# daisyTemp sensor

## Introduction

Temperature sensors are important where optimum temperature control is paramount. If there is an air conditioning malfunction or abnormal weather conditions, damage to information, delicate electronic equipment or warehouse stock may occur.

The daisyTemp sensor is a multipoint temperature measurement solution specially designed for efficient rack temperature monitoring.

Up to 8 daisyTemp sensors can be stringed together and plugged into one securityProbe Intelligent Sensor port enabling the unit to measure up to a maximum of 64 temperature points.

The sensor cables can be extended using Ethernet cable with a maximum daisy-chain length of 500 ft.

As with all our intelligent sensors its presence will be automatically detected by the unit. Each sensor has its own SNMP OID so that data can be collected over the network and graphed.

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

The SNMP OID for the temperature sensor degrees is:
.1.3.6.1.4.1.3854.1.2.2.1.19.33.<port>.2.1.3.<subport>

where
<port> is port the unit starting at 1 to 7
<subport> port of temperature sensor on the string

**Specifications & Features:**

- o   Measurement range Celsius:-55°C to +75°C

- o   Measurement resolution Celsius: 1°C increments.

- o   Measurement accuracy Celsius: ±0.5°C accuracy from -10°C to +75°C

- o   Measurement range Fahrenheit: -67°F to +167°F

- o   Measurement resolution Fahrenheit: 1°F increments.

- o   Measurement accuracy Fahrenheit: ±0.9°F accuracy from +14°F to +167°F

- ○ Communications cable: RJ-45 jack to daisyTemp sensor using UTP Cat5 cables.

- ○ Sensor type: semiconductor microprocessor controlled.

- ○ Power source: powered by the securityProbe. No additional power needed.

- ○ SecurityProbe auto detects the presence of the daisyTemp.

- ○ Measurement rate: one reading every 10 seconds

- ○ Up to 8 daisyTemp sensors per sensor port, measure up to 64 temperature points on one securityProbe.

- ○ The securityProbe temperature detail page allows you to set and get the working parameters of a specific temperature sensor.

## Configuring the Temperature Sensors.

**a)** Plug the daisy-cahin of daisyTemp sensors  into one of the RJ45 sensor ports on the rear panel of the unit.

**b)** Now point your browser to the IP address of the unit (default, 192.168.0.100). Next you need to login as the administrator using your administrator password (default is "public"). You will then be taken to the summary page.

**c)** From the summary page you need to select the sensors tab.

**d)** You should now be able to setup the thresholds for each of the sensors on you're the daisy-chain. The low critical, low warnings, normal, high warnings, high critical values can be set from this page.

*Now we will cover the settings that are specific to each sensor on your temperature string. The following applies to all of the sensors in the daisy-chain.*

**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*.

> *Hint: The actual precision for each of the temperature sensors 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:*
>
> *.1.3.6.1.4.1.3854.1.2.2.1.19.33.<port>.2.1.14.<subport>*
> *where*
> *<port> is port the unit starting at 0 to 7*
> *<subport> port of temperature sensor on the string*
>
> *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.*

**Status:** If at any time communications with a daisy-chain temperature sensor is lost, the status of the temperature sensor will change to **sensorError**. If communications with the temperature sensor is re-established the status will be formed by comparing the Degree to the high and low thresholds.
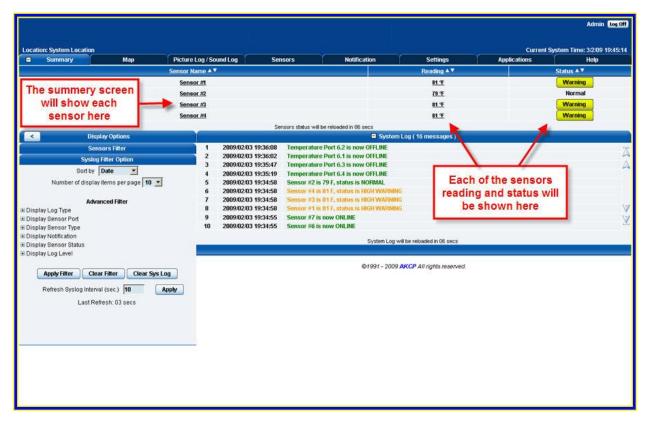
**Degree Type:** The Degree Type can be set to Fahrenheit or Celsius. When the Degree Type is changed all the threshold fields will change their values automatically. The securityProbe stores the thresholds for both Celsius and Fahrenheit independently allowing you to switch between the two.

**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.
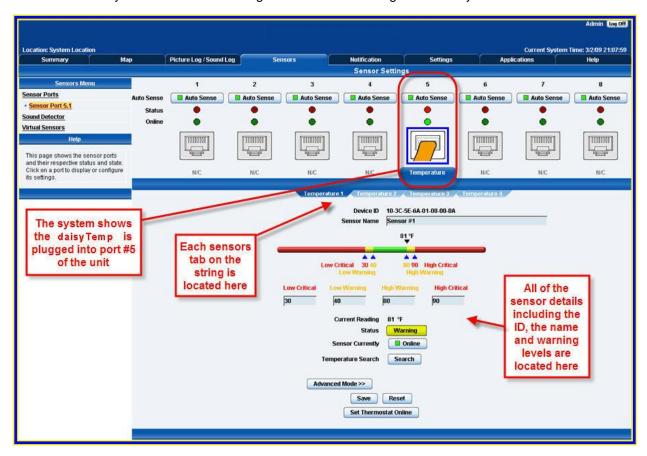
## Screen shots of the temperature daisy-chain configuration

Please see the annotated screenshots below describing the fields for the daisyTemp sensor setup

In this example, the Summery tab shows all the sensors including the status of each on the daisy-chain including the reading in temperature and the status.

The Sensors tab is the area where we can edit each individual sensors setting. By clicking on each sensors tab the system allows us to change each sensors setting on the daisy chain.



.Advanced settings of each sensor in the daisy-chain can be setup by clicking on the "Advanced Mode" button