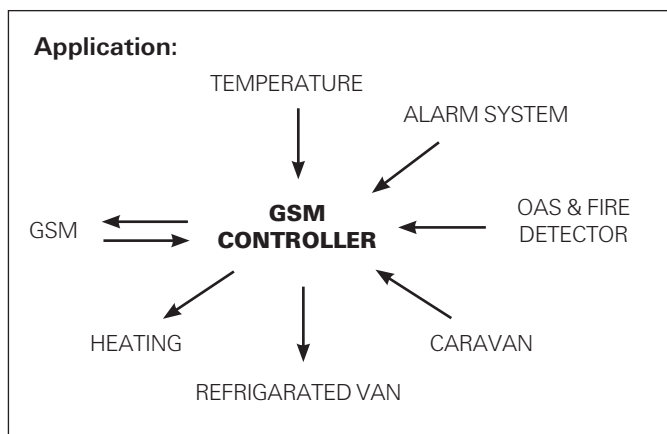


Technical specification

Supply voltage	230 VAC / 6VDC adapter (included)
Power consumption	3 VA
Control settings	via GSM/SMS from a standard mobile phone Slot for a normal open SIM-card
Relay output, potential free	1 normally open, max. 5A / 250V
Alarm inputs	2 normally closed contacts
Ambient temperature – operation	0 – 40 deg.C
Ambient temperature – transport	-20 - +50 deg.C
Temperature range, external sensor	+1 - +35 deg.C
Accuracy, internal/external sensor	1,0 deg.C
Switching hystereses	±1,0 deg.C
Back-up for set values	In non-volatile memory
Protection class	IP20
Terminals	Max. 1,5 mm ²
External sensor	NTC, 10K / 25 deg.C (included)
Maximum length of external sensor cable	100 m, 2x1,5 mm ²
Dimension	H170 x W50 x D28 mm
Colour	Polar white RAL 9010
Approvals	CE, according to EN xx

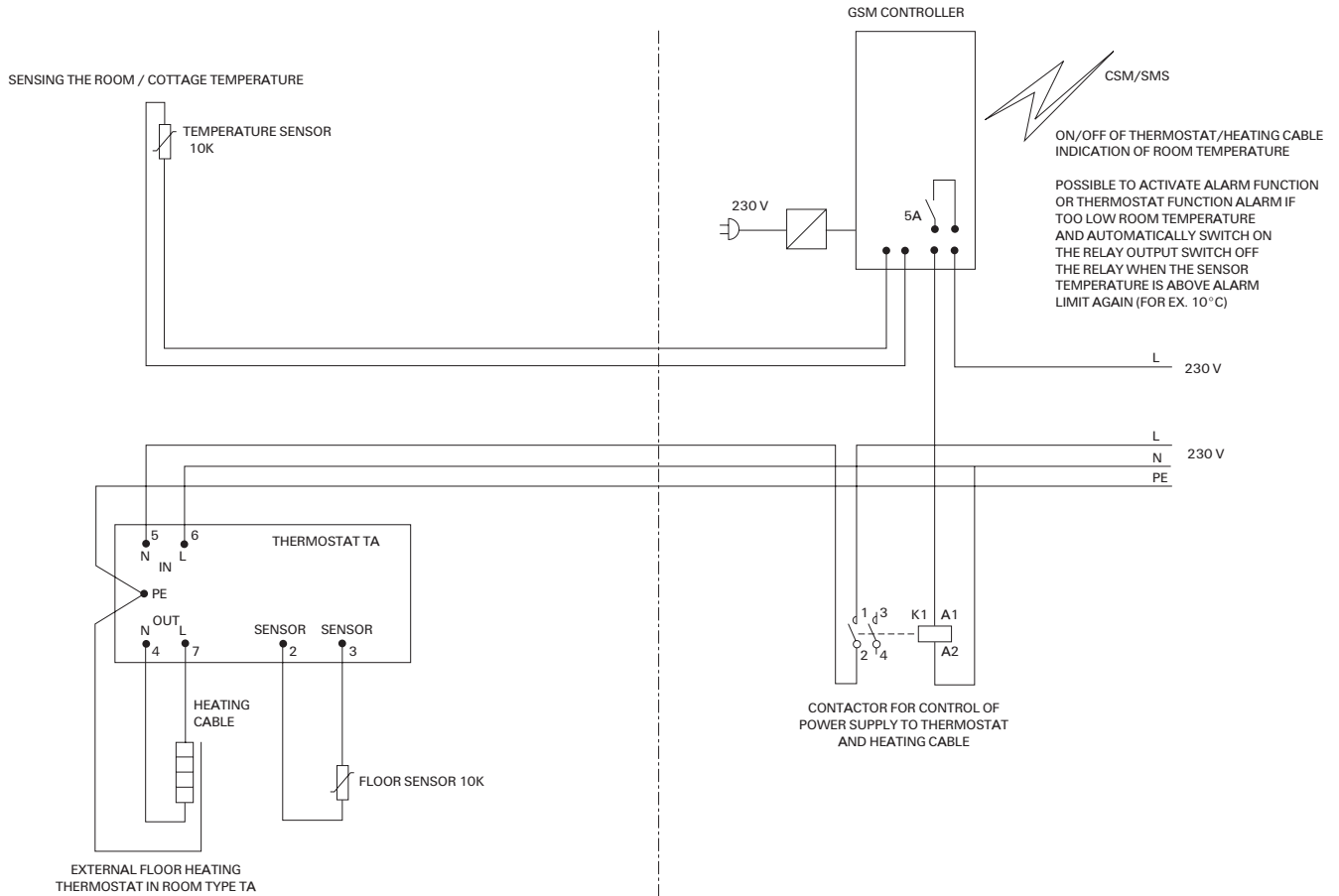
Description

GSM Controller is a GSM-controller for control and monitoring a heating cable installation, or other systems/apparatus in a house/cabin. It provides the following features and functions:



- Via a standard mobile phone send a SMS and turn the relay output on for connecting a floor heating thermostat to an early heating start in the house/cabin
- Possible, via SMS, to see temperature values for internal sensor and external sensor, status for two alarm inputs and the relay output
- Possible, via two alarm inputs monitoring IR-detectors, window/door contact, high water level sensor, moisture detector, etc. for protect your house/cabin
- Configure GSM Controller so the controller send a SMS to a specific mobile phone, when too low temperature for an external sensor
- Configure GSM Controller so the controller send a SMS to a specific mobile phone, when there are alarm status on one or two inputs
- Configure GSM Controller so when there is an alarm the relay output switch automatically on for low temperature and switch off when normal temperature. For example, turn on the floor heating thermostat when there is too cold in the house/cabin.
- One internal buzzer for indicating alarm status or GSM-communications
- One push button for manually turn the relay output off/on
- External temperature sensor, with 3 m cable, is included
- Power supply adapter to GSM Controller is included

Mounting and installation



The GSM Controller, GSM-controller, shall be mounted in a dry location. For example near the electrical distribution panel. A 2-wire cable can be installed to control a contactor in the electrical panel. The contactor will then control a thermostat/heating cable. The external temperature sensor shall be mounted in the coldest place in the house/cabin. For example in the floor, or where there are risk for freezing.

The sensor should be installed in a separate flexible conduit/hose for easy replacement. The sensor can be extended to 100 m with a separate cable 2 x 1,5 mm².

In order to avoid signal disturbance, resulting in a possible malfunction of the module, the sensor should not be installed in a conduit together with other power carrying cables.

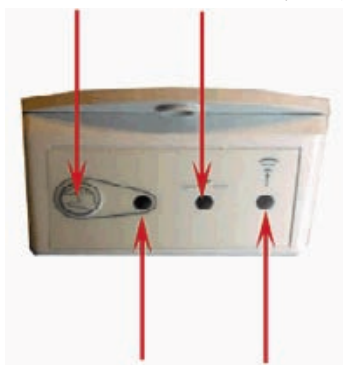
Note: If you do not want to use the external temperature sensor for alarm function, you have to disable this sensor alarm function in the Configuration for the GSM-controller.

Operation

Getting started

LED indications and manual controls

- | | |
|---|---|
| <p>1s: – Switch ON/OFF (Relay)
– Stop the buzzer (if ringing)</p> <p>5s: – Enable/Disable both alarms</p> | <p>Bicolor led indicates alarm status:</p> <p>– green: contact of the both alarms closed (no alarm)</p> <p>– red: contact opened (alarm)</p> |
|---|---|



- | | |
|--|--|
| <p>Relay indication:</p> <p>– Red: Relay ON</p> <p>– Nothing: Relay OFF</p> | <p>GSM Network Indication:</p> <p>– shining: no GSM signal</p> <p>– blinking: GSM signal strong enough</p> <p>– blinking quickly when it receives SMS</p> |
|--|--|

First start – install a SIM-card in the GSM-controller and control the output relay

Put in an open SIM card, (no PIN code) in the right side of the controller. See picture.

Plug in the 230V/6VDC power supply.

The unit starts connecting to the GSM network. The LED starts to blink slowly when connected to the network.

Send SMS-message: PASS to the mobile phone number for the SIM-card in the GSM-controller

Note that a complete international phone number shall be used. For example +46xxxxxxxxxxxx.

The module will return with a SMS-message:

PASS

TEMP:

INT:20 (indicates the internal sensor temperature inside the GSM-controller)

EXT:15 (indicates the external sensor temperature, for example in the floor. Value NC for no sensor)

ALARM 1:0 (indicates the status of alarm input 1. 0=OFF, normal)

ALARM 2:0 (indicates the status of alarm input 2. 0=OFF, normal)

OUTPUT=0 (indicates the status of the relay output. 0=OFF)

To set the relay output on: Forward all the SMS-texts back to the GSM-controller, with the only change OUTPUT=1

To see the new status, send SMS-message: PASS again to the module.

For turning off the relay output the above can be done again, with OUTPUT=0, or push the button on the GSM-controller for 1 sec.

Configure the GSM-controller for more functions

Send SMS-message PASS CONF to the mobile phone number for the SIM-card in the GSM-controller.

The GSM-controller will return with a SMS-message with the factory values:

PASS

PASS=PASS (Here you can change your 4-characters password)

REPLY=ON (Choose if the GSM-controller shall confirm command or not)

ALARM1=ON (If ON, a SMS is sent when an event on the input occurs)

ALARM2=ON (If ON, a SMS is sent when an event on the input occurs)

ALARMTEMP=10 (External sensor. The set temperature when sending SMS to your mobile phone, and perhaps automatically turn on/off the relay. If the number is 0, this input is disabled. See below.)

OUTPUT=0 (If 0, relay controlled only via SMS)

(If 1, relay ON if ALARM 1 is ON)

(If 2, relay ON if ALARM2 is ON)

(If 3, relay ON if ALARM 1 or ALARM2 is ON)

(If 4, relay ON if ALARMTEMP is ON. Working as a low limit on/off thermostat. No SMS temperature alarm will be sent for this function)

BUZZER=1 (If 0, OFF)

(If 1, ON if ALARM1 is ON)

(If 2, ON if ALARM2 is ON)

(If 3, ON if ALARM1 or ALARM2 is ON)

HEARTBEAT=0 (Sets how often the GSM-controller shall automatically send status to your mobile phone. If 0, this function is off. Max. number of hours are 9999 hours, 4 16 days)

SMSCOUNTER=0 (Number of SMS sent. Reset after 99 pcs.)

PHONE=+460000000 (Sets which mobile phone number the GSM-controller shall send SMS-message to, when alarm occurs. Must be set up at the configuration of the GSM-controller. A complete international mobile phone number must be used.)

For changing this configuration: Forward all the SMS-texts back to the GSM-controller, with some of the parameters changed to another digit/characters as above.

Note:

If you do not want to use and connect the external temperature sensor, but will use the PHONE-parameter to receive other alarms, then set the parameter ALARMTEMP=0 (disable the input). Otherwise the GSM-controller will send sensor fault message.

If you have the external sensor connected and the parameter OUTPUT=0, the GSM-controller will only send low temperature alarm message.

If you have the external sensor connected and the parameter OUTPUT=4, the GSM-controller will not send low temperature alarm message. Now the GSM-controller work as a on/off thermostat.

Reset to factory defaults

Push in the push button on the GSM-controller in 30 sec. and all the configuration parameters will go back to factory default values. Note that also the actual mobile phone number will be erased.

Manual control of the output relay

Pushing the button in 1 sec.:

- Switch relay ON/OFF. Note that when using parameter RELAY=4, thermostat function, this function starts again when the relay manually turns OFF again.
- Stop the buzzer (if ringing)

Pushing the button in 5 sec.:

- Enable/Disable both alarms for input 1 and 2

Monitoring of the external temperature sensor

When the external sensor is not connected the value EXT: NC is shown in the SMS-status text.

If the external sensor is used in the Configuration, and is not connected properly a SMS-text: SENSOR FAULT is sent to the actual mobile telephone number in the Configuration.

Sensor fault do not affect the status of the relay output.

The external sensor has the following temperature / resistance values:

15 deg.C / 15,8 kΩ
20 deg.C / 12,5 kΩ
25 deg.C / 10,0 kΩ
30 deg.C / 8,04 kΩ
35 deg.C / 6,51 kΩ

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