	
Bananas	12	24		Oats	18	36	
Barley	18	36		Okra	18	36	
Beans (bush)	10	18		Olives	24	48	60
Beans (Lima)	18	36		Onions	12		
Beans (Pole)	18	36		Papaya	12	24	
Beets (sugar)	18	36		Parsnips	18	36	
Beets (table)	12-18	24-36		Pecans	18	36	48
Blueberries	12	24		Permanent Pasture	8-15	24-30	
Broccoli	12	20		Peas	18	36	
Cabbage	12	20		Peaches	18	36	60
Canaigre	18	36	48	Peanuts	12	24	
Cantaloupe	18	36		Pears	18	36	48
Carnations	12	(Placed 4-6")		Peppers	15	30	
Carrots	12	24		Persimmons	18	36	
Cauliflower	12	24		Pineapple	15	30	
Celery	10	20		Pistachio Nuts	24	48	60
Chard	12	24		Pomegranates	18	36	
Cherries	24	48		Potatoes (Irish)	8-10	18	
Christmas tree	12	24		Potatoes (Sweet)	18	36	
Citrus; orange, lemon, grapefruit	18	36		Plums	24	48	72
Coffee	18-24	36-48		Prunes	24	48	72
Corn (sweet)	12	30		Pumpkin	18	36	48
Corn (field)	18	36		Radishes	12		
Cotton	18	36	48	Raspberries	12	18	
Cranberries	18	36		Sorghum	18	36	
Cucumbers	18	36		Soy Beans	18	36	60
Date plum	24	48	60	Spinach	12	24	
Egg Plant	12	24		Squash (Summer)	15	30	
Figs	18	36		Strawberries	6	12	
Garlic	12	24		Sudan Grass	18-24	36-48	
Grain and Flax	18	36		Sugar Cane	18	36	
Grapes	24	48	60	Sunflowers	24	48	60
Hops	24	48	60	Tea	12	24	
Jojoba	18	36		Tobacco	8-15	30	
Kiwi	18	36	48	Tomatoes	18	36	
Landino Clover	10	20		Turnips	18	36	
Lettuce	12			Walnuts	24	48	72
Macadamias	12	24	36	Watermelon	18	36	48
Maize	18	36		Wheat-Hay	18	36	

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200SS WATERMARK Sensor



Features:

- Proven stable calibration
- Inexpensive and easy to install
- No maintenance
- Range of measurement from 0 to 239 cb (kPa)
- Durable construction
- Not harmed by freezing
- Compensated for soil water salinity

In use since 1978, the patented WATERMARK sensor is a granular matrix sensor used to measure soil water tension. Water in the soil exchanges with the proprietary matrix inside of the sensor, creating a relationship between measured resistance and soil water tension.

The sensor consists of corrosion resistant electrodes imbedded within a granular matrix, contained in a perforated stainless-steel enclosure. Power (normally 2.5 to 5V) is applied to the WATERMARK to obtain a resistance value. Reading devices use published calibrations to convert the measured resistance into centibars (cb) or kilopascals (kPa) of soil water tension.

The WATERMARK is designed to be a permanent sensor, placed in the soil to be read as needed for monitoring soil conditions. Low cost, minimal power requirements, and easy installation make this sensor ideal for battery powered IoT devices in both agriculture and landscape applications.

Available in standard cable lengths of either 5' (1.5m) or 15' (4.5m), Sensors can optionally be installed on the end of ½" class 315 (SDR 13.5) PVC pipe for wire protection or ease of installation/removal.

Specifications:

OUTPUT: Variable resistance from 550 to 32000 ohms

WEIGHT: 0.147 lb. (.067 kg) – with 5' lead

DIMENSIONS: Diameter- 0.875" (22mm), Length: 3.25" (83mm)

CABLE: 2 conductor AWG 20 in 5' (1.5m) or 15' (4.5m) standard lengths

RANGE: 0 to 239 centibar (kPa)

MATERIAL: ABS plastic caps - stainless-steel body -hydrophilic fabric -granular matrix

Ordering Information:

Sensor Options:

200SS-5 Watermark Sensor, 5' (1.5m) cable

200SS-15 Watermark Sensor, 15'(4.5m) Cable

Adapter Options:

200SS-VA 1 sensor adapter with 0-3VDC analog output

200SS-SDI 3 sensor adapter with SDI-12 output

