

GSM Sensor Control

Preliminary operating manual

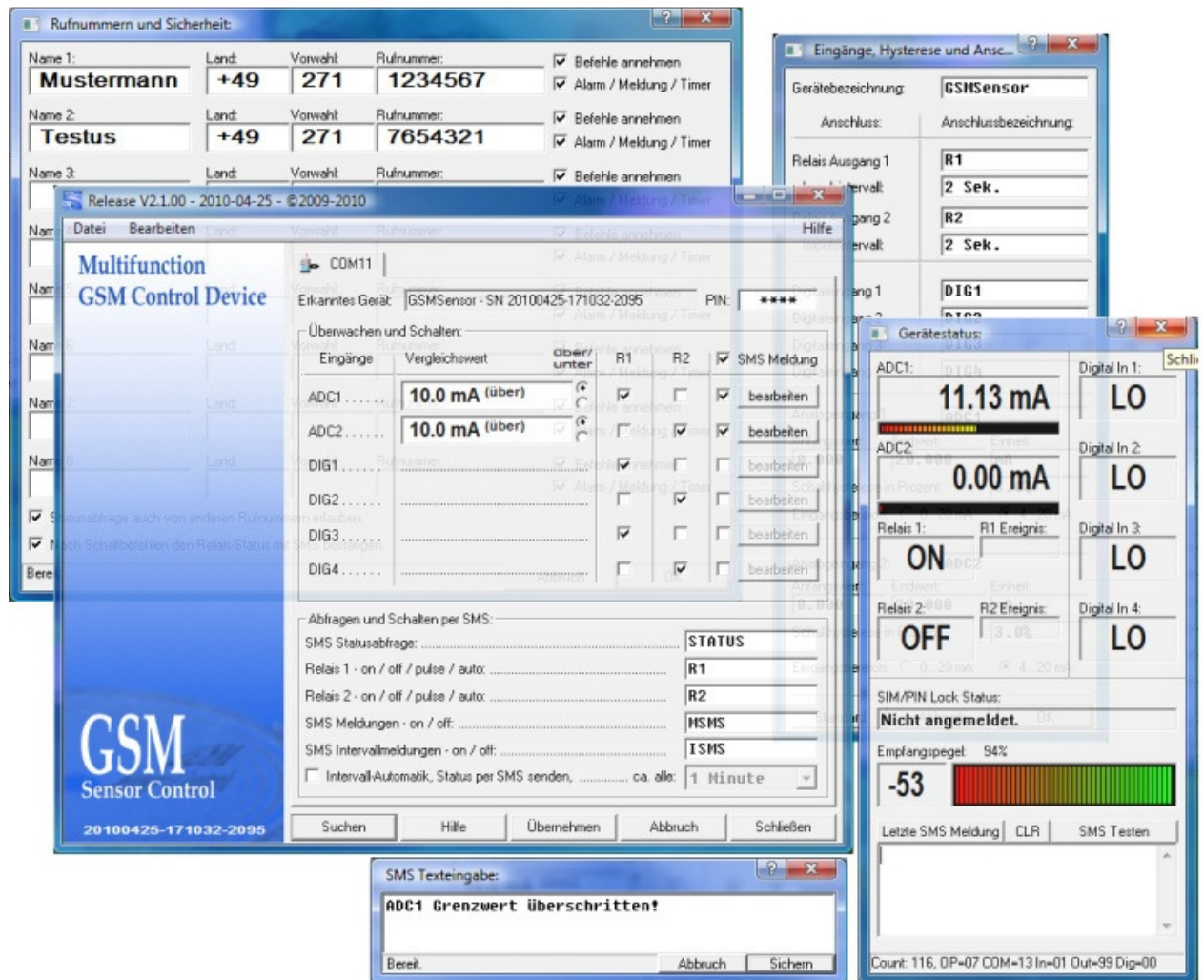


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2. Safety notes



CAUTION!

- The GSM sensor control device and the depending software must not be used in applications where people can be threatened or violated. It must not be used as an emergency stop switch on equipment and machinery or in other security areas!
- Please note that the GSM radio modem of the GSM Sensor Control module must register with a GSM provider. For this, a SIM card and a PIN is required. The PIN must be stored in the module, so that this can automatically log in to the provider. When you enter a wrong PIN and start the module for three times, then the SIM card will automatically be blocked. Please enter a valid PIN number before inserting the SIM card, so the system cannot even register with an incorrect PIN.
- Please ensure that the GSM sensor control device is disconnected from the power supply when inserting the SIM card. Otherwise the device could be damaged while inserting the card, caused by offset voltages or short circuits.
- The GSM sensor control device may not be operated in areas in which electromagnetic waves or radio signals can cause serious problems in equipment or systems.
- The operation of the device within a GSM network is causing additional costs, which may differ dependent from the provider, the data volume and the usage time.
- For the application of the GSM Sensor Control, the legal regulations of the country in which the equipment is operated must be respected!
- You must always check the correct GSM function, using some control calls, until the equipment is used for good. The local radio conditions are not predictable and the SMS delivering time may need between 1 second to several minutes, depending on the GSM provider and the SMS Service Center.
- The relay outputs can be switched either by instruction of the user by means of an SMS, or following an alarm condition. The response times are very much dependent on individual circumstances. During a GSM communication, monitoring tasks can be delayed for a few seconds, the relays respond normally in about 0.5 seconds after the event occurs. The SMS delivering time is not predictable, nor is there a delivery guarantee. Usually, a delivering time between 5 to 90 seconds may be expected.
- The circuit of the GSM sensor control module can be damaged by static electricity, by short-cuts or surges, if not handled with care. Work on the open device therefore is only with the greatest attention. In particular, the connection of sensors or other external devices to the device connector, wires in no case must come in contact with internal circuit parts.

3. Technical data

Power supply		
	DC 8 ... 24 V	Power supply DC 8 ... 30 V (+/-10%) regulated
Inputs		
	4 x digital	Digital inputs 5...24V, 20mA over optocouplers, alarm-switch time ca. 500 ms.
	2 x analog	Analogue inputs 0 ... 20mA, +/- typically 0.01%
Outputs		
	2 x Relais	Relay outputs 50V / 2A
GSM modem		
	GSM	GSM850, EGSM900, DCS1800, PCS 1900 Netze , Command interpreter for controlling the device by SMS messages.
	GSM900	GSM class 4, up to 2 W transmission power (33 dBm)
	GSM1800	GSM calss 1, up to 1 W transmission power (30 dBm)
	Sensitivity	Receiver sensitivity < -102 dBm

4. System requirements

4.1. System requirements for the GSM Sensor Control device

For the commissioning of the device a sufficient power supply (8 ... 30 V) is necessary.

As to the basic functions of the device in addition to measuring and monitoring belongs the communications within the GSM network (e.g. alerting via SMS), for an effective use, a cell phone network coverage is required.

For communication within the GSM telephone network also a standard SIM card is required, which is found in normal cell phone use. Communication leads to increased costs in the context of the used mobile phone contract.

In the case of using the analog inputs, it must be ensured, that the used sensor device can really deliver the 20 mA on a device voltage below 16V also.

The relay outputs can be switched either by instruction of the user by means of an SMS, or following an alarm condition. The response times are very much dependent on individual circumstances. During a GSM communication, monitoring tasks can be delayed for a few seconds, the relays respond normally around 0.5 seconds after occurrence of the alarm event. The SMS delivering time is not predictable, nor is there a delivery guarantee. Usually, a SMS delivering time can be expected ranging between 5 to 90 seconds.

The output named "relay A" is also named "relay 1" or "R1", the output named "relay B" is also named "relay 2" or "R2" in the software.

4.2. System requirements for the parameterization software

The program for parameterization of the GSM Sensor Control module is designed as a Windows 32 compliant application for Windows XP, Windows Vista or Windows 7. The software uses only general Windows functions, such as access to the hardware (RS232C, etc.).

Older versions of Windows, as Windows ME, Windows'98, Windows'95, Windows 3.x or DOS-based systems are not suitable.

The application is also suitable for 64-bit systems, where it is executed within a 32-bit subsystem.

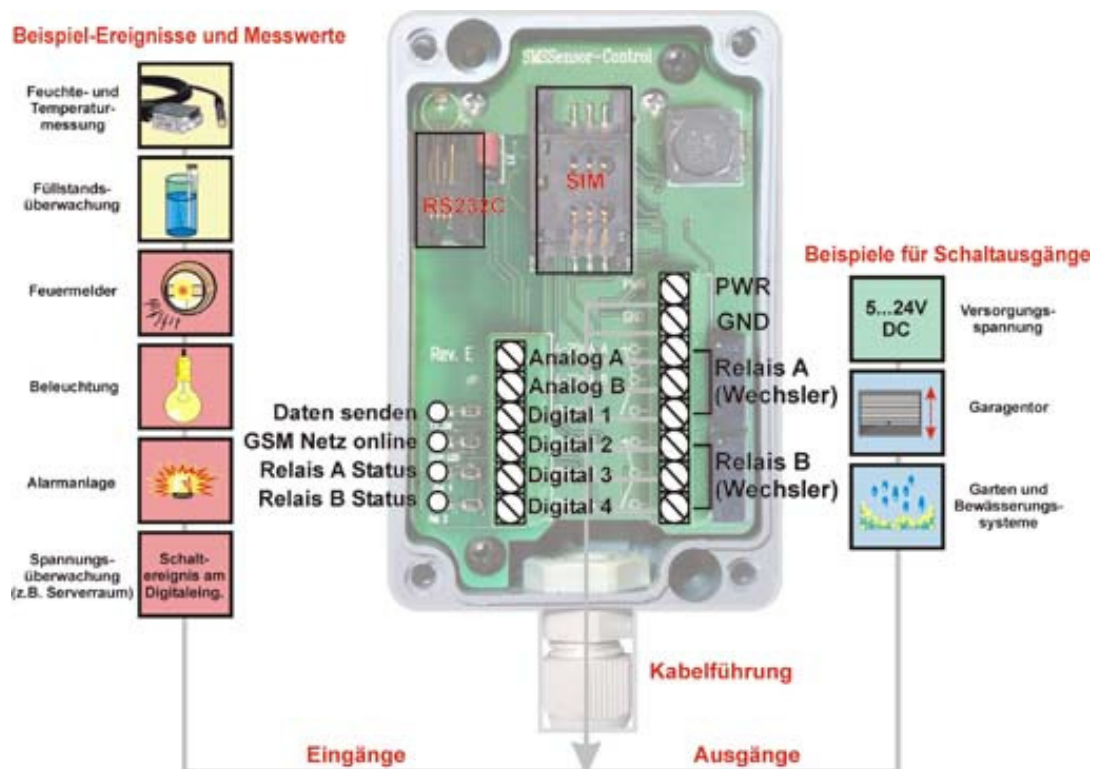
To ensure an efficient use of the program, the following minimum system requirements are recommended:

- X86/X64 compatible PC with a suitable Windows operating system.
- Sufficient amount of memory to ensure the correct function of the Windows operating system and to allow standard applications.
- Enough free hard disk space for the correct function of Windows operating system.
- At least a video resolution of 1024 x 768 pixels with 64K (16-bit) color depth. The use of lower resolutions is also possible, e.g. for notebook devices, however, the possibility that individual components of dialogue cannot find space on the screen.
- At least one free COM port to connect the GSM Sensor Control device. It can also be USB to RS232 adapter unless it has a Windows COM port drivers and set up a logical interface.

The software requires no further installation. Just copy the program to your hard disk or run it directly from another data carrier. There is no need for further installations by the user.

5. Commissioning

The unit is basically ready for operating after turning supply power on. Depending on the requirements, you first must setting-up some important adjustments.



The GSM functions are ready for use after inserting a SIM card, configuring the network access information and logging into an suitable GSM network.

5.1. Connectors and interfaces



- 1 RS232 interface port for configuration
- 2 SIM card holder
- 3 Status LEDs
- 4 Input signal terminal
- 5 Terminal block for power supply and the outputs
- 6 Conduit for the cable

Note: The output named "relay A" is also named "relay 1" or "R1", the output named "relay B" is also named "relay 2" or "R2" in the software.

1 RS232 interface port for configuration

The GSM sensor control device contains a RS232 compatible 3-wire interface for connection to the PC. Control lines are not required.

2 SIM card holder

For the use of the SMS interface, the GSM sensor control device first has to register to a GSM service provider. This will require a SIM card. The card must be inserted into this card holder. Any standard SIM card for GSM cell phones can be used.

3 Status LEDs

The GSM Sensor Control contains four status LEDs which have the following signaling functions:

- GSM transmitting signal.
- Operating LED. This LED is off if no supply voltage. It's permanently on if supply voltage is on and device is not connected to GSM. It's blinking if device is logged to a GSM network..
- Relay 1 status LED. This LED is on, if relay 1 is closed.
- Relay 2 status LED. This LED is on, if relay 2 is closed.

4 Input signal terminal

This left side terminal consists of 6 different connectors. The connectors are assigned as follows:

- Analogue input A
- Analogue input B
- Digital input 1
- Digital input 2
- Digital input 3
- Digital input 4

5 Terminal block for power supply and the outputs

The right hand side terminal consists of the power supply and the relay connectors. It has the following contacts::

- +24V DC power connector
- Ground
- Relay 1 connector
- Relay 2 connector

6 Conduit for the cable

Through this opening, the connections made to terminal blocks.

5.2. Insertion of the SIM card

The SIM card is required for logging the radio module with your GSM provider. For the GSM Sensor Control device you can use a normal GSM cell phone card from any provider. As the device will register the GSM module after inserting the SIM card to the local GSM network, also it must have a valid PIN already been stored in the module. Please do the following:

- Connect the GSM sensor control device, even without a SIM card, to the PC. Switch it on and start the parameterization program.
- Enter your PIN number in the dialog box and click on "Apply" to commit the changes to the device. Your PIN number is now stored in the device. It is recommended to make all further settings already now, so that unnecessary and potentially expensive GSM access is prevented due to incorrect settings.
- Turn the device off again and disconnect it from the PC.
- For insertion of the SIM card open the housing of the GSM Sensor Control device and insert the card into the SIM card holder. Then close the housing again.
- After that, the GSM Sensor Control device can be connected and turned on again. It then logs automatically after a few seconds at the local GSM network and begins the configured monitoring tasks. The correct registration with the GSM network can be recognized according to the blinking status LED. Until the beginning of the monitoring functions about 30 seconds may pass.

You need to confirm the correct GSM function always using some checking-calls before the equipment is used for good. The local radio conditions are not predictable and depends on the GSM provider and SMS Service Center also expected to SMS maturities between 1 second to several minutes.

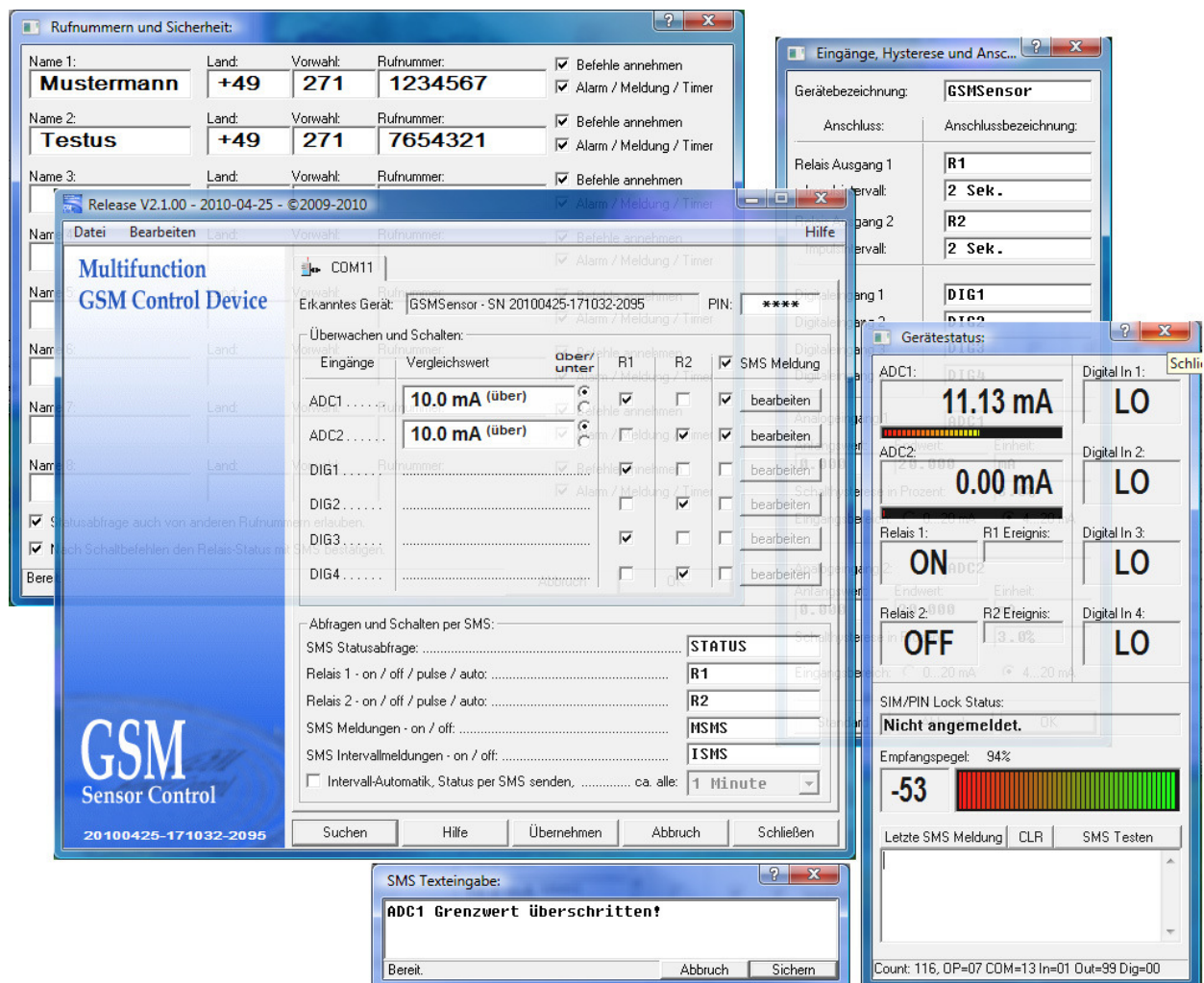
6. Parameterization

Immediately after loading, the parameterization program starts looking for connected GSM Sensor Control devices. In this process automatically all appropriate and available RS232 interfaces of the PC are searched. A further configuration of interfaces or a manual selection is not required. Of course, only connected and powered devices can be found.

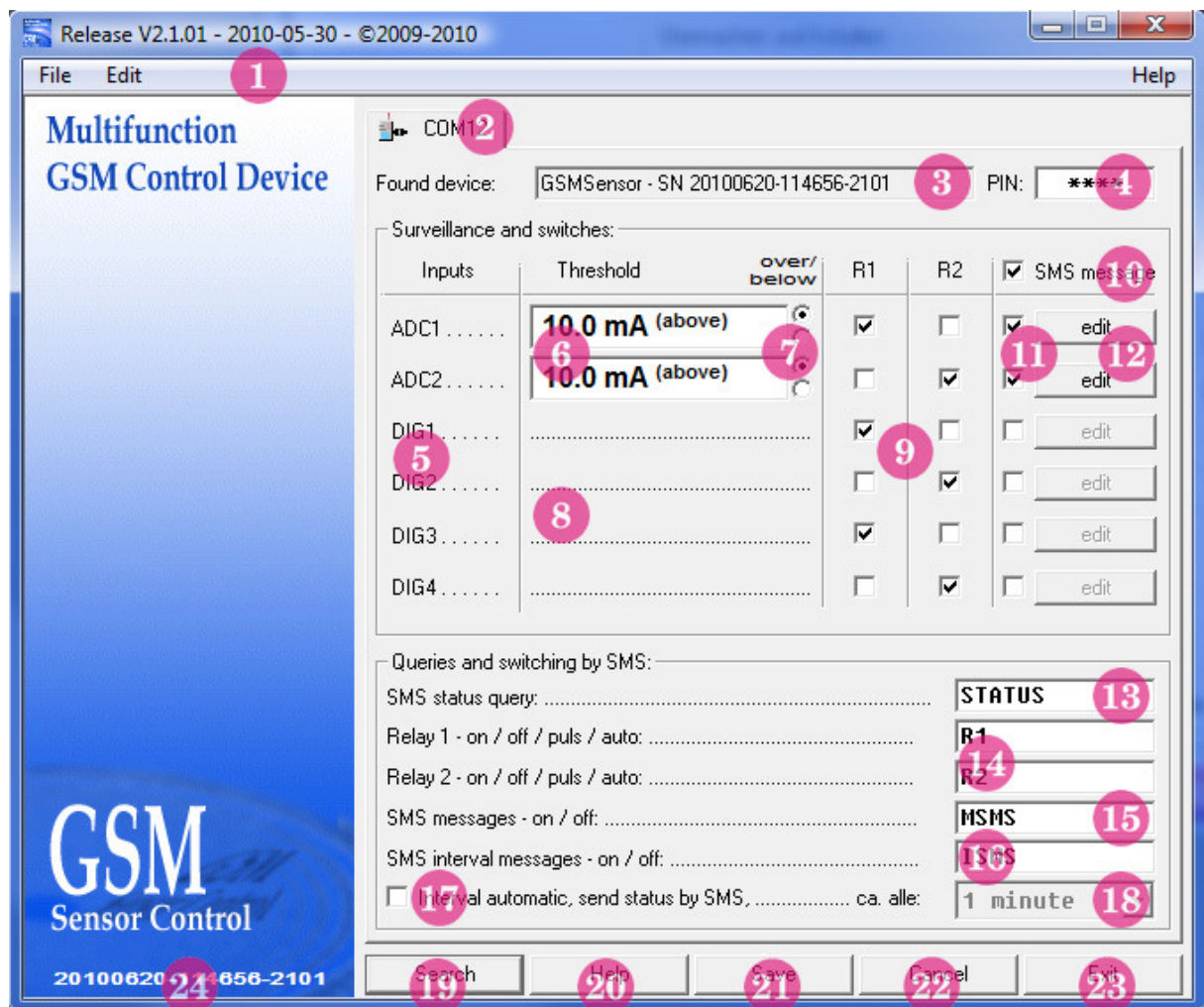
After the search process, the parameterization of the first found device is read automatically and displayed on screen, or all dialogue items in main window are disabled and grayed if no device was found.

In rare cases it may occur, that a connected GSM Sensor device unit cannot even respond quickly enough, e.g. if it receives at this moment a SMS or is otherwise busy. If a connected device cannot be found directly, you can repeat the device search just as often as necessary.

In the case, that more than one sensor GSM Control device is found, you can select one of the found devices using the tabulator control (see description of the parameterization dialogue). The maximum number of simultaneously connected devices is limited by the number of available serial RS232 ports.



6.1. The main window of the parameter setting program



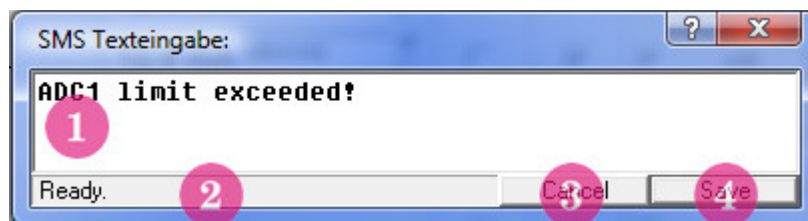
Description of controls:

- 1 Main Window menu. Some less often used features of the program are available by the program menu. The main functionality of the menu is to open the sub dialogues, e.g. the dialogue for setting the phone numbers, the dialogue for configuration of the inputs and the outputs or the measurement display for checking the correct function after adjusting the device.
- 2 Tab for the selection of a device. Once a device is connected to the PC and identified by the software, a tab will appear with his COM port number for the connection. You may see several tabs are displayed, if more than one device is connected. In this case, you can select the desired device by its tab.
- 3 Display of the name of the selected device and its serial number. The selected device can be identified by this ad. Here beside the device name, the assigned unique serial number is displayed.
- 4 Input for the SIM pin. In this field you must enter the PIN number of the SIM card. This is very important because the device cannot book into a GSM network without the valid PIN number. Please note that the input of an incorrect PIN number can cause the blocking of the SIM card after several times the device is turned on again with a inserted SIM card. If this happens, the card must be unlocked again using the PUK (using a normal mobile phone). The software is designed so that a PIN "0000" is understood as "not entered". In this case, the device don't try to book into a GSM network. Therefore, it is not possible to establish a "0000" as a GSM SIM PIN for connection.
- 5 Names of the inputs. In this column the names of the inputs are shown. You can enter or change the names using the dialog for configuration of the scaling, the inputs and outputs.

- 6 Thresholds for analog inputs. Here, the threshold for switching based on a analogue input level is available. The value must correspond to the set scaling, entered in the dialogue for the configuration of the inputs and outputs and scaling. E.g. for an input a scaling of 0 ... 20 mA was defined, the threshold must lie within the set 0 ... 20 mA and a threshold of 40 is not valid.
- 7 Choice for switching with exceeding threshold or shortfall the threshold value. This value defines if switching should take place if a event for exceeding or falling below the threshold will occur. E.g. switching below the threshold can be used for a failure alarm, while switching above the threshold can be used for an overrun alert.
- 8 Reserved. Currently no further configuration for digital inputs is available.
- 9 Allocation to switching events. Using the buttons in these two columns, you can determine whether a switching event is to be spent on one of the two switching outputs. E.g. you can choose to switch the relay R2 on exceeding the threshold of an analog input.
- 10 General enabling for SMS messages. This button determines whether alarm messages via SMS to be sent or not. This is a global switch, i.e. there are all SMS messages, no matter how they are configured, on or off. It's also possible to change this button by sending a SMS command, which is named "MSMS" by default.
- 11 Activation of specific alarm messages. Use these buttons to determine whether a switching event is leading to a SMS message or not. The corresponding SMS message can be defined with the adjacent button (12).
- 12 Alerts edit. This button opens a dialogue for defining the message text of a SMS for a switching event (see Section 6.2, editing of SMS texts).
- 13 SMS query command for status message. This field contains the command string for status queries by SMS. By default, it is set to "STATUS".
- 14 SMS switch commands for the relay outputs. In this two fields the command strings for switching the two relay outputs can be configured. The string means the keyword part of the complete SMS string, which is followed by an extension which defines what to do with the output. There are existing several different extension, e.g. "ON", "OFF" or "RELEASE" and so on.
- 15 SMS command for enabling or disabling SMS messages by the device. This string will define the command, which is followed by an extension what to do.
- 16 SMS command for enabling or disabling of interval messages. This field contains the command string which is used for enabling or disabling interval status messages by the device. The command string must be followed by an extension too. Please note, that this command only enables or disables the interval message service, it does not set the interval time. Currently it is only possible to change the interval time using the parameterization software. The interval message itself always consists of a standard status message.
- 17 Button for direct enabling or disabling of interval status messages. This means that the status for interval messages can preselected by this button. Depending on the configuration, it is possible to change this setting by sending a SMS containing a command as configured at point 16.
- 18 Selection for the interval time used for interval status messages. You can choose one of the predefined interval times.
- 19 Button for initiating a new device search. Pressing this button repeats the device search in the same matter as on starting the program. During the device search, all available COM ports of the PC are scanned for connected GSM Sensor Control devices. The found devices are shown as tabs of the tab control window (2). The connection to the first found device is established automatically and its parameters are read and shown on screen.
- 20 Button for opening the help file.

- 21 Button for updating and saving the parameterization. If you press this button, all modified parameters are written back to the device and are directly valid. While you do some modifications on the device parameters, these are only stored in the PC memory. This includes the sub dialogues also. For activation of all changes, you need to press this button.
- 22 Button for closing the application without saving the made changes. Pressing this button causes terminating of the application immediately without saving made changes first. All made changes are lost.
- 23 Button for terminating the application after saving all made changes. This button is terminating the application too. but all made changes are first saved and immediately valid.
- 24 Display of the device serial number. This is the unique serial number of the currently connected and selected device.

6.2. Editing of SMS text



- 1 Input field for the text string. This can be used for editing the message text for the selected message. The maximum string length is 79 characters.
- 2 Status display. This field displays the number of already used characters for the message and how much is still available.
- 3 Button for closing the dialogue without saving the made changes. The dialogue is closed without saving the data in the device parameter set.
- 4 Button for closing the dialogue after saving all made changes. The dialogue is closed after the changes are stored in the device data set. Please note, that the device data set must be written back too before the changes are becoming valid.

6.3. The dialogue "Connectors and scales"

The screenshot shows the 'Connector configuration' dialog box. It contains several sections for configuring device parameters. Numbered callouts (1-13) point to specific fields and buttons:

- 1**: Device name field (containing 'GSMSensor').
- 2**: Relay output 1 name field (containing 'R2').
- 3**: Impulse interval for relay output 1 field (containing '2 sec.').
- 4**: Digital input 2 name field (containing 'DIG2').
- 5**: Analogue input 1 name field (containing 'ADC1').
- 6**: Beginning value for analogue input 1 field (containing '4.000').
- 7**: End value for analogue input 1 field (containing '20.000').
- 8**: Unit for analogue input 1 field (containing 'mA').
- 9**: Hysteresis in percent field (containing '3.90').
- 10**: Input range field (containing '0...20 mA').
- 11**: Defaults button.
- 12**: Cancel button.
- 13**: OK button.

- 1** Name of the device. In this field you can type a name for the device, which can have a maximum length of 9 characters at all. The name is used with different messages for identifying this device.
- 2** Names of the relay outputs. This is used for defining the names of the relay outputs of the device. By default, the relay output 1 is named as "R1" and the relay output 2 is named "R2". This strings may have a maximum length of 10 characters.
- 3** Interval time for impulse output on the relay outputs. Here you can define the impulse length for switching a relay output. The time is defined in seconds. The value can be between 1 and 255 seconds. The time means the time in seconds the relay switch stays on.
- 4** Names of the digital inputs 1 to 4. As described in point (2), this fields defines the names of the digital inputs.
- 5** Names of the analogue inputs. This fields are used to define the names of the analogue inputs.
- 6** Beginning value for scaling the analogue measure values. This is the lowest value used for scaling and displaying the analogue measurement. This is also the value display on minimum measurement.
- 7** End value for the scaling. This is the end value for scaling the analogue measure values. Same as described in (6), this is the value which is displayed as the analogue input value is at the maximum.

- 8** Units of the analogue measuring. This fields are used to define the units displayed for analogue measuring. This can be a string with a length of maximal 4 characters.
- 9** Hysteresis for switching functions based on analogue measuring. For triggering of switching events exceeding threshold or shortfall the threshold value, a hysteresis can be defined in percent. This value is set using the edit field.
- 10** Input range for measuring with the analogue inputs. This setting is used to define the minimum level of a analogue input. It is possible to select a value between 0 and 4 mA. The input is also causing the range of the analogue input between 16 and 20 mA. The defined minimum level is converted to the scaling start level and the maximum input level is converted to the maximum scaling value. The range is always scale in a linear matter.
- 11** Button for loading the default values. If you press this button, all parameters shown in the dislogue are reset to their defaults.
- 12** Button for closing the dialogue without saving the changing.
- 13** Button for closing the dialogue after saving all changes in the device data set, which must be written back to the device from the main dialogue window.

6.4. The dialogue "Phone numbers and safety"

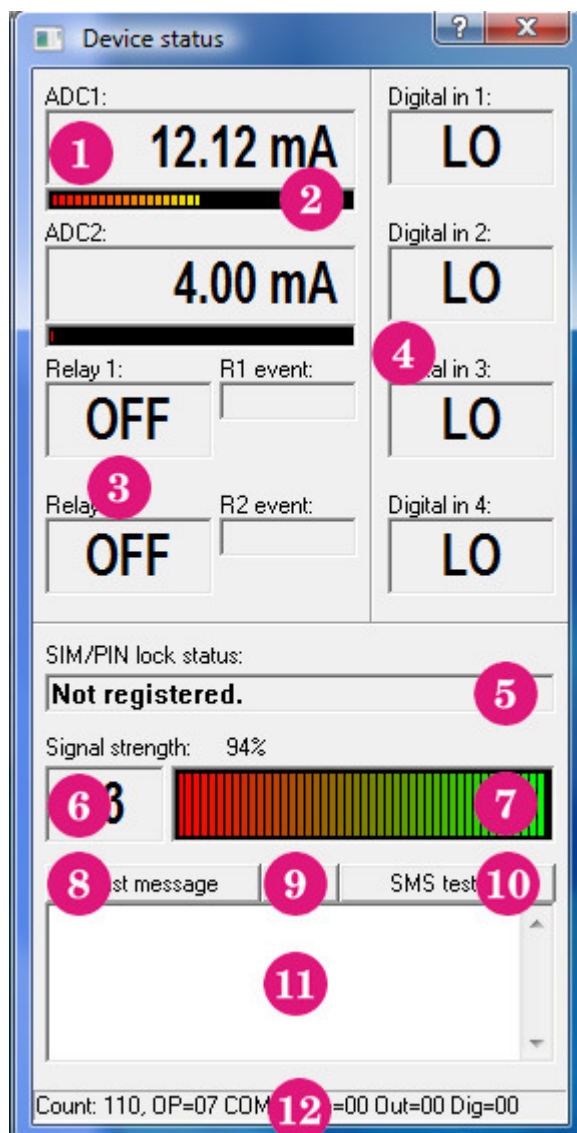
The dialog box "Phone numbers and safety" contains the following fields and controls:

- Name 1:** Doe, John (Callout 1)
- Country code:** +49 (Callout 2)
- Area code:** 271 (Callout 3)
- Phone number:** 1234567 (Callout 4)
- Accept commands:** ☒ (Callout 5)
- Alert / Message / Timer:** ☒ (Callout 6)
- Name 2:** Testus (Callout 1)
- Country code:** +49 (Callout 2)
- Area code:** 271 (Callout 3)
- Phone number:** 7654321 (Callout 4)
- Accept commands:** ☒ (Callout 5)
- Alert / Message / Timer:** ☒ (Callout 6)
- Name 3:** (Empty)
- Country code:** (Empty)
- Area code:** (Empty)
- Phone number:** (Empty)
- Accept commands:** ☒ (Callout 5)
- Alert / Message / Timer:** ☒ (Callout 6)
- Name 4:** (Empty)
- Country code:** (Empty)
- Area code:** (Empty)
- Phone number:** (Empty)
- Accept commands:** ☒ (Callout 5)
- Alert / Message / Timer:** ☒ (Callout 6)
- Name 5:** (Empty)
- Country code:** (Empty)
- Area code:** (Empty)
- Phone number:** (Empty)
- Accept commands:** ☒ (Callout 5)
- Alert / Message / Timer:** ☒ (Callout 6)
- Name 6:** (Empty)
- Country code:** (Empty)
- Area code:** (Empty)
- Phone number:** (Empty)
- Accept commands:** ☒ (Callout 5)
- Alert / Message / Timer:** ☒ (Callout 6)
- Name 7:** (Empty)
- Country code:** (Empty)
- Area code:** (Empty)
- Phone number:** (Empty)
- Accept commands:** ☒ (Callout 5)
- Alert / Message / Timer:** ☒ (Callout 6)
- Name 8:** (Empty)
- Country code:** (Empty)
- Area code:** (Empty)
- Phone number:** (Empty)
- Accept commands:** ☒ (Callout 5)
- Alert / Message / Timer:** ☒ (Callout 6)
- Allow status queries from different numbers too:** ☒ (Callout 7)
- Confirm switching commands by an answer SMS:** ☒ (Callout 8)
- Bereit.** (Callout 9)
- Cancel** (Callout 10)
- OK** (Callout 11)

- 1 Name to the phone number. This field can be used for typing the name for the phone number. This is only used for helping the user. It has no further function.
- 2 Country code of the phone number. In this field you must enter the country code for phone number. If no country code is entered, automatically "+49" is used for Germany.
- 3 Area code for the phone number. In this field, the area code of the telephone number is entered. If no area code is entered, automatically 1 is used.
- 4 Local phone number. This is the local part of the phone number. If no number is entered, 0 is used automatically.
- 5 Check box for enabling or disabling of accepting calls over this specific phone number. Commands, sent by SMS, are only accepted, if this option is enabled for the number. This is used for checking the permission for executing SMS commands on the device. This is also the reason, why no calls are accepted from callers, which have suppressed their phone numbers, because in this case the permission cannot be verified.
- 6 Check box for enabling or disabling of sending alert SMS to this phone number. This allows you to enable SMS events to a specific phone number only.

- 7 Check box for enabling or disabling of status calls from phone numbers which are not listed in the phone number table. If this field is enabled, then also phone calls are accepted for status queries when it is not listed in the phone number table. But this callers are not allowed to send other SMS commands to the device.
- 8 Check box for enabling or disabling of automatic status messages after executing a SMS command. This is used for confirming the execution of command SMS.
- 9 Status line.
- 10 Button for closing the dialogue without saving the changing.
- 11 Button for closing the dialogue after saving all changes.

6.5. The dialogue for displaying measuring and for testing settings



- 1 Numerical display of analog measured values according to the chosen scaling.
- 2 Bar graph of the relative representation of the current measuring analogue levels.
- 3 Display of state of the switching outputs.
- 4 Displays the current state of digital inputs.
- 5 Display for the status of the GSM connection.
- 6 Numerical display for the field strength of the received GSM signal.
- 7 Bar graph of the relative representation of the field strength of the received GSM signal.
- 8 Button to query the last SMS message that was created by the device. This button causes the transmission and display of the SMS text buffer of the device. The string is displayed in the field described with (11).
- 9 Button to delete the SMS message. The content of the field, described with point (11), is cleared.
- 10 Button to transmit a simulated SMS commands to the device. The content of field, described in point (11), is transferred to the SMS text buffer of the device and a simulated SMS reception is started. The transmitted text is then processed as an SMS command. This feature allows to test the correct configuration of SMS commands.
- 11 Simulated input for SMS commands and display of the last created SMS from the device.
- 12 Status line.

6.6. Analysis of SMS commands

In the following section is describing the manner in which the contents of incoming SMS commands is evaluated.

The device has a full-text command interpreter. This examines the text of the message received by the specified keywords. If a keyword is found, the command is processed. There are two different types of commands, query commands and set commands. In all the commands then the number of the sender of the SMS will be reviewed. If this is not found in the internal list of phone numbers, then the command is usually not performed. The exception to this is a simple status query which is also processed if the corresponding switch for accepting status queries from unknown callers in the configuration is enabled. For all other commands, the phone number must be found in the list and permission for the execution of commands must be set.

If all conditions are met, the device starts with the command execution. For a switching command, after the command is usually given an additional extension. The extension must be separated by at least one space between the command and the extension. The expansion will be searched from command end to end SMS text, which allows to combine multiple commands with an extension, so as to shorten the required text. Example: "R1 R2 on" turns on both outputs, because for both commands R1 and R2 the expansion "on" was found. If no extension is found, the defined standard extension is used. For switching commands this is no further action.

As command extensions a variety of words or abbreviations are accepted. Since the extensions are searched by a text search, they can also be combined or within (the beginning) of another word occur. Therefore, a priority is set so that the initials of an extension is not already accepted, if this string occurs within another extension. With the full-text search, it does not matter whether, for example instead of "PULSE" the word "PULS" appears, it is because each form is included in the keyword. However, all extensions must begin with a space character.

The analysis of the extensions are not case-sensitive. However, as it is not possible to send SMS text within all special characters, these special characters are automatically converted into an alternative form (this also applies to the keywords of the commands). Example: The character "Ä" is changed to the characters "AE".

The following list shows the currently possible command extensions in order of priority:

Priority	Key word	Meaning/Function
1	RELEASE	release
2	SWITCH	toggle
3	TOGGLE	toggle
4	AUTO	release
5	FREI	release
6	PULS	impulse mode
7	EIN	turn on
8	OFF	turn off
9	AUS	turn off
10	CLR	release
11	SW	toggle
12	ON	turn on
13	AN	turn on
14	0	turn off
15	1	turn on
16	2	toggle
17	3	impulse mode
18	4	release

The execution of command functions takes priority over the internal functions of the device, since a direct command from the user is considered as more important than the internal alarm configuration. E.g. was the device configured to switch R1 if a threshold is exceeded, and this condition is fulfilled, the R1 output normally is switched on. But if a user sends "R1 off" command the R1 is switched off regardless of the analogue value because the user command has the higher priority. For releasing this overwriting status, the user can send the "R1 auto" command. The default by the user is then removed and the output switches back to threshold is exceeded.

7. Misc

7.1. Application samples

7.1.1. Gate control over cell phone

The GSM Sensor Control is in an excellent way to control door systems using a cell phone. E.g. for opening or closing the gate the relay R1 or R2 is used with the pulse output mode. For clarity, in the dialogue "connections and scales" for the relay output a meaningful name can be assigned, for the example "GB2". Additionally, two digital inputs are connected to the both limit switches of the gate. This is realized by connecting digital input 1 with the limit switch for opening the gate and the digital 2 input is connected with the limit switch for closing the gate. Further, for D1 event the message "Gate B2 is open" and as D2 event message "Gate B2 is closed" can be defined. You also can assign the names "B2 up" and "B2 down" for the digital inputs to improve the differentiation.

The parameterization sample is stored on the CD-ROM. Of particular note is, that the check box "Automatic status messages after executing a SMS command" should be disabled in the dialogue "Phone numbers and safety", because otherwise the device is always sending 2 messages if the gate is controlled by SMS, one from the limit switches and one from the SMS confirmation.

Open the gate: (SMS) phone number + „TB2 pulse“ > Feedback to the cell phone „**Gate B2 is open**“

Close the gate: (SMS) phone number + “TB2 pulse“ > Feedback to the cell phone „**Gate B2 is closed**“

If the GSM sensor control version with fully functionality is used, 2 more digital inputs (digital in 2 and 3) and 2 analogue inputs are remaining unused. So such a GSM sensor control is able to manage additional tasks parallel to the gate controlling, such as theft insurance using sensors or monitoring of temperature or humidity.

If you want to know whether the door is open or closed, you can always query a feedback using the "STATUS" query command.