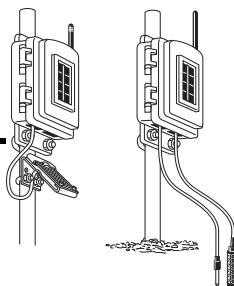


# Wireless Leaf & Soil Moisture/ Temperature Station

6345  
6345CS



## Vantage Pro2™ Accessories

The Wireless Leaf & Soil Moisture/Temperature Station for Vantage Pro2™ monitors up to four temperature-compensated Soil Moisture Sensors and two Leaf Wetness

Sensors anywhere within the transmission range of your wireless Vantage Pro2 console. The station communicates directly to your Wireless Vantage Pro2 console/receiver over any one of eight user-selectable ID codes, and has a transmitting range of between 200' to 1000' (75 to 300 m) depending upon the environment. The station is solar powered, and includes a battery backup. The Soil Moisture, Temperature, and Leaf Wetness Sensors are optional and can be ordered to meet the needs of your application.

The Complete Wireless Soil Moisture/Temperature Station (# 6345CS) comes pre-packaged with four Soil Moisture Sensors and four temperature probes. The Wireless Leaf & Soil Moisture/Temperature station (# 6345) comes without any sensors, allowing you to customize the sensors used in correlation with the station.

### Soil Moisture Sensors (# 6440)

The Watermark® Soil Moisture Sensor is an indirect, calibrated method of measuring soil water. It is an electrical resistance type sensor. The Vantage Pro2 weather station converts the electrical resistance reading from the sensor into a calibrated reading of centibars of soil water suction. The Watermark Soil Moisture Sensor is a product of the Irrrometer Company, Inc.

### Stainless Steel Temperature Probes with Two-Wire Termination (# 6470)

Multi-purpose temperature probe with 2½" (64mm)-long stainless steel housing and a 15' (4.6 m) direct-burial cable. Use to measure temperature of air, soil, or water. The Temperature Probe is a precision platinum wire thermistor that produces a resistance change proportional to temperature. The temperature probe is used by the station to provide temperature compensation for the associated soil moisture reading.

### Leaf Wetness Sensors (# 6420)

The Leaf Wetness Sensor detects the presence of surface moisture. The sensor is an artificial-leaf electrical-resistance type. It consists of a sensing grid, low-voltage bi-polar excitation circuit, and conductivity-sensing circuit. The Vantage Pro2 console measures the conductivity across the grid and displays the result as a moisture level, scaled from 0 to 15. The user may select the threshold level at and above which moisture-hour totals are accumulated.

The sensing grid is a gold-plated etched circuit on an epoxy-glass substrate; the excitation and sense circuits are encapsulated in black epoxy. The included mounting bracket holds the sensor at a 45° angle to simulate a typical leaf position and to permit runoff of excess moisture; it may be mounted on a vertical post, pipe, or stake.

## General

Operating Temperature . . . . .	-40° to +150°F (-40° to +65°C)
Storage Temperature . . . . .	-50° to +158°F (-45° to +70°C)
Current Draw . . . . .	0.14 mA (average), 30 mA (peak) (from external power source)
Battery . . . . .	CR123A 3-Volt Lithium cell
Battery Life . . . . .	8 months without sunlight - greater than 2 years depending on solar charging
Solar Panel . . . . .	0.5 Watts
Housing Material . . . . .	UV-resistant PVC plastic
Dimensions (length x width x height) . . . . .	6.25" x 2.25" x 7.88" (158.75 mm x 57.15 mm x 200 mm)
Weight . . . . .	1.08 lb. (.49 kg) (with battery, without sensors)

## Sensors

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### Leaf Wetness Sensor (# 6420)

Sensor Type .....	Electrical resistance
Cable Type .....	4-conductor, 26 AWG
Connector .....	Modular connector (RJ-11)
Maximum Cable Length .....	200' (61 m) using 4-conductor 26 AWG cable

Note: Increasing the cable length above the recommended maximum cable length may cause inaccurate readings.

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### Watermark Soil Moisture Sensor (# 6440)

Sensor Type .....	Electrical resistance
Standard Cable .....	15' (4.6 m) Watermark standard two-wire, stripped and tinned
Maximum Cable Length .....	18 AWG: 800' (243 m) (UF wire recommended)

### Multi-Purpose Temperature Probe (# 6470)

Sensor Type .....	Precision thermistor
Standard Cable .....	15' (4.6m) 22 AWG direct burial cable, stripped and tinned
Maximum Cable Length .....	24 AWG: 800' (244 m), 22 AWG: 1200' (365 m)

Note: There is no absolute maximum cable length. Increasing the cable length above the recommended maximum length causes an increased measurement error at a rate of approximate. +.024°F (+0.13°C) per 100' (30m) of 22 AWG cable. We recommend the use of 18 AWG fully waterproof with VG insulation and 3M Scotchpak or Duraseal heat shrink splice connector.

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## Wireless Communications

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Transmit/Receive Frequency .....	US Models: 902-928 MHz FHSS, Overseas Models: 868.0 - 868.6 MHz FHSS
ID Codes Available .....	8
Output Power .....	902-928 MHz FHSS: FCC-certified low power, less than 8 mW, no license required 868.0 - 868.6 MHz FHSS: CE-certified, less than 8 mW, no license required
Range	
Line of Sight .....	up to 1000 feet (300 m)
Through Walls .....	200 to 400 feet (75 to 150 m)

## Sensor Output

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### Leaf Wetness

Resolution .....	1
Range .....	0 to 15
Dry/Wet Threshold .....	User-selectable
Accuracy .....	±0.5
Update Interval .....	46 to 54 seconds

### Soil Moisture (Watermark Soil Moisture Sensor)

Resolution .....	1 cb (centibar)
Range .....	0 to 200 cb
Update Interval .....	77 to 90 seconds

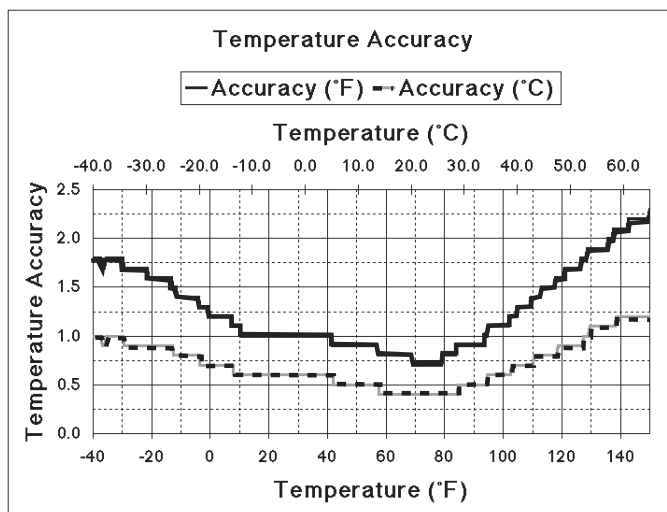
### Temperature

Resolution and Units .....	1°F or 1°C. (user selectable)
Range .....	-40° to +150°F (-40° to +65° C)
Sensor Accuracy .....	±1°F (±0.5°C) typical (See Chart)
Update Interval .....	77 to 90 seconds

### Input/Output Specifications:

Black .....	Common
White .....	Temperature (variable resistance to common)

## Temperature Accuracy Chart



## Package Dimensions

Product #	Package Dimensions (Length x Width x Height)	Package Weight	UPC Codes
6345	11.75" x 6.75" x 3.00" (299 mm x 172 mm x 76 mm)	2.3 lbs. (1.1 kg)	011698 00795 0
6345OV			011698 00796 7
6345CS	11.75" x 6.75" x 6.00" (299 mm x 172 mm x 153 mm)	3.7 lbs. (1.7 kg)	
6345CSOV			