

**Wind (PRO Anemometer)**

Type: 3-Cup Anemometer, all digital, magnetically-actuated  
Materials: UV-Stabilized Polycarbonate, Acetal, 316 Stainless Steel  
Cup Size: 2.6" diameter (6.6cm), 5.3 in<sup>2</sup> (34cm<sup>2</sup>) cross-sectional area  
Vane Size: 12.9" (32.8cm) overall length, 3.5" (8.9cm) height, 13.8in<sup>2</sup> (88.5 cm<sup>2</sup>) surface area  
Resolution: 0.1 mph (0.1 km/h, 0.1 m/s, 0.1 knots)  
Speed Range: 0.2 to 160.0 mph (0.3 to 257.0 km/h, 0.1 to 71.0 m/s, 0.2 to 139.0 knots)  
Threshold: 1.5 mph (2.4 km/h, 0.6 m/s, 1.3 knots)  
Update Interval: 0.5 seconds, typical (more often at speeds >5 mph)  
Accuracy: ± 2 mph (± 3.2 km/h, ± 0.9 m/s, ± 1.7 knots) or ± 5%, whichever is greater  
Speed Data: Current<sup>1,2</sup>, 1-min Peak and associated Direction<sup>2</sup>, 1-min Avg<sup>2</sup>, 5-min Peak and associated Direction<sup>2</sup>, 5-min Avg<sup>2</sup>, Daily Peak and associated Direction<sup>1,2</sup> (8 days' Peaks stored in keyboard memory), Long-Term Peak and associated Direction<sup>1,2</sup>  
Direction: Digital magnetic sensor, with 16-point analog "compass rose" display<sup>1</sup>, and numeric "degrees" display<sup>1,2</sup> with 1° resolution, ± 5% accuracy  
Cable: 40 ft., 4-conductor, unshielded w/modular plug

**Wind (Standard Anemometer)**

Type: 3-Cup Anemometer, all digital, magnetically-actuated  
Materials: UV-Stabilized Polycarbonate, Acetal, 316 Stainless Steel  
Cup Size: 1.2" diameter (3.2cm), 1.2 in<sup>2</sup> (7.8cm<sup>2</sup>) cross-sectional area  
Vane Size: 6.2" (15.7cm) overall length, 2.8" (7.1cm) height, 6.8in<sup>2</sup> (43.6 cm<sup>2</sup>) surface area  
Resolution: 1 mph (1 km/h, 1 m/s, 1 knot)  
Speed Range: 2 to 175 mph (3 to 282 km/h, 1 to 78 m/s, 2 to 152 knots)  
Threshold: 3 mph (5 km/h, 1 m/s, 3 knots)  
Update Interval: 1 second, typical (more often at speeds >10 mph)  
Accuracy: ± 2 mph (± 3 km/h, ± 1 m/s, ± 2 knots) or ± 5%, whichever is greater  
Speed Data: Current<sup>1,2</sup>, 1-min Peak and associated Direction<sup>2</sup>, 1-min Avg<sup>2</sup>, 5-min Peak and associated Direction<sup>2</sup>, 5-min Avg<sup>2</sup>, Daily Peak and associated Direction<sup>1,2</sup> (8 days' Peaks stored in keyboard memory), Long-Term Peak and associated Direction<sup>1,2</sup>  
Direction: 16-point analog "compass rose" display<sup>1</sup>, and numeric "degrees" display<sup>1,2</sup> w/1° resolution, ± 5% accuracy  
Cable: 40 ft., 4-conductor, unshielded w/modular plug

**Outdoor Temperature**

Type: Precision aged Thermistor  
Materials: Nickel-plated Steel Probe housing, 24-gauge copper cable  
Resolution: 1°F<sup>1</sup> (0.1°C<sup>1</sup>), 0.1°F<sup>2</sup> (0.1°C)<sup>2</sup>  
Range: -55°F to +150°F (-48°C to +66°C)  
Accuracy: ± 1°F (± 0.5°C)  
Data: Current<sup>1,2</sup>, Today's High and Low w/time occurred (since 12:00am)<sup>1,2</sup>, Daily Highs and Lows w/time occurred<sup>1,2</sup> (each of previous 7 days), and Long Term Highs and Lows w/time occurred<sup>1,2</sup> (since user reset)  
Cable: 25 ft., 4-conductor w/modular plug termination

continued



<sup>1</sup>Data displayed in keyboard LCD  
<sup>2</sup>Data available in RS232 Output  
<sup>1,2</sup>Data displayed in LCD and available in RS232 Output

## **ULTIMETER® WEATHER STATION SPECIFICATIONS (continued)**

### **Wind Chill**

Basis:	Derived from ambient air temperature and instantaneous wind speed
Index:	US National Weather Service Wind Chill Index (adopted November 2001, and valid for air temperatures below 50°F) <u>Note:</u> by definition, above +50°F(+10°C), the Wind Chill Temperature is identical to the ambient air temperature
Resolution:	1°F <sup>1</sup> (0.1°C) <sup>1</sup> , 0.1°F <sup>2</sup> (0.1°C) <sup>2</sup>
Range:	-99°F to +50°F (-72°C to +10°C) See note above
Accuracy:	± 1°F (± 0.5°C)
Data:	Current <sup>1,2</sup> , Today's Low w/time occurred (since 12:00am) <sup>1,2</sup> , Daily Lows w/time occurred <sup>1,2</sup> (each of previous 7 days), and Long Term Low w/time occurred <sup>1,2</sup> (since user reset)

### **Indoor Temperature (incl. on models 2100 and 800, optional on model 100)**

Type:	Precision aged Thermistor, located inside keyboard/display
Resolution:	1°F <sup>1</sup> (0.1°C) <sup>1</sup> , 0.1°F <sup>2</sup> (0.1°C) <sup>2</sup>
Range:	32°F to +110°F (0°C to 43°C)
Accuracy:	± 1°F (± 0.5°C)
Data:	Current <sup>1,2</sup> , Today's High and Low w/time occurred (since 12:00am) <sup>1,2</sup> , Daily Highs and Lows w/time occurred <sup>1,2</sup> (each of previous 7 days), and Long Term Highs and Lows w/time occurred <sup>1,2</sup> (since user reset)

### **Barometric Pressure (model 2100 only)**

Type:	Precision electronic absolute pressure transducer, located within keyboard/display unit
Resolution:	0.1 hPa/mbar, 0.1 inHg 0.1 mmHg
Range:	931.3 to 1067.0 hPa/mbar, 27.5 to 31.5 inHg 698.5 to 800.0 mmHg
Accuracy:	± 1.7 hPa/mbar, ± 0.05 inHg, ± 1.3 mmHg (at room temperature)
Data:	Current <sup>1,2</sup> , 3-hr Change <sup>1,2</sup> , Daily High/Low <sup>1,2</sup> (8 days), Long-Term High/Low <sup>1,2</sup>

### **Rain Gauge, PRO (optional sensor, all models)**

Type:	Drop-counting electronic rain gauge, 3.2"dia (8.1cm) funnel
Resolution:	0.001 inches (.025mm), 0.01 inch (.25mm) increments
Range:	0.00 to 199.99 inches (0.00 to 1999.9mm) accumulation
Accuracy:	± 5%, at rain rates up to 10" (254mm) per hour
Data:	Today's Rainfall (since 12:00am) <sup>1,2</sup> , 3-hr Change <sup>1,2</sup> , Daily Rainfall <sup>1,2</sup> (each of previous 7 days), and Long Term Rainfall <sup>1,2</sup> (since user reset)
Units:	inches, millimeters
Cable:	40 ft., 4-conductor w/modular plug termination

### **Rain Gauge, TB (optional sensor, all models)**

Type:	Electronic Tipping Bucket rain gauge, US NWS compliant 8"dia (20.3cm) funnel
Resolution:	0.01 inch (.25mm) increments
Range:	0.00 to 199.99 inches (0.00 to 1999.9mm) accumulation
Accuracy:	± 1.5%, at rain rates up to 0.5" (13mm) per hour ± 5%, at rain rates up to 5" (127mm) per hour
Data:	Today's Rainfall (since 12:00am) <sup>1,2</sup> , 3-hr Change <sup>1,2</sup> , Daily Rainfall <sup>1,2</sup> (each of previous 7 days), and Long Term Rainfall <sup>1,2</sup> (since user reset)
Units:	inches, millimeters
Cable:	40 ft., 4-conductor w/modular plug termination

continued



## **ULTIMETER® WEATHER STATION SPECIFICATIONS (continued)**

### **Rain Gauge, Other (optional sensor, all models)**

Type: Other manufacturers' rain gauges can be interfaced  
Increments: 0.1", 0.01", 2.5mm, .25mm, 0.1mm (user selectable to match rain gauge increments)

### **Outdoor Humidity/Temperature (optional sensor, models 2100 and 800)**

Type: Capacitive RH Sensor, Precision aged Thermistor  
Materials: UV-stabilized ABS housing, 24-gauge copper cable, conformal-coated circuit assembly, stainless steel vents  
Resolution: 1°F<sup>1</sup> (0.1°C<sup>1</sup>), 0.1°F<sup>2</sup> (0.1°C)<sup>2</sup>, 1% R.H.  
Range: Temperature -55°F to +150°F (-48°C to +66°C),  
Relative Humidity 0 to 100%  
Accuracy: Temperature ± 1°F (± 0.5°C), R.H. ± 4%  
Dew Point: derived from ambient temperature and relative humidity;  
same units as temperature  
Heat Index: derived from ambient temperature and relative humidity;  
same units as temperature  
Data: Current Temp, R.H. Dew Point, Heat Index<sup>1,2</sup>, Today's High and Low Temp & R.H. w/time occurred (since 12:00am)<sup>1,2</sup>, Daily High and Low Temp & R.H. w/time occurred<sup>1,2</sup> (each of previous 7 days), and Long Term High and Low Temp & R.H. w/time occurred<sup>1,2</sup> (since user reset)  
Cable: 40 ft., 4-conductor w/modular plug termination

### **Indoor Humidity (optional sensor, models 2100 and 800)**

Type: Capacitive RH Sensor  
Materials: UV-stabilized ABS housing, 24-gauge copper cable, sintered plastic vents  
Resolution: 1% R.H.  
Range: Relative Humidity 0 to 100%  
Accuracy: R.H. ± 4%  
Data: Current<sup>1,2</sup>, Today's High and Low w/time occurred (since 12:00am)<sup>1,2</sup>, Daily Highs and Lows w/time occurred<sup>1,2</sup> (each of previous 7 days), and Long Term Highs and Lows w/time occurred<sup>1,2</sup> (since user reset)  
Cable: 20 ft., 4-conductor w/modular plug termination

<sup>1</sup>Data displayed in keyboard LCD

<sup>2</sup>Data available in RS232 Output

<sup>1,2</sup>Data displayed in LCD and available in RS232 Output

### **Control Unit**

Size: 6-3/4" x 2-3/4" x 1-1/4", Desk or Wall Mounted  
Display: Backlit Liquid Crystal  
Numeral Size: .5" high  
Keypad: 16-button, illuminated buttons (models 2100 and 800); 12-button (model 100)  
Sensor Interface Jack: 10P10C (for 10-conductor cable to Junction Box)  
Serial Port: RS232 I/O port, RJ12 modular jack

### **Junction Box**

Has receptacles for external power and all outside sensors.  
RS232 Serial Data I/O port (RJ12 modular jack)  
Built-in Static Electricity Discharge Protection  
Size: 4" x 1-3/4" x 7/8"

### **Primary Power**

AC adapter 12 v DC output

continued

3 <sup>1</sup>Data displayed in keyboard LCD  
<sup>2</sup>Data available in RS232 Output  
<sup>1,2</sup>Data displayed in LCD and available in RS232 Output



## **ULTIMETER® WEATHER STATION SPECIFICATIONS (continued)**

### **Back-up Power**

Provision for 9-volt alkaline battery

### **Serial Data Output**

RS232 compatible UART, user-selectable 2400 or 19200 baud, 8-N-1

### **Optional Accessories**

- Indoor Humidity Sensor
- Outdoor Humidity/Temperature Sensor
- Self-emptying Rain Gauges - several models available, including heated
- The Weather Picture®
- WeatherText™ Tools PC Data Logger Kit
- The WeatherVox – a “speech synthesized” weather reporting device

Specifications necessarily subject to change without notice. Protected under one or more of the following patents: US 05361633, US 05231876, US 05033402, US 05001929, and US 04969358

