



SECURECOM

SS21-GSM M2

Signalling, control and temperature measurement via GSM mobile networks

OPERATION

The device can perform 3 different functions depending on the setting:

- alarm call and/or SMS by contact input trigger
- controllable relay output by toll free call
- alarm call and/or SMS by setted temperature exceeded

The module sends an alarm call and/or SMS to up to 4 phone numbers in case of the input contact are triggered. The relay output can be controlled from 4 phone numbers with caller ID or from another 4 phone numbers until a specified date value is reached. The date of the occasional control can also be easily changed by SMS, e.g. the AIRBNB electronic door key can be set and cancelled. In a setting without caller ID, unlimited users can control the output relay.

An external thermometer (TS-100) can be connected to the device to measure the ambient temperature over a wide range and the measured value can be retrieved via SMS. A temperature alarm threshold can be set (lower and upper or both) to send an alarm call, SMS and even control the output relay as a thermostat, which switches off when the temperature is reset.

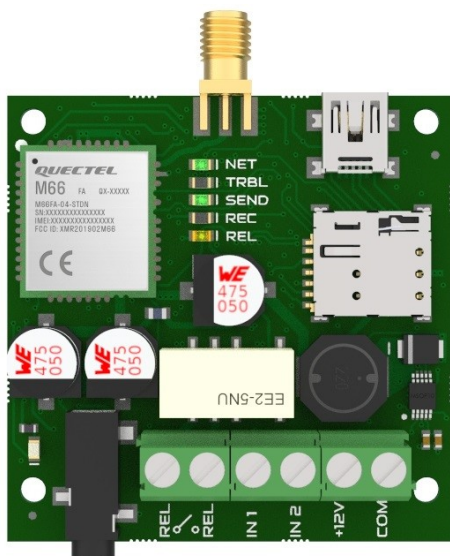
To check the continuous operation, you can set that the device is send a test report periodically in SMS message and the balance info on the SIM card is automatically forwarded.

FEATURES

- 2 contact inputs with independent signaling
- 1 relay output, NO contact
- External temperature sensor, 3.5mm audio jack
- Measuring range: -55 °C / + 125 °C (accuracy +/- 0.5 °C)
- Low supply voltage indication
- Notification up to 4 phone numbers Call and SMS
- USB connection to PC: USB 2.0 mini-B
- Remote setup with SMS message
- Communication: GSM 900 / 1800MHz
- SIM card: Nano-SIM (4FF)
- Power supply: 10-30V DC / maximum 500mA
- Operating temperature: -25 °C / + 50 °C
- Dimensions: 52x52x15mm

APPLICATION AREAS

- Alarm transmitter of alarm control panel
- Gate control by toll free call with caller ID
- Temperature control in wide range
- GSM thermostat function
- Any remote control or switch status indication
- Setting the authorization time range eg. AIRBNB



PACKAGE CONTENTS

- SS21-GSM M2 modul
- GSM antenna
- USB 2.0 mini-B cable
- Plastic spacers
- Warranty
- TS-100 external thermometer is optional, not included in package

SETUP

The module can be configured in 2 ways:

- Locally by PC program, via USB connection (using the supplied cable)
- With remote setup by sending SMS configuration commands. In this mode only limited end-user settings can be changed with an SMS message, see the table of SMS commands.

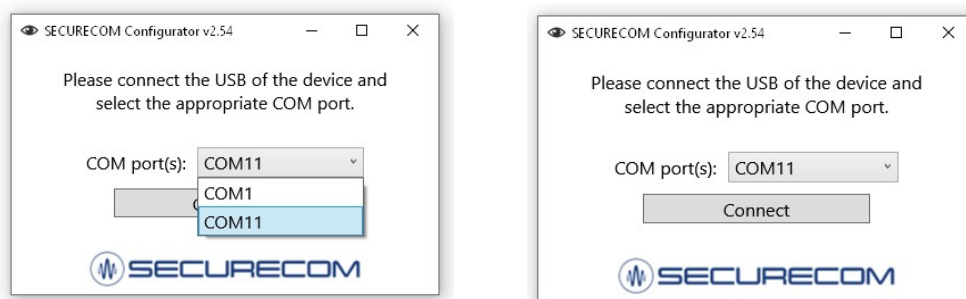
The device is configured using the SecurecomConfigurator application, which can be downloaded from <https://securecom.eu> After installation and running the program, the module must be connected to the PC via USB and the COM port activated by the device must be selected.

Settings with a Securecom Configurator software


After launching the **SecurecomConfigurator.exe** (Windows XP 7,8,10 compatible) and connecting the device, you can configure it as follows.

Attention: the USB connection only has enough power to configure the settings, therefore an external power supply is required to test the calls!

Communication port selection and connection



Once connected, the parameters are configured in the interface below.



TYPE: SS21-GSM
FIRMWARE: v1.16.367
Device ID: 03804cb5bc8ad877

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LATEST EVENTS									
14:35:32: Phone type: M66									
14:35:37: ICCID: 89367031562011009239									
14:35:43: Phone access technology: EDGE (2G)									
14:35:46: Network time synchronization: 2022-03-16,14:35:45									
14:35:46: PHONE READY!									

MODULE STATUS	
Mobile network:	EDGE (2G) Vodafone
Network signal (%):	74%
Input 1:	INACTIVE
Input 2:	INACTIVE
Output:	INACTIVE
Temperature:	°C
Supply voltage:	V
Date/Time:	2022-03-16,14:36:45

PERIPHERAL SETTINGS and SMS NOTIFICATIONS									
Name	Type	Interval	Limit	Range	Relay	SMS message		Enable	
Input 1	NO	0,3 sec				IN1 alarm	TEST	<input checked="" type="checkbox"/>	
Input 2	NO	0,3 sec				IN2 alarm	TEST	<input checked="" type="checkbox"/>	
Relay control		5 sec							
Upper temp.			45 °C	Above	<input type="checkbox"/>	High temperature alarm	TEST	<input type="checkbox"/>	
Lower temp.			0 °C	Under	<input type="checkbox"/>	Low temperature alarm	TEST	<input type="checkbox"/>	
Voltage			10 V	Under		Battery low!	TEST	<input checked="" type="checkbox"/>	
Test period		0 day(s)				Test OK!	TEST	<input checked="" type="checkbox"/>	

GENERAL SETTINGS	
SIM PIN	
Ring time (sec):	20
Call time (sec):	20
Alarm time (sec):	300
SMS limit/day:	20
Call limit/day:	20
Relay control:	Configured phone numbers

NOTIFICATION and PERMISSION SETTINGS						
Phone number	Call	SMS	ACK	Relay	SMSFW	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TEMPORARY CONTROL	
Phone number	Availability
	<input type="text" value="15"/>
	<input type="text" value="15"/>
	<input type="text" value="15"/>
	<input type="text" value="15"/>

After the program is started, it scans and displays the current settings of the device. However, you must press the "download" button (icon 3) to apply the changes, because the settings are not automatically downloaded into the device!

Device datas and file operations



TYPE: SS21-GSM
 FIRMWARE: v1.16.367
 Device ID: 03804cb5bc8ad877 





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Open saved settings from PC



Save settings into a file on PC



Download settings into the device memory

Attention:

Changed values and settings will be valid only after downloading to device.

If a change is made to the settings, the background of the download icon will turn red, indicating the need to download.

General settings

MODULE STATUS	
Mobile network:	EDGE (2G) Vodafone
Network signal (%):	74%
Input 1:	INACTIVE
Input 2:	INACTIVE
Output:	INACTIVE
Temperature:	°C
Supply voltage:	V
Date/Time:	2022-03-16,14:41:22

SIM card PIN code, if necessary

Ringing duration of the called phones

Alarm signal voice maximal duration







Duration while the device is trying to transmit the alarm event

Daily limit for sending SMS (to avoid overpayment)

Daily limit for calls (to avoid overpayment)

Selection of the output relay control function

Events settings

PERIPHERAL SETTINGS and SMS NOTIFICATIONS								
Name	Type	Interval	Limit	Range	Relay	SMS message		Enable
Input 1	NO ▾	0,3  sec				IN1 alarm	TEST	<input checked="" type="checkbox"/>
Input 2	NO ▾	0,3  sec				IN2 alarm	TEST	<input checked="" type="checkbox"/>
Relay control		5  sec						
Upper temp.			45  °C	Above	<input type="checkbox"/>	High temperature alarm	TEST	<input type="checkbox"/>
Lower temp.			0  °C	Under	<input type="checkbox"/>	Low temperature alarm	TEST	<input type="checkbox"/>
Voltage			10 V	Under		Battery low!	TEST	<input checked="" type="checkbox"/>
Test period		0  day(s)				Test OK!	TEST	<input checked="" type="checkbox"/>

The top row of the table is the name of the settings.

The first column of the table is the name of the device events.

Fields in grey are not used or cannot be modified.

In the example, events highlighted in red are missing the enable checkbox, so these events are ignored.

To be notified of all events, the **Enable** checkbox must be checked at the end of the row.

Parameters of contact inputs

Name: Input 1 / Input 2 contact events designators
Type: NO defaults to open input while NC defaults to closed input
Duration: the state change must persist for at least that long to generate an event
SMS message: SMS text which it send when change the contact input state

Parameters of relay control:

Name: Relay control: designator of the relay to be controlled
Duration: relay ON time in seconds (NO->NC->NO monostable type control)

Parameters of temperature measurement:

Name: Upper temperature / Lower temperature: name of temperature thresholds to be notified when reached or exceeded
Threshold: the temperature value above or below which the module sends a notification
Range: defined parameter corresponding to the upper and lower thresholds
Relay: when the threshold is exceeded, it also controls the relay until the temperature is reset (like a thermostat)
SMS message: text of the SMS message sent for a temperature exceeded

Parameters of battery low:

Name: Battery low: the name of the event when the input supply voltage drops under 10V
Threshold: predefined parameter the value of the battery critical voltage
Range: defined parameter corresponding to the lower thresholds
SMS message: text of the SMS message sent for an input voltage drop exceeded

Parameters of test report:

Name:: Test report: periodic SMS test message confirming that the system and SIM card are working
Duration: rather the frequency of sending test reports, which can be specified in days (e.g. if the setting 7 days, in this case it sends an SMS once every week)
 it sends the test report SMS at 9.00 on the current day to the first InfoSMS user specified
SMS message: text of the SMS message (eg. test OK)

Note: the module will only notify you about events if it is selected in the **Enable** column!

Notifications and permission settings

NOTIFICATON and PERMISSION SETTINGS					
Phone number	Call	SMS	ACK	Relay	SMSFW
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Phone number: the phone numbers to which the module sends notifications, if any event occurs
Call / SMS: the type of notification which can be a call SMS or both
ACK: if acknowledgement is set, the alarm will only stop if the called user press any key on the dialer of the phone ((0-9), otherwise the alarm process will continue for the duration set in the settings
Control: if checked, the user can control the relay by making a free call (caller ID) from the phone number provided, e.g. to open a gate or door. If you want to use this function, you must also select the function "Set phone numbers" in the **General settings / Relay control** field!
InfoSMS: send information system messages for maintenance purposes to the first telephone number provided
 - SIM card balance info message forwarding
 - Battery low
 - Test report message

Temporary control

TEMPORARY CONTROL	
Phone number	Availability
	<input type="text"/> 15
	<input type="text"/> 15
	<input type="text"/> 15
	<input type="text"/> 15

In addition to the telephone numbers set in the **Notifications settings** window, it is also possible to temporarily control the relay from another 4 telephones until a specified date. In this way, you can add or delete occasional access to doors or gates. If you want to use this function, you must also select the function **"Set phone numbers"** in the **General settings / Relay control** field!

Phone number: the phone numbers (up to 4) from which the relay can be controlled by caller ID

Validity: the expiration date of the relay controlling from that phone number (until 23:59 on the given day)

Relay control functions and setting

The relay output of the SS21-GSM module can be configured for the following functions:

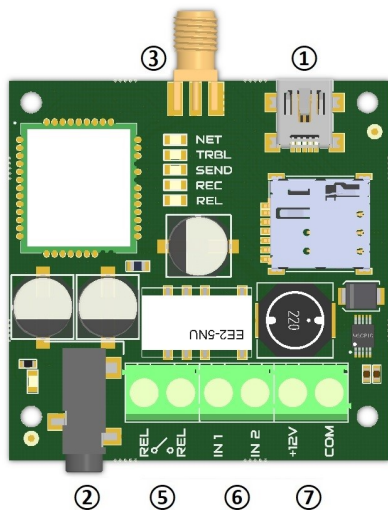
- control with caller ID recognition from preset phone numbers (up to 4 numbers) or 4 additional numbers with temporary control
(Hint: if the 4 fixed numbers are not sufficient, the temporary control must be extended, e.g. up to 20 years)
- control by calling from any phone number, no number recognition, unlimited number of users
- control when the set temperature limit is reached or exceeded

Since all three functions control the same relay, therefore only one of the 3 options can work at a time.

The setting is available in the following menu of the PC program:

GENERAL SETTINGS	
SIM PIN	
Ring time (sec):	20
Call time (sec):	20
Alarm time (sec):	300
SMS limit/day:	20
Call limit/day:	20
Relay control:	Configured phone numbers
	Configured phone numbers
	All call
	Temperature limit

SS21-GSM M2 panel



- ① USB port
- ② TS-100 input
- ③ GSM antenna connector
- ④ Nano SIM holder
- ⑤ Relay (NO out)
- ⑥ Contact inputs
- ⑦ Power supply

LED signals

	Continuous	Flashing
NET (green)	Network OK	RF signal < 30%
TRBL (red)	SIM missing	Network registration
SEND (red)	SMS sending	Call in progress
REC (green)	Incoming call	
REL (yellow)	Relay controlled	

Installation steps

- SIM insertion: with the contact facing downwards and the marked corner facing the SIM holder, as shown in the figure
- Connect the antenna and then connect the terminal blocks as indicated on the panel
- Switching on the power supply

SMS commands

Some user settings can be changed remotely via SMS. These settings include temporary control phone numbers and temperature thresholds.

SMS setting commands are only accepted from the first phone number set.

Sent message	Meaning
?	Query status information including current temperature
t1:phonenumber/yyyymdd, t2:phonenumber/yyyymdd, t3:phonenumber/yyyymdd, t4:phonenumber/yyyymdd,	Setting the phone numbers with temporary relay controll right The user phone number should be entered after t1-t4 , and the date after the / character (in appropriate format)
t1:,t2:,t3:,t4:	Deleting a phone number
lowtemp:xy	Changing the lower limit of temperature range
hightemp:xy	Changing the upper limit of temperature range

Example for temperature limit changing:

SMS message: **lowtemp:-15**

Result: the lower limit of temperature range will be set to -15°C

Example for setting of phone number:

SMS message: **t1:06301234567/20191231**

Result: the phone call from the given number will activate the relay until end of day 31.12.2019

If the limit value is negative, a – sign should be before the number: **lowtemp:-15**

means that the -15°C a will be the low temperature limit, the signal will be sent when it is crossed.