RMS-I-ST

Temperature sensor

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Content

1. 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.

A temperature sensor is with 30cm cable. 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 the temperature sensor is the number of degrees. This information can be used for graphing the sensor.

The SNMP OID for the temperature sensor degrees on RJ45#1: .1.3.6.1.4.1.3854.1.2.2.1.16.1.3.0

1.1. Specifications & Features:

- Measurement range Celsius:-55°C to +75°C
- Measurement resolution Celsius: 1°C increments.
- Measurement accuracy Celsius: ±0.5°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: ±0.9°F accuracy from +14°F to +167°F
- Communications cable: RJ-45 jack to temperature sensor using UTP Cat 5 cable.
- Sensor type: semiconductor microprocessor controlled
- Power source: powered by the RAMOS unit. No additional power needed.
- The RAMOS auto detects the presence of the temperature sensor
- Measurement rate: one reading every second
- Up to 8 temperature sensors per RAMOS Optima
- Up to 500 temperature sensors per RAMOS Ultra using expanders

- Full Autosense including disconnect alarm
- The RAMOS Temperature Detail page allows you to set and get the working parameters of a specific temperature sensor.

2. Configuring the Temperature Sensor

a) Plug the sensor into one of the RJ45 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. The layout of the next page will vary depending on your unit so please refer to your units manual.

d) You should now be able to setup the thresholds for your sensor. The low critical, low warnings, normal, high warnings, high critical values can be set from this page.

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 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 RAMOS 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.