



TEXAS WEATHER INSTRUMENTS INC.

Manufacturer of Digital Weather Stations

5942 Abrams Road #113 Dallas, TX 75231(214) 368-7116 or (800) 284-0245

WLS-8000

A Digital Computer Weather Logging Station

- Industrial Grade High Resolution Sensors
- Large Digital Display
- Non-Volatile Memory & Clock
- Fully Addressable by PC via the RS-232
- Logs Data to Memory - 4000 data points
- 12 Hour Uninterruptible Power Supply
- Real Time Information Output:

Information in English or Metric

Time & Date

Wind Direction & Speed - instant & average

Outside & Indoor Temperature

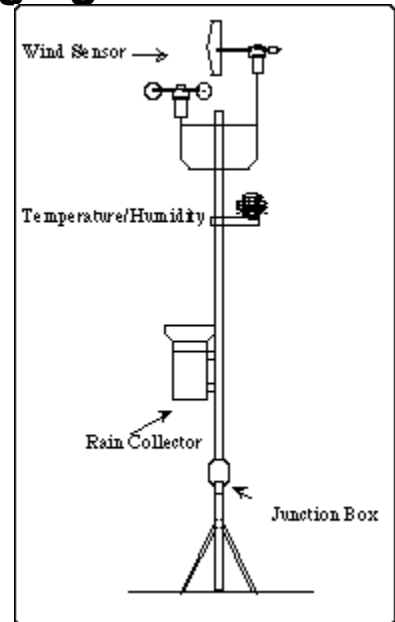
Humidity & Solar Radiation

Barometric Pressure (rising, falling)

Daily & Monthly Rain - Rainfall Rate

Wind chill Index, Heat Index & Dewpoint

Daily Minimums and Maximums



SYSTEM INCLUDES:

WLS Console

TE Wind Direction & Speed Sensor

Barometric Pressure Sensor

Solar Radiation Sensor

8" TE Rain Collector

Temperature & Humidity Sensor in Shield

Serial RS-232 Cable & Mast Junction Box

120' Sensor Cables

Junction Box

Three Year Limited Warranty

Weatherview32 Software for Windows95 and TWICal Software

OPTIONS:

Leaf wetness sensor and Lightning Sensor

SPECIFICATIONS:

WINDSENSOR-

Operational Envelope: 0-135 mph (0 to 60 m/s) Temperature:-40 to 160° F (-40 to 70° C) Relative Humidity:0-100%
 Height:6.5" (16.5 cm) Cup Diameter: 3.25" (8.25 cm) Cup Wheel Diameter: 12.5" (32 cm)
 Cable 20' supplied with sensor
 Size: 27" wide, 22" tall, 6" deep, 20' cable w/RJ-11 connector

Speed

Operating Range: 0-100 mph Signal Presentation: frequency, pulsed output light chopper

The 20-slot disc produces the following linear repetition rate:

10 RPM =1 MPH = 200 pulses/min.

100 RPM = 10 MPH = 2,000 pulses/min.

1000 RPM = 100 MPH = 20,000 pulses/min.

Accuracy:±/ 1.0 mph (0.45 m/s) over entire range ±/ 0.6 mph (0.25 m/s) at less than 11.2 mph (5.0 m/s)

Distance Constant:> 16.5' (5.0 m) Starting Threshold:1.1 mph (0.5 m/s)

Direction

Operating Range: 0-360° mechanical, 0-357° electrical Signal Presentation: ±/ 0.5% Potentiometer linearity: ±/ 0.5% Accuracy:±/ 3.0° Starting Threshold:2.5 mph (1.1 m/s) Damping Ratio:30.36 Damped Wavelength:19.7' (6.0 m) Delay Distance:4.8' (1.15 m) Resolution:1°

BAROMETRIC PRESSURE

Pressure range: 28 to 34 inches Hg ±2%

Pressure resolution 0.01 inches Hg

Pressure accuracy: ±.03 at 75 degrees F

HUMIDITY/TEMPERATURE/PAGODA

Size: 7" around, 9" tall, 20' cable w/RJ-11 connector

Temperature range: -40 to +130 degrees F,

Temperature accuracy (-40 to +130 deg. F) 0.2 degree F

Humidity range: 0 to 100% inches Hg ±3%

LEAF WETNESS SENSOR

Size: 15"long x 4"x 4.5", Weight: 17oz., Cable Length: 20 feet

Temperature operating range: 32 to +120 degrees F,

Sensor: PCB with gold plated grid

SOLAR SENSOR (Pyranometer)

Size:12" long x 4"x 2", Weight: 12 oz., 20' cable w/RJ-11 connector

Temperature operating range: -40 to +120 degrees F

Spectral Response: 400-1100nm

Sensitivity: Typically 60µA per 1000 Wm²

Rise Time:: 30ns

Range: 0 to 1500 Wm²

Calibration: ±10% fso

LIGHTNING SENSOR

Size: 12" long x 11" tall x 3" wide, 20' cable w/RJ-11 connector

RAIN COLLECTOR

Resolution: 0.01" English Accuracy: 1.0% up to 2"/hr (50 mm/hr) Collector diameter: 8.00" (203 mm) with knife-edge Funnel depth: 6.4" (163 mm) Splash out protection: >2" (50 mm) Operating Temp: 32 to 125° F (0 to 50° C) Storage Temp: -40 to 160° F (-40 to 70° C) Humidity Limits: 0 to 100% Weight: 2.5 lbs. (1.2 kg)

6 lbs. (2.7 kg) shipping Height: 11" (280 mm) >2" (50 mm) splash out protection Cable: 6', Switch: Momentary potted reed switch Switch rating: 30 VDC @ 2 A, 115 VAC @ 1 A Switch Closure Time: 135 ms Bounce Settling Time: 0.75 ms Pivot: Hardened SS Jewel & Pivot Bucket: UV protected ABS

DATA SAMPLE (ASCII):

Time	Date	Direction	Speed	Solar	Indoor	Outdoor	Humidity	Pressure	Daily Rain	Monthly Rain	Rainfall Rate
18:33	01/05/96	SSW	08MPH	002K	068F	032F	075%	30.27R	00.00"D	00.56"M	00.56"R
19:03	01/05/96	WSW	06MPH	001K	068F	030F	073%	30.28R	00.00"D	00.56"M	00.56"T
MIN	01/05/96	WSW	01MPH	001K	068F	030F	063%	30.10"	00.00"D	00.56"M	00.56"T
MAX	01/05/96	WSW	21MPH	002K	073F	041F	081%	30.28"	00.00"D	00.56"M	00.56"T

High Resolution Mode

Date	Time	Direction	Speed	Solar	Indoor	Outdoor	Humidity	Pressure
96/01/05	18:34:03	186	011.1MPH	0016K	068.4F	032.1F	075%	30.272F
96/01/05	19:04:05	174	009.3MPH	0006K	068.4F	030.1F	073%	30.280F

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