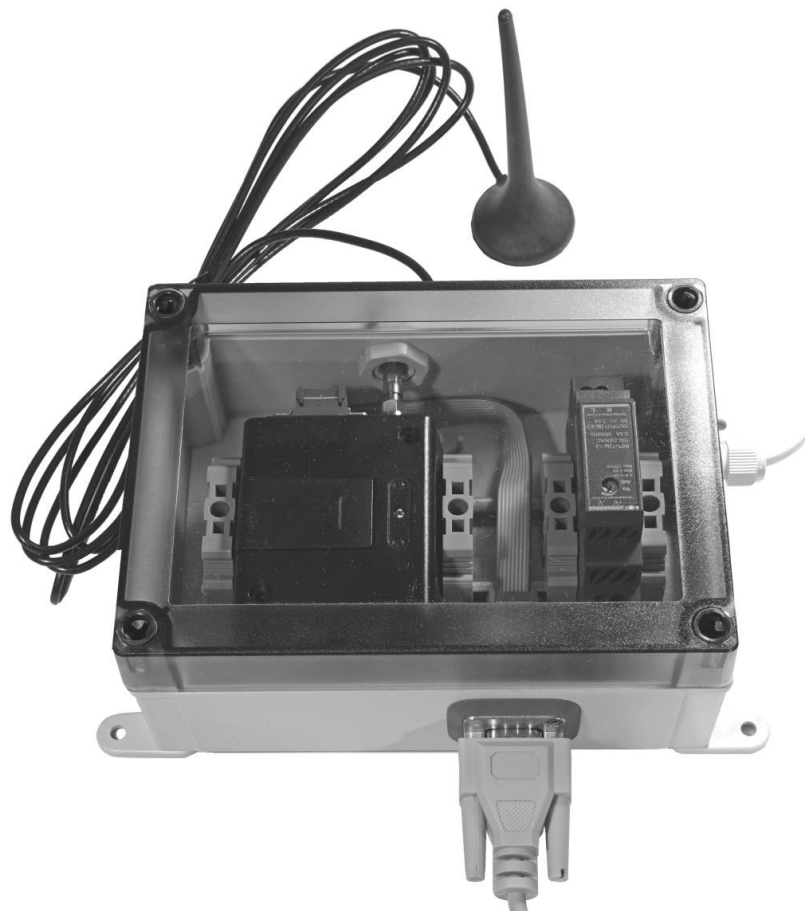


**Thermoguard GSM Modem**  
**Serial Version**  
**Version 2.95**



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## Introduction

The *Thermoguard* software can send alarm and heartbeat messages both as an e-mail and as SMS from the local computer.

E-mails can be sent to a mailbox for a mail client program located on a stationary or mobile device. Furthermore, e-mails can be sent as SMS to mobile phones.

For sending e-mails to external e-mail addresses, an e-mail server with an internet connection is required. Forwarding of e-mails as SMS to mobile phones depends on the services of your mobile phone provider. You will find examples of the configuration for forwarding of e-mails as SMS in the **SYSTEM MANUAL**'s section "*Forwarding E-Mail as SMS to Cell Phones*".

The *Thermoguard* software can send alarms or heartbeat messages *alternatively or in addition* to the way described above but also directly via a GSM modem as SMS to one or more mobile phones. A GSM modem works in principle like a mobile phone, but without a keypad or display. Like a mobile phone, a GSM modem requires a valid SIM card from a mobile phone provider. The location of the GSM modem must be covered by the GSM network, i.e. mobile phone reception must be possible.

The *Thermoguard* software sends the SMS with the help of the GSM modem directly via the "Service Message Center" of your mobile phone provider. No Internet connection is required.

## Versions / Parts

Thermoguard offers a GSM modem ready for connection in a mounting housing in two different versions:

- *Serial Version*  
Direct connection to a serial COM port of the *Thermoguard PC*
- or
- *COM Server Version*  
Providing network connection; operation via driver software emulating a "virtual" COM port

This documentation *TG GSM-ModemS-en* describes the use of the *Serial Version*.  
For the *COM Server Version* please see documentation *TG GSM-ModemC-en*

Serial Version:



## Inserting the SIM card



**1. Make sure that the device's power cord is NOT plugged in.**



2. Remove the housing cover by loosening the 4 plastic cross-head screws.

3. Remove the cover of the SIM card compartment by sliding it to the left:



4. Push the "slide" about 2 mm to the right:



=>



5. Then fold the slide up to the right and insert the SIM card as shown:



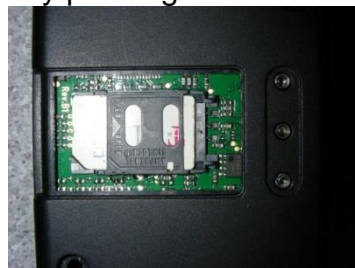
=>



6. Fold the carriage down again and lock it by pushing it to the left:



=>



7. Slide the SIM card compartment cover back on.

8. Screw the housing cover back on.

## Connecting the device

Connect the serial connector on the modem housing to a free serial interface ("COM port") on the *Thermoguard* PC using the enclosed 5 m long 9-pin serial cable.

Then connect the 230V~ power cord cable (firmly attached to the housing) to the mains supply. After the power is supplied, it takes **about 40 seconds** with the currently used GSM modem model (Telic N910G) until the device is ready for operation. This initialization can be seen on a video, which can be found on your Thermoguard CD:

`\Weitere Software\006-COM-Server (GSM Modem)\Init Video\Init NT910G.mp4`

The connection of the GSM modem is now complete.

Note:

If the PC does not have a (free) serial port, operation via an USB port with an USB-to-serial adapter is also possible.



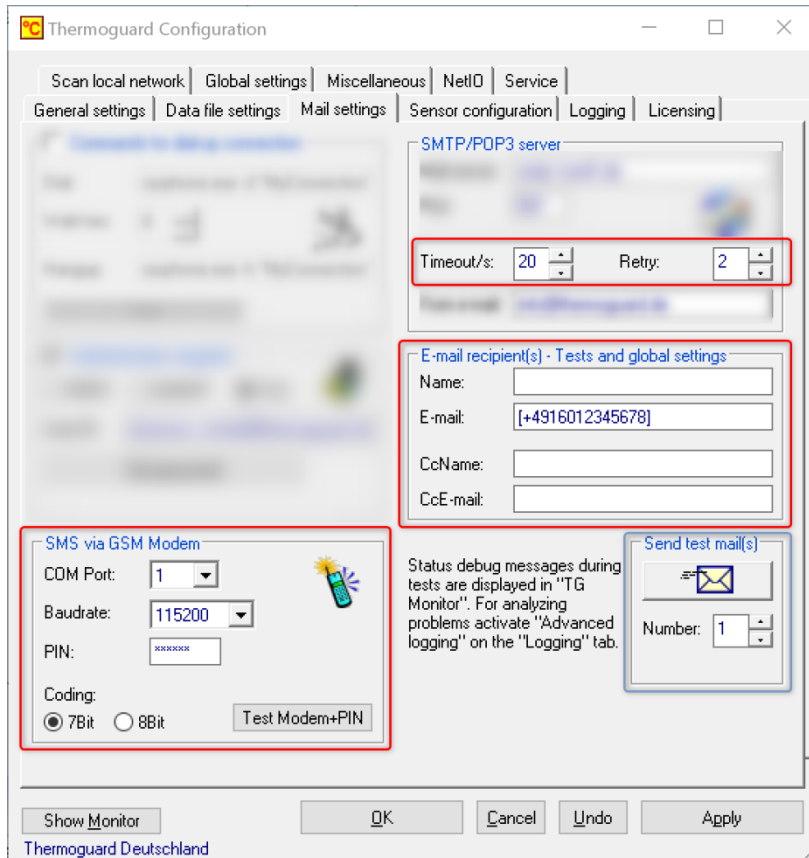
*Example of an USB-to-Serial Adapter*

Here, a "virtual" COM interface is emulated using driver software. The COM port number must be read from the properties of the modem entry via the Windows device manager after the driver installation in order to be able to configure the *Thermoguard* software correctly afterwards.



## Configuration and Test within the *Thermoguard* software

You will find the configuration of the GSM modem on the "Mail settings" tab of the *Thermoguard configuration*:



For the dispatch of SMS alarm messages over the GSM Modem you must configure only the fields framed in the screen copy opposite correctly.

Note the special format of the E-mail "address" in square brackets (see also below).

The value for Timeout/s should be set to 20 seconds, because a first "GPRS-Attach" of the modem can last up to 12 seconds.

The value for "Retry" should be set to a value >0.

Note: If several mobile phone numbers are entered as the destination address for the GSM SMS mail, a retry will be performed for each of these numbers in the event of an error.

In the selection list "COM Port" set the port number of the COM port of your *Thermoguard* PC to which you have connected the serial connection cable (usually 1 or 2). If the modem is operated via a USB-to-serial adapter, the port number determined during the driver installation must be set here. Enter the PIN of your SIM card in the PIN field. If the test for Modem+PIN (see below) fails, select a different value for "Baudrate" if necessary.

7Bit or 8Bit encoding:

Select the 7Bit setting if your mobile phone does not support 8Bit SMS. The 7Bit setting should work with all models, but the ° sign cannot be displayed.

## Format of Target Mobile Phone Number for fields *E-Mail* and/or *CcE-Mail*

To make a distinction from an e-mail address, please enter the telephone number within square brackets. **The number must contain the international area code and start with the "+" sign.** Example: [+49 160 123 456 78].

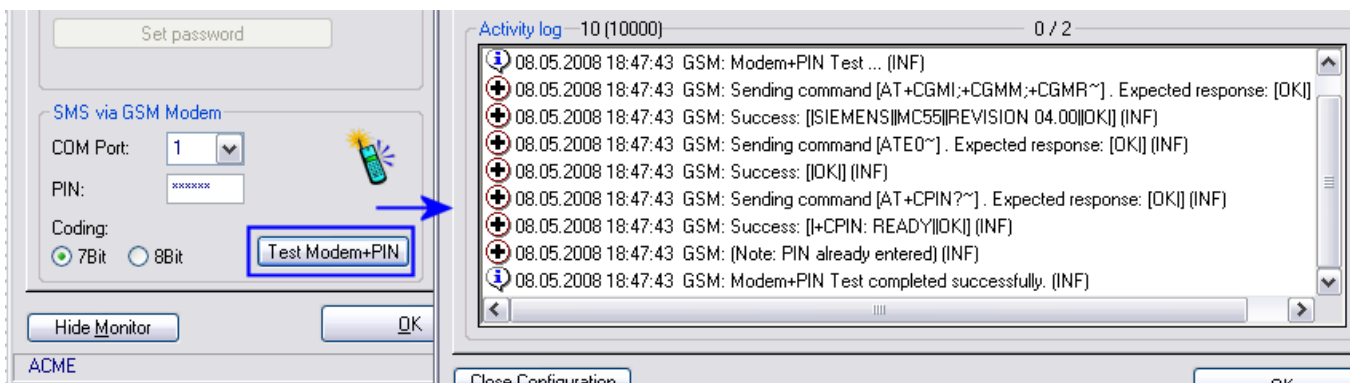
Leading zeros ("0") might occur between the "+" sign and the international area code. For better readability, blanks might be used, too. Simultaneous sending to several mobile phones is possible. Please separate the numbers with a semicolon.

By the square brackets, *Thermoguard* software recognizes automatically that this special "e-mail address" is a destination number for sending the alarm-e-mail via the GSM modem. The "Name" and "CcName" fields have no significance for pure SMS operation; they are not evaluated.

## "Test Modem+PIN"

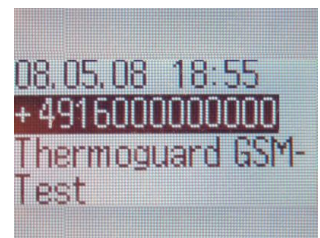
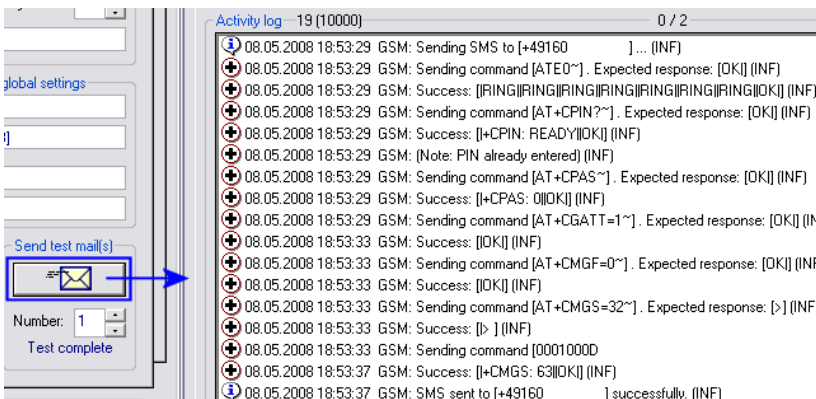
Open the *Thermoguard* monitor window to observe the output of the following tests. In case one of the tests is unsuccessful, you should activate the "Advanced logging" on the tab "Logging", in order to obtain more detailed information.

First of all, click on the button "Test Modem+PIN". This test does not yet send any SMS, but it checks the communication between the *Thermoguard* software and the modem and whether the PIN is correct:



## Test "Send test mail(s)"

Verify that the number of test mails is set to 1. Perform the test (subject to charges!) by clicking the button "Send test mail(s)".



Received test SMS on a mobile phone's display

On average, sending a test mail lasts between 5 and 10 seconds. If both tests are executed successfully, you may enter your mobile phone numbers in the e-mail configuration dialog of each single sensor to complete the software configuration.

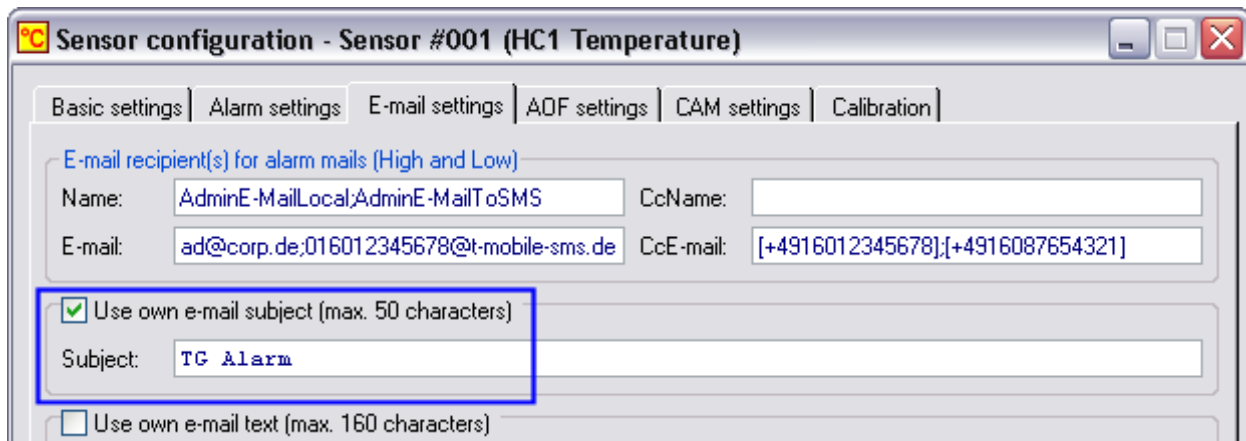


## Mixed use of standard E-mail and GSM operation

Parallel operation is possible: When the *Thermoguard* PC is connected to the companies network and in addition to a GSM modem, both e-mail using the mail server and SMS news using the GSM modem can be sent. Normal e-mail is sent first of all, afterwards the SMS. A failure of one of the two sending classes does not hinder the successful sending of the other kind. By this manner, a redundant alarm can be realized for important supervision objects.

If you would like to enter both address types in an address field ("E-mail" or "CcE-mail"), please enter the normal mail addresses first, then enter GSM numbers enclosed by square brackets.

The following screen shot shows an example, where a) a normal e-mail is sent using the mail server, b) an e-mail using the mail server as "E-Mail as SMS" to a mobile phone is sent and c) a GSM SMS is sent directly to two mobile phone subscribers using the GSM modem:



## Limitation to 140 characters

For sending a GSM SMS, the 8-bit format reduces the common length of 160 characters for a SMS to 140 characters. You should pay attention in particular while configuring your own e-mail text. The subject matter should be held shortly also, if possible (as shown for example above). Text with more than 140 characters is abbreviated to 140 characters.

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## "Heartbeat" recommended

When using an isolated standalone computer system, failures of its services are normally not discovered. Therefore, a regular information e-mail service ("Heartbeat") should be established. Heartbeat mails are configured on the "Service" tab. The syntax for entering e-mail addresses is the same as described above. Again, several e-mail address and mobile phone numbers can be entered "mixed".

