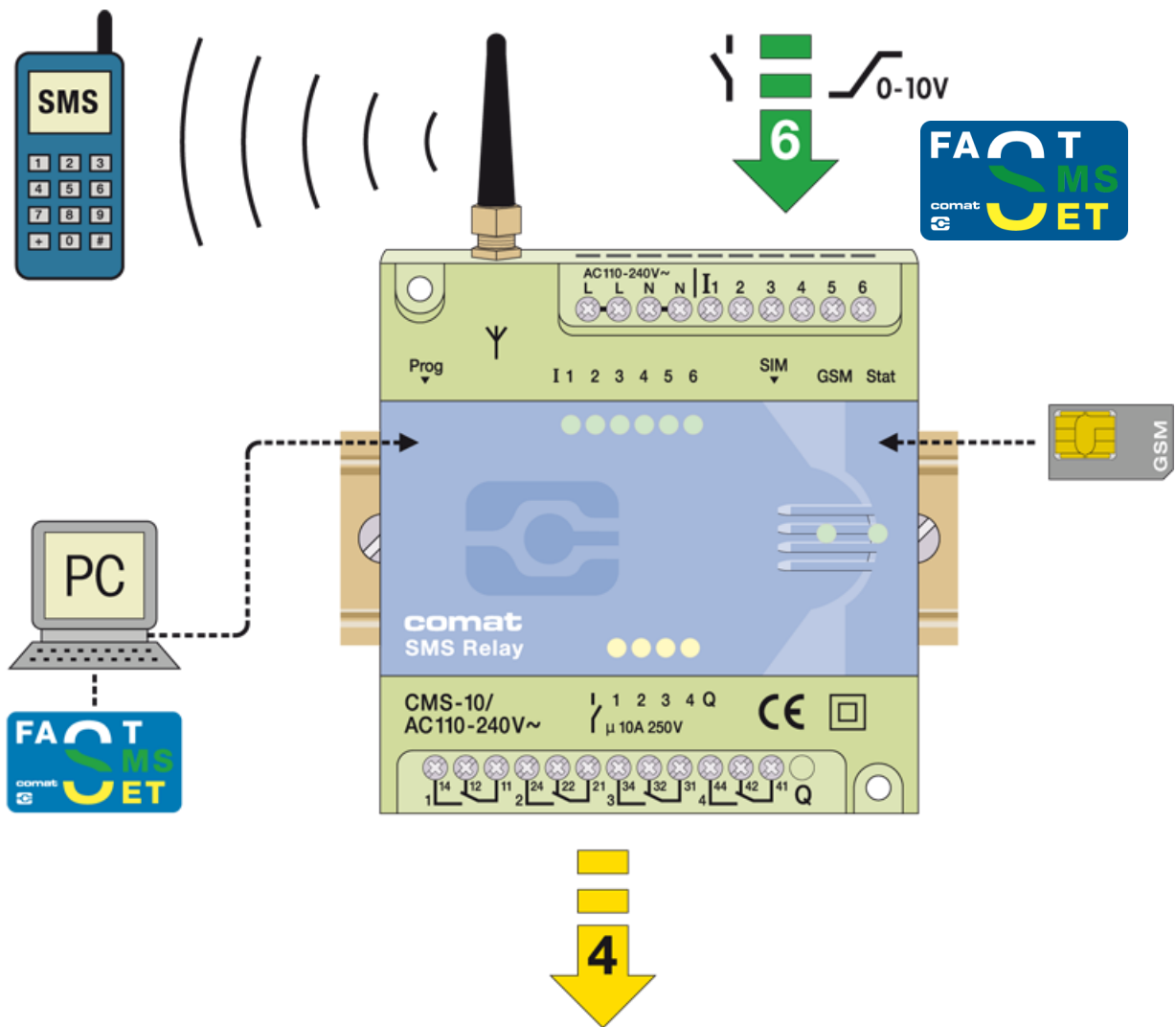


# Operating Instructions





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## 1. SMS Relay Operating Instructions

### 1.1 Short description of the CMS Comat Message System SMS Relay

The Comat CMS-10 SMS relay is a remote control and messaging system. It has six inputs which can be used as analog or digital inputs and four outputs with change over contacts. All the inputs can be monitored by SMS (Short Message System). At the same time, the outputs can be controlled and activated with SMS messages via a mobile telephone network\* (SIM card determines the provider).

The device's own phone book saves up to 50 mobile phone numbers and names of message receivers.

Each status change on one of the inputs sends a pre-defined message by SMS to the assigned max. 5 different receivers. The receivers are processed cyclically one by one, according to the selected sequence. The outputs can be switched ON and OFF with pre-defined messages by SMS. In order to obtain an overview of the present status of all in- and outputs and with that in general of the condition of the entire installation, the input and output status can also be questioned and retrieved by SMS. The relay outputs can be linked to a „timer function“ and can be switched time dependant for a preset time.


With the password option, unauthorized remote access to the SMS Relay by a third party is avoided.

The SMS relay sends out a message at regular intervals as for example in case of a power loss, whereby the SMS relay is able to send a last warning message before it shuts down. If the power is restored, the CMS-10 will announce its operational status again with a new message. All input and output status can be attached to each message. All these options can of course be made active or inactive as required.

The programming of the SMS Relay is carried out with the „FAST SMS Set“™ configuration software provided together with the device. All the settings can be configured very easy and without special knowledge of any programming language.

\***GSM network:** 850MHz, 900MHz, 1800MHz, 1900MHz (quad-band GSM module inside)

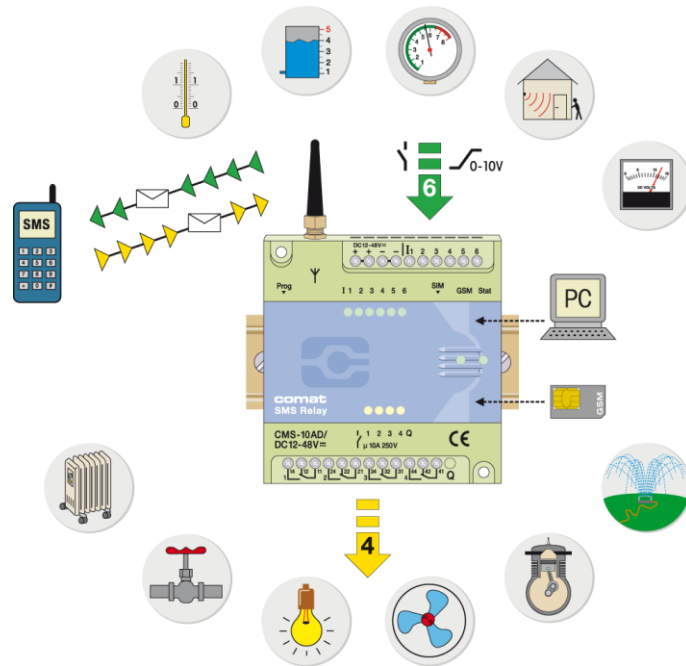
### 1.2 Short instructions

1. The SMS Relay must be separated from the power supply.
2. Place the SIM card into the card holder
3. Connect the RS232 interface of your PC or Notebook with the programming interface of the SMS Relay. Use the programming cable.
4. Connect the power supply to the SMS Relay
5. As soon as the SMS Relay is ready (after approx. 100 sec), Status-LED & GSM-LED are flashing regularly in a cycle of 1 second. Start the programming software FASTSMS Set
6. Select your prepared file or create a new file with your configuration. Please set the correct PIN code (Very important to set correct PIN code otherwise the SIM card may block).
7. Select a free COM port (Menu Configuration – Select port)
8. Download the file to the SMS Relay ( download)
9. Wait until the SMS Relay is ready again (after approx. 100 sec)
10. Set the time and the date (Menu Configuration – Set time/date)



### 1.3 Application examples

Heating control  
 Pump control  
 Irrigation installations  
 Alarm transmission  
 Level monitoring  
 Temperature monitoring  
 Pressure monitoring  
 Valve control  
 Voltage monitoring



## 2. Safety instructions

The electrical installation of the SMS relay must be carried out by a professional person. Please read the complete operating instructions before installation and commissioning.

This device is not suitable for monitoring sensitive installations or time critical processes. GSM network failure or power interruptions cannot guarantee a secure monitoring. The use of a prepaid SIM card is possible. It is recommended to use a SIM card with subscription. This avoids possible credit balance problems.

The individual responsibility for protecting the SIM card against abuse lies solely with the card owner.

Comat AG does not accept any liability for possible damage to persons, buildings and/or machines, which occur due to incorrect use or from not following the instructions or abusing the device. Comat AG cannot accept any responsibility for the application and use of the SMS relay. In particular Comat AG cannot guarantee the connection security with the mobile network.



### 3. Installation details/ scope of supply

#### 3.1 Antenna

The SMS Relay comes together with the CMS-ANT small device antenna. The location of installation must be taken into account and the right antenna has to be selected to ensure reliable connection with the network.

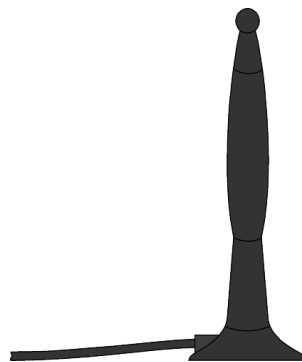
PLEASE NOTE:

**The CMS-ANT small device antenna is not suitable for installation inside a control panel (shielding).**

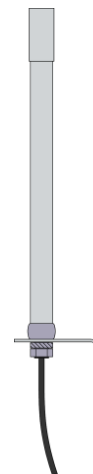
For that purpose the CMS-ANT-MAG/2.5M antenna with magnetic feet or the CMS-ANT-SPEZ/5M external signal antenna provide a much better result. Please take this into account when ordering. The signal strength may be checked beforehand with a cell phone. Our product specialists will be glad to answer any questions or to give further advice.



**CMS-ANT**



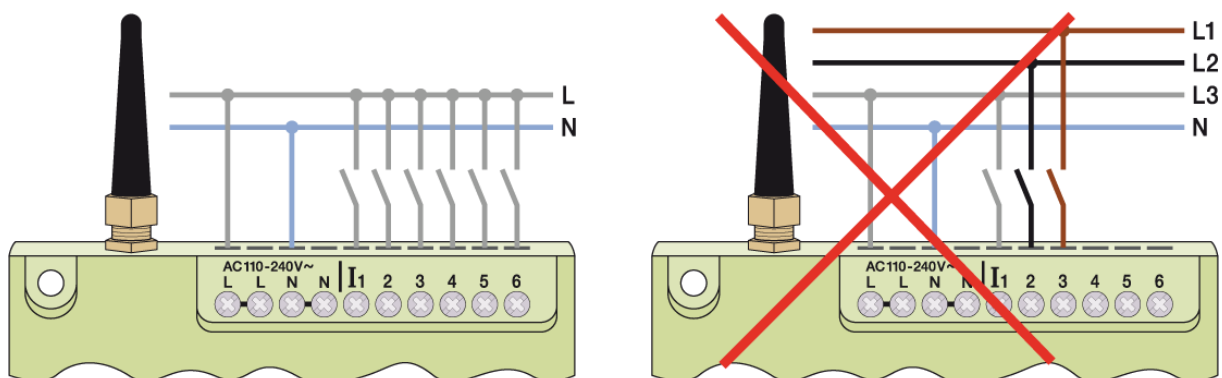
**CMS-ANT-MAG/2.5M**



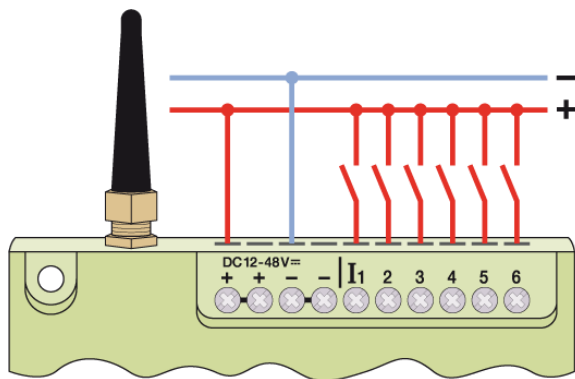
**CMS-ANT-SPEZ/5M**

#### 3.2 Wiring

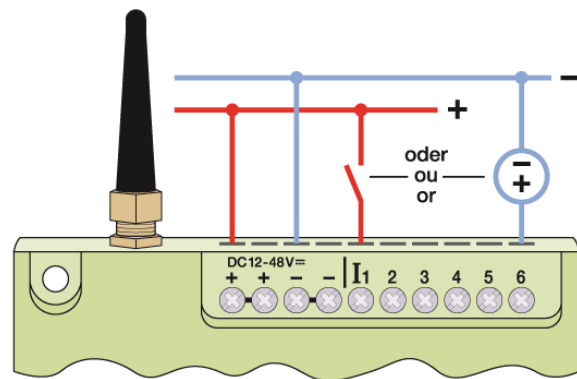
When connecting to the 230VAC mains it is absolutely necessary to ensure that the power supply and the Inputs power supply originate from the same phase i.e. a voltage above 240VAC must be avoided on the device. The SMS relay must be connected according to the following schematic:



**Connection CMS-10/AC110-240V**



Connection CMS-10/DC12-48V



Connection CMS-10AD/DC12-48V

The regulations and common standards are to be followed for the electrical installation and the installation must be carried out by an authorized person.

### 3.3 Button Test and Reset

There are 2 buttons under the front cover. RESET key on the left and TEST key on the right. Push TEST button for > 5 seconds to send a Test message. Push RESET button for > 15 seconds to re-set all Outputs in NO position (Firmware Version 2.8)

## 4. Software

### 4.1 System requirements

The „FAST SMS Set“™ configuration software runs on the current Microsoft® operating systems. The following minimum system requirements must be met in order that the software functions properly:

#### Operating system:

Windows® 2000  
Windows® XP  
Vista

#### CPU computer capacity:

486er / 100MHz  
**Recommended: Pentium III / 800MHz**

#### RAM:

256MB (Windows® XP)

#### Hard disc storage capacity available

40MB

#### Programming interface:

RS232  
USB (with USB-RS232- interface converter e.g. CMS-USB)

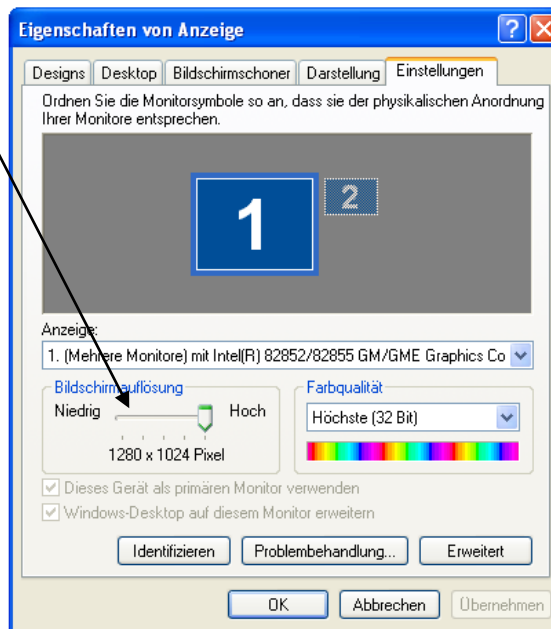


### \*Screen resolution

Minimal: 1024 x 768 pixels

#### \*PLEASE NOTE:

*If the screen resolution is too low, the window of the programming software will not be displayed in the normal size. That means some tabs or buttons would be outside the screen window and therefore invisible. To avoid this, change the screen resolution of your computer system. Select "Start" – "System controls" – "Display" and then the register "Settings". Please set the screen resolution to 1024 x 768 pixels in minimum.*



## 4.2 Installation

Once the CD-ROM is inserted in to the CD drive, the installation menu starts automatically. If this is not the case then the CD-ROM can be started by double clicking „Start“ in the Windows® Explorer. In case that there should be no CD-ROM available, the software is available for free download from the website of COMAT AG. Please visit [www.comat.ch](http://www.comat.ch).

The installation menu is available in different languages. Please choose the required language. You can install the software on your computer or start it directly from the CD-ROM without installing. Please follow the set-up programming instructions during installation.

The SMS relay starts up automatically once power has been supplied. If the signal is strong enough the device will register itself in the GSM network (according to the SIM card settings, depending on provider). Both LED will display the actual status of the device as well as the network status.



## 5. Run Mode

### 5.1 LED status display

The SMS relay has two LEDs, the GSM LED and the status LED. Both LEDs can be seen from the outside and are located below the cover. The following states are displayed:

#### 5.1.1 GSM-LED

- |  |   |
|--|---|
| - Flashing regularly (every second)            | Module is not registered in the GSM network.          |
| - Short flashing (approx. every three seconds) | Module is registered and ready for data communication |
| - Irregular flashing                           | Data are transmitted (SMS)                            |

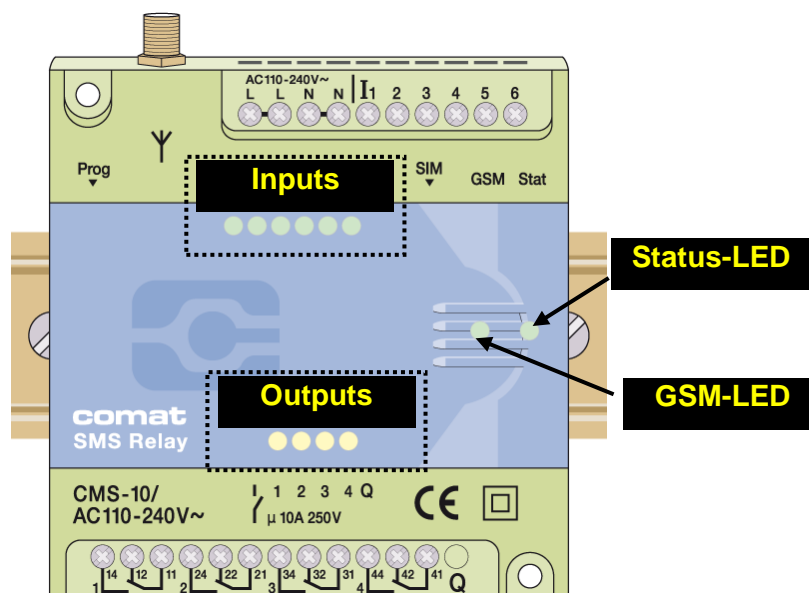
#### 5.1.2 Status-LED

- |  |                            |
|--|----------------------------|
| - Dark LED   | Device does not run        |
| - Intermittent flashing (irregular)                  | Device starts up           |
| - Short flashing (like GSM LED, approx. every 3s) 1x | Device runs, everything OK |
| - Short flashing (like GSM LED, approx. every 3s) 2x | No credit left             |
| - Short flashing (like GSM LED, approx. every 3s) 3x | Clock not adjusted         |
| - Flashing regularly (every second) 1x               | Module in initial state    |
| - flashing regularly (every second) 2x               | Configuration error        |
| - Flashing regularly (every second) 3x               | Communication error        |

#### 5.1.3 Inputs / outputs

Each input and output status is displayed with individual LED's. These LED are designated as follows:

- |         |                        |  |
|---------|------------------------|--|
| Inputs  | I1, I2, I3, I4, I5, I6 | (LED lighting = Input is switched on)  |
| Outputs | Q1, Q2, Q3, Q4         | (LED lighting = Output is switched on) |





## 5.2 Power failure

Short power supply failures ( $t < 1s$ ) are tolerated and do not change the module status.

Longer power failures ( $t > 1s$ ) are registered and can trigger a last SMS alarm message (depending on the set mode) before the device shuts down. The device restarts automatically after the power supply is restored. The registration of the SMS Relay in the GSM network is restored and the same status of the outputs is initiated as before the power failure (Memory function).

## 5.3 Diagnose

The SMS Relay together with the programming software „FAST SMS Set™“ allow the display of the actual signal strength. For that function the SMS Relay has to be connected to a PC / Notebook with the programming cable. To get to the diagnose function, select “Configuration – Diagnose” from the menu in the programming software. In addition to the signal quality, the diagnose will display some more information like version numbers, error codes and service provider.

Error codes and their significations are listed below

Error codes	Signification	Reason	Remedies
1	No credit	Pre-paid card empty	Load SIM card
2	Time not set	No time set	Configuration -> Set time
3	no relay.csr found	no configuration loaded	Load file
4	Configuration error	Incomplete file safe	Repeat file loading
5	Communication error	Relay connection to PC is interrupted for a short moment during data transfer. SMS relay function is however normally fully maintained. Status LED is flashing 2*/second	Repeat file loading
1001	SIM card blocked	Wrong Pin code entered 3 times	SIM card must be inserted into a cellular (mobile phone) --> to clear PUK code --> insert again into SMS relay
1002	No SIM card	SIM card missing, not correct inserted or contaminated surface	Insert SIM card correctly or clean



## 6 Configuration of the SMS Relay with the „FAST SMS Set™“ Software

### 6.1 General

The SMS Relay is configured and prepared for use with the „FAST SMS Set™“ configuration software. The SMS Relay configuration (telephone book creation, message definitions, default settings, etc.) can be done on a PC and saved in a respective file without connection to the device. In order to do this, the software is started, a new or existing file opened and edited. The saved file needs to be downloaded to the SMS Relay with the CMS-RS232 programming cable. In offline mode the diagnostics functions are not active and can only be accessed once the SMS Relay is connected with the RS232 serial interface cable to the PC.

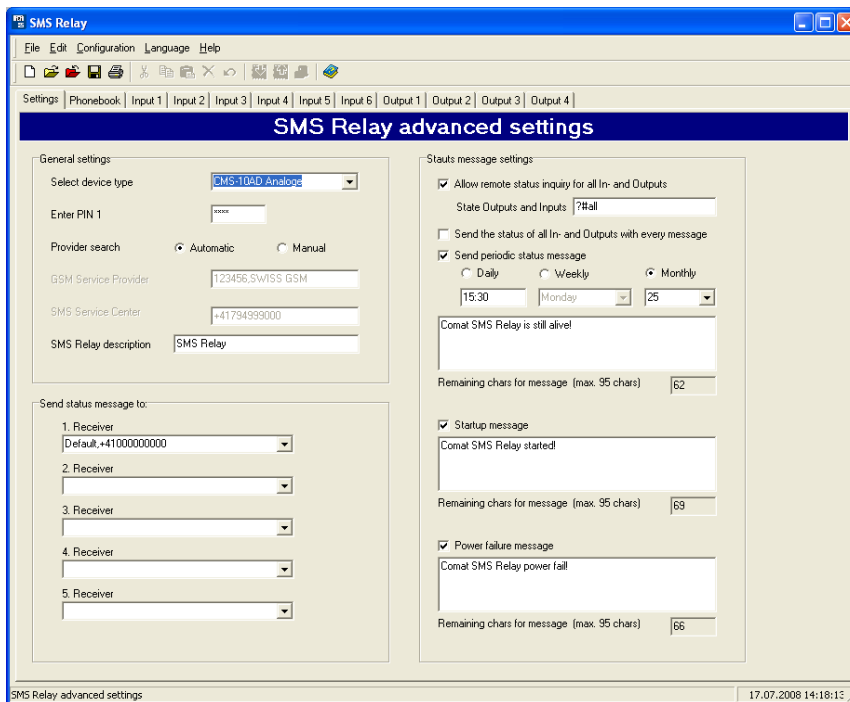


### 6.2 Create connection

- Cut off the power supply of the SMS Relay
- Insert the SIM card
- Connect the RS232 interface of your PC or Notebook with the SMS Relay programming interface using the CMS-RS232 programming cable. *If your PC or Notebook does not have an RS232 interface connection then use a CMS-USB interface converter. With this converter the programming cable can be directly connected to one of the computer's USB slots.*
- Connect power supply to the SMS Relay
- As soon as the Status-LED of the SMS Relay flushes in a cycle off 1 second, the software can be started.
- Choose a saved file or create a new one.
- For transmission, choose the required COM port of your PC. Select menu „Configuration – Select port“.

Everything is now set to download the prepared configuration file to the device.





### SMS Relay Settings

#### 6.4.1 Device types

Depending on the device type the correct type has to be selected. The selection has an influence on the configuration of the inputs and outputs. It is however possible to correct the selected type at any time. The following types are available:

Type	Description
CMS-10 Digital	This type has <b>only</b> digital inputs - CMS-10/AC110-240V - CMS-10/DC12-48V
CMS-10AD Analog	For this type the inputs can be used to work as analog or digital inputs - CMS-10AD/DC12-48V

#### 6.4.2 Automatic provider search

The automatic provider selection depends on the SIM card that is inserted into the SMS Relay. The provider details and access of the SIM card are adapted. Basically the provider is preassigned when the SIM card is purchased. With the „Automatic“ setting, the network provider is automatically searched and logged. This is useful if the card is used in the home network. Other GSM networks can be accessed abroad with the same SIM card according to the roaming contracts.



### 6.4.3 Manual provider search

For manual provider searches the available GSM networks are scanned several times. The results of this search are displayed with a list of networks. By clicking „Search“ with the mouse, the available networks are displayed. The desired network can now be chosen. The SMS service centre number can be taken from the SIM card documentation. Normally this number is already saved on the SIM card. The number depends on the GSM provider. In the „SMS Relay description“ field, a name for the SMS relay can be entered. All outgoing messages from this SMS Relay are provided with this identification text. The available number of characters for a message is reduced according to the number of characters already used for the identification name. The actual number of available characters is displayed.

**PLEASE NOTE**      *The display of special characters in the GSM network can cause problems. Please use only text characters and figures. The programming software identifies special characters and an error messages will occur.*

### 6.5 Status messages

The receiver of the status messages can be chosen from the telephone book. In order to do this click with the mouse pointer onto the expand arrow and select the required entry.

The SMS relay can send the following status messages:

Remote enquiry of all inputs and outputs

The device offers the possibility to interrogate all input and output states by SMS. A code word is therefore sent by SMS to the device. The code word can be individually created. The default code word is: ?#all

The answer is send to the same phone number from which the correct code word was received (phone number identification). The states of the inputs and outputs are displayed as follows in the SMS message:

**I:001001 → Inputs 1 to 6 → 0 = OFF / 1 = ON**  
**O:0101 → Outputs 1 to 4 → 0 = OFF / 1 = ON**

If there are inputs configured as analog inputs, the SMS Relay sends the analog value including the dimension unit after the status of all the digital inputs. The analog inputs will be substituted with "-". In the following example, with the inputs I2 and I5 configured as analog inputs, the status message looks as follows:

**I: 0-10-1 O:0101 21.2m3/h,126lt**

**I:0-10-1 → Inputs 1 to 6 → 0 = OFF / 1 = ON / - = analoge**  
**O:0101 → Outputs 1 to 4 → 0 = OFF / 1 = ON**

- *Attach Status of all inputs and outputs with each message*  
A status message of all inputs and outputs is attached to each message. (Firmware Version 2.8 and Software 1.3.0)
- *Message at the start*  
A message for each start up (switching on / return of power) of the SMS relay is sent. (According to the phone number assigned to this events.) The message contents can be edited.



- *Messages in case of power failure*  
In case of voltage failure the SMS relay sends a last message to the assigned receiver No.1 to 5 of the status messages. The message contents can be edited.
- *Periodical message*  
The periodic message provides information of the device's current status and is sent periodically. The message can be sent daily (time), weekly (time, weekday) or monthly (time, date). The message text can be edited. It is for checking functionality or operation confirmation.

**PLEASE NOTE**      *The display of special characters in the GSM network can cause problems. Please use only text characters and numbers. The programming software identifies special characters and an error messages will occur.*

## **6.6      Input configuration**

### **6.6.1      General**

The SMS Relay has 6 inputs. Depending of the device type, all this inputs can be used as digital inputs only (CMS-10/AC110-240V and CMS-10/DC12-48V) or as digital/analog inputs (CMS-10AD/DC12-48V).

### **6.6.2      Digital inputs (CMS-10/AC110-240V and CMS-10/DC12-48V)**

Each one of these inputs can activate an SMS message to a predefined telephone number either in case of HIGH or LOW input signal (up to 5 various numbers).

**PLEASE NOTE**      *Please mind every input needs at least one phone number in his list. It doesn't matter if the input is connected or not or the status messages are set inactive. If the receiver field is empty, the software can't save the file or the file can't be downloaded to the SMS Relay.*

Basically two events can trigger an SMS message: the change from LOW-to-HIGH and the inverse, the change from HIGH-to-LOW. One or both events can be configured to activate a message. A separate text message can be entered for each event.

If the SMS Relay does not receive an acknowledgement SMS within a certain preset time from the receiver, the event message will be sent to the next receiver. This means that the device runs through the 5 allocated receiver numbers and restarts afterwards with the first number again (The number of running loops can be pre-defined). As soon as the device receives a confirmation from the receivers the process is stopped. If this is not the case the message will be sent to the next receiver (after expiry of the preset time).

If the acknowledgement is inactive, all receivers who are allocated to that event will receive a message without repetition.

If the confirmation code word is not activated, the phone number identification is carried out as a security check and it is sufficient to send an empty SMS message to the SMS Relay.

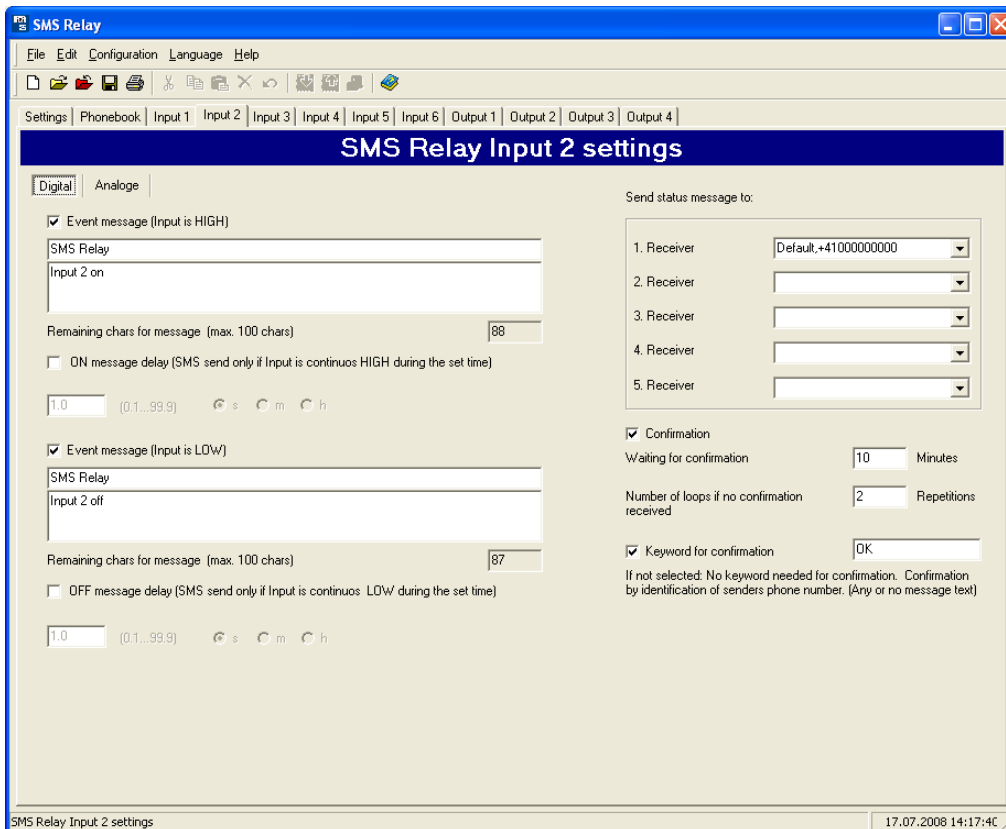
**PLEASE NOTE**      *The display of special characters in the GSM network can cause problems. Please use only text characters and figures. The programming software identifies special characters and an error messages will occur.*



### 6.6.2.1 Parallel message handling

It may occur that the status of several inputs change at the same time or within the actual running message cycle. Every input activates its individual message.

Every change of the input status, which triggers an event message, is processed in order of the appearance. That means that all the messages for every input will be handled individual. Several events at the same time can trigger different messages at the same time. Example: The events “pump breakdown” and “over temperature” (two different inputs) appear at the same time → both events are processed individual and both messages will be sent.



Input configuration

### 6.6.2.2 Time delayed message for input ON

If there is an input signal, the respective message transmission can be time delayed, i.e. the SMS relay only sends the pre-defined message after the preset time has elapsed and if the signal has remained ON constantly during that time. In other words, the input signal is ignored during the set delay time. Time delays of 0.1 seconds to 99.9 hours are possible. This time function default must be activated and is to prevent that unstable short signals can activate numberless identical SMS messages.

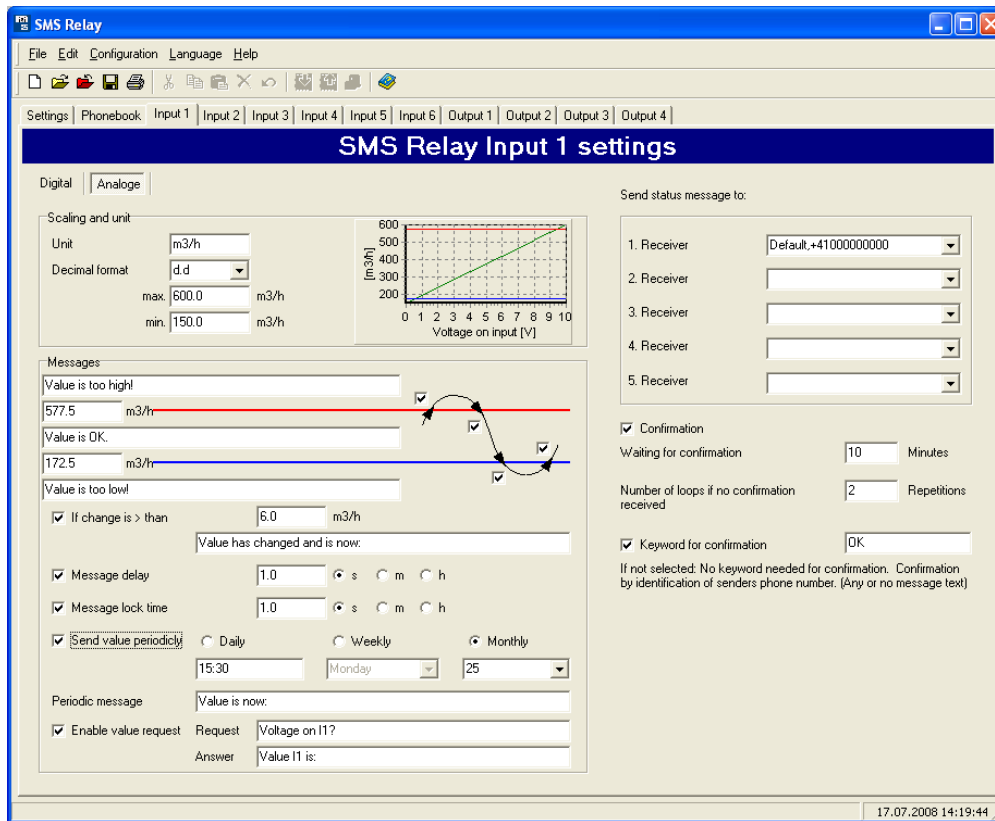
### 6.6.2.3 Time delayed message for output OFF

If an input changes from HIGH to LOW, i.e. there is no longer an input signal, a delayed message can also be activated here. The SMS relay sends the predefined message after the preset time has elapsed and if the signal is no longer present respectively the input signal was constantly OFF during the selected time delay. Time delays of 0.1 seconds to 99.9 hours are possible. This time function must be activated and is to prevent that unstable short signals as for example of a floating level switch will activate numberless messages.



### 6.6.3 Analog inputs (CMS-10AD/DC12-48V)

The 6 inputs can be individually configured as analog inputs. For that purpose each input has to be predefined as analog or digital input. The analog inputs are designed for a standard 0 ... 10V DC analog signal. The resolution is 10 bits.



### Configuration of the analog inputs

#### 6.6.3.1 Scaling and units

In a first step the measuring unit and the scale have to be defined. For both end-values 0V and 10V, a minimal and a maximum value of the selected unit is assigned. With this two values a linear function will be interpolated (straight line between 2 points) and displayed in the configuration window. The linear function is adapted automatically in accordance to the set values.

The values displayed on the PC screen or transmitted by SMS can be display in different resolutions:

- d** integer value, i.e. 5200
- d.d** one digit after decimal point, i.e. 5200.0
- d.dd** two digits after decimal point, i.e. 5200.00
- d.ddd** tree digits after decimal point, i.e. 5200.000

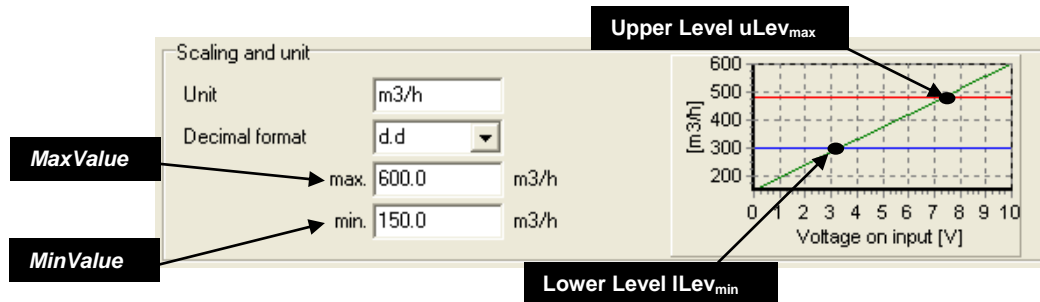
Ten characters are available for the description of the units. This unit will be sent with every value message following the actual value:

Example of a message: **The temperature is 15.5C**

The value between the max and the min value is the range. This range has an important function in the designation of the thresholds.



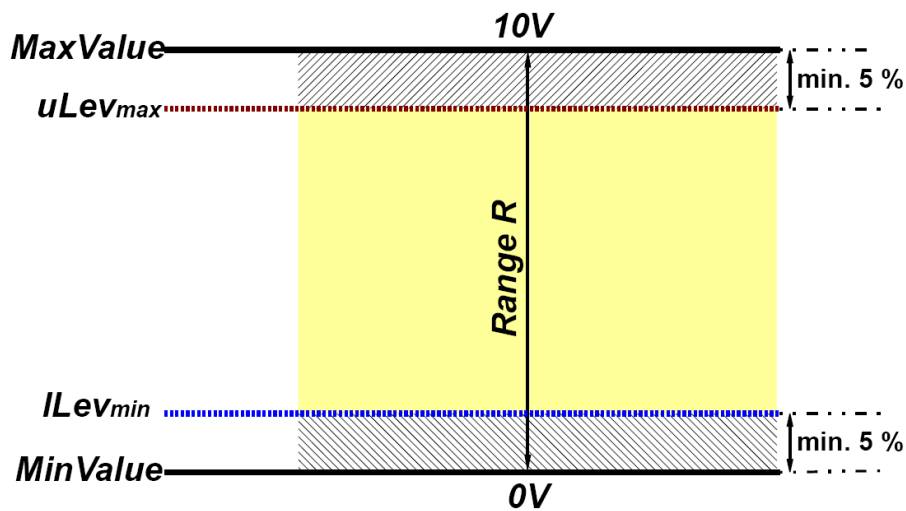
**PLEASE NOTE** The display of special characters in the GSM network can cause problems. Please use only text characters and figures. The programming software identifies special characters and an error messages will occur.



**Detail: Scaling and unit**

### 6.6.3.2 Messages

The top and the bottom thresholds have to be defined to allow sending of messages.



**Description of the range**

The value between the max and the min value is the range R. This range has an important function in the designation of the thresholds.

### 6.6.3.2 Messages

The top and the bottom thresholds have to be defined to allow sending of messages. These limiting values depend on the installation which is monitored. However, certain rules have to be obeyed so that the level values can be recognized in the scale window.

At first the measuring range has to be calculated. The range is the span between Max. and Min. values. These 2 values refer to the end values 0...10V of the analog input signal

$$| \text{Range } R | = | \text{MaxValue} - \text{MinValue} |$$

The maximum Upper Level  $uLev_{max}$  is calculated as follows:



Deduct 5% of the Max value.

$$uLev_{max} = MaxValue - (|R| \times 0.05)$$

- Inserted values higher then calculated above are corrected automatically by the software

The minimum Lower Level  $lLev_{min}$  is calculated as follows:

Add 5% to the Min. value

$$lLev_{min} = MinValue + (|R| \times 0.05)$$

- Inserted values lower then calculated above are corrected automatically by the software

**Example:**

Max. value 600m<sup>3</sup>/h → 10V of the analog signal

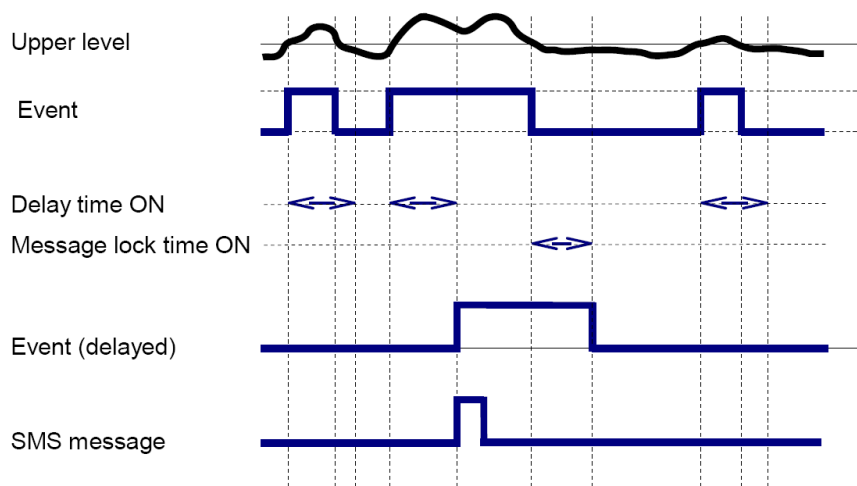
Min. value 150m<sup>3</sup>/h → 0V of the analog signal

Range B = Max value – Min value = 600m<sup>3</sup>/h – 150m<sup>3</sup>/h = 450m<sup>3</sup>/h

Upper Limit uL = Max. value – B x 0.05 = 600m<sup>3</sup>/h – (450m<sup>3</sup>/h x 0.05) = 577.3m<sup>3</sup>/h

Lower Limit lL = Min value + B x 0.005 = 150m<sup>3</sup>/h + (450m<sup>3</sup>/h x 0.05) = 172.5m<sup>3</sup>/h

The above example allows monitoring the scenario as seen below:



**Analog value processing: “Value is greater than the upper level”**

**The actual measured value is between the Upper and the Lower Level.**

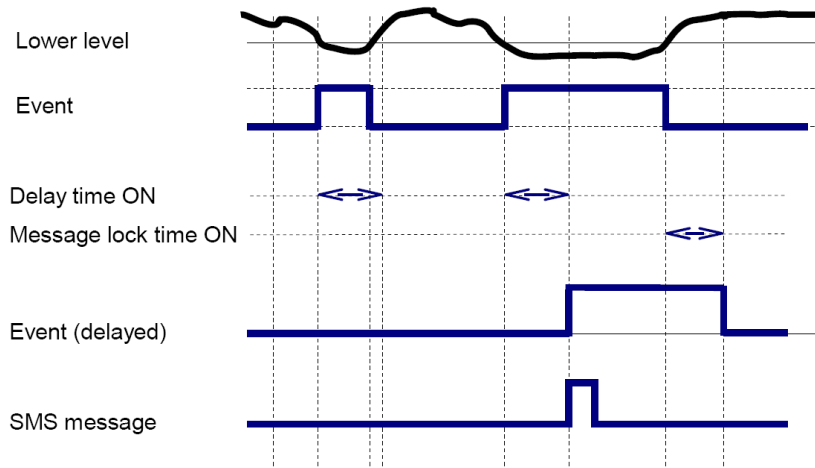
The installation is in normal status. A message is only sent (if default set) if previously the measured value was above or below Upper or Lower limit.



### On this example the actual measured value is below the set Lower Level

A message is sent (if programmed and default set to active)

The message text can be freely edited



### Analog value processing: "Value is smaller than the lower level"

#### A certain difference between the actual value and the last sent value is exceeded

The SMS Relay monitors the analog value. A message is sent if the difference exceeds a certain value.

The maximal value for this is 50%

→ Inserted values above that 50% limit are corrected automatically by the software

### Periodical messages

Actual value can be sent by SMS periodically in intervals of minutes, hours, or days. The periodical message is sent to the first receiver. If this message is not confirmed, it will be forwarded automatically to the next receiver.

All message texts can be freely edited. The measured value and the unit are always transmitted together with the message text.

A space is inserted automatically between the message text and the value. No space is inserted between the value and the unit.

<input checked="" type="checkbox"/> Send value periodically	<input type="radio"/> Daily	<input type="radio"/> Weekly	<input checked="" type="radio"/> Monthly
<input type="text" value="15:30"/>	<input type="text" value="Monday"/>	<input type="text" value="25"/>	
Periodic message	<input type="text" value="Value is now:"/>		

### Periodical messages

#### Request value

The actual present value can be enquired by SMS.

The message text can be freely edited.

To enquire the actual value, a SMS message has to be sent to the device first. This message text can be edited freely.

However, the incoming SMS text must comply fully with the programmed enquiry text.

A space is inserted automatically between the message text and the value. No space is inserted between the value and the unit.



<input checked="" type="checkbox"/> Enable value request	Request	Voltage on I1?
	Answer	Value I1 is:

### Request value

#### Confirmation

If the SMS Relay does not receive an confirmation SMS within a certain preset time from the receiver, the event message will be sent to the next receiver. This means that the device runs through the 5 allocated receiver numbers and restarts afterwards with the first number again (The number of running loops can be pre-defined). As soon as the device receives a confirmation from the receivers the process is stopped. If this is not the case the message will be sent to the next receiver (after expiry of the preset time).

If the acknowledgement is inactive, all receivers who are allocated to that event will receive a message without repetition.

If the confirmation code word is not activated, the phone number identification is carried out as a security check and it is sufficient to send an empty SMS message to the SMS Relay.

*PLEASE NOTE      The display of special characters in the GSM network can cause problems. Please use only text characters and figures. The programming software identifies special characters and an error messages will occur.*

#### 6.6.3.3 Message delay

If message criteria are reached, the respective message transmission can be time delayed, i.e. the SMS relay only sends the pre-defined message after the preset time has elapsed and if the value has remained constantly during that time. In other words, the measured value is ignored during the set delay time. Time delays of 0.1 seconds to 99.9 hours are possible. This time function default must be activated and is to prevent that unstable short signals can activate numberless identical SMS messages.

#### 6.6.3.4 Message block

If message criteria are reached which requires sending of a message that timer is triggered. There will be no further message (same messages) sent during that time.

With that setting it can be avoided that the same status message is sent repeatedly during a set time (Block time)



## 6.7 Output configuration

### 6.7.1 General

The SMS Relay has 4 relay outputs (change over contacts, 10A, 250V). The outputs can be controlled by an SMS i.e. they can be switched ON and OFF. Each output can be activated individually. The message text can be edited individually. However, the device only accepts the exact expression i.e. the message must correspond exactly with the registered expressions. Upper and lower cases are ignored, spaces between the words and other characters must be typed correctly. Switching commands are only accepted from numbers which are registered in the telephone book. That means, an output can be switched ON or OFF by receiving a SMS message. The SMS Relay confirms this with an acknowledging message to the sender after carrying out the actions. An additional message can be defined, to inform the sender if the output is already switched to the required state and consequently no action will be carried out.

The screenshot shows the 'SMS Relay output 1 settings' window. It includes a menu bar (File, Edit, Configuration, Language, Help) and a toolbar. The main area is divided into several sections:

- Number identification:** Checked. ON instruction: 1#1, OFF instruction: 1#0. Default values are: ON: 1#1, OFF: 1#0. A 'Default' button is present.
- Confirmation if switched on:** Checked. Message text: 'SMS Relay - Kusi "Test" Relais 1 ein'. Remaining chars: 86.
- Message if state hasn't changed:** Checked. Message text: 'SMS Relay - Kusi "Test" Relais 1 bereits in diesem Zustand.'. Remaining chars: 63.
- Confirmation if switched off:** Checked. Message text: 'SMS Relay - Kusi "Test" Relais 1 aus'. Remaining chars: 86.
- Output timer (Output ON during defined time frame):** Checked. Value: 1.0 (0.1 ~ 99.9). Units: s, m, h.

The status bar at the bottom right shows the date and time: 12.04.2006 21:43:25.

### Output configuration

#### 6.7.2 Timer function

An output can be switched ON for a certain time with the time function option. With that function the output can be switched ON with an SMS message for a preset time. The output will switch OFF automatically without the need of receiving an OFF message again after that time has elapsed. Time delays of 0.1 seconds to 99.9 hours are possible. The output OFF is reconfirmed to the sender after expiry of the set time. If a switch OFF message is received before the set time has elapsed, the output will ignore the remaining ON time and switches to OFF status immediately. The default of that timing function is normally inactive and therefore must be activated.



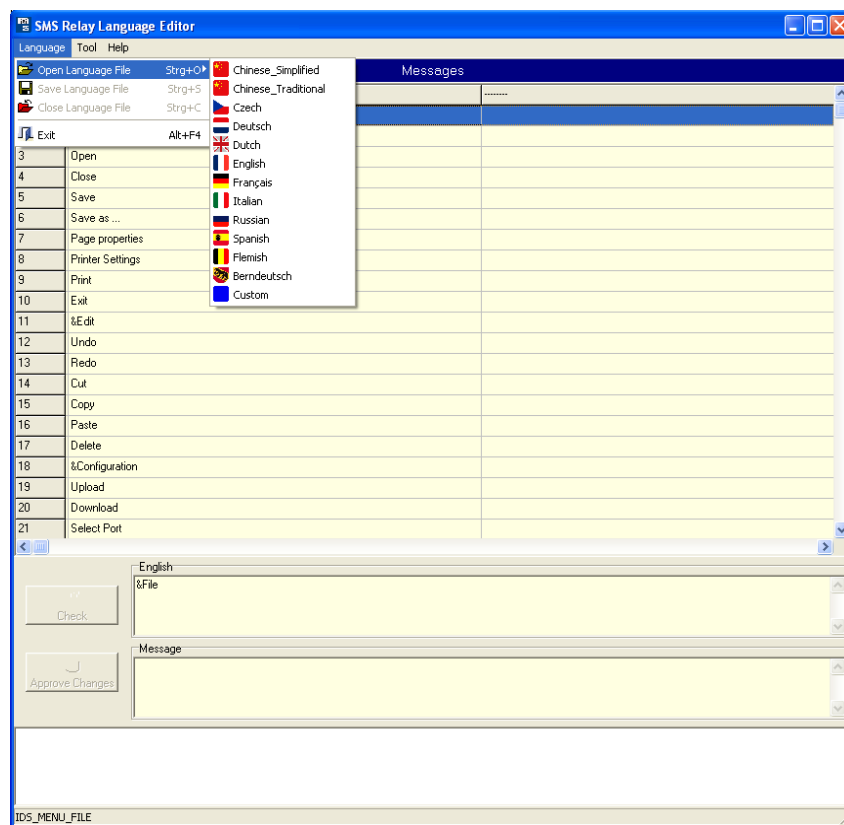
PLEASE NOTE:

**The switching times don't allow a monitoring or a controlling of time critical processes due to the tolerances and GSM network delays.**

## 7 Language selection

### 7.1 General

Several languages of the SMS Relay configuration software "Fast SMS Set"™ are available. The languages can be selected from a library. It is not necessary to re-start the program after selecting another language. Select the language menu to access the available configuration languages and click onto the required language from the library.



Language editor

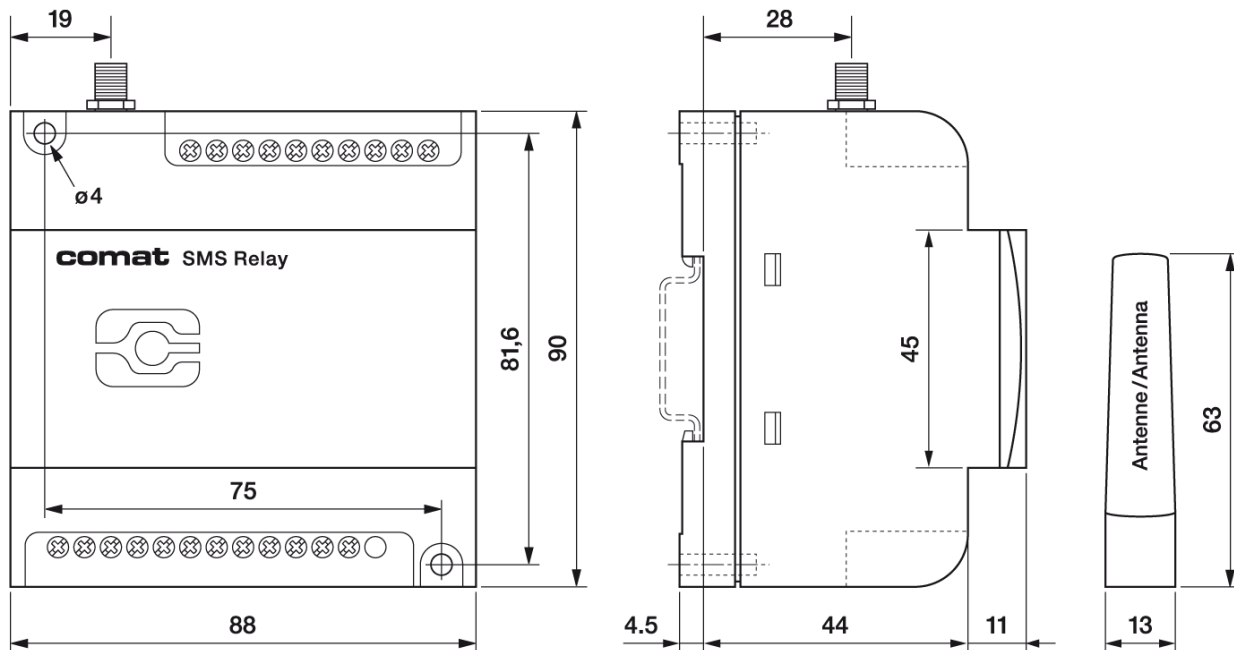
### 7.2 Change / expand language library

The available languages can be modified or expanded. The „Language editor“ can be started from the „Language“ menu. Click „Edit language“ to access that function. The required language for editing is selected from the „Language – Open Language File“. The complete menu navigation is displayed on the left side in English which is also the „master file“. The menu navigation appears on the right side in the selected language. The items to be changed can be selected with the cursor or by mouse click. The text can be overwritten in the „Message“ window below, and must then be confirmed with the „Approve Changes“ button. The changes will not be effective without this confirmation. After all the changes have been implemented the file must be saved with „Save Language File“. Now the language editor can be exited via „Close“ or „Exit“ .



## 8 Technical items

### 8.1 Dimension



SMS Relay - Dimension

### 8.2 Technical data

#### 8.2.1 CMS-10

Operating voltage	AC 110-240V~ 50/60Hz	DC 12-48V $\equiv \nabla \nabla$ max. 10%
Power consumption	8VA / 6W	6W
Switching capacity	4 x 10 A 250 V <b>CAUTION:</b> total current of all Outputs total 20 A	
Temperature range	Temp: -25...+55°C Rel. humidity: 5...95% (non condensing) Protection: IP 20	
Inputs	6x digital trigger level 85V~	6x digital trigger level 9.5V $\equiv \nabla \nabla$
Outputs	4x CO contacts	
Provider (Phone / Network)	User selectable (depending on SIM card)	

#### 8.2.2 CMS-10AD

Operating voltage	DC 12-48V $\equiv \nabla \nabla$ max. 10%	
Power consumption	6W	
Switching capacity	4 x 10 A 250 V <b>CAUTION:</b> total current of all Outputs total 20 A	
Temperature range	$T_u$ : -25...+55°C Rel. humidity: 5...95% (non condensing) Protection: IP 20 built in	
Inputs	6 Inputs, for each Input elective <b>digital</b> or <b>analog</b> <b>Digital:</b> trigger level 9.5V $\equiv \nabla \nabla$ <b>Analog:</b> 0...10V analog signal, 10 Bit A/D-converter	
Outputs	4x CO contacts	
Provider (Phone / Network)	User selectable (depending on SIM card)	