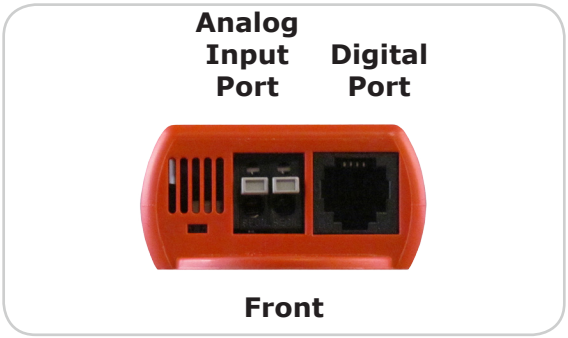
Installation Note

AVTECH's Digital Temperature & Analog Sensor monitors ambient indoor temperature and a connected 0 to 5 VDC analog sensor. This compact, light-weight sensor has operating ranges of -40º to 185º Fahrenheit (-40º to 85º Celsius) and 0 to 5 VDC; it maintains accuracy within +/- 2º C and +/- 0.075 volts.

Digital Temperature & Analog Sensor Package Contents

- One (1) Digital Temperature & Analog Sensor
- One (1) 25' RJ-11 cable

Digital Temperature & Analog Sensor



Install Your Digital Temperature & Analog Sensor

Do not use this sensor in hazardous (classified) locations or life safety applications.

Step 1: Mount your Digital Temperature & Analog Sensor.

Locate the sensor where you wish to measure temperature. You may hang it from a nail, screw or hook through the flange hole, secure it with Velcro or simply place it on a flat surface.

Step 2: Connect your Digital Temperature & Analog Sensor to Room Alert.

1. Run the built-in 25' cable back to your Room Alert. Try to avoid running it near large electromagnetic devices or fluorescent lights, which produce EMI that can interfere with the sensor's readings.
2. Connect the sensor to a digital sensor port on your Room Alert.

Step 3: Connect your Digital Temperature & Analog Sensor to an analog sensor.

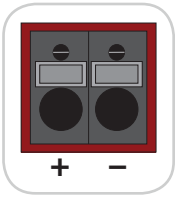
Do not connect the analog inputs on AVTECH products to live circuits of over 5 VDC.

Use only low-voltage 2-wire cable to connect analog inputs.

You may use any low-voltage two-wire cable to connect the analog input port to the analog output port on your analog sensor.

AVTECH stocks 25' speaker wire for this purpose; please contact your Product Specialist to purchase this cable.

1. Separate and strip both ends of a low-voltage two-wire cable (such as speaker wire). Expose about ¼" of wire.
2. Connect one set of leads to the analog input port on the Temperature & Analog Sensor. Be sure the bare wire, not the insulation, connects to the port. Note that the port is polarized: the left contact is positive (+) and the right is negative (-).



3. Run the cable back to your analog sensor. Try to avoid running it near large electromagnetic devices or fluorescent lights, which produce EMI and can interfere with sensor readings.
4. Connect the +/- wires to the matching +/- contacts on your analog sensor.

Sensor Features & Specifications

Environment Condition Monitored	Indoor ambient temperature & analog sensor output
Type Of Sensor	Digital
Power Supply	Powered by Room Alert
Sensor Cable Type	
Digital Sensor Cable	RJ-11 (standard straight-through telephone cord)
Included	Yes
Length	25'
Maximum Extendible Length	100'
Analog Input Cable	Low-voltage 2-wire speaker cable
Included	No
Maximum Extendible Length	900'
Temperature Range	-40° F to 185° F (-40° C to 85° C)
Accuracy	+/- 2° C
Resolution	0.03125° C
Analog Input Range	0-5 VDC
Accuracy	+/- 0.075 V
Resolution	0.01 V
Compatible Products	Room Alert 32E/W, 24E, 12E, 4E, 3E, 3W and Wireless Sensor Hubs

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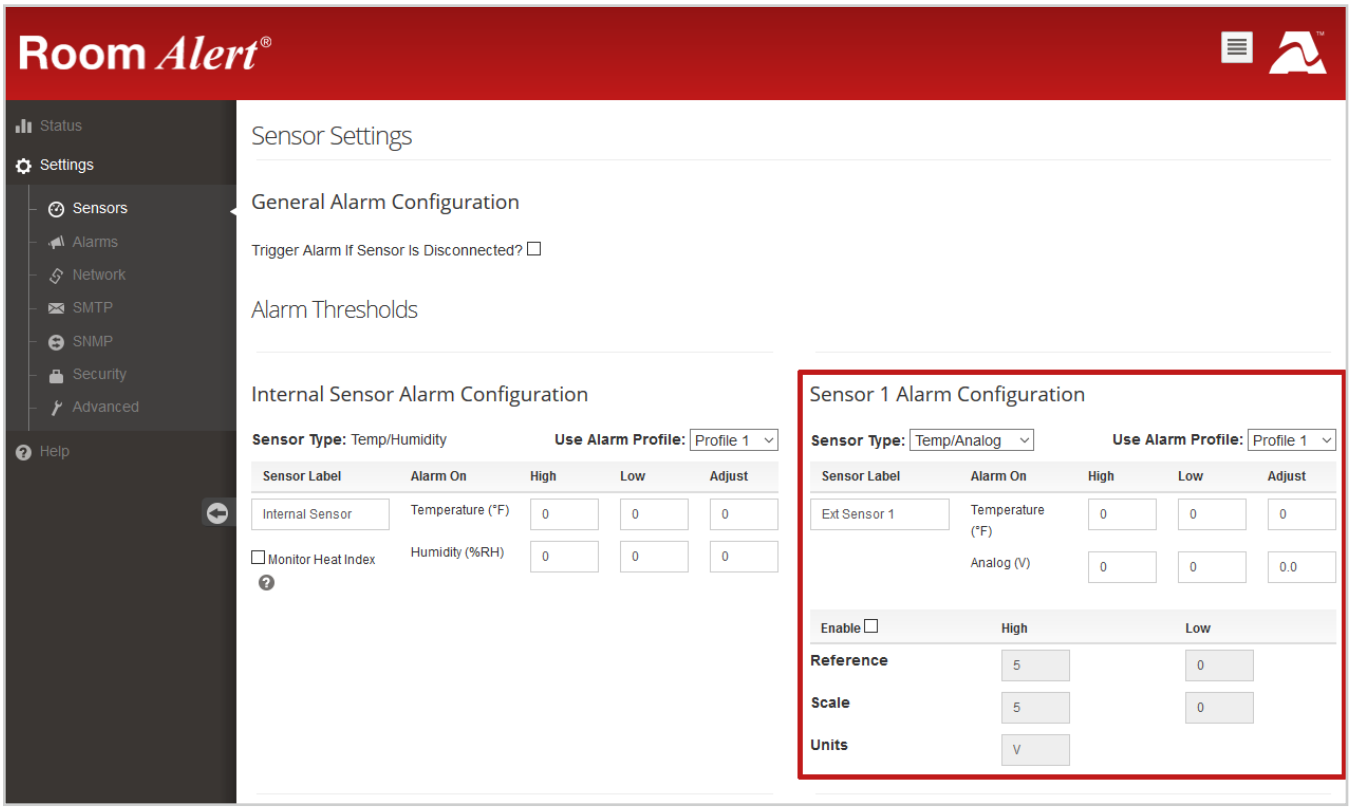
Configure Your Digital Temperature & Analog Sensor

Use Room Alert's Built-In Web Interface

Navigate to **Settings** → **Sensors** in the web interface of your Room Alert. The options you see below will vary depending on the model.

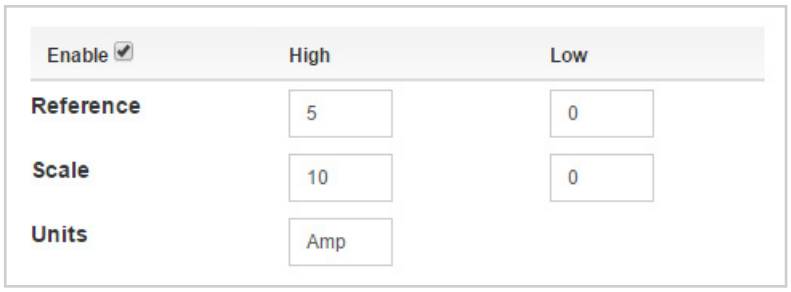


1. Scroll to your external digital sensor(s), the total number of which will vary depending on the Room Alert model.

2. Find the digital sensor interface that matches the port you connected your Digital Temperature & Analog Sensor to. For example, if you used the first digital port on your Room Alert, look for *Sensor 1 Alarm Configuration*; if you used the second, look for *Sensor 2 Alarm Configuration*, and so on.

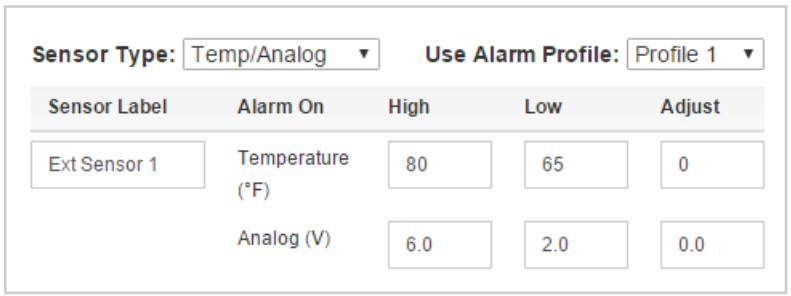
3. Notice that your Room Alert automatically detects the digital sensor and inserts a drop-down list in *Sensor Type*, which defaults to *Temp/Humidity*. Select **Temp/Analog** to bring up the interface for your Digital Temperature & Analog Sensor.

4. Then, configure the set of fields on the bottom of the Temperature & Analog Sensor display to calculate your analog sensor's output signal to scale. In this example, we are converting volts to amperage:



- Click **Enable** to turn on the *Reference*, *Scale* and *Units* fields.
- In *Reference*, enter values from 5 to 0 that represent the *High* and *Low* points of your analog sensor's output signal range. Here, we've left the default values of 5 to 0.
- In *Scale*, enter the *High* and *Low* points of the scale you want the *Reference* reading to be converted to. In this example, we would like to convert 0-5 volts to 0-10 amps, so we've put "10" in *High* with "0" in *Low*.

5. Next, fill in the set of fields on the top of the Temperature & Analog Sensor display:



- In *Sensor X Label*, you may leave the default, "Ext Sensor X," or enter something more descriptive of up to 15 characters. You may use the following characters in sensor labels: letters, numbers, spaces, hyphens (-), underscores (_) and periods (.).
- *Alarm On* automatically populates with the default temperature scale and *Analog*. Please refer to your Room Alert *User's Guide & Reference Manual* to change the default temperature scale.
- In *High* and *Low*, you may leave the default, 0—which means no alarm is configured—or enter values for high and low thresholds. Your Room Alert generates alerts based on these thresholds.

  Note that for the analog *High* and *Low* fields, the values must fall within the analog *Scale* range from the previous step. In our example, we entered a conversion scale of 0 to 10 (amps) in the previous step, and we've chosen to generate alarms at the high and low thresholds of 6 and 2 (amps).

- In *Adjust*, you may leave the default, 0, or enter a value to adjust the temperature or analog reading if it differs from a known value at that location.

- In *Use Alarm Profile*, which controls light towers and relays on your Room Alert, you may leave the default, **Profile 1**, or choose another profile from the drop-down menu.

6. Select **Save Settings** at the top or bottom of the page. Your Room Alert will automatically reboot and commit your changes.