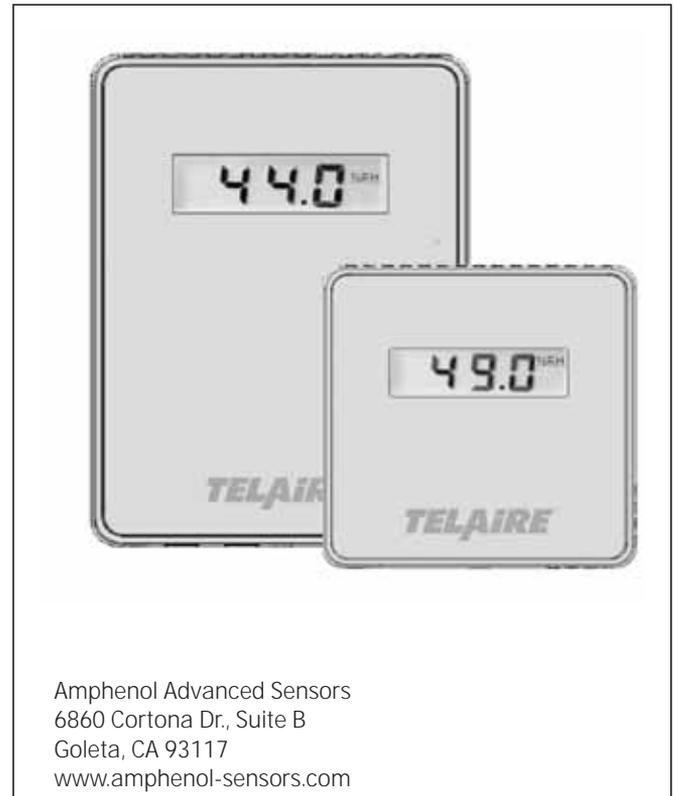
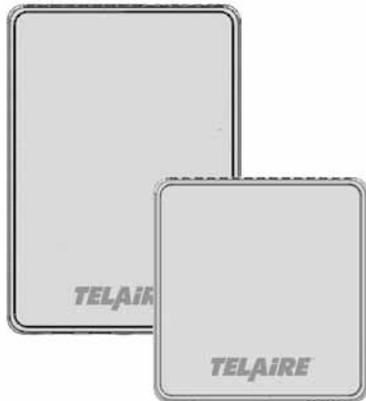


## Installing the Sensor

### !WARNING!

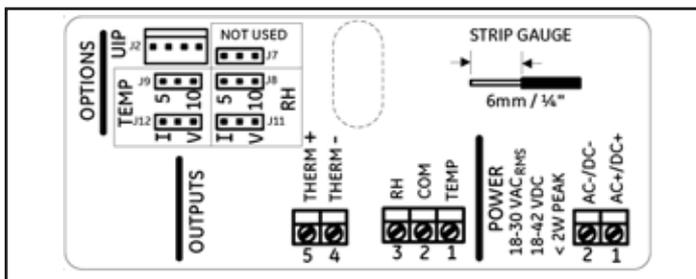
Before performing service or maintenance operations on the systems, turn OFF main power switches to the unit. Electric shock can cause personal injury. Please read and follow the wiring instructions precisely; miswiring may cause permanent damage to the product.



Amphenol Advanced Sensors  
6860 Cortona Dr., Suite B  
Goleta, CA 93117  
[www.amphenol-sensors.com](http://www.amphenol-sensors.com)

## Basic Installation

1. Separate the case into its front and rear sections.
2. Secure the rear section of the case to the wall or junction box using the supplied screws, and make necessary wire connections.
3. Mount the Controller on the base by aligning the top clips and then securing to the bottom clips. Secure the Ventostat with the supplied set screw. A one-minute stabilization warmup will take place.



Internal Label for Display Units

# Telaire Humidity/Temperature Wiring Diagrams

The T8700 Telaire Humidity/Temperature family of products has a configuration that provides active outputs for RH and Temperature (terminals 1, 2 and 3) as well as a passive connected 10k type II Thermistor (terminals 4 and 5) and an independent thermistor.

For electrical wiring and power supply requirements, please follow the specific instructions for wiring. The recommended wire gauge is 18-22 AWG (1.0 to 0.75 metric).

## !WARNING!

The T8700 Telaire Humidity/Temperature products have two terminal pins that are connected inside the sensor to a common/ground: pin #2 on the I/O terminal block and pin #2 on the power block. Do NOT connect positive (hot) 24 VAC power line to terminal number 2 of the power block.

## Caution!

The Telaire Humidity/Temperature products are either 3-wire or 4-wire type configurations, powered by either AC or DC voltage. They are not 2-wire or loop-powered devices. Wiring the units as 2-wire or loop-powered devices will irreparably damage the sensors and void the warranty.

Note: *For additional flexibility of temperature measurements, the T8700 models contain a passive thermistor (terminal pins #4 and 5), which is electrically isolated from the other circuitry and should be wired independently from active RH/temperature outputs. The thermistor has no connection to the Ventostat common ground and/or power.*

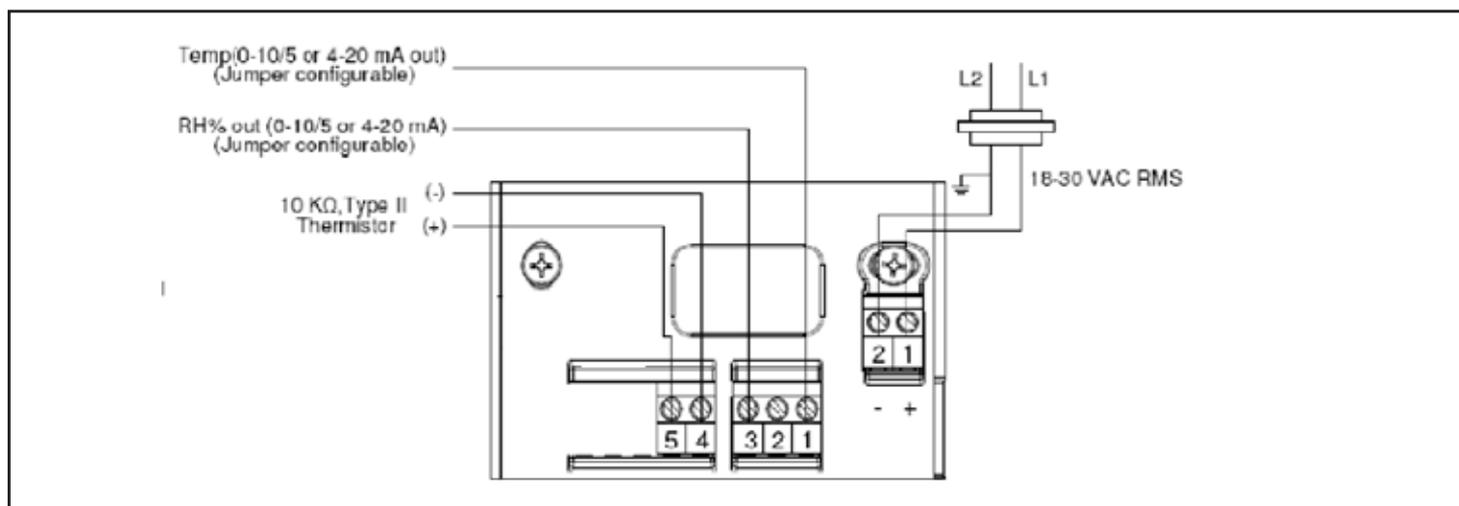


Figure 1: Wiring for 3-Wire System, AC Power

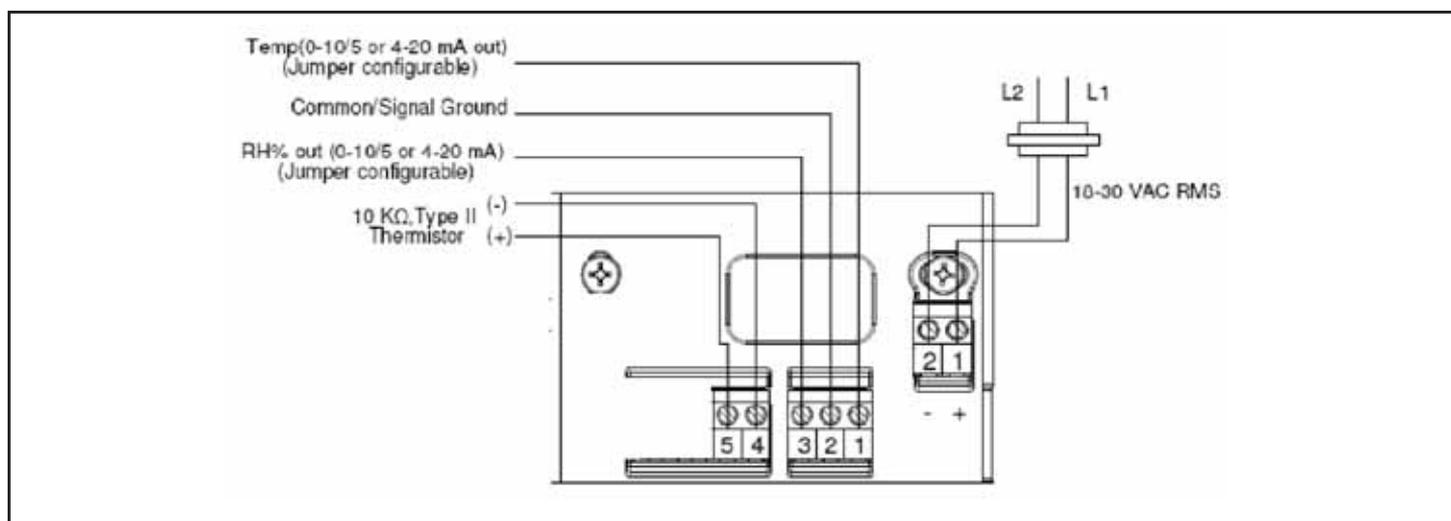


Figure 2: Wiring for 4-Wire System, AC Power

## 8700 Specifications

### Sensing Method

Fully integrated humidity and temperature

### RH Sensing Element

Capacitive polymer sensor

### RH Range

0% to 99% RH (non-condensing)

### RH Accuracy (25°C)

±2.5% RH (20 to 80% RH)  
±3.5% RH (<20% and >80% RH)

### Active Temperature Range

0 to 50°C

### Active Temperature Accuracy

±0.8°C @ 22°C

### Thermistor Type

NTC 10 K thermistor (passive) datasheet available on request.

### Thermistor Accuracy

±1°C (15° to 35°C)

## Output

### Analog

- 0 to 10 V (100 Ω output impedance) or
- 4 to 20mA ( $R_L$  maximum 500 Ω)
- Digital to Analog Error ±1%

### Power Supply Requirements

18-30 VAC RMS, 50/60 Hz, or 18 to 42 VDC, polarity protected

### Power Consumption

<0.3 W using voltage outputs  
<1.1 W using two current outputs  
0.8 W typical using two current outputs

### Certifications

CE and RoHS compliant

## Operating Conditions

- 32°F to 122°F (0°C to 50°C)
- 0 to 95% RH, non-condensing

## Storage Conditions

-40°F to 158°F (-40°C to 70°C)

## Flammability Classification

UL94 5VA

## Enhanced Field Serviceability

The T8700 series features a field-replaceable Relative Humidity (RH) sensor tip module that allows the end user to replace the sensor on-site while maintaining ±2.5% RH accuracy. The user simply powers off the unit, installs the new sensor module and powers back the unit. This virtually eliminates the need for time consuming and costly factory calibration, while reducing downtime during service intervals to near zero.

## Warranty/Other

### Warranty

24 months parts and labor

### Warranty Repairs

Amphenol Thermometrics, Inc. will repair Telaire product that fails to meet the terms provided for in the Return and Warranty Policy Statement (See, <http://www.amphenol-sensors.com>). Warranty period shall start from date of manufacture and be based on product category and type of equipment as specified in Table 1: Product Warranty Periods. For all warranty repairs, Amphenol Thermometrics, Inc. will bear all product repair parts, labor, and standard ground shipping charges.

## Customer Support Centers

### U.S.A.

#### Sales and Services

#### (Repair/Calibration):

Amphenol Thermometrics, Inc.  
St Marys Center  
967 Windfall Road  
St Marys, Pennsylvania 15857  
U.S.A.  
T: +1 814-834-9140  
F: +1 814-781-7969

### U.K.

#### Sales and Service:

Amphenol Thermometrics (U.K.) Limited  
Crown Industrial Estate Priorswood Road  
Taunton, TA2 8QY, UK  
T: +44 1823-335-200

### Brazil

#### Sales and Service

Amphenol TFC DO Brazil LTDA  
Rodovia Governador Adhemar  
Pereira de Barros KM 121,5 S/N  
13098-396 Campinas  
Sao Paulo, Brazil

### U.S.A.

#### Technical Support:

Amphenol Thermometrics, Inc.  
St Marys Center  
967 Windfall Road  
St Marys, Pennsylvania 15857  
U.S.A.  
T: +1 814-834-9140  
F: +1 814-781-7969

Or

Amphenol Advanced Sensors  
6860 Cortona Dr., Suite B  
Goleta, CA 93117

### China:

Amphenol (Changzhou)  
Connector Systems  
305 Room, 5D  
Jintong Industrial Park  
Wujin, Changzhou, Jiangsu, China  
T:+86 519 8831 8080 ext. 50087  
F:+86 519 8831 2601

# Amphenol

## Advanced Sensors

[www.amphenol-sensors.com](http://www.amphenol-sensors.com)

[www.telaire.com](http://www.telaire.com)

©2014 Amphenol Thermometrics, Inc. All rights reserved.  
Technical content subject to change without notice.