

# RAMOS PLUS

RACK MONITORING SYSTEM

**NOTIFICATIONS MANUAL**

**➤ EN**

**CONTEG**

## Table of Contents

Introduction.....	3
What is the RAMOS PLUS and Thermal sensor ST3H .....	3
RAMOS PLUS Features: .....	3
Events .....	3
Notifications .....	5
Notifications page .....	6
Create an Action with the Action Wizard.....	6
Dry Contact Action setup .....	7
Email Action setup.....	8
Relay Action setup.....	10
Siren Action setup .....	12
SMS Action setup (RAMOS PLUS GSM only) .....	13
Troubleshooting the SMS Action.....	15
SNMP Trap Action setup .....	15
SNMP v1 action .....	16
SNMP v2c action.....	18
SNMP v3 action .....	20
Telephone Call Action setup.....	24
Example notification setup: SMS Notification.....	27
Heartbeat Messages.....	29
Macro Description for actions.....	35
Troubleshooting .....	36

## Introduction

This manual covers all of the built in notifications on the RAMOS PLUS and how to configure them.

### What is the RAMOS PLUS and Thermal sensor ST3H

The RAMOS PLUS is a high speed, accurate, intelligent monitoring device, featuring a completely embedded host and operating system. We've combined the low cost and simplicity of use of the RAMOS OPTIMA, along with many advanced features of our RAMOS ULTRA platform.

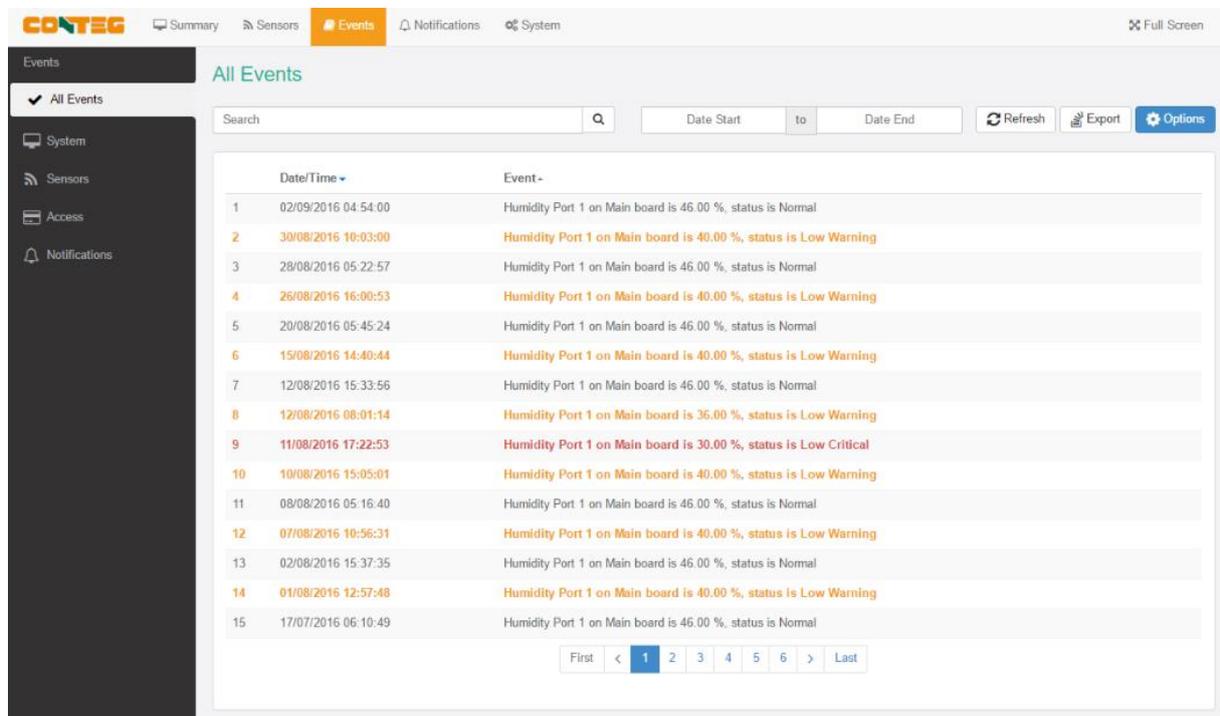
The Rack sensor ST3H combines 4 sensors into one sensor port on the RAMOS PLUS, specially designed to monitor the air entering and leaving a computer rack. The Thermal Rack Map is performed from the CONTEG Pro Server using the Rack sensor ST3H connected to the RAMOS PLUS. The Rack sensor ST3H monitor the temperature and humidity at different points of the rack.

### RAMOS PLUS Features:

- IP based, including SNMPv3 and HTTPS
- Send encrypted SNMP Trap and Email Notifications
- Supports 4 Intelligent Sensors
- Optional cellular modem with external antenna
- Notification Wizards
- Support Daisy Chained Temperature sensors and expander D8-8
- Front and Rear Thermal Mapping (ST3H) for any server cabinet

## Events

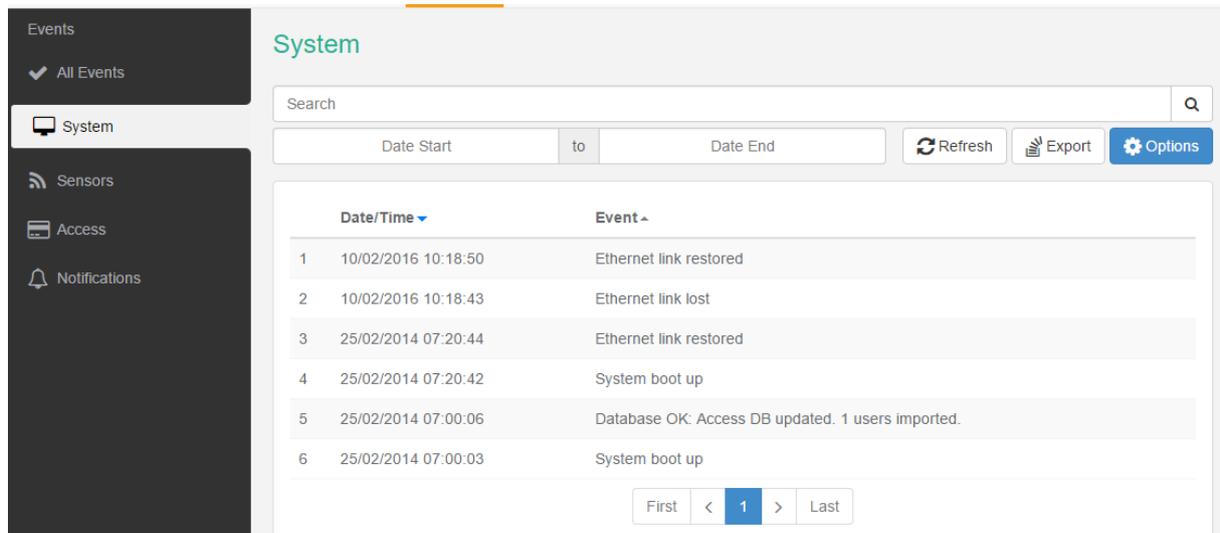
The Events page contains all logged events that the unit stores. It's functioning like a categorized syslog, where you can search for a specific event, and also export the logged entries to a file.



The screenshot shows the CONTEG web interface with the 'Events' tab selected. The page title is 'All Events'. There is a search bar and filters for 'Date Start' and 'Date End'. Below the filters is a table of events. The table has two columns: 'Date/Time' and 'Event'. The events listed are related to humidity on the Main board, with statuses ranging from Normal to Low Warning and Low Critical. At the bottom of the table, there is a pagination control showing 'First', '<', '1', '2', '3', '4', '5', '6', '>', and 'Last'.

Date/Time	Event
02/09/2016 04:54:00	Humidity Port 1 on Main board is 46.00 %, status is Normal
30/08/2016 10:03:00	Humidity Port 1 on Main board is 40.00 %, status is Low Warning
28/08/2016 05:22:57	Humidity Port 1 on Main board is 46.00 %, status is Normal
26/08/2016 16:00:53	Humidity Port 1 on Main board is 40.00 %, status is Low Warning
20/08/2016 05:45:24	Humidity Port 1 on Main board is 46.00 %, status is Normal
15/08/2016 14:40:44	Humidity Port 1 on Main board is 40.00 %, status is Low Warning
12/08/2016 15:33:56	Humidity Port 1 on Main board is 46.00 %, status is Normal
12/08/2016 08:01:14	Humidity Port 1 on Main board is 36.00 %, status is Low Warning
11/08/2016 17:22:53	Humidity Port 1 on Main board is 30.00 %, status is Low Critical
10/08/2016 15:05:01	Humidity Port 1 on Main board is 40.00 %, status is Low Warning
08/08/2016 05:16:40	Humidity Port 1 on Main board is 46.00 %, status is Normal
07/08/2016 10:56:31	Humidity Port 1 on Main board is 40.00 %, status is Low Warning
02/08/2016 15:37:35	Humidity Port 1 on Main board is 46.00 %, status is Normal
01/08/2016 12:57:48	Humidity Port 1 on Main board is 40.00 %, status is Low Warning
17/07/2016 06:10:49	Humidity Port 1 on Main board is 46.00 %, status is Normal

The default view is the All Events which contains all logs in one view. We'll explain all of the categories below.



You can filter the events by type, by clicking on the tabs.

In this picture we've chosen to display only the **System** events.

#### Events by category:

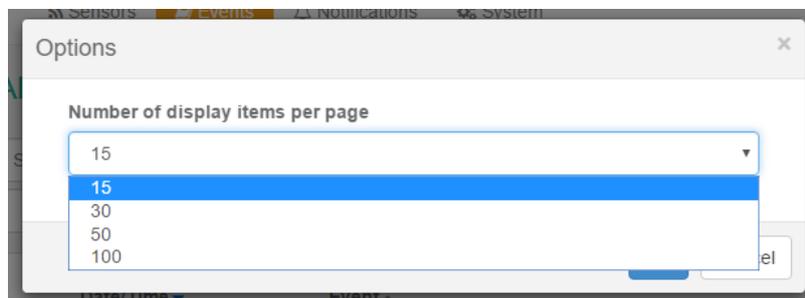
**All Events** - contains all logs from the device, sorted by date and time; you can specify the start- and end dates to narrow the list, or choose a specific log category.

**System** - contains the logs for the device's system events, such as reboot, firmware update etc.

**Sensors** - contains logs for all sensor related events, such as status changes, online/offline etc. and the port number where the sensor is attached.

**Access** - contains logs for all user authentication-related events, such as access granted/denied.

**Notifications** - contains logs for the active notifications on the device, for example the result of an email notification, heartbeat message or an SNMP Trap.

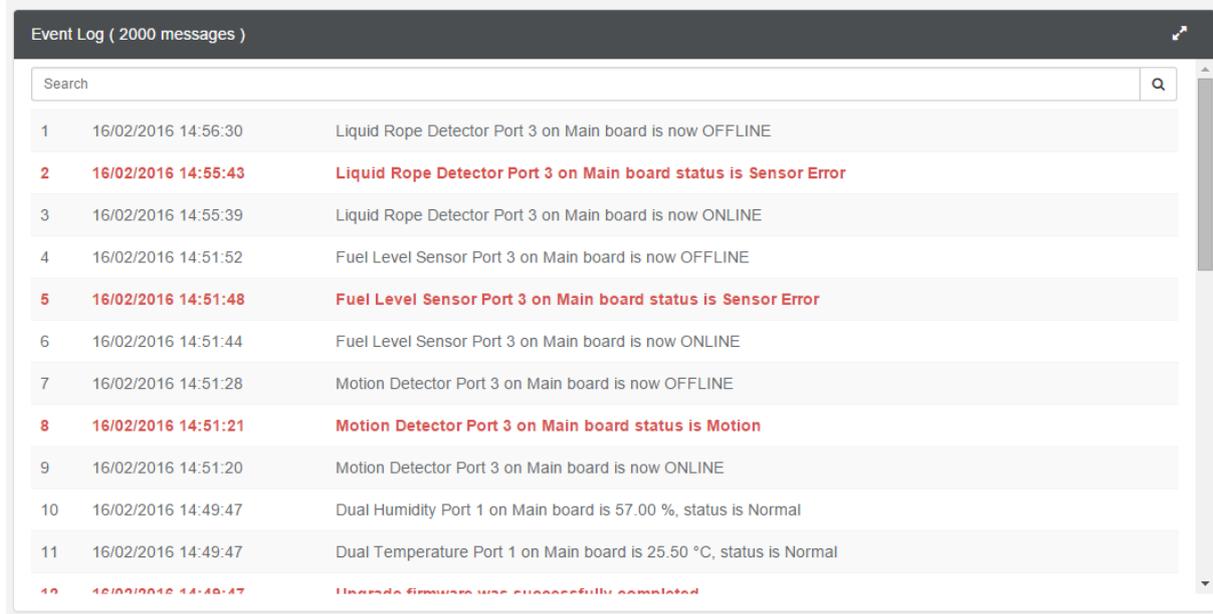


In the **Options**, you can change the number of log entries displayed per page. The default is 15.

If you click on the **Export** button, a confirmation popup window will appear, asking if you'd like to export the log entries.

If you answer yes, then the full event log will be downloaded as a text file.

The file name will contain the IP address of the unit, for example: log\_10.1.1.146.txt



The unit's **Summary** page also shows the **Event** Log, which contains all entries from the "All Events" category. The last 30 entries are shown, but if you're scrolling down the list, more events (30 more) will be loaded automatically. You can view the full log if you keep scrolling down.

## Notifications

If you setup a notification you can define the action to take when a sensor gives a reading beyond your previously set thresholds. This allows you to determine how you will be notified that a sensors reading has reached the specified thresholds (high warning, critical etc).

### What function do the different types of notifications provide?

The notifications are used to notify you when a sensor reading has hit a certain preset "critical" threshold. There are many ways you can be notified. They are as follows:

**SNMP Trap:** This form of notification sends out a signal to your SNMP trap receiver server.

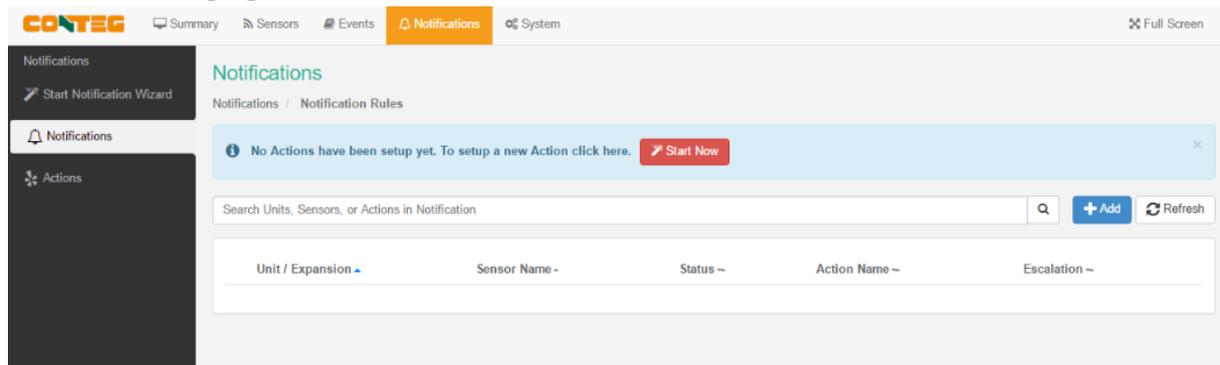
**E-Mail:** This sends a notification via e-mail.

**SMS:** This sends an SMS message to your mobile phone.

**Relay:** The relay is used as a switch, for example it could switch on an air con unit if the temperature reading of a temperature sensor reaches a certain threshold.

**Telephone call:** Will call you and play a customizable text to speech message.

## Notifications page



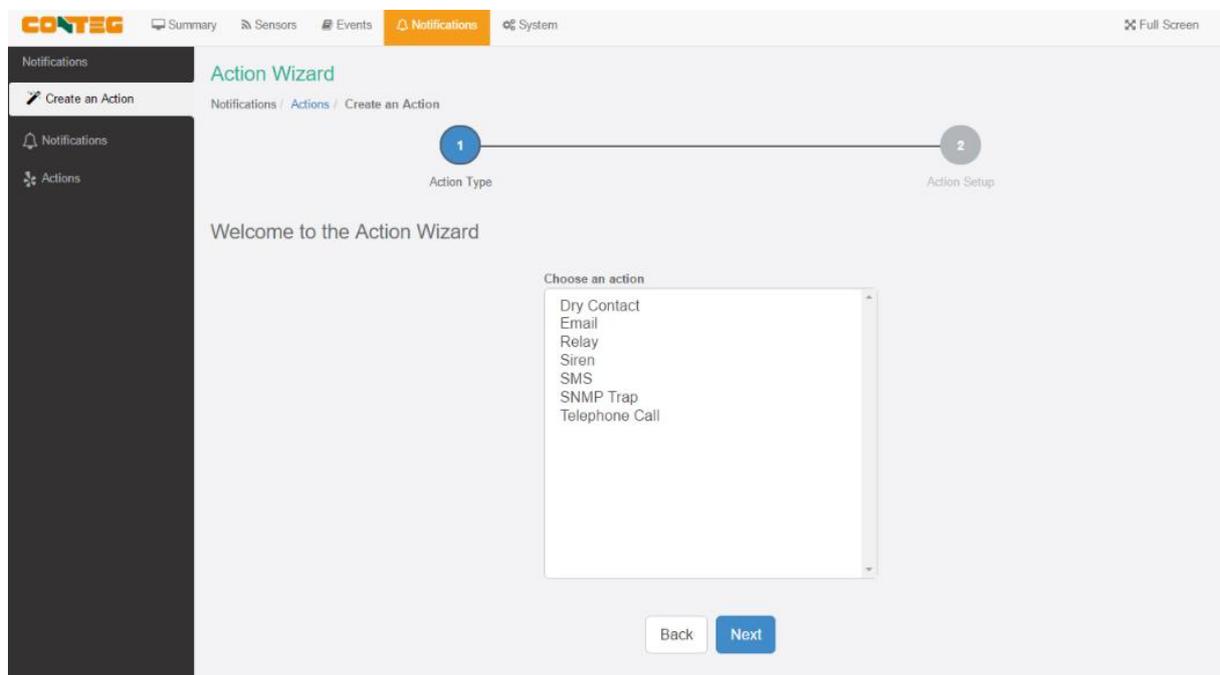
This is the **Notifications** page. If you have notifications set up, they will appear in the list and you can edit or remove them.

If you don't have any actions set up, you'll need to create them first before making notifications. The notice to run the **Action Wizard** is displayed on the top for easy action setup. Click on the **Start Now** button or the **Start Notification Wizard** tab to start the wizard. In the next section we'll show you how to set up the actions.

After you have actions set up, you can link the actions to a sensor with the **Add** button.

All notifications are following the same setup steps with the **Link Notification Wizard**. We'll show you how to use this wizard with an example notification below in the manual with an SMS action, you'll then be able to configure other notifications similarly.

## Create an Action with the Action Wizard



This is the Action Wizard's welcome page; the supported Web UI configurable actions are shown. Select one to configure and click **Next**.

We'll show you each action's configuration in the following sections.

Note: CPS (CONTEG Pro Server) allows more types of actions to be set up.

## Dry Contact Action setup

You can use the Dry Contact Action to control a dry contact when a sensor reaches a certain threshold.

The screenshot shows the CONTEG Action Wizard interface. The top navigation bar includes 'CONTEG', 'Summary', 'Sensors', 'Events', 'Notifications', and 'System'. The left sidebar has 'Notifications' and 'Actions' sections. The main content area is titled 'Action Wizard' and shows a progress bar with two steps: '1 Dry Contact Information' and '2 Complete'. Below the progress bar, the 'Step 1 - Dry Contact Information' form is displayed. It contains the following fields: 'Action Name' (text input with 'Dry Contact Action'), 'Unit / Expansion' (dropdown menu with 'Main board'), 'Dry Contact' (dropdown menu), 'Action' (dropdown menu with 'Turn Low'), and 'Delay Before Action' (text input with '0' and a '0s' suffix). A note below the form states: 'Note: Controlled dry contact must be set to notification control mode.' At the bottom of the form are 'Back', 'Finish', and 'Cancel' buttons, and a green 'Finish and Setup Notification' button.

**Note:** The dry contact needs to be connected to the unit before it can be configured, and it needs to be set to **Notification Control** mode. This mode is only selectable with the **Output direction** (see below).

If you click on the **Finish and Setup Notification** button, this will launch the **Link Notification Wizard** where you can use the new action for making a notification.

You'll have the following options for controlling the dry contact with the action:

The screenshot shows a dropdown menu for the 'Action' field. The menu is open, showing the following options: 'Turn Low', 'Turn Low', 'Turn High', 'Turn Low Until Sensor Normal', 'Turn High Until Sensor Normal', 'Turn Low Until Acknowledge', 'Turn High Until Acknowledge', and 'Cycle the Dry Contact'. The 'Turn Low' option is currently selected. Below the dropdown menu, there is a 'Delay Before Action' field with a value of '0' and a '0s' suffix. Below that, there is a 'Cycle Time' field with a value of '5' and a '5s' suffix.

If you choose to cycle the dry contact, you can specify the cycle time.

You'll need to change the Dry Contact sensor to **Output direction** mode from the **Sensors** page as shown below:

1 Auto Sense Dual Humidity

2 Auto Sense Relay

3 Auto Sense Dry Contact I/O

4 Auto Sense Dual Humidity

Dry Contact I/O Advanced

Sensor Name Dry Contact Port 3

Sensor Status Critical

Sensor Currently Online

Direction  Input  Output

Description of Status When High High

Description of Status When Low Low

Description of Status When Sensor Error Sensor Error

Save Cancel

Change the **Direction** from Input to **Output** and click **Save**.

Dry Contact I/O Advanced

Control Mode Notification Control

Normal State  Close/GND  Open/+5 Volts

Graph Enable  Enable  Disable

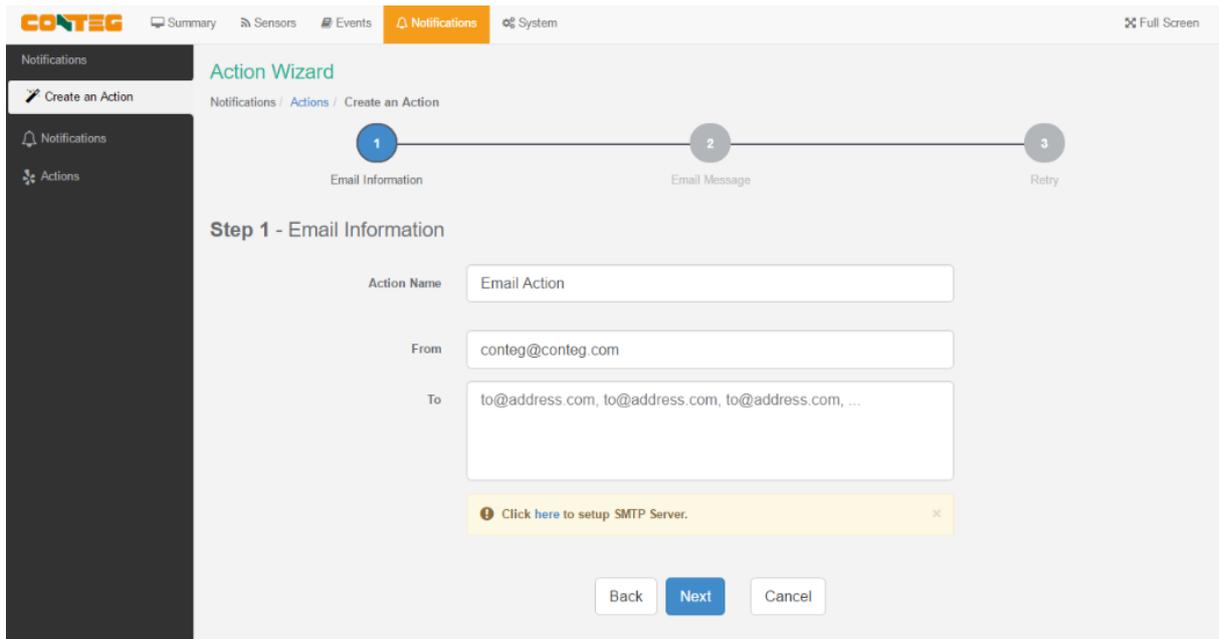
Filter Status  Enable  Disable

Save Cancel

Then you'll be able to choose the **Notification Control** mode in the **Advanced** tab.

### Email Action setup

You can use the Email Action to send a notification by email when a sensor reaches a certain threshold.

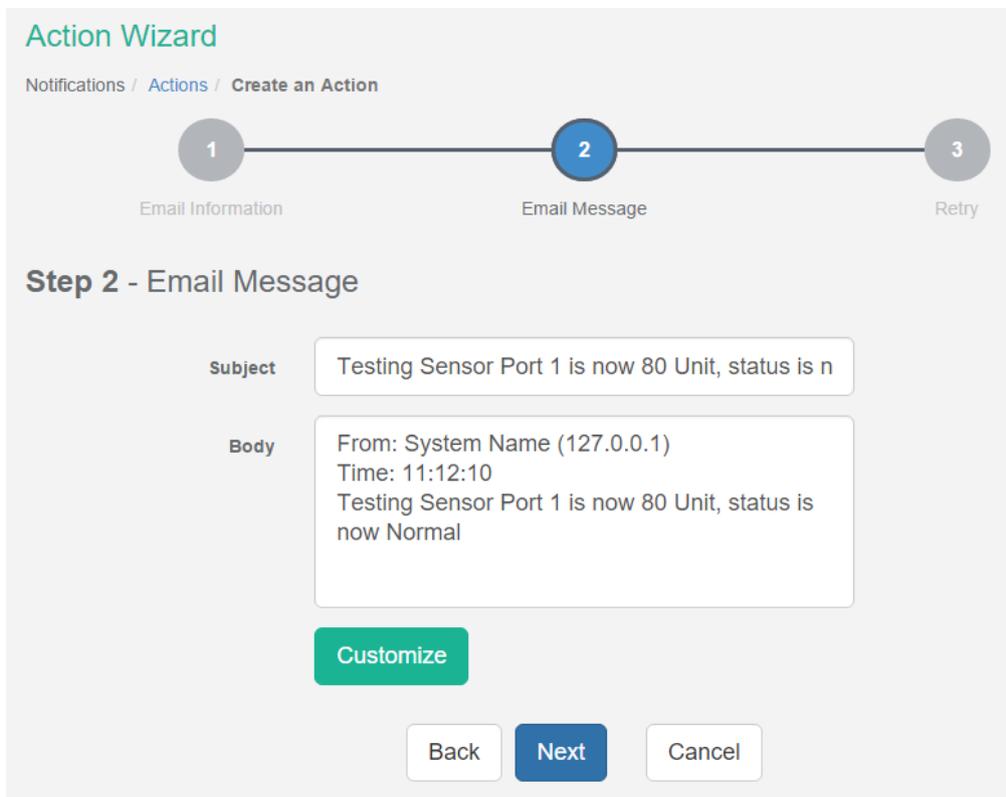


**Note:** The SMTP server settings needed to be configured on the unit, before this action works.

All email actions will use this SMTP server for sending emails.

You can find more information in the Introduction manual about how to set up the SMTP server on the System page although it's very straight-forward.

Either click on the link on the notice, or go to the **System/SMTP** page for the configuration.



After clicking “Next” you will get a page where you can input the e-mail name and message. Press the “Customize” button and the fields will re-write in a format that will allow for an automated e-mail that will display the sensor information.

### Step 2 - Email Message

**Subject**

**Body**

For all possible macro values (dynamic text values starting with \$) you can see a detailed list at the end of this manual.

### Action Wizard

Notifications / Actions / Create an Action

1 — 2 — 3  
Email Information — Email Message — Retry

### Step 3 - Retry

**Maximum Times to Retry**

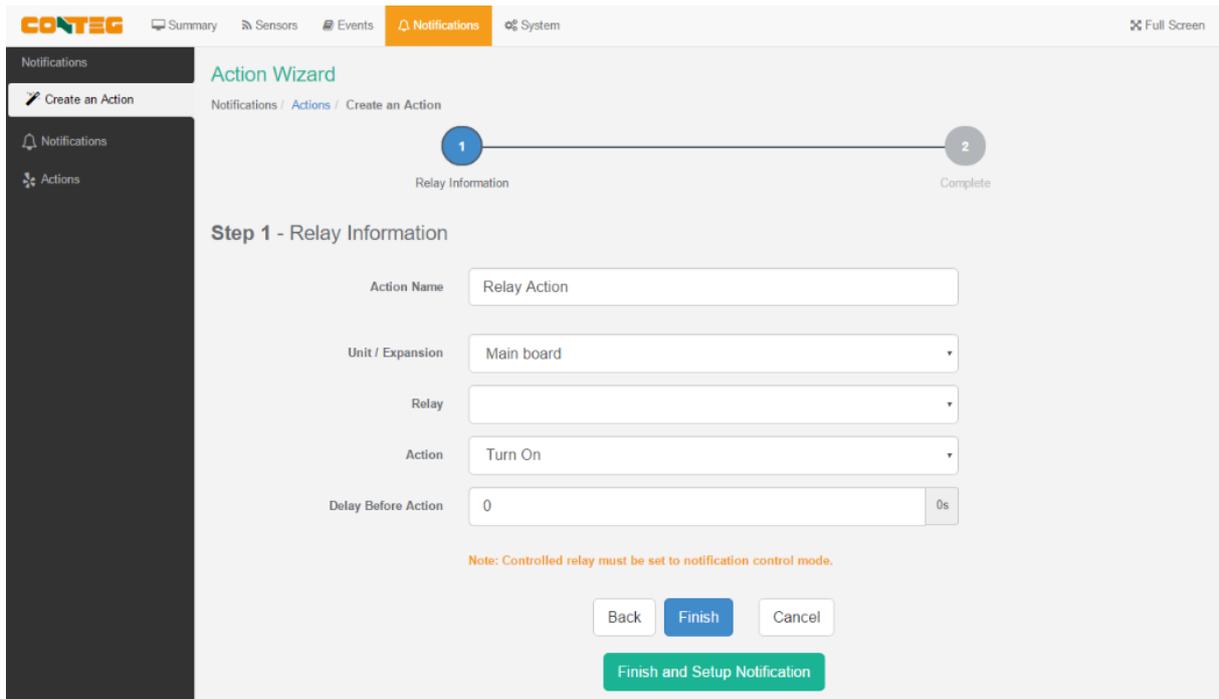
**Retry Interval**  15s

These parameters set the maximum number of times to send the email notification and the time interval between each notification.

If you click on the **Finish and Setup Notification** button, this will launch the **Link Notification Wizard** where you can use the new action for making a notification.

### Relay Action setup

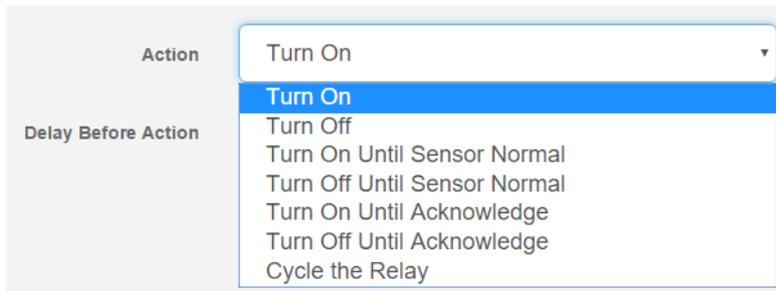
You can use the Relay Action to control a relay when a sensor reaches a certain threshold.



**Note:** The relay needs to be connected to the unit before it can be configured, and it needs to be set to **Notification Control** mode.

If you click on the **Finish and Setup Notification** button, this will launch the **Link Notification Wizard** where you can use the new action for making a notification.

You'll have the following options for controlling the relay with the action:

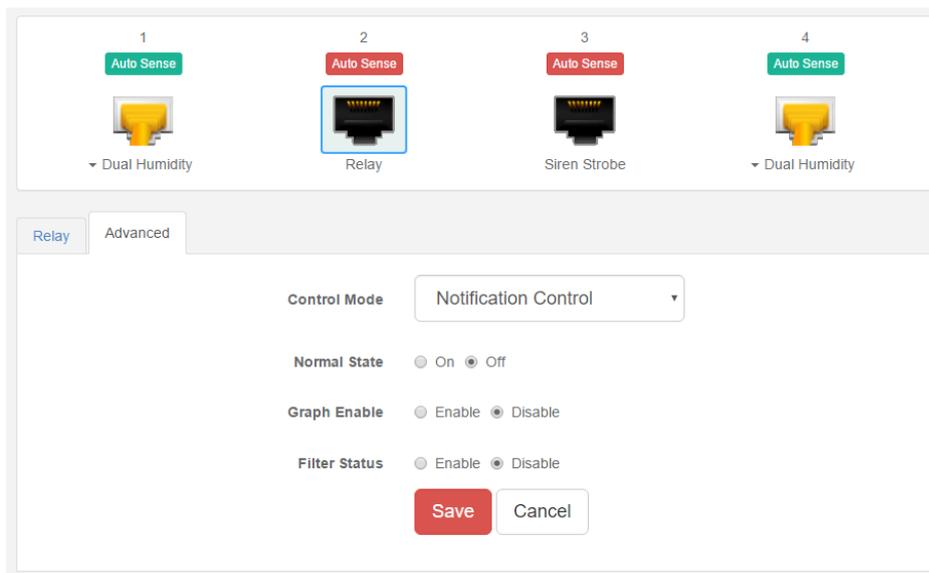


If you click on the **Finish and Setup Notification** button, this will launch the **Link Notification Wizard** where you can use the new action for making a notification.



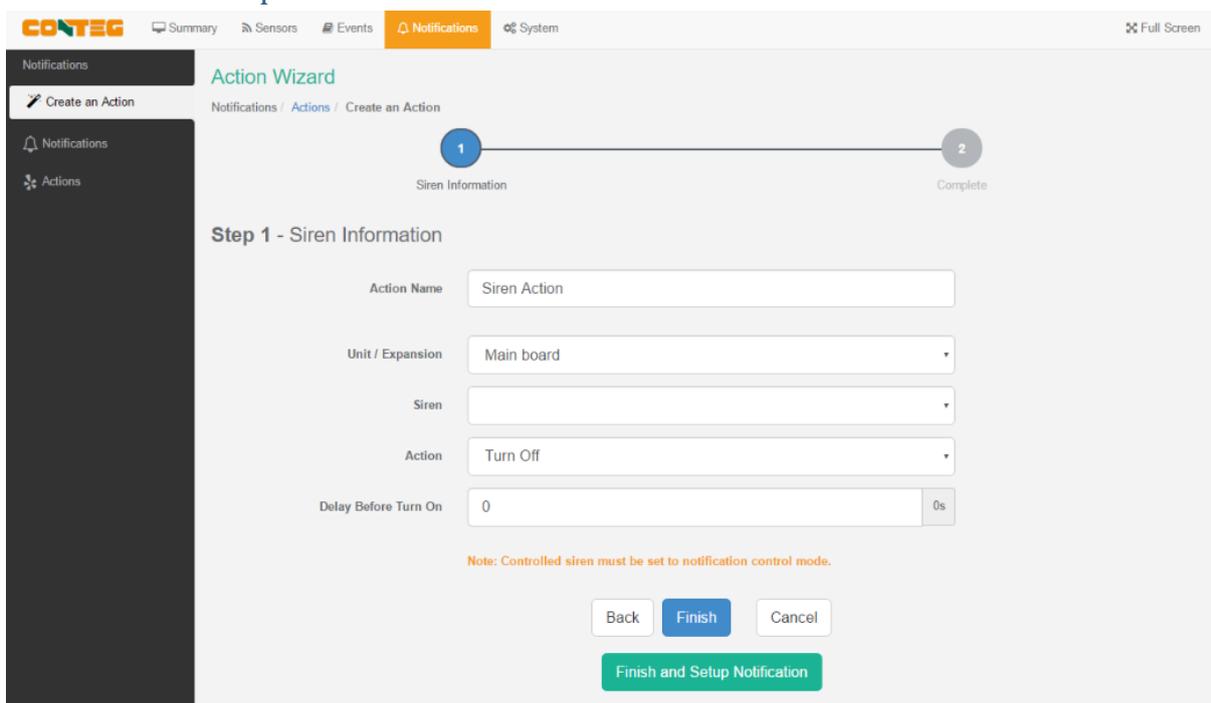
If you choose to cycle the relay, you can specify the cycle time.

You'll need to have the Relay sensor in **Notification Control** mode from the **Sensors** page as shown below:



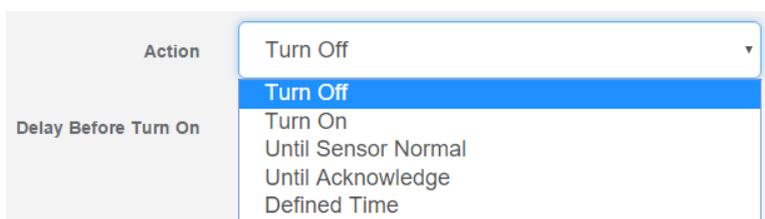
You'll be able to choose the **Notification Control** mode in the **Advanced** tab.

## Siren Action setup



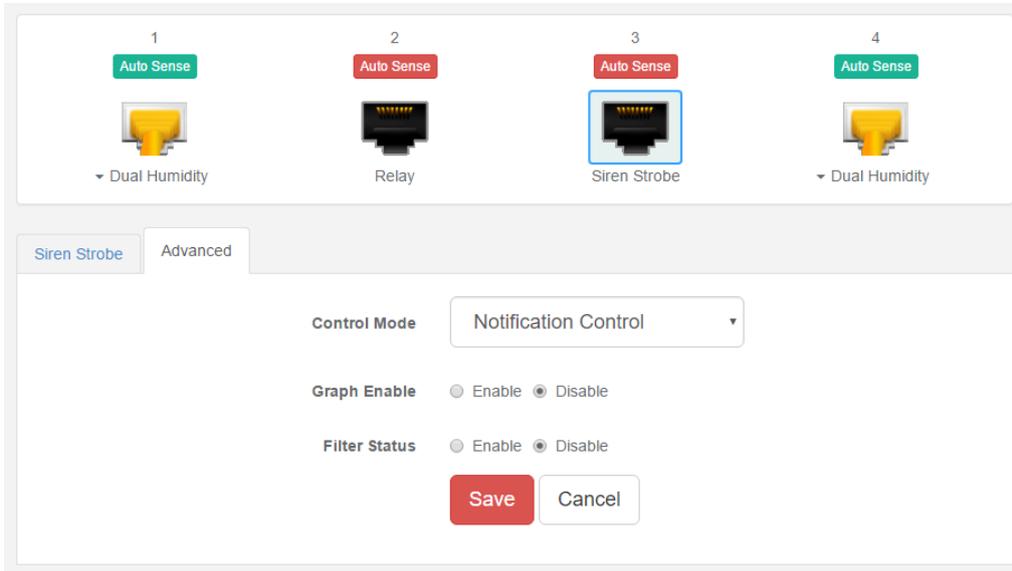
**Note:** The siren needs to be connected to the unit before it can be configured, and it needs to be set to **Notification Control** mode.

You'll have the following options for controlling the siren with the action:



If you choose Defined Time, you can specify the time in seconds for how long the siren should be turned on.

You'll need to have the Siren sensor in **Notification Control** mode from the **Sensors** page as shown below:



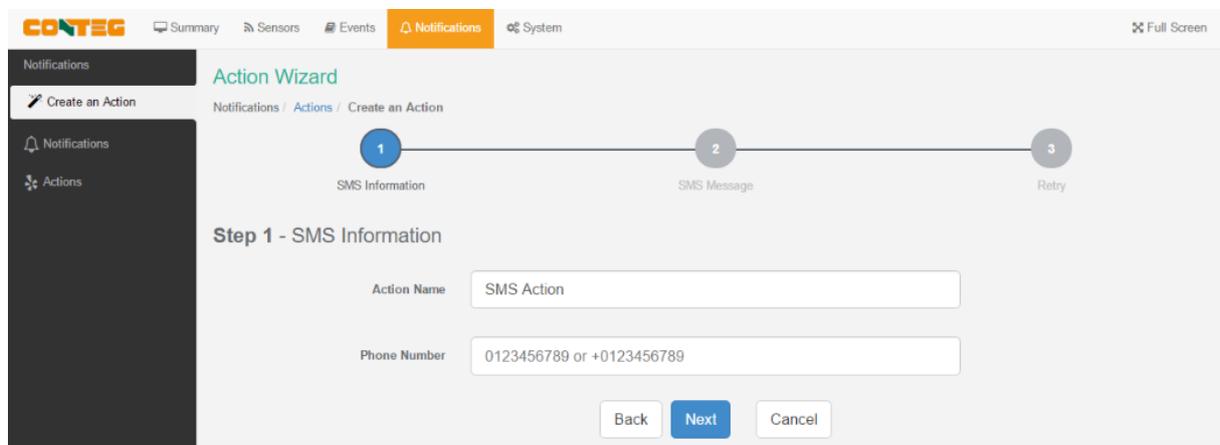
You'll be able to choose the **Notification Control** mode in the **Advanced** tab.

### SMS Action setup (RAMOS PLUS GSM only)

You can use the SMS Action to send a notification by SMS when a sensor reaches a certain threshold.

The unit can send an SMS, or Voice alert to many different phone numbers, but you can specify only one phone number per action when setting it up. However, please keep in mind that both the SMS and the dial up actions such as Voice will call to the first number, then after sending to this number, it will call to the second number and so on. So, if you have many numbers in the call list, it will take that much more time to finish sending the SMS or dial up Voice call alerts.

**Note:** The internal modem module is needed to be connected and set up for this action.



After typing in your phone number, click **Next**.

You can specify only one phone number per action.

The screenshot shows the 'Action Wizard' interface. At the top, it says 'Action Wizard' and 'Notifications / Actions / Create an Action'. Below this is a progress bar with three steps: 1 (SMS Information), 2 (SMS Message), and 3 (Retry). Step 2 is currently active. The main content area is titled 'Step 2 - SMS Message'. It contains a 'From' field with the value '127.0.0.1' and an 'SMS Message' field with the text 'Testing Sensor Port 1 is now 80 Unit, status is now Normal'. Below the message field is a green 'Customize' button. At the bottom are three buttons: 'Back', 'Next' (highlighted in blue), and 'Cancel'.

After clicking “Next” you will get a page where you can input the SMS message. Press the “Customize” button and the fields will re-write in a format that will allow for an automated SMS that will display the sensor information.

This screenshot shows the 'Step 2 - SMS Message' configuration screen after clicking the 'Customize' button. The 'From' field now contains the macro '\$[IP]'. The 'SMS Message' field contains the macro-based text: '\$[DESCRIPTION] is now \$[VALUE] \$[UNIT], status is now \$[STATUS]'. Below the message field are three buttons: 'Preview' (highlighted in green), 'Restore Default', and 'Macro Description'.

For all possible macro values (dynamic text values starting with \$) you can see a detailed list at the end of this manual.

**Action Wizard**

Notifications / Actions / Create an Action

1 SMS Information — 2 SMS Message — 3 **Retry**

### Step 3 - Retry

Maximum Times to Retry:

Retry Interval:  10s

Back **Finish** Cancel

**Finish and Setup Notification**

These parameters set the maximum number of times to send the SMS notification and the time interval between each notification.

If you click on the **Finish and Setup Notification** button, this will launch the **Link Notification Wizard** where you can use the new action for making a notification.

### Troubleshooting the SMS Action

If you are having trouble sending the SMS alerts, please go through the check list below. Also, try moving the modem's antenna to a slightly different location.

Test the SIM card on mobile phone: verify the account is active, has adequate credit for making phone calls and that the PIN code is disabled.

Ensure the SIM card is properly inserted in the modem's slot. Inserting and removing the SIM is only possible while the unit is powered off; otherwise you can damage the SIM or the unit.

### SNMP Trap Action setup

You can use the SNMP Trap Action to send a notification (Trap message) to your SNMP Trap Receiver server when a sensor reaches a certain threshold.

## SNMP v1 action

The screenshot shows the 'Action Wizard' interface in the CONTEG system. The top navigation bar includes 'Summary', 'Sensors', 'Events', 'Notifications', and 'System'. The left sidebar has 'Notifications' and 'Actions' sections. The main area is titled 'Action Wizard' and shows a progress bar with three steps: 1. SNMP Information, 2. SNMP Trap Type, and 3. Retry. The current step is 'Step 1 - SNMP Information', which contains the following fields:

- Action Name:** A text input field containing 'SNMP Trap Action'.
- Trap Version:** A selection field with three options: 'v1' (selected), 'v2c', and 'v3'.
- Port:** A text input field containing '162'.
- Destination IP Address:** A text input field containing '192.168.0.XXX'.
- Community:** A text input field containing 'Community'.

At the bottom of the form are three buttons: 'Back', 'Next', and 'Cancel'.

Enter your Destination IP Address and Community; the default SNMP port is automatically selected.

Notifications / Actions / Create an Action

1 — 2 — 3  
SNMP Information      SNMP Trap Type      Retry

### Step 2 - SNMP Trap Type

SNMP Trap Type:

VarBind:

- specificTypeTraps
- generalTypeTraps
- specific & generalTypeTraps
- statusTypeTraps
- customTypeTraps

Sensor Name

Sensor Description

Sensor Type

Sensor Sub Index

Sensor Status Name

Board ID

Board Description

Event Time Stamp

Event Class Number:

Event Class Name:

Sensor Decimal Value

Sensor ID

A different trap message is sent for each sensor type such as temperature, humidity, and switch.

The trap messages include *VarBind* fields that include the current sensor status (Normal, Critical High, Warning High, Critical Low, Warning Low, and sensorError), the current sensor value, the level exceeded, the sensor index, the sensor name, and the sensor description.

You can enable or disable specific fields if you choose the *customType Traps* from the drop-down list.

### Action Wizard

Notifications / Actions / Create an Action

1 — 2 — 3

SNMP Information      SNMP Trap Type      Retry

#### Step 3 - Retry

Maximum Time to Retry: 0

Retry Intervals: 10 10s

Back   Finish   Cancel

**Finish and Setup Notification**

These parameters set the maximum number of times to send the trap notification and the time interval between each notification.

If you click on the **Finish and Setup Notification** button, this will launch the **Link Notification Wizard** where you can use the new action for making a notification.

#### SNMP v2c action

### Action Wizard

Notifications / Actions / Create an Action

1 — 2 — 3 — 4

SNMP Information      SNMP Details      SNMP Trap Type      Retry

#### Step 1 - SNMP Information

Action Name: SNMP Trap Action

Trap Version: v1   **v2c**   v3 (No License)

Port: 162

Destination IP Address: 192.168.0.XXX

Community: Community  
This field is required.

Back   Next   Cancel

Enter your Destination IP Address and Community; the default SNMP port is automatically selected.

**Action Wizard**  
Notifications / Actions / Create an Action

1 — 2 — 3 — 4  
SNMP Information — SNMP Details — SNMP Trap Type — Retry

**Step 2 - SNMP Details**

SNMP Trap or SNMP Inform   **SNMP Trap**   SNMP Inform

Back   **Next**   Cancel

You can choose the packet to be sent between SNMP Trap or Inform packet.

Notifications / Actions / Create an Action

1 — 2 — 3 — 4  
SNMP Information — SNMP Details — SNMP Trap Type — Retry

**Step 3 - SNMP Trap Type**

SNMP Trap Type   customTypeTraps

**VarBind**

- Sensor Status
- Sensor Value
- Sensor Level Exceeded
- Sensor Index
- Sensor Name
- Sensor Description
- Sensor Type
- Sensor Sub Index
- Sensor Status Name
- Board ID
- Board Description
- Event Time Stamp
- Event Class Number   0
- Event Class Name   INFORMATIONAL
- Sensor Decimal Value
- Sensor ID

Back   **Next**   Cancel

A different trap message is sent for each sensor type such as temperature, humidity, and switch.

The trap messages include *VarBind* fields that include the current sensor status (Normal, Critical High, Warning High, Critical Low, Warning Low, and sensorError), the current sensor value, the level exceeded, the sensor index, the sensor name, and the sensor description.

You can enable or disable specific fields if you choose the *customType* Traps from the drop-down list.

**Action Wizard**  
Notifications / Actions / Create an Action

1 — 2 — 3 — 4  
SNMP Information — SNMP Details — SNMP Trap Type — Retry

**Step 4 - Retry**

Maximum Time to Retry: 0

Retry Intervals: 10 10s

Back Finish Cancel

**Finish and Setup Notification**

These parameters set the maximum number of times to send the trap notification and the time interval between each notification.

If you click on the **Finish and Setup Notification** button, this will launch the **Link Notification Wizard** where you can use the new action for making a notification.

### SNMP v3 action

Only SNMPv3 provides secure SNMP communication. The previous versions are considered unsecure and unencrypted.

This feature requires a separate license. You can read more details about the licensing in the Introduction manual. **SNMPv3 license is included.**

### Action Wizard

Notifications / Actions / Create an Action

- 1 SNMP Information
- 2 SNMP Details
- 3 SNMP Trap Type
- 4 Retry

#### Step 1 - SNMP Information

Action Name:

Trap Version:

Port:

Destination IP Address:

Community:

Enter your Destination IP Address and Community; the default SNMP port is automatically selected.

**Action Wizard**

Notifications / Actions / Create an Action

1 — 2 — 3 — 4

SNMP Information      SNMP Details      SNMP Trap Type      Retry

### Step 2 - SNMP Details

SNMP Trap or SNMP Inform      **SNMP Trap**      SNMP Inform

SNMPv3 User Name     

SNMPv3 engineID     

Security Level     

Authentication Protocol     

Authentication Protocol Pass Phrase     

Privacy Protocol     

Privacy Protocol Pass Phrase     

You can choose the packet to be sent between SNMP Trap or Inform packet.

Configure the settings for authentication, and access privileges.

Below we'll give a quick description of each setting:

Level	Authentication	Encryption	Description
noAuthNoPriv	Username	No	Match Username (same as SNMP v1/v2c)
authNoPriv	MD5 or SHA	No	Auth Based on Algorithms (check password)
authPriv	MD5 or SHA	Yes - DES	Auth Algorithms and Encryption

Basically if you select **noAuthNoPriv** then the setup will be the same as with SNMP v1 and v2c versions: authentication is only checked by unencrypted username.

**authNoPriv** will provide password protection but no encryption.

**authPriv** provides encrypted username and password protection.

Notifications / Actions / Create an Action

1 — 2 — 3 — 4

SNMP Information      SNMP Details      SNMP Trap Type      Retry

### Step 3 - SNMP Trap Type

SNMP Trap Type:

**VarBind**

- Sensor Status
- Sensor Value
- Sensor Level Exceeded
- Sensor Index
- Sensor Name
- Sensor Description
- Sensor Type
- Sensor Sub Index
- Sensor Status Name
- Board ID
- Board Description
- Event Time Stamp
- Event Class Number:
- Event Class Name:
- Sensor Decimal Value
- Sensor ID

A different trap message is sent for each sensor type such as temperature, humidity, and switch.

The trap messages include *VarBind* fields that include the current sensor status (Normal, Critical High, Warning High, Critical Low, Warning Low, and sensorError), the current sensor value, the level exceeded, the sensor index, the sensor name, and the sensor description.

You can enable or disable specific fields if you choose the *customType* Traps from the drop-down list.

These parameters set the maximum number of times to send the trap notification and the time interval between each notification.

If you click on the **Finish and Setup Notification** button, this will launch the **Link Notification Wizard** where you can use the new action for making a notification.

## Telephone Call Action setup

You can use the Telephone Call Action to send custom voice call alerts to your phone when a sensor reaches a certain threshold.

The unit can send an SMS, or Voice alert to many different phone numbers, but you can specify only one phone number per action when setting it up. However, please keep in mind that both the SMS and the dial up actions such as Voice will call to the first number, then after sending to this number, it will call to the second number and so on. So, if you have many numbers in the call list, it will take that much more time to finish sending the SMS or dial up Voice call alerts.

**Note:** The internal modem module is needed to be connected and set up for this action.

After typing in your phone number, click **Next**.

You can specify only one phone number per action.

**Action Wizard**

Notifications / Actions / Create an Action

1 Telephone Call Information      2 Message      3 Retry

### Step 2 - Speech Output and Message

Speech Volume: Min Avg Max

Speech Speed: Min Avg Max

Speech Acknowledge: No acknowledge

Message: Testing Sensor Port 1 is now 80 Unit, status is now Normal

Customize

Back Next Cancel

Now you can select the **volume** and **playback speed** for your phone call.

The call will be made by using a Text to Speech module.

You can also specify to have the call acknowledged:

Speech Acknowledge: No acknowledge

Message: Play acknowledge message first  
Play acknowledge message last

If Speech Acknowledgement is selected the user will be requested to dial 1 on their phone when prompted in the call to confirm their acknowledgement.

**Message**

\${DESCRIPTION} is now \${VALUE} \${UNIT},  
 status is now \${STATUS}

A preview of the message that will be read is displayed, which you may customize further. The sent message will include the details relevant to your sensor.

For all possible macro values (dynamic text values starting with \$) you can see a detailed list at the end of this manual.

**Action Wizard**

Notifications / Actions / Create an Action

1 Telephone Call Information
  2 Message
  3 Retry

**Step 3 - Retry**

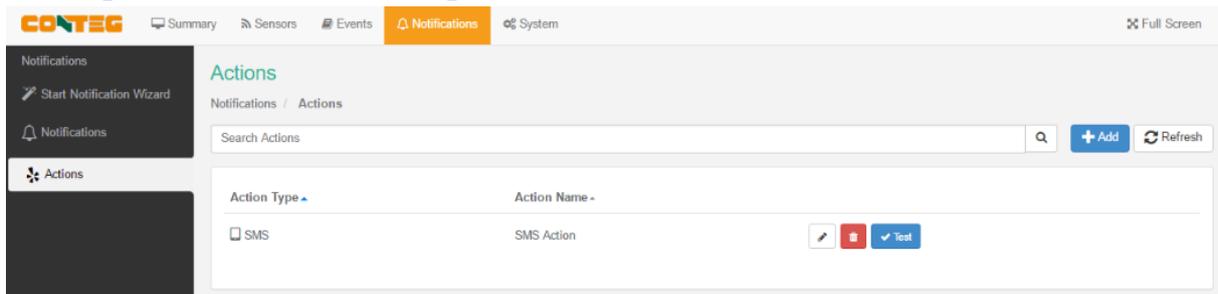
Maximum Times to Retry:

Retry Interval:  10s

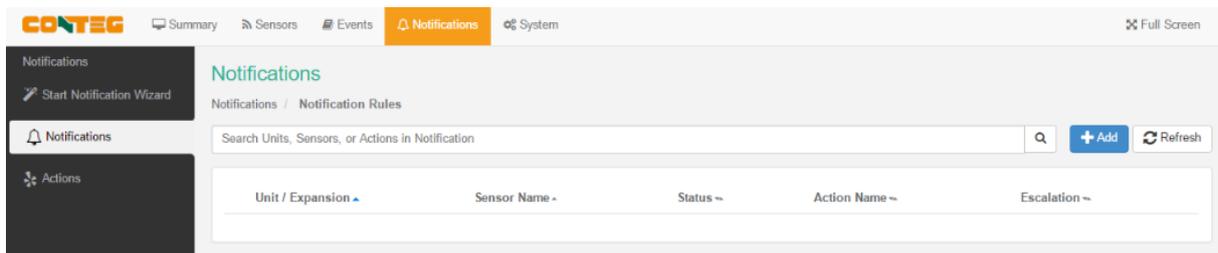
These parameters set the maximum number of times to send the call notification and the time interval between each notification.

If you click on the **Finish and Setup Notification** button, this will launch the **Link Notification Wizard** where you can use the new action for making a notification.

## Example notification setup: SMS Notification

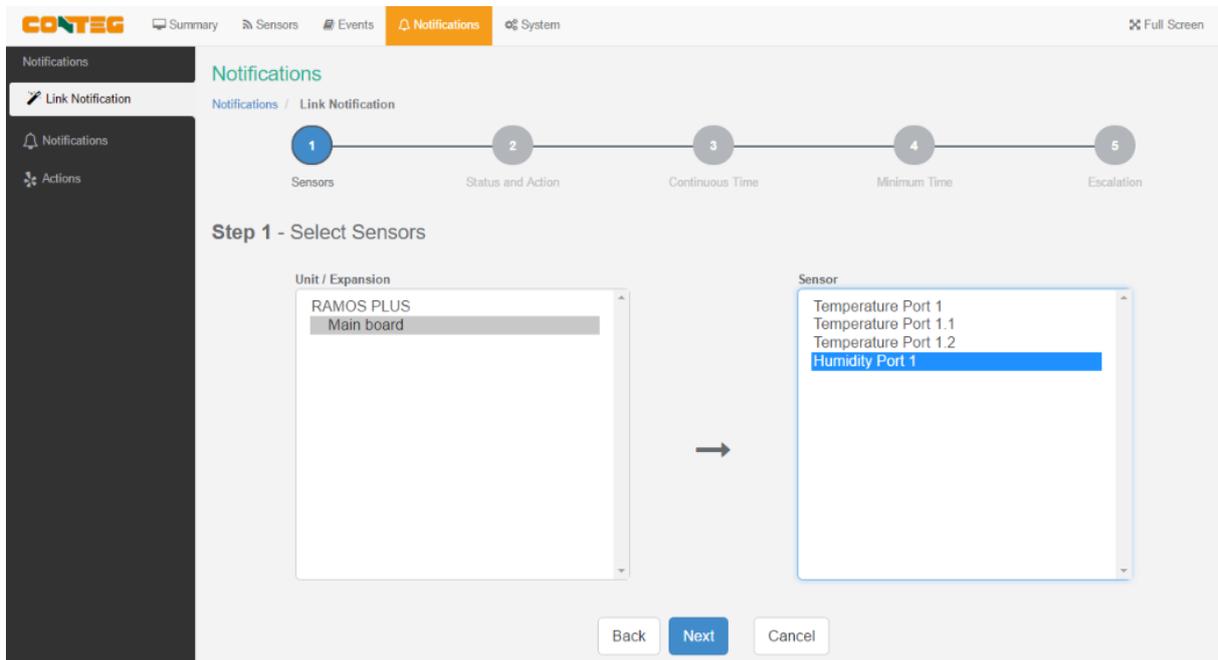


In our example we've set up an SMS action and we'll link that to notify us by SMS when the Humidity sensor's value reaches High Critical.



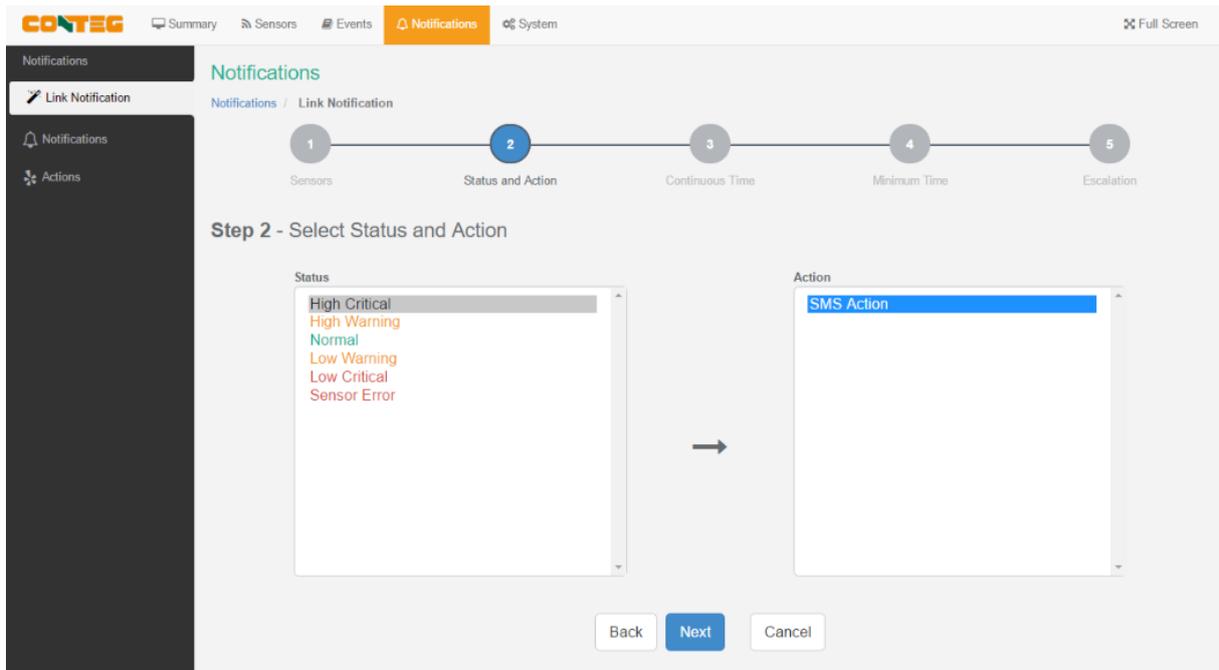
On the **Notifications** menu we click on **Add**.

This will start the **Link Notification Wizard**.



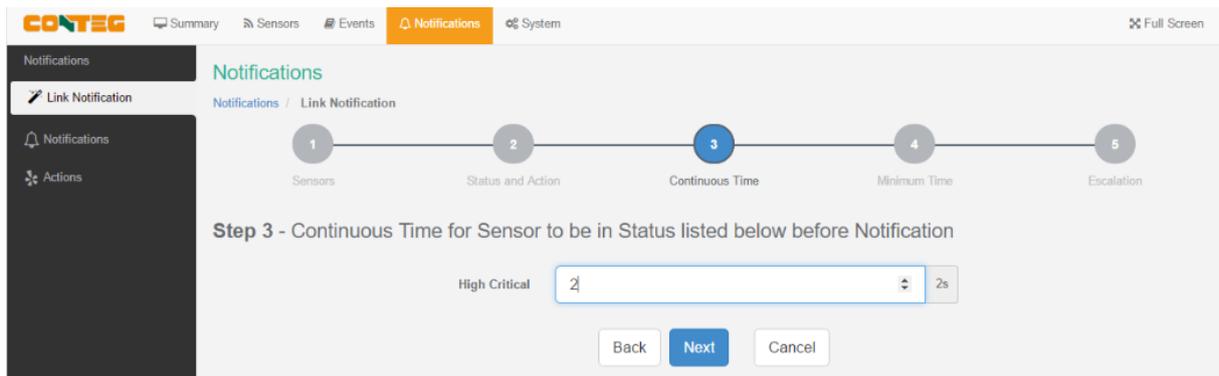
The first step is to select the sensor that we'll link the notification to.

You could also select multiple sensors for a single notification.

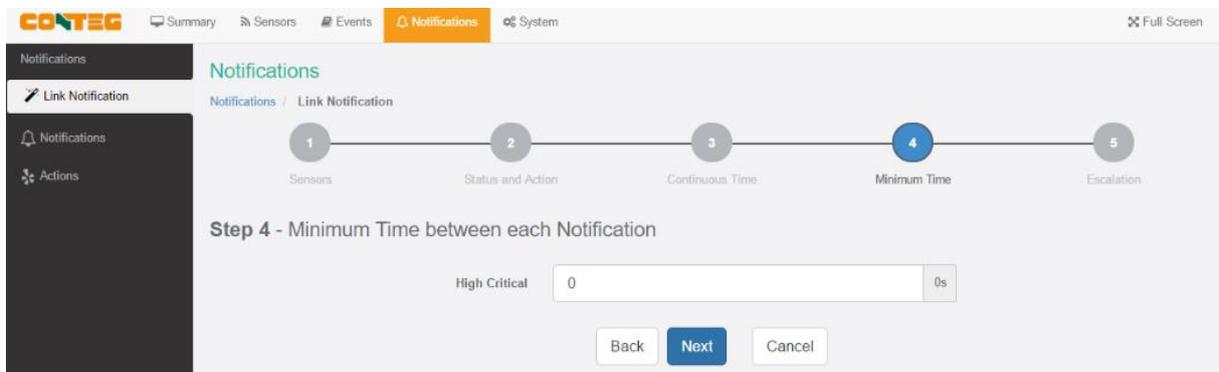


Next we choose the status *High Critical* for the sensor, and use the previously created SMS Action.

You could also select multiple statuses for a sensor by holding “**Ctrl**”.

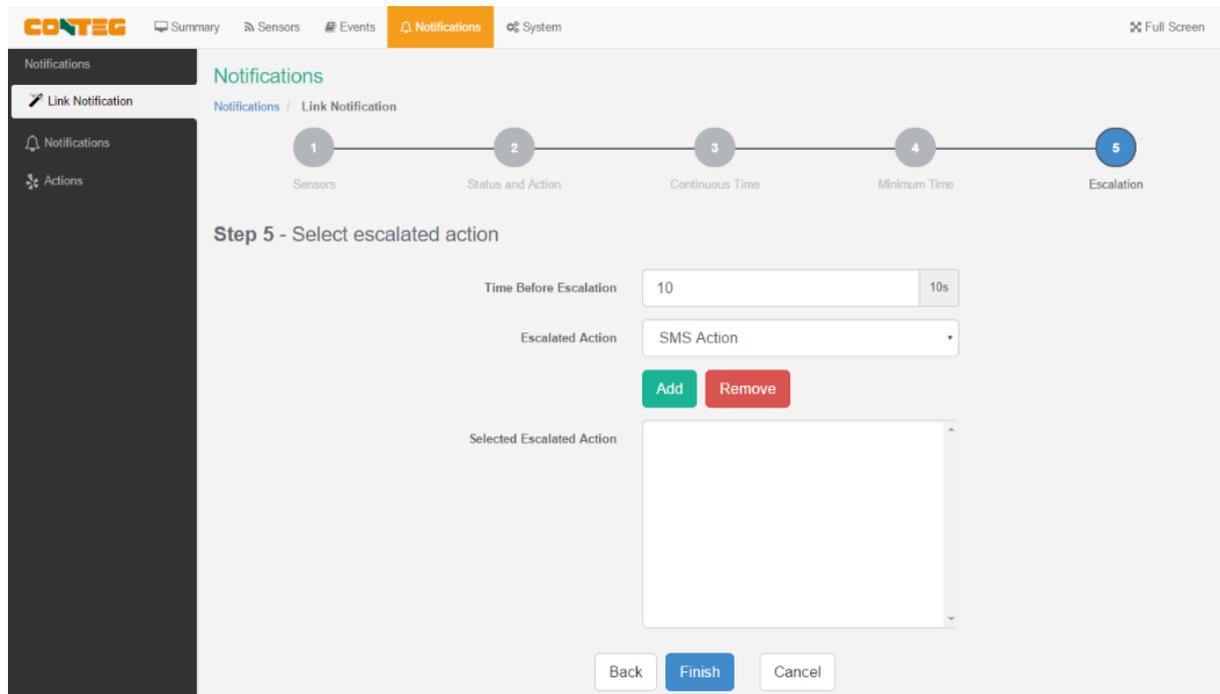


We set the continuous time as 2 seconds - this means the sensor’s state has to remain at least 2 seconds in the chosen state before the notification runs.



We don’t use a minimum time between notifications (default value).

If you get multiple notifications of the same type, this option could help to reduce the frequency of them.



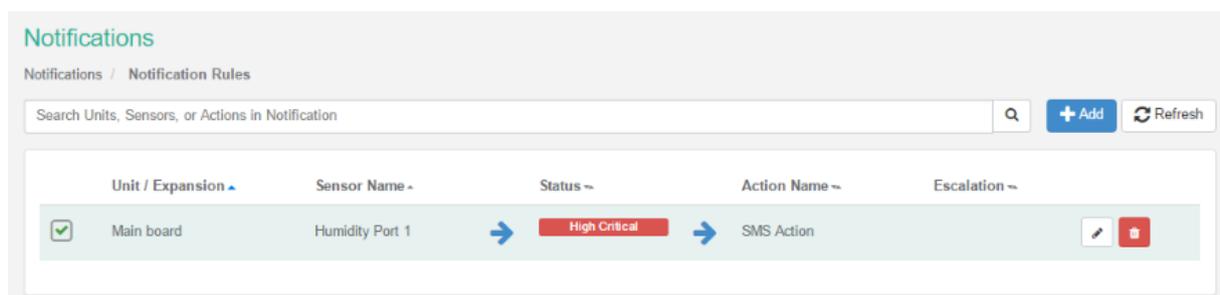
All actions have an option **Escalation**. With this you could specify additional actions to run after the initial action, with the specified time.

Use the **Add** and **Remove** buttons to add or remove escalated actions.

The maximum number of escalated actions is 10.

Note that the additional actions need to be created before you could select them.

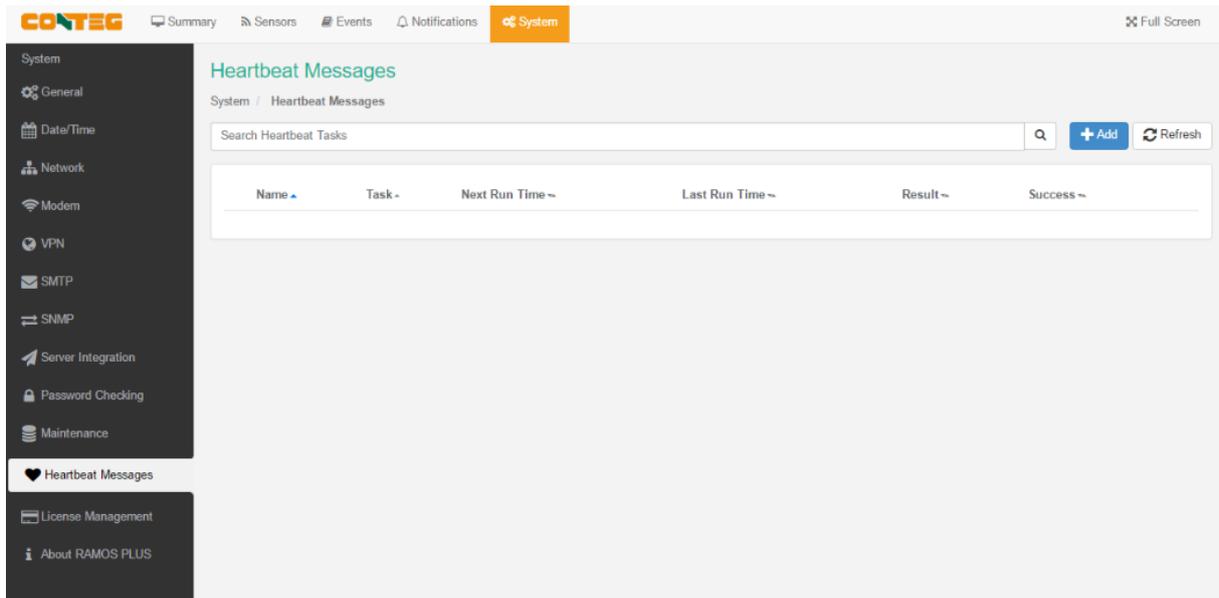
In this example we won't use escalated action.



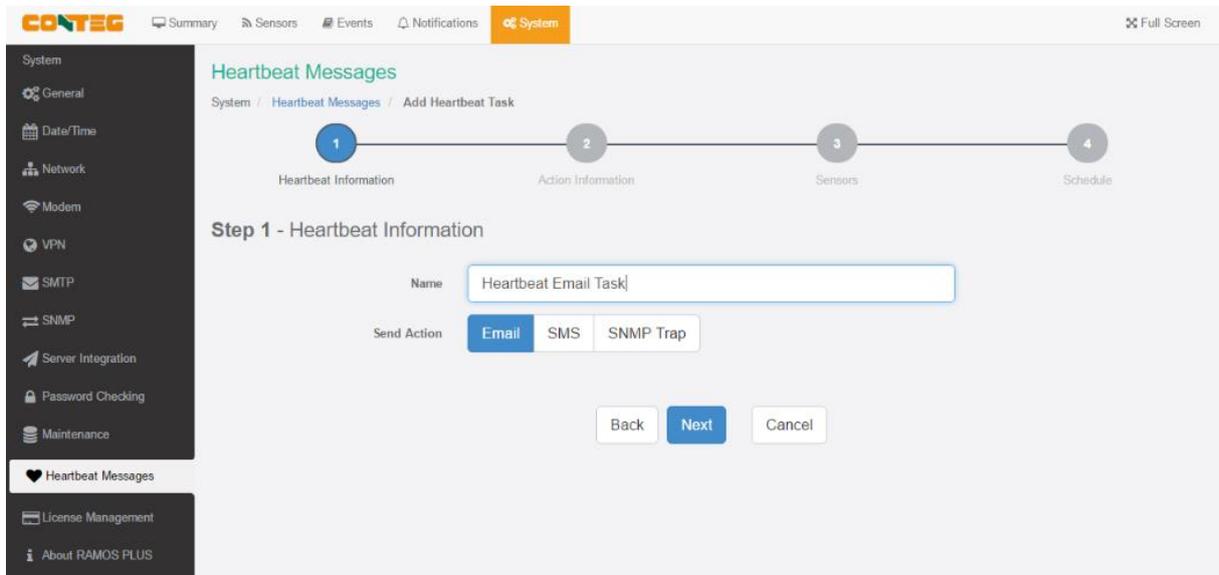
After the wizard has finished, you can view, edit or remove the completed notification in the **Notifications** menu.

## Heartbeat Messages

This feature allows you to set up periodical “keep alive” notifications task by email, SMS or SNMP Trap to indicate the unit is still working properly.



Navigate to **System/Heartbeat Messages** and click on the **Add** button to begin the wizard.



In the first step you can choose the type of the heartbeat notification, which can be Email, SMS or SNMP Trap. In our example we'll use **Email notification**.

### Heartbeat Messages

System / Heartbeat Messages / Add Heartbeat Task

1 Heartbeat Information    2 Action Information    3 Sensors    4 Schedule

#### Step 2 - Action Information

Email From:

Email To:

Cloud Monitoring:  Enable  Disable

**!** Click [here](#) to setup SMTP Server. ×

Choose the recipients of the action. If you haven't yet set up the SMTP server options, you'll be asked to do so.

If you choose SMS action in the previous step, then you'll need to fill in a phone number here.

For the SNMP Trap you'll need to specify the SNMP options; see the SNMP Trap Action configuration in this manual for more help.

### Heartbeat Messages

System / Heartbeat Messages / Add Heartbeat Task

1 Heartbeat Information    2 Action Information    3 Sensors    4 Schedule

#### Step 3 - Sensors in Heartbeat Message

Unit / Expansion

- RAMOS PLUS
- Main board

Sensor

- Temperature Port 1
- Temperature Port 1.1
- Temperature Port 1.2
- Humidity Port 1

In this step you can choose one or more sensor's status and reading to include in the heartbeat message. Select at least one sensor.

Heartbeat Messages

System / Heartbeat Messages / Add Heartbeat Task

1 Heartbeat Information 2 Action Information 3 Sensors 4 Schedule

**Step 4 - Schedule to perform this task**

Perform this Task by **Minute** Day Week Month

Every 60 min(s)

Back Finish Cancel

Finally, choose a schedule for the heartbeat message. This picture shows the by-minute schedule.

You can choose between Minute, Day, Week, Month.

We'll also show the configuration for all of them below.

Heartbeat Messages

System / Heartbeat Messages / Add Heartbeat Task

1 Heartbeat Information 2 Action Information 3 Sensors 4 Schedule

**Step 4 - Schedule to perform this task**

Perform this Task by Minute **Day** Week Month

Every 1 day(s)

Start Time 22:00 hh:mm

Back Finish Cancel

This is the by-daily schedule.

### Heartbeat Messages

System / Heartbeat Messages / Add Heartbeat Task

1 — 2 — 3 — 4  
Heartbeat Information — Action Information — Sensors — Schedule

#### Step 4 - Schedule to perform this task

Perform this Task by:  Minute  Day  Week  Month

Every:  week(s)

Start Time:  hh:mm

Select days of the week:

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

This is the by-weekly schedule

### Heartbeat Messages

System / Heartbeat Messages / Add Heartbeat Task

1 — 2 — 3 — 4  
Heartbeat Information — Action Information — Sensors — Schedule

#### Step 4 - Schedule to perform this task

Perform this Task by:  Minute  Day  Week  Month

Every:  month(s)

Start Time:  hh:mm

Select dates of the month:

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16

This is the by-monthly schedule.

### Heartbeat Messages

System / Heartbeat Messages

Search Heartbeat Tasks

Name ▲	Task ▲	Next Run Time ▼	Last Run Time ▼	Result ▼	Success ▼	
<input checked="" type="checkbox"/> Heartbeat Task	Start at 22:00, Every 1 month(s)	01/03/2016, 22:00	-	OK	0 <input type="button" value="reset"/>	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

When you've finished the wizard, it will appear in the list.

You could edit or remove the task, and reset the success counter.

Note that you can define multiple heartbeat notification tasks with different schedule or notification methods.

The screenshot shows the CONTEG interface with the 'Events' tab selected. The left sidebar contains navigation options: All Events, System, Sensors, Access, and Notifications. The main content area is titled 'Notifications' and features a search bar, date range filters (Date Start to Date End), and buttons for Refresh, Export, and Options. A single notification entry is displayed with the following details:

Date/Time ▼	Event ▲
1 29/02/2016 12:53:36	Email ok: Good mail sent to "XXXXXXXXXX@akcp.com"

Below the notification entry is a pagination control showing 'First', '<', '1', '>', and 'Last'.

You can view the result of the notification at the Events page's Notifications section.

## Macro Description for actions

Macro Name	Description
[\$SYSNAME]	System name.
[\$SYSLOCATION]	System location.
[\$SYSCONTACT]	System contact.
[\$SYSURL]	System URL.
[\$IP]	The IP address of this system.
[\$IP_ETH]	The IP address of ethernet interface.
[\$IP_VPN]	The IP address of VPN interface.
[\$TIME]	The time when a sensor transmits the notification in the format of HH:MM:SS Ex: 18:45:10.
[\$DATE]	The date when the sensor transmits the notification in the format of YYYY/MM/DD Ex: 2005/01/31.
[\$DAY_OF_WEEK]	The day of the week when the sensor transmits the notification. Ex: Monday, Tuesday, etc.
[\$DAY]	The date of the month when the sensor transmits the notification. Ex: 1,2,3,...
[\$MONTH]	The month when the sensor transmits the notification. Ex: January, February, etc.
[\$YEAR]	The year when the sensor transmits the notification. Ex: 2014.
[\$PORT]	The port number when the sensor transmits the notification. Ex: 2.
[\$DESCRIPTION]	The description to identify the reporting sensor transmitting the notification. Ex: Temperature of computer room.
[\$STATUS]	The status of the sensor transmitting the notification. Ex: High Critical.
[\$VALUE]	The current reading of the sensor when a notification occurs. Ex: 40 Percent, 20 Volts, etc.
[\$UNIT]	The unit of the sensor. Ex: Percent, Volts, etc.

**Note:** This macro help window is also available from the Web UI when you click on the **Macro Description** button.

## Troubleshooting

I am having problems with the unit but not sure what to do next?

Please email [support@conteg.com](mailto:support@conteg.com) and include the following detailed information in your email;

Note: The more details you can provide the easier and faster we can provide you with a resolution, so please be as detailed as possible.

1. The details of the problem, condition of the LEDs etc.
2. What you did to determine the unit has this problem?
3. Was there anything done to the unit prior to having the problem?
4. Did the unit always have this problem, if not when did this start?
5. Do you have more than one unit having the same problem?
6. What did you do to try and fix the problem?
7. What version of firmware is running on the unit? Did you try and upgrade it?
8. Include the backup configuration file from the unit.
9. If you can put the unit online this would be the fastest way for us to solve the problem.
10. What is the MAC ID of the unit?

**CONTEG, spol. s r.o.**

**Headquarters:**

Na Vitezne plani 1719/4

140 00 Prague 4

Czech Republic

Tel.: +420 261 219 182

[conteg@conteg.com](mailto:conteg@conteg.com)

[www.conteg.com](http://www.conteg.com)

**Production plant:**

K Silu 2179

393 01 Pelhrimov

Czech Republic

Tel.: +420 565 300 300