



TEXAS WEATHER INSTRUMENTS INC.

Manufacturer of Digital Weather Stations

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Weather Report Spec Sheet

WRL Model

The **Weather Report** tells at a glance the last time it rained, how hard and how much, the Heat Index, the Windchill Index or the Dewpoint. It can tell you instant or average wind speed and direction, outdoor and indoor temperatures, barometric pressure, humidity and the maximum and minimum of all values.

The **Weather Report** is available in two configurations, the WR-25 and the WRL. The WRL model has all the features of the WR-25 but adds memory and data buffering. Included with the WRL is a mast mounted junction box, a pagoda radiation shield and TWICal software.

WR-25 Features

NORMAL DISPLAY - Displays wind direction and speed; date and time, inside, outside, and aux temperatures, barometric pressure, humidity, daily, monthly, and term cumulative rainfall, (solar radiation in WR-25-S) and lunar tide cycle.

MIN/MAX READINGS - Displays minimum and maximum (since the last clear) wind speed and direction, temperature, barometric pressure, relative humidity, rainfall rate, (solar radiation in WR-25-S) and the date and time of its respective occurrence.

SELECTABLE SCALE - English or Metric.

WINDCHILL INDEX - Indicates Windchill factor.

COMFORT INDEX - Displays temperature humidity index.

DEWPOINT- Displays Dewpoint.

LAST RAIN - Shows date and time of last rain and rate.

CUMULATIVE RAINFALL - Registers rainfall over daily, monthly, and user defined time periods.

WIND AVERAGE - Displays the average speed and direction for previous minute.

RISE/FALL - Indicates rising or falling trend in temperature (solar radiation in WR-25-S), pressure, and humidity.

HOLD - Deactivates information cycling of respective display.

SELECT - Puts weather station into various setting functions.

LUNAR/TIDE CYCLE - predicts high and low tides.

WARRANTY - Limited One Year.

RS-232 ADAPTER - A serial port (RS-232 adapter) is built into every unit. This feature allows common serial printers to be plugged directly into the instrument (cable not included). The instrument may be directed to print at intervals chosen by the user. The weather station can also be tied directly into an IBM PC, or Macintosh computer, through its RS-232 adapter or plugged into a modem for remote monitoring.

NON-VOLATILE MEMORY - In case of power failure, the clock function, calibration and all data are preserved.

SPECIFICATIONS:

WINDSENSOR

Size: 21" wide, 12" tall, 4" deep, 20' cable w/RJ-11 connector

Temperature range: -40 to +120 degrees F

Wind direction: 16 points

Wind speed: 1 to 200 mph $\pm 1\%$

BAROMETRIC PRESSURE

Pressure range: 28 to 34 inches Hg $\pm 2\%$

Pressure resolution 0.01 inches Hg

Pressure accuracy: ± 0.03 at 75 degrees F

HUMIDITY/TEMPERATURE/PAGODA

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

Temperature range: -40 to +140 degrees F,

Temperature accuracy -40 to +140 deg. F) ± 1 degree F

Humidity range: 0 to 100% inches Hg $\pm 3\%$

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 60 μ A per 1000 Wm²

Rise Time: 30ns

Range: 0 to 1500 Wm²

Calibration: $\pm 10\%$ fso

LIGHTNING SENSOR

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

RAIN COLLECTOR

Size: 7.7" wide, 7.5" tall, 15.5" deep, Receiving Orifice Diameter 6.00"

Temperature Operating range: 32 to +130 degrees F, Temperature Limits -50F° to +130F°.

Resolution 0.01 inches Accuracy: $\pm 1\%$ @ 1" per hour

MODELS

- **WR-25 Standard Weather Report**, system includes indoor temperature, outside temp/humidity, wind direction and speed, barometric pressure and rainfall.
- **WR-25-C Weather Report Starter** system, includes indoor and outdoor temperature, wind direction and speed and barometric pressure (may be updated to Standard WR-25)
- **WR-25-S Weather Report** with solar radiation, includes indoor temperature, outdoor temp/humidity, wind direction and speed, barometric pressure, rainfall and solar radiation.

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WRL - Weather Report Logger

The WRL features a data logging capability along with all the other features found in the WR-25 . The WRL is available with 2K of memory (holds approximately 30 lines of data), 32K of memory (holds approximately 2000 lines of data) or 128K of memory (holds approximately 8000 lines of data). The logged data can be recalled on the display, downloaded into a computer or be queried by a modem. All WRL units are supplied with a wind sensor, a temperature and humidity sensor with a pagoda , a rain collector, a mast mounted junction box TWICal software, and a total of 120 feet of sensor cables (20 feet for the mast & 100 feet to the console). A barometric pressure sensor, an indoor temperature sensor, and a serial cable come with the console.

MODELS

- **WRL-25**
- **WRL-32**
- **WRL-128**
- **WRL-xxS**
- **WRL-xxL**
- **WRL-xxSL-Datalogger with Solar and Wetness Sensor**

DATA SAMPLE (ASCII)

Time	Date	Direction	Speed	Aux. Temp	Indoor	Outdoor	Humidity	Pressure	Daily Rain	Monthly Rain	Rainfall Rate
15:00	07/24/90	SE	03MPH	052F	069F	082F	090%	30.04R	00.01"D	01.20"M	00.00"R

15:30	07/24/90	SE	02MPH	052F	068F	072F	089%	30.04R	00.19"D	01.38"M	00.00"R
MIN	07/24/90	SW	00MPH	052F	067F	067F	054%	30.00"	00.19"D	01.38"M	00.00"R
MAX	07/24/90	SSE	25MPH	052F	071F	092F	099%	30.06"	00.19"D	01.38"M	00.72"R

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