

WS-PRO Weather Stations

Optimize Irrigation With Automatic Weather-Sensitive Scheduling

The WS-PRO2 and WS-PRO LT Weather Stations collect and store weather data from field locations. This information is retrieved by the Central Controller daily, allowing SiteControl, IQ v2.0, and Maxicom²® (WS-PRO2 only) to adjust station run time and/or schedule day cycle frequency according to each day's ET (evapotranspiration) and rainfall.

WS-PRO Weather Stations are highly accurate, durable, and reliable. They are built using the highest quality sensors available and will provide years of reliable data even in the toughest environments. An on-board data-logger continually polls the sensors which measure air temperature, relative humidity, wind speed and direction, rainfall and solar radiation.

Weather Station Features

- Rugged yet lightweight metal construction
- Powerful internal micro-logger for data collection, logging, analysis, constant communication with sensors, and storage of 30 days of data
- Sensors monitor 6 ET/weather parameters: air temperature (high & low), solar radiation, relative humidity, wind speed, and rainfall – Wind direction is also measured
- Sensors located 3 meters above ground for added vandal resistance
- Simple-to-service sensors and internal components
- Self-diagnostic test mechanisms: internal moisture, battery voltage level, and test port for local sensor check
- Internal battery charged by 120 VAC/16 VDC transformer or optional solar panels

SiteControl Features

- WS-PRO2 and WS-PRO-LT Weather Station compatibility is standard for SiteControl v3.0 or later software
- SiteControl can interface with up to 6 weather stations
- Automatic communication between Central Controller and Weather Station requires SiteControl Automatic ET Software Module
- SiteControl Smart Weather Software Module enables automatic, user defined reactions to weather events (rain, freeze, high wind, etc.)

IQ v2.0 Features

- WS-PRO2 or WS-PRO-LT Weather stations are compatible with IQ v2.0 or later software
- Automatic communication between the IQ v2.0 central and weather station requires the Advanced ET feature pack (IQAETFP)
- Weather data retrieval hourly up to 24 times a day or custom retrieval times up to 5 per day

Maxicom²® Features (WS-PRO2 only)

- WS-PRO2 Weather Station compatibility is standard for Maxicom²® v3.6 or later software
- Each site can have its own Weather Station or can share between sites
- Automatic communication standard
- Up to 24 automatic weather data retrievals can be configured per day

Models

- WS-PRO2-DC Direct Connect model – 2-pair wire connection with Central Controller via short-haul modem
- WS-PRO2-PH Phone Connect model – dial-up phone modem for phone communication with Central Controller
- WS-PRO2-PHS Phone Connect, Solar Power model – dial-up phone modem for phone communication with Central Controller, solar powered
- WS-PRO-LT-SH Short Haul model – 2-pair wire connection with Central Controller via short-haul modem
- WS-PRO-LT-WL Wireless model – wireless connection with Central Controller via 916 MHz radio (only available in the U.S. and Canada)
- WS-PRO-LT-WLS Wireless model – wireless connection with Central Controller via 916 MHz radio, solar powered (only available in the U.S. and Canada)

WS-PRO2 Specifications

Air Temperature Sensor:

- Range: -13° to +122°F (-25° to +50°C)
- Accuracy: +/- 2.7°F (+/- 1.5°C)

Relative Humidity Sensor:

- Range: 0 to 100%
- Accuracy: +/- 6% @ 90% to 100% RH, +/- 3% @ 0% to 90% RH



Rain Gauge Sensor:

- Resolution: 0.01" (0.25 mm)

Solar Radiation Sensor:

- Accuracy: ± 3%

Wind Speed Sensor:

- Starting threshold: 0.9 mph (0.4 m s-1)

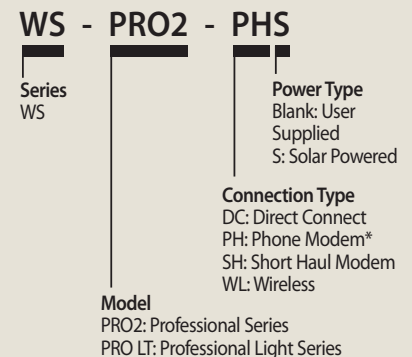
Wind Direction Sensor:

- Range: 360° mechanical, 356° electrical, accuracy ± 4°

WS-PRO2 Electrical Specifications

- **Input required:** 9.6 to 16VDC from transformer (120 VAC/16 VDC transformer provided with powered stations) or solar panels
- **Power backup:** "Gel-cell" 12 VDC battery (provided with station)

How To Specify



* Only available on WS PRO2 models.

WS-PRO LT Specifications

Air Temperature Sensor:

- Range: -40° to +122° F (-40° to +50° C)
Accuracy: ±0.9°F (±0.5°C)

Relative Humidity Sensor:

- Range: 0 to 100%
Accuracy: ±5% - 90% to 100% RH
- ±3% - 10% to 95% RH

Rain Gauge Sensor:

- Resolution: 0.04" (1 mm)

Solar Radiation Sensor:

- Accuracy: ± 2.5%

Wind Speed Sensor:

- Starting threshold: 0.78 ms-1 (1.75 mph)

Wind Direction Sensor:

- Range: 360° mechanical, 352° electrical

WS-PRO LT Electrical Specifications

• Input required:

16 to 22VDC from transformer (120 VAC/16 VDC transformer provided with powered stations) or solar panels

- **Power backup:** "Gel-cell" 12 VDC battery (provided with station)

Specifications

Models WS-PRO2-DC and WS-PRO2-PH / -PHS

The central control system shall include an on-site or remote weather station where shown on the plans and specifications. The unit shall be complete with the necessary instruments for recording wind run, wind direction, relative humidity, rainfall, solar radiation, and high and low temperature. A micro-logger shall continuously poll and record the data every 5 seconds.

Short-haul or telephone modems may be used for communication between the computer and weather station.

For connection between the weather station and a central controller short-haul modem, two twisted-pair wires (4 wires total) shall be furnished. This communication path shall not exceed 20,000 feet in total length.

For connection between the weather station and a central controller modem a dial-up telephone line shall be furnished.

The unit shall be complete with a 120 VAC/16 VDC transformer. A 120 VAC power connection shall be furnished at the transformer location.

The weather station shall be mounted on a poured concrete base and securely bolted to it. If the weather station is installed in an unsecured area, install inside a 6'-0" high (minimum) security fence with access gate. And all sides must be at least 8'-0" out from the weather station base. The security fence shall be such as not to interfere with the correct readings of the instruments.

Surge protection shall be provided for the 16 VDC power supply to the weather station. Surge protection shall be provided for the 2 twisted-pair communication lines installed for both the weather station short-haul modem and the central controller short-haul modem. The weather station shall be grounded to an earth ground. The earth ground network shall be 10 ohms or less when tested with a ground measuring device.

The weather station shall be as manufactured for Rain Bird Corporation Glendora, California.

Models WS-PRO-LT-SH, WS-PRO-LT-WL and WS-PRO-LT-WLS

The central control system shall include an on-site or remote weather station where shown on the plans and specifications. The unit shall be complete with the necessary instruments for recording wind run, wind direction, relative humidity, rainfall, solar radiation, and high and low temperature. A micro-logger shall continuously poll and record the data every 5 seconds.

Short-haul modems or radios may be used for communication between the computer and weather station.

For connection between the weather station and a central controller short-haul modem, two twisted-pair wires (4 wires total) shall be furnished. This communication path shall not exceed 20,000 feet in total length.

900 MHz radios (range of ½ mile line of sight), or 2.4 GHz radios (range of ¼ mile line of sight) shall be furnished for connection between the weather station and a central controller. Spread-spectrum radios may be used with models WS-PRO-LT-WL and WS-PRO-LT-WLS.

The unit shall be complete with a 120 VAC/18 VDC transformer. A 120 VAC power connection shall be furnished at the transformer location.

The weather station shall be mounted on a poured concrete base and securely bolted to it. If the weather station is installed in an unsecured area, install inside a 6'-0" high (minimum) security fence with access gate. And all sides must be at least 8'-0" out from the weather station base. The security fence shall be such as not to interfere with the correct readings of the instruments.

Surge protection shall be provided for the power supply to the weather station. Surge protection shall be provided for the 2 twisted-pair communication lines installed for both the weather station short-haul modem and the central controller short-haul modem. The weather station shall be grounded to an earth ground. The earth ground network shall be 10 ohms or less when tested with a ground measuring device.

The weather station shall be as manufactured for Rain Bird Corporation Glendora, California.

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The Intelligent Use of Water™
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