

RMS-I-STH

Temperature/Humidity Sensor

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1. Introduction

The dual sensor has both temperature and humidity measuring capabilities in a single sensor. This means a single port can have two sensors, saving ports for additional sensors.

A specially designed CAT 5 cable assures a correct reading up to 100 feet, and is in standard length 30cm.

When the dual sensor is plugged into the RJ-45 port, the system will auto detect the sensor, and it will display Temperature and Humidity for each port to which a dual sensor is connected. A built in graph option is available on the system for graphing temperature and humidity variations over a period of time.

The SNMP OID for the temperature sensor on RJ45#1 is **.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.0**

The SNMP OID for the humidity sensor on RJ45#1 is **.1.3.6.1.4.1.3854.1.2.2.1.17.1.3.0**

2. Specifications & Features

2.1. Temperature

- Measurement range Celsius: -40°C to +75°C
- Measurement resolution Celsius: 1°C
- Measurement accuracy Celsius: ±0.2°C accuracy from -10°C to +75°C
- Measurement range Fahrenheit: -67°F to +167°F
- Measurement resolution Fahrenheit: 1°F increments.
- Measurement accuracy Fahrenheit: ±0.4°F accuracy from +14°F to +167°F

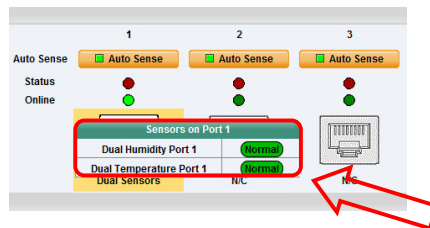
2.2. Humidity

- Measurement range: 0 to 100% Relative humidity

- Sensor element wetttable without damage
- Resolution: 0.5 %
- Accuracy at 25°C ±5%,
- Working Range -20°C +60°C
- Communications cable: RJ-45 jack to dual sensor using UTP Cat 5 cable.
- Power source: powered by the RAMOS. No additional power needed.
- The RAMOS auto detects the presence of the dual sensor
- Up to 8 dual sensors per RAMOS Optima
- Up to 500 temperature sensors per RAMOS Ultra using expanders
- Full Autosense including disconnect alarm

3. Configuring the Dual sensor:

On the device click on “Sensors” tab and when you move with cursor on “Dual sensor”, the window shown below will pop up. Then select the temperature or humidity sensor.



Since all of Cone’s intelligent sensors are configured similarly, not every field is described below. The descriptions below describe the fields which are specific to the humidity sensor.

3.1. Temperature

A commonly used SNMP OID for the temperature sensor is the number of degrees. This information can be used for graphing the sensor.

The SNMP OID for the temperature sensor on RJ45#1 is **.1.3.6.1.4.1.3854.1.2.2.1.16.1.3.0**

Current Reading: The number of Degrees is displayed in this read-only field. This is an integer SNMP OID field which has a precision of 1 degree. The value can be polled via SNMP, and the data can be used to graph the temperature variations. The value displayed can be in Fahrenheit or Celsius. If communication to the temperature sensor is lost, the sensor value -512 will be returned by a *snmpget*.

Status: If at any time communications with the temperature sensor are lost, the status of the temperature sensor is changed to sensorError. If communications with the temperature sensor are reestablished the status will be formed by comparing the Degree to the high and low thresholds.

Degree Type: The Degree Type can be set to Fahrenheit or Celsius. When the Degree Type is changed all the threshold fields will change their values automatically. The system stores the thresholds for both Celsius and Fahrenheit independently allowing you to switch between the two.

Reading Offset: The Reading Offset parameter can be used to calibrate temperature and humidity sensors. If for example the actual reading of a sensor is 28 degrees Celsius and the Reading Offset is set to 2 the temperature will be displayed as 30 degrees Celsius.

Hint:

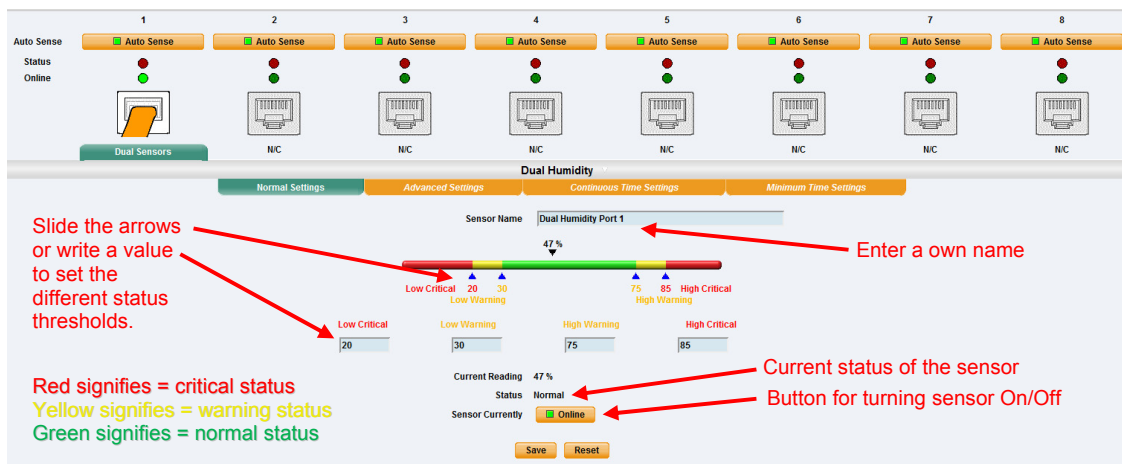
The actual precision for the temperature sensor is 0.9°F (0.5°C). Nevertheless, the Current Reading field only displays the temperature with an increment/decrement of 1 degree. To retrieve the actual reading from the temperature sensor, another SNMP OID must be used; it is:

.1.3.6.1.4.1.3854.1.2.2.1.16.1.14.0 for the sensor on RJ45#1.

However, since this is an integer SNMP OID, the temperature must be multiplied by 10 before polled via SNMP. Therefore, the returned value has to be divided by 10 to become the actual temperature.

3.2. Humidity

Please see the annotated screenshot below describing the fields for the Humidity sensor setup tab.



A commonly used OID for the Humidity sensor is the percentage, this can be graphed.

The SNMP OID for Humidity sensor on RJ45#1 is **.1.3.6.1.4.1.3854.1.2.2.1.17.1.3.0**

Current Reading: The relative Humidity Percent is displayed in this field. This is a read-only field. This integer OID and can be polled. The data can be used to graph the Humidity.

Status: If at any time communications with the humidity sensor are lost, the status of the Humidity sensor is changed to sensorError. When communications with the humidity sensor are re-established the status will be formed by comparing the percentage to the high and low thresholds.