

The RainWise Relative Humidity and Temperature Sensor

The RainWise RH/T sensor combines our temperature sensor with our relative humidity sensor. The sensors are mounted within a passive multi-plate solar shield. This dual design results in a compact unit which provides accurate, responsive measurements with a minimum of hysteresis.

The temperature sensor is available in several configurations, including RTD's, thermistors and thermocouples depending upon the user requirements. The standard sensor is a solid state integrated circuit with a built-in operational amplifier. This amplifier provides consistency against cable length variation and resistance to electrical noise problems. The relative humidity sensor is a thin film polymer capacitor. This is mounted within a porous plastic filter. Certification traceable to NIST is available for these sensors.

The RH/T is available with several mounting configurations. These include our standard Monopod plug-in mount, building side mounts and bracketed tower mounts. With the proper RainWise interface, the RH/T can be furnished with either an RS-232 digital or analog output. The RainWise RH/T sensor has a five year warranty.

SPECIFICATIONS

Relative Humidity

Range:	0 - 100 % RH. (0.00 to 1.00 Vdc)
Total Accuracy:	± 2.0 % RH @ 25° C, 10 - 90% RH
Operating Temperature:	-40°C to + 85 ° C. - see note.
Hysteresis:	± 0.8% of span maximum.
Linearity:	± 0.5% RH typical.
Repeatability:	± 0.5% RH.
Factory Calibration:	Supplied at 0% RH and 75.3% RH.

NOTE:

The accuracy of the humidity sensor is specified at 25° C. In order to achieve ± 2% accuracy over the operating temperature range, the temperature effects are compensated in the RainWise logger. The range for the system with this compensation is -40° C to + 85 ° C.

Temperature:

	<i>Standard</i>
Range:	-40 °C to +65°C.
Accuracy:	± 0.1 °C.
Resolution:	0.1 °F or 0.1°C.

	<i>Precision</i>
Range:	-50 °C to +65°C.
Accuracy:	± 0.1°C.
Resolution:	0.1 °F or 0.1°C.



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