

RMS-I-DE-06

Rope Water Sensor

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1. Introduction

Water can enter a building in many different ways and, in some cases, remain undetected. This can cause damage and problems to sensitive electronic equipment. Computer and mainframe rooms which have a false floor and ceilings could harbor undetected water, which is only detected after a problem occurs.

The Rope Water sensor is capable of detecting the presence of or non-presence of water. It contains a microprocessor controlled capacitance measuring circuit which is far more precise than commercially available standard water detectors which measure the resistance of water.

The detector provides feedback to the web based interface which will indicate the presence/absence of water with a Normal/Alert, or Critical indication. The unit will retain any error condition until it is read via a *snmpget*. Therefore, if it encounters a critical condition at any time, it will report that condition before it returns to a normal state.

(Introduction continued)

The value of the status for the SNMP OID for the Rope Water sensor can be Normal, No Status, Critical or Sensor Error.

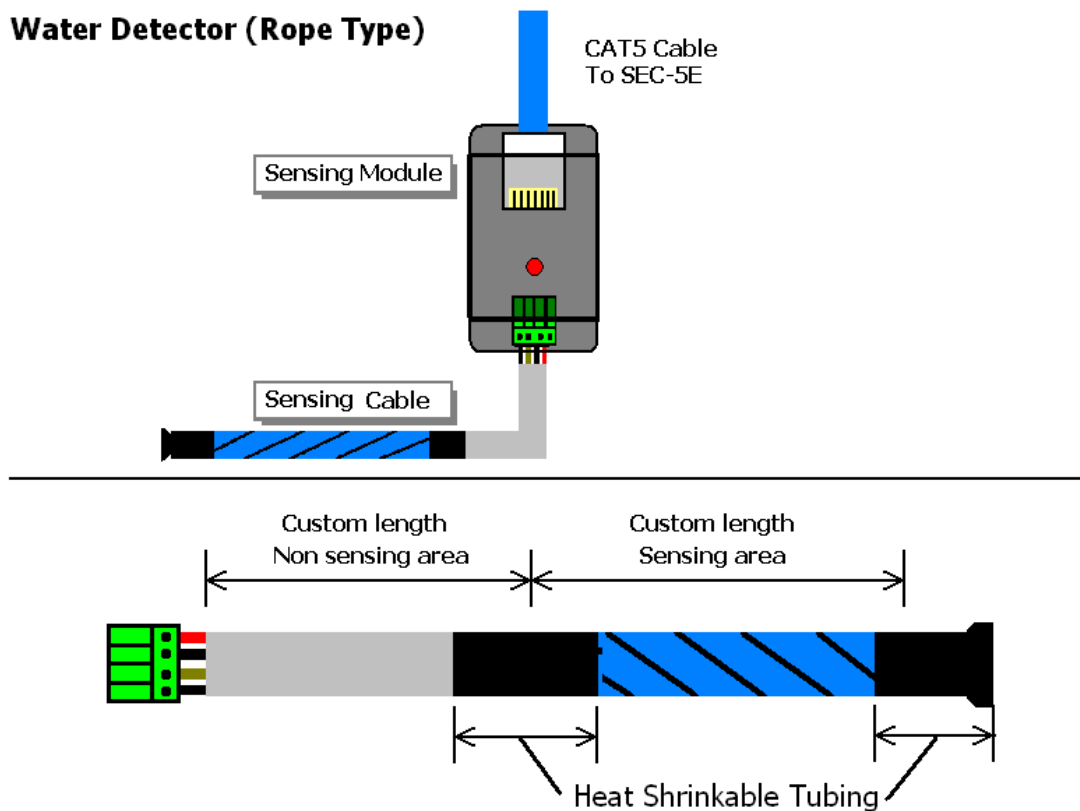
Rope Water sensor OID:

For a switch type sensor on RJ45#1 the OID for the status is **.1.3.6.1.4.1.3854.1.2.2.1.18.1.3.0**

1.1. Features:

- On/Off alarm signal of Water detected
- Accurate, cost effective Water detecting system
- Rope portion of the sensor is submersible
- Sensor type - open/closed contact switch
- Power source: powered by the unit. No additional power needed.
- Power Consumption: Typical 125 mWatt, 25 mA

- The unit auto detects the presence of the Rope Water sensor
- Up to 8 Rope Water sensors per RAMOS Optima unit.
- Hundreds of Rope Water sensors per RAMOS Ultra with Expanders
- Full Autosense including disconnect alarm if cut, broken, or disconnected
- Sensing rope cable can be pre-ordered from a 3m minimum to any custom run length of up to 50 m.
- Non-sensing cable comes in a standard 6m run length.
- Can be connected to any of the RAMOS Optima's or RAMOS Ultra's 8 RJ-45 Intelligent sensor ports or any of the RAMOS Ultra EX-18's expansion module ports.
- Can be extended up to 30 meters using normal CAT5\6 LAN cable from the RJ-45 sensor ports.
- Measurement range: Wet or Dry (-20 degrees C- +60 degrees C)
- Comes fully assembled and includes the rope portion that is the water sensing cable, the non-sensing area cable (from the rope to the sensing module) and the main sensing module.



Rope Water sensor product assembly diagram

2. Configuring the Rope Water sensor

- a) Plug the sensor into one of the RJ45 ports on the rear panel of the unit or expansion module.
- 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 unit’s 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.

Status: If the sensor is offline, the status is No Status. If the sensor is online, and there is no water detected, the status is Normal. If water is detected, then the status is Critical. If at any time communications with the Rope Water sensor are lost, the status of the Rope Water sensor is changed to Sensor Error.

2.1. Configuring the Rope Water sensor on a RAMOS Optima unit

The Rope Water sensor shows the “Normal” status in Summary page after connecting the sensor.

Location: Conteg Prague RAMOS OPTIMA User Log Off

Current System Time: 5/2/05 17:40:17

Port	Type	Description	Reading	Status	Action	Graph
1	Humidity	Humidity1_Description	38 %	Normal	-	View
2	Temperature	Temperature1_Description	26 °C	Normal	-	View
3	Temperature	Temperature2_Description	27 °C	Normal	-	View
4	Temperature	Temperature3_Description	26 °C	Normal	-	View
5	Security	Security4_Description	-	No Status	Remove	-
6	-	-	-	-	-	-
7	-	-	-	-	-	-
8	Liquid	Water4_Description	-	Normal	-	-

System Log (442 entries, 10 pages)

1	05/02/05 17:39:47	User login attempt succeeded from IP address 192.168.161.107
2	05/02/05 17:39:14	Security sensor on RJ4584 is Not Plugged In, status is now Sensor Error
3	05/02/05 17:37:23	Security sensor on RJ4584 status is now Sensor Normal
4	05/02/05 17:35:27	User login attempt succeeded from IP address 192.168.161.107
5	02/02/05 00:28:26	Security sensor on RJ4584 status is now Critical
6	02/02/05 00:28:23	Security sensor on RJ4584 status is now Sensor Normal
7	02/02/05 00:28:20	Security sensor on RJ4584 status is now Critical
8	31/01/05 19:37:47	Temperature sensor on RJ4583 is 23 degrees C, status is now Sensor Normal
9	31/01/05 19:36:24	Temperature sensor on RJ4583 is Not Plugged In, status is now Sensor Error
10	31/01/05 02:59:20	Humidity sensor on RJ4581 is 57 %, status is now Sensor Normal

< Prev | Oldest | Newest | Next >

Use the Sensors page and the Water Detector sensor settings in the RAMOS Optima’s web interface for configuring the Rope Water sensors settings.

Location: Conteg Prague

RAMOS OPTIMA

Current System Time: 5/2/05 17:45:10

Sensors

Sensor Settings

Liquid (Water8 Description) on Port 8

Port 8

Description Water8 Description

Status Normal

Sensor Online/Offline Online

Go Online/Offline Online

Save Reset

Leak Location Sensor Settings

Sensing Length -

The Raw Value 0

Units meters

Sensing Type water

Sensing Impedance(x100) 1300

Save Reset

The Rope Water sensor shows the “Critical” status in the Summary page after detecting water.

Port	Type	Description	Reading	Status
1	Humidity	Humidity1 Description	38 %	Normal
2	Temperature	Temperature1 Description	26 °C	Normal
3	Temperature	Temperature2 Description	26 °C	Normal
4	Temperature	Temperature3 Description	26 °C	Normal
5	-	-	-	-
6	-	-	-	-
7	-	-	-	-
8	Liquid	Water8 Description	-	Critical

2.2. Configuring the Rope Water sensor on a RAMOS Ultra unit

The Rope Water sensor shows the “Normal” status in Summary page after connecting the sensor and when water is detected it will show “Critical” in this page and Syslog. Detailed information’s about status will be written in syslog memory and shown on syslog page with the timestamp.

RAMOS ULTRA

Current System Time: 16/07/2012 10:07:53

Sensors

Host Name	Type	Sensor Name	Reading	Status
Main Module	Dual Humidity	Dual Humidity Port 2	38 %	Low Warning
	Dual Temperature	Dual Temperature Port 2	25.9 °C	Normal
	Temperature	Temperature Port 1	25.5 °C	Normal
	Water	Water Detector Port 8	-	Normal

Sensors status will be reloaded in 07 secs

System Log (102 of 171 messages)

1	2012/07/16 09:50:10	Dual Humidity Port 2 is 37 %, status is Low Warning
2	2012/07/16 09:50:10	Dual Humidity Port 2 is 37 %, status is Low Warning
3	2012/07/16 09:50:09	Dual Temperature Port 2 is now ONLINE
4	2012/07/16 09:50:09	Dual Humidity Port 2 is now ONLINE
5	2012/07/16 09:50:05	Temperature Port 1 is 26.5 °C, status is Normal
6	2012/07/16 09:50:04	Temperature Port 1 is now ONLINE
7	2012/07/16 09:49:56	Water Detector Port 8 status is Normal
8	2012/07/16 09:49:55	Water Detector Port 8 status is Critical
9	2012/07/16 09:49:55	Water Detector Port 8 is now ONLINE
10	2012/07/16 09:48:55	Temperature Port 1 is now OFFLINE

System Log will be reloaded in 08 secs

Use the Sensors page and the Water Detector sensor settings in the RAMOS web interface for configuring the Rope Water sensors settings.

Location: System Location Current System Time: 16/07/2012 09:59:42

Summary Sensors Notification Access Control Settings Applications Help

Sensors Menu

- Sensor Ports
- Expansion Boards
 - Power Meter
 - Add Meter
 - Stats
- Virtual Sensors

SNMP OID Get SNMP OID

Help









This page shows the sensor ports and their respective status and state.
Click on a port to display or configure its settings.

Helpful Suggestion

Continuous Time for Sensor
One way to eliminate false warnings in an unstable temperature environment is to add time in the continuous time to report feature here.

Minimum Time Status
Prevents the status from fluctuating within the time set. Eg. Sensor can only show high critical state once within 3 seconds. If value is set to 3 seconds.

Sensor Settings

1	2	3	4	5	6	7	8
Auto Sense <input checked="" type="checkbox"/> Auto Sense	Auto Sense <input checked="" type="checkbox"/> Auto Sense	Auto Sense <input checked="" type="checkbox"/> Auto Sense	Auto Sense <input checked="" type="checkbox"/> Auto Sense	Auto Sense <input checked="" type="checkbox"/> Auto Sense	Auto Sense <input checked="" type="checkbox"/> Auto Sense	Auto Sense <input checked="" type="checkbox"/> Auto Sense	Auto Sense <input checked="" type="checkbox"/> Auto Sense
Status ●	Status ●	Status ●	Status ●	Status ●	Status ●	Status ●	Status ●
Online ●	Online ●	Online ●	Online ●	Online ●	Online ●	Online ●	Online ●
 Temperature	 Dual Sensors	 N/C	 N/C	 N/C	 N/C	 N/C	 Water

Normal Settings **Advanced Settings** **Continuous Time Settings** **Minimum Time Settings**

Sensor Name: Water Detector Port 8

Status: Normal

Sensor Currentity: ● Online

Description of Status When Normal	Normal
Description of Status When Critical	Critical

Save Reset