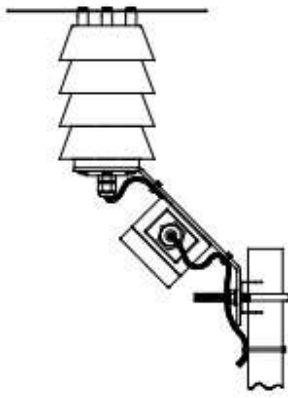




*"Relied on Worldwide in the Most Extreme Conditions"*



**TTH-1315  
TTH-1315-A  
Temperature & Humidity Sensor  
User's Manual**



## Model TTH-1315 Temperature Humidity Sensor

### DESCRIPTION

The Texas Electronics, Inc. Model TTH-1315 Sensor utilizes a Vaisala HMP60 Humidity Temperature Probe with interchangeable sensing elements that do not require calibration.

The unit is encased in a corrosion-resistant aluminum radiation shield that allows for wind aspiration and protection from the sun's UV rays. The shield is finished in white powder-coat 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.

<u>Specifications</u>	<u>TTH-1315</u>	<u>TTH-1315-A</u>
Sensor:	Viasala INTERCAP HMP60	Viasala INTERCAP HMP60
Sensor Protection:	Stainless steel sintered filter	Stainless steel sintered filter
Measuring Range:	0 to 100% Relative Humidity 40° to +140°F (-40° to +60°C)	0 to 100% Relative Humidity 40° to +140°F (-40° to +60°C)
Analog Output Signals:	0 to 1 V -40° to +140°F (-40° to +60°C)	4-20 mA -40° to +140°F (-40° to +60°C)
Analog Signal Resolution:	0.02% RH & 0.1°F	0.02% RH & 0.1°F
Operating Limits:	Same as measuring range	Same as measuring range
Accuracy:	+/- 1.5% RH and +/- 0.5°F / 0.3°C	+/- 1.5% RH and +/- 0.5°F / 0.3°C
Repeatability:	Better than 0.5% RH and 0.1°C / 32.18°F	Better than 0.5% RH and 0.1°C / 32.18°F
Protection Grade:	IP65	IP65
Supply Voltage:	5 to 28 VDC	5 to 28 VDC
Current Consumption:	1 mA average, max. peak 5 mA	1 mA average, max. peak 5 mA
Minimum Excitation Time:	4s	4s
EMC Compatibility (CE):	EN 61326-1	EN 61326-1
Material:	Powder-coat, White Aluminum	Powder-coat, White Aluminum
Dimensions:	12" Height	12" Height
Diameter:	7¼"	7¼"
Warranty:	3 years	3 years

## **FEATURES & BENEFITS**

- Combines temperature and humidity in one sensing unit
- Vaisala HMP60 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 powder-coat finish reflects most radiant heat from sun and surrounding objects

## **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 installed 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 they extend from the side of the building roof or tower assembly.

## **ORDERING INFORMATION**

Model #	Description
TTH-1315	Temperature & Humidity Sensor
TTH-1315-A	Temperature & Humidity Sensor, 4-20 mA

### Optional Parts / Accessories

Radiation Shield Assembly  
Vaisala HMP60 Humidity & Temperature Probe

# WIRING DIAGRAM

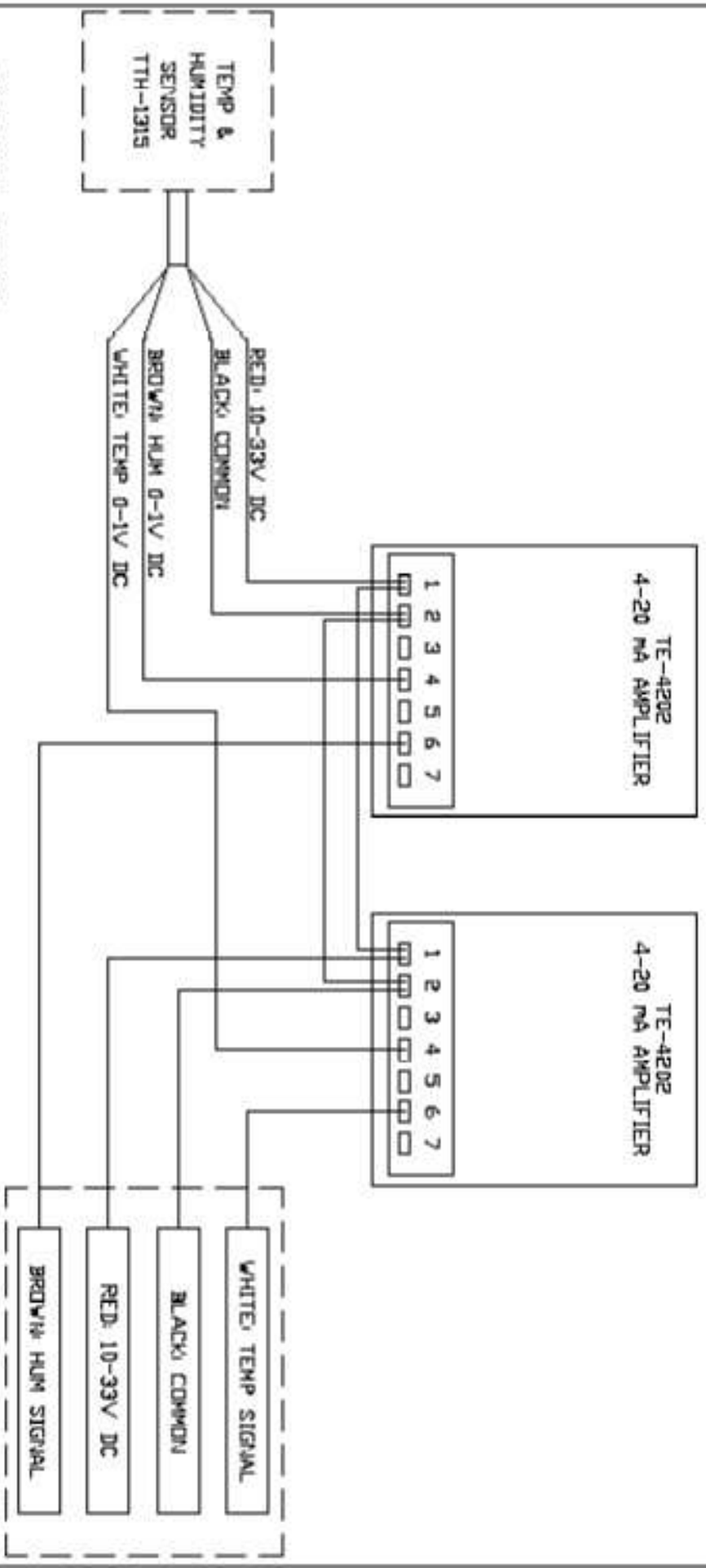


TYPICAL RANGE  
TEMPERATURE, -40° TD 60° C (-40° TD 140° F)  
HUMIDITY, 0-100% RH

OUTPUT  
TEMPERATURE, 0-1 VDC  
HUMIDITY, 0-1 VDC


<i>Texas Electronics, Inc.</i>			
The Gold Standard in Weather Instrumentation Since 1967			
TITLE TTH-1315 HUMIDITY & TEMPERATURE WIRING DIAGRAM			
SIZE A	FIG. NO.	DWG. NO.	REV.
A		3005	A
SCALE		SHEET 1-1	

# WIRING DIAGRAM



**TYPICAL RANGE**  
 TEMPERATURE: -40° to 60° C (-40° to 140° F)  
 HUMIDITY: 0-100% RH

**OUTPUT**  
 TEMPERATURE: 4 to 20 mA  
 HUMIDITY: 4 to 20 mA

<b>Texas Electronics, Inc.</b>			
The Gold Standard in Weather Instrumentation Since 1967			
			
<b>TTH-1315A HUMIDITY &amp; TEMPERATURE</b>			
<b>TITLE</b>			
<b>SIZE</b>	<b>FRGM NO.</b>	<b>DRG. NO.</b>	<b>REV.</b>
A		3004	A
<b>SCALE</b>			<b>SHEET 1-1</b>

## **Warranty**

Texas Electronics, Inc. (hereafter TEI) warrants the equipment manufactured by it to be free from defects in material and workmanship. Upon return, transportation charges prepaid to TEI, within three (3) years of original shipment of sensors and one (1) year of original shipment of electronics, recorders and indicators, TEI will repair or replace, at its option, any equipment which it determines to contain defective material or workmanship, and will return said equipment to purchaser, F.O.B., TEI. Texas Electronics shall not be obligated however to repair or replace equipment which has been repaired by others, abused, improperly installed, altered or otherwise misused or damaged in any way. TEI will not be responsible for any dismantling, re-assembly, or reinstallation charges.

This warranty is in lieu of all other warranties, expressed or implied. TEI shall not be liable for any special, indirect, incidental or consequential damages claimed in connection with any rescission of this agreement by purchaser.