



Texas Electronics, Inc.

The Gold Standard in Weather Instrumentation Since 1957

Ambient Air Temperature & Humidity

TTH-1315 Temperature Humidity Sensor



Description

The Texas Electronics, Inc. Model TTH-1315 Sensor utilized a Rotronics HygroClip S3 Humidity Temperature Probe with interchangeable sensing elements that do not require calibration.

The unit is encased in a corrosive-resistant spun aluminum radiation shield that allows for wind aspiration and protection from the sun's UV rays. The shield is finished in white baked-enamel to provide for virtual cosmetic invisibility while reflecting much of the radiant heat from surrounding objects and the sun.

Overcurrent protection is provided in a NEMA 4X enclosure that is mounted to the angled mounting bracket on the sensor. Transorbs are utilized to protect the sensor and signal conditioning units in an overcurrent situation.

With DC voltage applied to the sensor, the unit will return signal voltages that are linear to the range of the instrument. Signal conditioning is applied to ensure proper voltages are returned and can be amplified or modified to a current output to connect to any analog signal processing unit.

Specifications

Humidity Sensor:	ROTRONIC Hygromerò C94 (capacitive)
Temperature Sensor:	RTD Pt100 Ohm, 1/3 DIN
Sensor Protection:	Wire Mesh filter (standard) / foam filter (optional)
Measuring Range:	0-100 % Relative Humidity -40° to +140°F (-40° to +60°C)
Operating Limits:	Temperature Same as measuring range
Accuracy at 73°F / 23°C:	+/- 1.5% RH and +/- 0.5°F / 0.3°C - standard calibration +/- 1.0% RH and +/- 0.4°F / 0.2°C - special calibration (optional)
Repeatability:	Better than 0.5% RH and 0.1°C/ 32.18°F
Analog output signals:	0...100% RH = 0...1V (minimum load >10k ohm) -40...+140°F = 0...1V (-40...+60°C) Analog Signal Resolution 0.02% RH and 0.1°F
Sampling Time:	<0.7 sec
Maximum cable length:	5 m / 15 ft. for direct output Up to 100 m / 325 ft. with signal amplifier
Connection Type:	Bayonet cap on mounting connector
Protection grade:	IP65 (probe to connector)
Supply voltage:	3.5 ... 50VDC
Current consumption:	<4 mA
Minimum excitation time:	<4 sec
EMC compatibility (CE):	EN-50081-2, EN-50082-2
Material:	Polycarbonate, white
Dimensions:	Length: 100 mm (3.94") Diameter: 15 mm (0.59")
Weight:	14 g / 0.5 oz.

Features & Benefits

- Combines Temperature and Humidity onto one sensing unit
- Rotronics HygroClip S3 has interchangeable sensing elements requiring no calibration
- Stacked plate construction of shelter provides natural ventilation
- Quick-Release mounting bracket allows for easy installation and maintenance
- Aluminum radiation shield is lightweight and extremely durable
- White baked-enamel finish reflects most radiant heat from sun and surrounding objects

Ordering Information

<u>Model #</u>	<u>Description</u>
TTH-1315	Temperature & Humidity Sensor
TTH-1315A	Temperature & Humidity Sensor, 4-20 mA

Optional Parts / Accessories

H50	Interior Humidity Sensing element only
Cable	Additional Cable

Installation & Maintenance

The radiation shield with sensing element can be pole or mast mounted. Whenever possible, sensors should be installed at a height of 4 ft. (1.2 meters) or greater over earth or sod at least 100 ft. (30.48 meters) away from any concrete or other hard-surfaced area and not closer to any other object than four times the height of the object above the instrument shelter or remote sensors. Avoid roof installations if possible. If it is necessary to roof-mount shelters and sensors, they should not be closer than 30 ft. (9.14 meters) to any large, vertical reflecting surface (walls, etc.), exhaust fans, or cooling towers. Electronic remote sensors when roof-mounted should be at least 9 ft. (2.74 meters) or greater above the roof surface. To minimize radiation effects from the roof, they can also be mounted on a horizontal boom so that they will extend from the side of the building roof or tower assembly.