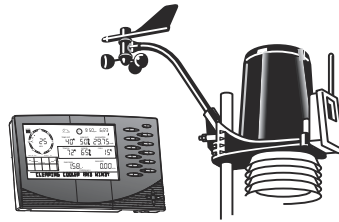


# Wireless Vantage Pro2™ & Vantage Pro2™ Plus Stations

(Including Fan-Aspirated Models)



**6152    6162**  
**6153    6163**

Vantage Pro2™ (6152, 6153) and Vantage Pro2™ Plus (6162, 6163) Wireless Weather Stations include two components: the Integrated Sensor Suite (ISS) which houses and manages the external sensor array, and the console which provides the user interface, data display, and calculations. The ISS and Vantage Pro2 console communicate via an FCC-certified, license-free, spread-spectrum frequency-hopping (FHSS) transmitter and receiver. User-selectable transmitter ID codes allow up to eight stations to coexist in the same geographic area. The frequency hopping spread spectrum technology provides greater communication strength over longer distances and areas of weaker reception. The Wireless Vantage Pro2 Plus weather station includes two additional sensors that are optional on the Vantage Pro2: the UV sensor and the solar radiation sensor.

The console may be powered by batteries or by the included AC-power adapter. The wireless ISS is solar powered with a battery backup. Use WeatherLink® for Vantage Pro2 and Vantage Vue® to let your weather station interface with a computer, to log weather data, and to upload weather information to the internet.

The 6152 and 6162 rely on passive shielding to reduce solar-radiation induced temperature errors in the outside temperature sensor readings. The Fan-aspirated 6153 and 6163 combine passive shielding with a solar-powered fan that draws outside air in over the temperature and humidity sensors, providing a much more accurate temperature reading than that available using passive shielding alone.

## Integrated Sensor Suite (ISS)

(Includes product numbers: 6152, 6153, 6162, 6163, 6322, 6323, 6327 & 6328)

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Operating Temperature . . . . .	-40° to +150°F (-40° to +65°C)
Non-operating Temperature . . . . .	-40° to +158°F (-40° to +70°C)
Current Draw (ISS SIM only) . . . . .	0.14 mA (average), 30 mA (peak) at 4 to 6 VDC
Solar Power Panel . . . . .	0.5 Watts (ISS SIM), plus 0.75 Watts (Fan-Aspirated)
Battery (ISS SIM /Fan-Aspirated) . . . . .	CR-123 3-Volt Lithium cell / 2 - 1.2 Volt NiCad C-cells
Battery Life (3-Volt Lithium cell) . . . . .	8 months without sunlight - greater than 2 years depending on solar charging
Battery Life (NiCad C-cells, Fan-Aspirated) . . . . .	1 year
Fan Aspiration Rate (Fan-Aspirated only)	
Intake Flow Rate, full sun . . . . .	190 feet/min. (0.9 m/s)
Intake Flow Rate, battery only . . . . .	80 feet/min. (0.4 m/s)
Sensor Chamber Flow Rate, full sun . . . . .	500 feet/min. (2.5 m/s)
Sensor Chamber Flow Rate, battery only . . . . .	280 feet/min. (1.4 m/s)
Connectors, Sensor . . . . .	Modular RJ-11
Cable Type . . . . .	4-conductor, 26 AWG
Cable Length, Anemometer . . . . .	40' (12 m) (included) 240' (73 m) (maximum recommended)

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Note: Maximum displayable wind decreases as the length of cable increases. At 140' (42 m) of cable, the maximum wind speed displayed is 135 mph (60 m/s); at 240' (73 m), the maximum wind speed displayed is 100 mph (34 m/s).

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Wind Speed Sensor . . . . .	Solid state magnetic sensor
Wind Direction Sensor . . . . .	Wind vane with potentiometer
Rain Collector Type . . . . .	Tipping bucket, 0.01" per tip (0.2 mm with metric rain adapter), 33.2 in <sup>2</sup> (214 cm <sup>2</sup> ) collection area
Temperature Sensor Type . . . . .	PN Junction Silicon Diode
Relative Humidity Sensor Type . . . . .	Film capacitor element
Housing Material . . . . .	UV-resistant ABS, ASA plastic

ISS Dimensions (not including anemometer or bird spikes):

## 2

### Wireless Vantage Pro2™

Vantage Pro2 with Standard Rad Shield . . . . .	14.0" x 9.4" x 14.5" (356 mm x 239 mm x 368 mm)
Vantage Pro2 with Fan-Asprated Rad Shield . . . . .	20.8" x 9.4" x 16.0" (528 mm x 239 mm x 406 mm)
Vantage Pro2 Plus with Standard Rad Shield . . . . .	14.3" x 9.7" x 14.5" (363 mm x 246 mm x 368 mm)
Vantage Pro2 Plus with Fan-Aspirated Rad Shield . . . . .	21.1" x 9.7" x 16.0" (536 mm x 246 mm x 406 mm)

### Console

(Includes product number 6312)

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Console Operating Temperature . . . . .	+32° to +140°F (0° to +60°C)
Non-Operating (Storage) Temperature . . . . .	+14° to +158°F (-10° to +70°C)
Current Draw . . . . .	0.9 mA average, 30 mA peak, (add 120 mA for display lamps, add 0.125 mA for each optional wireless transmitter received by the console) at 4 - 6 VDC
AC Power Adapter . . . . .	5 VDC, 300 mA, regulated
Batteries . . . . .	3 C-cells
Battery Life . . . . .	up to 9 months
Connectors . . . . .	Modular RJ-11
Housing Material . . . . .	UV-resistant ABS plastic
Console Display Type . . . . .	LCD Transflective
Display Backlight . . . . .	LEDs
Console Dimensions	
Console with antenna down (L x H x D) . . . . .	10.625" x 6.125" x 1.625" (270 mm x 156 mm x 41 mm)
Console with antenna extended up (L x H x D) . . . . .	10.625" x 9.625" x 1.625" (270 mm x 245 mm x 41 mm)
Display (L x H) . . . . .	5.94" x 3.375" (151 mm x 86 mm)
Weight (with batteries) . . . . .	1.88 lbs. (.85 kg)

### Data Displayed on Console

Data display categories are listed with General first, then in alphabetical order.

#### General

Historical Data . . . . .	Includes the past 24 values listed unless otherwise noted; all can be cleared and all totals reset
Daily Data . . . . .	Includes the earliest time of occurrence of highs and lows; period begins/ends at 12:00 am
Monthly Data . . . . .	Period begins/ends at 12:00 am on the first of the month
Yearly Data . . . . .	Period begins/ends at 12:00 am on the first of January unless otherwise noted
Current Display Data . . . . .	Current display data describes the current reading for each weather variable. In most cases, the variable lists the most recently updated reading or calculation. Some current variable displays can be adjusted so there is an offset for the reading
Current Graph Data . . . . .	Current graph data appears in the right-most column in the console graph and represents the latest value within the last period on the graph; totals can be set or reset. Display intervals vary. Examples include: Instant, 15-min., and Hourly Reading; Daily, Monthly, High and Low
Graph Time Interval . . . . .	1 min., 10 min., 15 min., 1 hour, 1 day, 1 month, 1 year (user-selectable, availability depends upon variable selected)
Graph Time Span . . . . .	24 Intervals + Current Interval (see Graph Intervals to determine time span)
Graph Variable Span (Vertical Scale) . . . . .	Automatic (varies depending upon data range); Maximum and Minimum value in range appear in ticker
Alarm Indication . . . . .	Alarms sound for only 2 minutes (time alarm is always 1 minute) if operating on battery power. Alarm message is displayed in ticker as long as threshold is met or exceeded. Alarms can be silenced (but not cleared) by pressing the DONE key.
Transmission Interval . . . . .	Varies with transmitter ID code from 2.25 seconds (#1=shortest), to 3 seconds (#8=longest)
Update Interval . . . . .	Varies with sensor - see individual sensor specs

#### Barometric Pressure

Resolution and Units . . . . .	0.01" Hg, 0.1 mm Hg, 0.1 hPa/mb (user-selectable)
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Range	16.00" to 32.50" Hg, 410 to 820 mm Hg, 540 to 1100 hPa/mb
Elevation Range	-999' to +15,000' (-600 m to 4570 m) (Note that console screen limits entry of lower elevation to -999' when using feet as elevation unit.)
Uncorrected Reading Accuracy	±0.03" Hg (±0.8 mm Hg, ±1.0 hPa/mb) (at room temperature)
Sea-Level Reduction Equation Used	United States Method employed prior to use of current "R Factor" method
Equation Source	Smithsonian Meteorological Tables
Equation Accuracy	±0.01" Hg (±0.3 mm Hg, ±0.3 hPa/mb)
Elevation Accuracy Required	±10' (3m) to meet equation accuracy specification
Overall Accuracy	±0.03" Hg (±0.8 mm Hg, ±1.0 hPa/mb)
Trend (change in 3 hours)	Change 0.06" (2 hPa/mb, 1.5 mm Hg) = Rapidly Change 0.02" (0.7hPa/mb, 0.5 mm Hg)= Slowly
Trend Indication	5 position arrow: Rising (rapidly or slowly), Steady, or Falling (rapidly or slowly)
Update Interval	1 minute or when console BAR key is pressed twice
Current Display	Instant
Current Graph Data	Instant, 15-min., and Hourly Reading; Daily, Monthly, High and Low
Historical Graph Data	15-min. and Hourly Reading; Daily, Monthly Highs and Lows
Alarms	High Threshold from Current Trend for Storm Clearing (Rising Trend) Low Threshold from Current Trend for Storm Warning (Falling Trend)
Range for Rising and Falling Trend Alarms	0.01 to 0.25" Hg (0.1 to 6.4 mm Hg, 0.1 to 8.5 hPa/mb)

### Clock

Resolution	1 minute
Units	Time: 12 or 24 hour format (user-selectable)
Date	US or International format (user-selectable)
Accuracy	±8 seconds/month
Adjustments	Time: Automatic Daylight Savings Time (for users in North America and Europe that observe it in AUTO mode, MANUAL setting available for all other areas) Date: Automatic Leap Year
Alarms	Once per day at set time when active

### Dewpoint (calculated)

Resolution and Units	1°F or 1°C (user-selectable) °C is converted from °F rounded to the nearest 1°C
Range	-105° to +130°F (-76° to +54°C)
Accuracy	±3°F (±1.5°C) (typical)
Update Interval	10 to 12 seconds
Source	World Meteorological Organization (WMO)
Equation Used	WMO Equation with respect to saturation of moist air over water
Variables Used	Instant Outside Temperature and Instant Outside Relative Humidity
Current Display Data	Instant Calculation
Current Graph Data	Instant Calculation; Daily, Monthly High and Low
Historical Graph Data	Hourly Calculations; Daily, Monthly Highs and Lows
Alarms	High and Low Threshold from Instant Calculation

### Evapotranspiration (calculated, requires solar radiation sensor)

Resolution and Units	0.01" or 0.1 mm (user-selectable)
Range	Daily to 32.67" (832.1 mm); Monthly & Yearly to 199.99" (1999.9 mm)
Accuracy	Greater of 0.01" (0.25 mm) or ±5%, Reference: side-by-side comparison against a CIMIS ET weather station
Update Interval	1 hour
Calculation and Source	Modified Penman Equation as implemented by CIMIS (California Irrigation Management Information System) including Net Radiation calculation
Current Display Data	Latest Hourly Total Calculation
Current Graph Data	Latest Hourly Total Calculation, Daily, Monthly, Yearly Total
Historical Graph Data	Hourly, Daily, Monthly, Yearly Totals

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Alarm . . . . . High Threshold from Latest Daily Total Calculation

**Forecast**

Variables Used . . . . . Barometric Reading & Trend, Wind Speed & Direction, Rainfall, Temperature, Humidity, Latitude & Longitude, Time of Year

Update Interval . . . . . 1 hour

Display Format . . . . . Icons on top center of display; detailed message in ticker at bottom

Variables Predicted . . . . . Sky Condition, Precipitation, Temperature Changes, Wind Direction and Speed

**Heat Index (calculated)**

Resolution and Units . . . . . 1°F or 1°C (user-selectable) °C is converted from °F rounded to the nearest 1°C

Range . . . . . -40° to +165°F (-40° to +74°C)

Accuracy . . . . . ±3°F (±1.5°C) (typical)

Update Interval . . . . . 10 to 12 seconds

Source . . . . . United States National Weather Service (NWS)/NOAA

Formulation Used . . . . . Steadman (1979) modified by US NWS/NOAA and Davis Instruments to increase range of use

Variables Used . . . . . Instant Outside Temperature and Instant Outside Relative Humidity

Current Display Data . . . . . Instant Calculation

Current Graph Data . . . . . Instant Calculation; Daily, Monthly High

Historical Graph Data . . . . . Hourly Calculations; Daily, Monthly Highs

Alarm . . . . . High Threshold from Instant Calculation

**Humidity****Inside Relative Humidity (sensor located in console)**

Resolution and Units . . . . . 1%

Range . . . . . 1 to 100% RH

Accuracy . . . . . ±3% (0 to 90% RH), ±4% (90 to 100% RH)

Update Interval . . . . . 1 minute

Current Display Data . . . . . Instant (user-adjustable offset available)

Current Graph Data . . . . . Instant; Hourly Reading; Daily, Monthly High and Low

Historical Graph Data . . . . . Hourly Readings; Daily, Monthly Highs and Lows

Alarms . . . . . High and Low Threshold from Instant Reading

**Outside Relative Humidity (sensor located in ISS)**

Resolution and Units . . . . . 1%

Range . . . . . 1 to 100% RH

Accuracy . . . . . ±3% (0 to 90% RH), ±4% (90 to 100% RH)

Temperature Coefficient . . . . . 0.03% per °F (0.05% per °C), reference 68°F (20°C)

Drift . . . . . ±0.5% per year

Update Interval . . . . . 50 seconds to 1 minute

Current Display Data . . . . . Instant (user-adjustable offset available)

Current Graph Data . . . . . Instant; Hourly Reading; Daily, Monthly High and Low

Historical Graph Data . . . . . Hourly Readings; Daily, Monthly Highs and Lows

Alarms . . . . . High and Low Threshold from Instant Reading

**Extra Outside Relative Humidity (sensor located inside Temperature/Humidity Station)**

Resolution and Units . . . . . 1%

Range . . . . . 1 to 100% RH

Accuracy . . . . . ±3% (0 to 90% RH), ±4% (90 to 100% RH)

Temperature Coefficient . . . . . 0.03% per °F (0.05% per °C), reference 68°F (20°C)

Drift . . . . . ±0.5% per year

Update Interval . . . . . 50 seconds to 1 minute

Current Display Data . . . . . Instant Reading (user adjustable)

Alarms . . . . . High and Low Threshold from Instant Reading

## Leaf Wetness (requires leaf wetness sensor)

Resolution	1
Range	0 to 15
Dry/Wet Threshold	User-selectable
Accuracy	±0.5
Update Interval	46 to 54 seconds
Current Graph Data	Instant Reading; Daily High and Low; Monthly High
Historical Graph Data	Hourly Readings; Daily Highs and Lows; Monthly Highs
Alarms	High and Low Thresholds from Instant Reading

## Moon Phase

Console Resolution	1/8 (12.5%) of a lunar cycle, 1/4 (25%) of lighted face on console
WeatherLink Resolution	0.09% of a lunar cycle, 0.18% of lighted face maximum (depends on screen resolution)
Range	New Moon, Waxing Crescent, First Quarter, Waxing Gibbous, Full Moon, Waning Gibbous, Last Quarter, Waning Crescent
Accuracy	±38 minutes

## Rainfall

Resolution and Units	0.01" or 0.2 mm (user-selectable) (1 mm at totals ≥ 2000 mm)
Daily/Storm Rainfall Range	0 to 99.99" (0 to 999.8 mm)
Monthly/Yearly/Total Rainfall Range	0 to 199.99" (0 to 6553 mm)
Accuracy	For rain rates up to 4"/hr (100 mm/hr): ±4% of total or ± one tip of the bucket (0.01"/0.2mm), whichever is greater.
Update Interval	20 to 24 seconds
Storm Determination Method	0.02" (0.5 mm) begins a storm event, 24 hours without further accumulation ends a storm event
Current Display Data	Totals for Past 15-min
Current Graph Data	Totals for Past 15-min, Past 24-hour, Daily, Monthly, Yearly (start date user-selectable) and Storm (with begin date); Umbrella is displayed when 15-minute total exceeds zero
Historical Graph Data	Totals for 15-min, Daily, Monthly, Yearly (start date user-selectable) and Storm (with begin and end dates)
Alarms	High Threshold from Latest Flash Flood (15-min. total, default is 0.50", 12.7 mm), 24-Hour Total, Storm Total,
Range for Rain Alarms	0 to 99.99" (0 to 999.7 mm)

## Rain Rate

Resolution and Units	0.01" or 0.1 mm (user-selectable) at typical rates (see Fig. 2 and 3)
Range	0, 0.04"/hr (1 mm/hr) to 96"/hr (0 to 2438 mm/hr)
Accuracy	±5% for rates less than 5" per hour (127 mm/hr)
Update Interval	20 to 24 seconds
Calculation Method	Measures time between successive tips of tipping bucket. Elapsed time greater than 15 minutes or only one tip of the rain collector constitutes a rain rate of zero.
Current Display Data	Instant
Current Graph Data	Instant and 1-min. Reading; Hourly, Daily, Monthly and Yearly High
Historical Graph Data	1-min Reading; Hourly, Daily, Monthly and Yearly Highs
Alarm	High Threshold from Instant Reading

## Soil Moisture (requires soil moisture sensor)

Resolution	1 cb
Range	0 to 200 cb
Update Interval	77 to 90 seconds
Current Graph Data	Instant Reading; Daily and Monthly High and Low

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Historical Graph Data . . . . .	Hourly Readings; Daily and Monthly Highs and Lows
Alarms . . . . .	High and Low Thresholds from Instant Reading

**Solar Radiation (requires solar radiation sensor)**

Resolution and Units . . . . .	1 W/m <sup>2</sup>
Range . . . . .	0 to 1800 W/m <sup>2</sup>
Accuracy . . . . .	±5% of full scale (Reference: Eppley PSP at 1000 W/m <sup>2</sup> )
Drift . . . . .	up to ±2% per year
Cosine Response . . . . .	±3% for angle of incidence from 0° to 75°
Temperature Coefficient . . . . .	-0.067% per °F (-0.12% per °C); reference temperature = 77°F (25 °C)
Update Interval . . . . .	50 seconds to 1 minute (5 minutes when dark)
Current Graph Data . . . . .	Instant Reading and Hourly Average; Daily, Monthly High
Historical Graph Data . . . . .	Hourly Average, Daily, Monthly Highs
Alarm . . . . .	High Threshold from Instant Reading

**Sunrise and Sunset**

Resolution . . . . .	1 minute
Accuracy . . . . .	±1 minute
Reference . . . . .	United States Naval Observatory

**Temperature****Inside Temperature (sensor located in console)**

Resolution and Units . . . . .	Current Data: 0.1°F or 1°F or 0.1°C or 1°C (user-selectable) °C is converted from °F rounded to the nearest 1°C Historical Data and Alarms: 1°F or 1°C (user-selectable)
Range . . . . .	+32° to +140°F (0° to +60°C)
Sensor Accuracy . . . . .	±1°F (±0.5°C), (see Fig. 1)
Update Interval . . . . .	1 minute
Current Display Data . . . . .	Instant (user-adjustable offset available)
Current Graph Data . . . . .	Instant Reading; Daily and Monthly High and Low
Historical Graph Data . . . . .	Hourly Readings; Daily and Monthly Highs and Lows
Alarms . . . . .	High and Low Thresholds from Instant Reading

**Outside Temperature (sensor located in ISS)**

Resolution and Units . . . . .	Current Data: 0.1°F or 1°F or 0.1°C or 1°C (user-selectable) nominal °C is converted from °F rounded to the nearest 1°C Historical Data and Alarms: 1°F or 1°C (user-selectable)
Range . . . . .	-40° to +150°F (-40° to +65°C)
Sensor Accuracy . . . . .	±1°F (±0.5°C) above 20°F (-7°C), ±2°F (±1°C) under 20°F (-7°C) (see Fig. 1)
Radiation Induced Error (Passive Shield) . . . . .	+4°F (2°C) at solar noon (insolation = 1040 W/m <sup>2</sup> , avg. wind speed ≤ 2 mph (1 m/s)) (reference: RM Young Model 43408 Fan-Aspirated Radiation Shield)
Radiation Induced Error (Fan-Aspirated Shield) . . . . .	+0.6°F (0.3°C) at solar noon (insolation = 1040 W/m <sup>2</sup> , avg. wind speed ≤ 2 mph (1 m/s)) (reference: RM Young Model 43408 Fan-Aspirated Radiation Shield)
Update Interval . . . . .	10 to 12 seconds
Current Display Data . . . . .	Instant (user-adjustable offset available)
Current Graph Data . . . . .	Instant Reading; Daily, Monthly, Yearly High and Low
Historical Graph Data . . . . .	Hourly Readings; Daily, Monthly, Yearly Highs and Lows
Alarms . . . . .	High and Low Thresholds from Instant Reading

**Extra Temperature Sensors or Probes**

Resolution and Units . . . . .	Current Data: 1°F or 1°C (user-selectable) °C is converted from °F rounded to the nearest 1°C Historical Data and Alarms: 1°F or 1°C (user-selectable)
Range . . . . .	-40° to +150°F (-40° to +65°C)
Sensor Accuracy . . . . .	±1°F (±0.5°C) above 20°F (-7°C), ±2°F (±1°C) under 20°F (-7°C) (see Fig. 1)
Update Interval . . . . .	10 to 12 seconds (77 to 90 seconds for Leaf Wetness/Temperature and Soil Moisture/Temperature Stations)
Current Display Data . . . . .	Instant Reading (user-adjustable offset available)
Alarms . . . . .	High and Low Thresholds from Instant Reading

Temperature Humidity Sun Wind Index (requires solar radiation sensor)

Resolution and Units . . . . .	1°F or 1°C (user-selectable) °C is converted from °F rounded to the nearest 1°C
Range . . . . .	-90° to +165°F (-68° to +74°C)
Accuracy . . . . .	±4°F (±2°C) (typical)
Update Interval . . . . .	10 to 12 seconds
Sources and Formulation Used . . . . .	United States National Weather Service (NWS)/NOAA Steadman (1979) modified by US NWS/NOAA and Davis Instruments to increase range of use and allow for cold weather use
Variables Used . . . . .	Instant Outside Temperature, Instant Outside Relative Humidity, 10-minute Average Wind Speed, 10-minute Average Solar Radiation
Formulation Description . . . . .	Uses Heat Index as base temperature, affects of wind and solar radiation are either added or subtracted from this base to give an overall effective temperature
Current Graph Data . . . . .	Instant and Hourly Calculation; Daily, Monthly High
Historical Graph Data . . . . .	Hourly Calculation; Daily, Monthly Highs
Alarm . . . . .	High Threshold from Instant Reading

Ultra Violet (UV) Radiation Dose (requires UV sensor)

Resolution and Units . . . . .	0.1 MEDs to 19.9 MEDs; 1 MED above 19.9 MEDS
Range . . . . .	0 to 199 MEDs
Accuracy . . . . .	±5% of daily total
Drift . . . . .	up to ±2% per year
Update Interval . . . . .	50 seconds to 1 minute (5 minutes when dark)
Current Graph Data . . . . .	Latest Daily Total (user resetable at any time from Current Screen)
Historical Graph Data . . . . .	Hourly, Daily Totals (user reset from Current Screen does not affect these values)
Alarm . . . . .	High Threshold from Daily Total
Alarm Range . . . . .	0 to 19.9 MEDs

Ultra Violet (UV) Radiation Index (requires UV sensor)

Resolution and Units . . . . .	0.1 Index
Range . . . . .	0 to 16 Index
Accuracy . . . . .	±5% of full scale (Reference: Yankee UVB-1 at UV index 10 (Extremely High))
Cosine Response . . . . .	±4% FS (0° to 90° zenith angle)
Update Interval . . . . .	50 seconds to 1 minute (5 minutes when dark)
Current Graph Data . . . . .	Instant Reading and Hourly Average; Daily, Monthly High
Historical Graph Data . . . . .	Hourly Average, Daily, Monthly Highs
Alarm . . . . .	High Threshold from Instant Calculation

Wind

Wind Chill (Calculated)

Resolution and Units . . . . .	1°F or 1°C (user-selectable) °C is converted from °F rounded to the nearest 1°C
Range . . . . .	-110° to +135°F (-79° to +57°C)
Accuracy . . . . .	±2°F (±1°C) (typical)
Update Interval . . . . .	10 to 12 seconds
Source . . . . .	United States National Weather Service (NWS)/NOAA
Equation Used . . . . .	Osczevski (1995) (adopted by US NWS in 2001)
Variables Used . . . . .	Instant Outside Temperature and 10-min. Avg. Wind Speed
Current Display Data . . . . .	Instant Calculation
Current Graph Data . . . . .	Instant Calculation; Hourly, Daily and Monthly Low
Historical Graph Data . . . . .	Hourly, Daily and Monthly Lows
Alarm . . . . .	Low Threshold from Instant Calculation

Wind Direction

Range . . . . .	0 - 360°
Display Resolution . . . . .	16 points (22.5°) on compass rose, 1° in numeric display
Accuracy . . . . .	±3°
Update Interval . . . . .	2.5 to 3 seconds

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Current Display Data	Instant (user-adjustable offset available)
Current Graph Data	Instant; 10-min. Dominant; Hourly, Daily, Monthly Dominant
Historical Graph Data	Past 6 10-min. Dominants on compass rose only; Hourly, Daily, Monthly Dominants
<b>Wind Speed</b>	
Resolution and Units	1 mph, 1 km/h, 0.4 m/s, or 1 knot (user-selectable). Measured in mph, other units are converted from mph and rounded to nearest 1 km/hr, 0.1 m/s, or 1 knot.
Range	1 to 200 mph, 1 to 173 knots, 0.5 to 89 m/s, 1 to 322 km/h
Update Interval	Instant Reading: 2.5 to 3 seconds, 10-minute Average: 1 minute
Accuracy	±2 mph (2 kts, 3 km/h, 1 m/s) or ±5%, whichever is greater
Maximum Cable Length	240' (73 m) (See note on page 1)
Current Display Data	Instant
Current Graph Data	Instant; 10-minute and Hourly Average; Hourly High; Daily, Monthly and Yearly High with Direction of High
Historical Graph Data	10-min. and Hourly Averages; Hourly Highs; Daily, Monthly and Yearly Highs with Direction of Highs
Alarms	High Thresholds from Instant Reading and 10-minute Average

**Wireless Communications****Transmit/Receive Frequency**

US Models	902 - 928 MHz FHSS,
EU Models	868.0 - 868.6 MHz FHSS
Japan Models	928.15 - 929.65 MHz FHSS
NZ Models	921 - 928 MHz FHSS
India Models	865.0 - 867.0 MHz FHSS

ID Codes Available . . . . . 8

**Output Power**

US Models	902 - 928 MHz FHSS: FCC-certified low power, less than 8 mW, no license required
EU Models	868.0 - 868.6 MHz FHSS. CE-certified, less than 8 mW, no license required.
Japan Models	928.15 - 929.65 MHz FHSS, less than 1 mW, no license required.
NZ Models	921 - 928 MHz FHSS, less than 10mW, no license required.
India Models	865.0 - 867.0 MHz, less than 10mW, no license required.

**Range: All models except Japan**

Line of Sight	up to 1000 feet (300 m)
Through Walls	200 to 400 feet (60 to 120 m)

**Range: Japan models**

Line of Sight	up to 300 feet (100 m)
Through Walls	50 to 200 feet (15 to 60m)

**Sensor Inputs**

RF Filtering	RC low-pass filter on each signal line
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# Sensor Charts

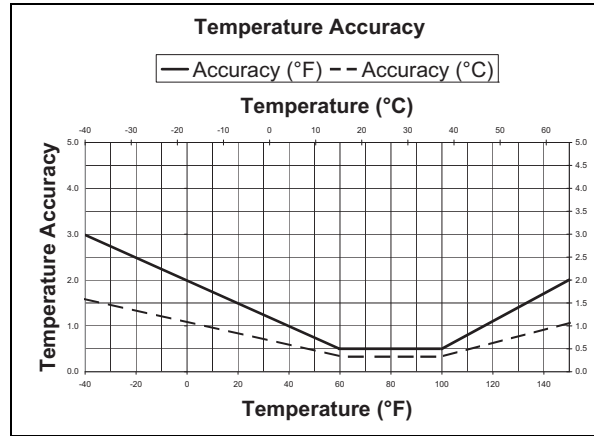


Figure 1. Temperature Accuracy

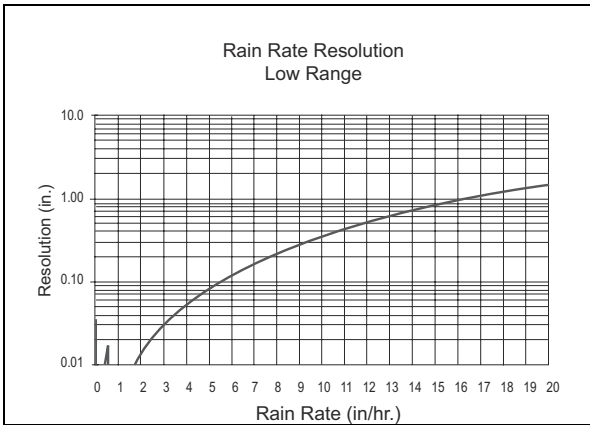


Figure 2. Low Range Rain Rate Resolution

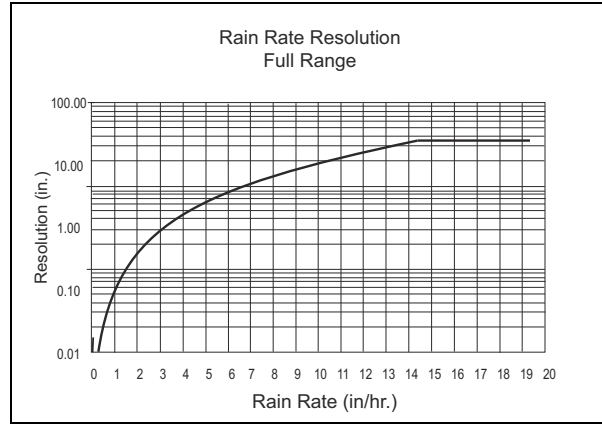


Figure 3. Full Range Rain Rate Resolution

## Package Dimensions

Product #	Package Dimensions (Length x Width x Height)	Package Weight	UPC Codes
6152 6152EU 6152UK	17.50" x 10.4" x 16.0" (445 mm x 264 mm x 406 mm)	11 lbs. 13 oz. (5.4 kg)	011698 00229 0 011698 00347 1 011698 00348 8
6162 6162EU 6162UK		11 lbs. 15 oz. (5.4 kg)	011698 00306 8 011698 00307 5 001698 00308 2
6153 6153EU 6153UK	14.9 x 12.9" x 23.4" (378 mm x 327 mm x 594 mm)	16 lbs. 11 oz. (7.6 kg)	011698 00335 8 011698 00336 5 001698 00337 2
6163 6163EU 6163UK		17 lbs. 5 oz. (7.9 kg)	011698 00341 9 011698 00342 6 001698 00342 3
6322 6322OV	17.50" x 10.4" x 16.0" (445 mm x 264 mm x 406 mm)	9 lbs.. 1 oz. (4.1 kg)	011698 00776 9 011698 00778 3
6327 6327OV		11 lbs. 1 oz. (5.0 kg)	011698 00781 3 011698 00783 7
6323 6323OV	14.9" x 12.9" x 23.4" (378 mm x 327 mm x 594 mm)	15 lbs. 15 oz. (7.2 kg)	011698 00779 0 011698 00780 6
6328 6328OV		16 lbs. 8 oz. (7.5 kg)	011698 00784 4 011698 00785 1
6312 6312EU 6312UK	12.6" x 9.3" x 2.5" (320 mm x 235 mm x 64 mm)	2 lbs. 10 oz. (1.2 kg)	011698 00724 0 011698 00766 0 011698 00767 7