



## GSM Key PROFI 2



# User Guide

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## **SAFETY INSTRUCTIONS**

- While using the Device be sure to observe law regulations and locally applied restrictions.
- Refrain from using the Device in hospitals as it can interfere with operation of medical instrumentation; e.g. in vicinity of cardiac pacemakers or hearing aid devices.
- Prior to installing, starting and operating the Device be sure to study carefully this Guide.
- Do not use the Device aboard an airplane.
- Do not use the Device nearby refueling stations, chemical equipment or in areas where explosives are being used or handled, as well as in areas with explosion hazard The Device can interfere with operation of some instruments.
- When in vicinity of TV sets, radios and PCs the Device can cause interference.
- Be sure to use only recommended accessories (see section RECOMMENDED ACCESSORIES) to avoid contingent damage caused to your Device or damage to property, health and breaching pertinent provisions. These recommended accessories have been tested and they cooperate reliably with the Device. Unfortunately, these accessories are not covered by the warranty terms.
- We recommend as a useful practice to make a copy or backup of all important settings as stored in the Device memory.
- The Device shall not be opened. Only replacing SIM card is allowed. The procedure of SIM card replacement is described in this User's Guide.
- Caution! Keep out of reach of small children, who could swallow the SIM card.
- Do not expose the Device to extreme ambient conditions. Keep it protected against dust, moisture and extreme temperatures.
- Supply voltage value as specified on the supply jack should not be by any means exceeded.
- Improper use of the Device invalidates the warranty!

## **CONTENT OF PACKAGING**

- 1.** 1 pc. GSM Key PRO 2
- 2.** 1 pc. power supply source, 12 V, 1250 mA, jack RJ12
- 3.** 1 pc. antenna GSM, gain 3 dB
- 4.** 2 pcs. installation supports for strip DIN 35 mm
- 5.** 1 pc. clamp (MRT9 connector)
- 6.** 1 pc. CD (software GSM Key ADMIN + User's Guide)
- 7.** 1 pc. RS232 (RJ45 connector)
- 8.** 1 pc. Quick user Guide

## GENERAL DESCRIPTION

GSM Key PRO is an application to actuate electric drive of gate openers, doors and barriers via a mobile phone. The opening and closing operations are FREE as they are reduced to mere ringing signals (i.e. ringing the address and hanging up) to the phone number of SIM card installed in the actuating device. The Device interface is formed by two output ports equipped with relays and four optically isolated input ports. Authorization of the competent user is made automatically using call list in the GSM Key. GSM Key is produced in two versions: GSM Key HOME and GSM Key PRO 2.

The version **GSM Key HOME** is suitable to be used for needs of a family house or of minor companies – up to 20 users. User administration and the Device settings are made via a mobile phone by SMS messages.

The version **GSM Key PRO** is suitable to be used for needs of medium sized and major companies, complexes of offices, hotels, boarding houses – i.e. application under conditions of a denser movement of persons (> 20 users). User administration and the Device settings are made either via a mobile phone or using SW of GSM Key ADMIN (the application under Windows).

Table 1: Technical parameters of GSM Key PRO 2

<b>GSM module</b>	Siemens Wireless Module TC65
<b>Frequency bands</b>	EGSM850/900/1800/1900 MHz
<b>User's interface</b>	2 relay outputs (for starting motor, connected in parallel) 4 optically isolated inputs (additional function) RS232-RJ45 connector (service interface)
<b>Operating temperature range</b>	-20 <sup>0</sup> C up to +55 <sup>0</sup> C
<b>Storage temperature range</b>	-40 <sup>0</sup> C up to +85 <sup>0</sup> C
<b>Supply voltage</b>	11 – 15, 22 – 30 V DC
<b>Power consumption</b>	1 W / 3.5 W (receiving / transmitting)
<b>Antenna jack</b>	FME (50 W)
<b>Dimensions</b>	30 x 90 x 102 mm
<b>Support</b>	DIN fixing strip 35 mm
<b>Weight</b>	150 g

# EXAMPLES OF USE

## **FAMILY HOUSE WITH GARAGE**

Suitable to control one garage of a family house is GSM Key HOME, having connected one output (see section INSTALLATION AND STARTING OPERATION). To ease control, we recommend the Device to set using operating mode Continual evaluation, while setting the switching response to be triggered by the first ringing; the second ringing signal is followed by hanging up (see the section ADMINISTRATION). This configuration means the entrance will start opening after ca. 5\* seconds of pressing the key. We recommend entering the ID of GSM Key in the phone in the form of a shortened dialing – one touch command. Adding / canceling an authorized user is made by sending an SMS message (see the section ADMINISTRATION).

## **FAMILY HOUSE WITH GARAGE AND GATE**

Where control of two entrances is required (e.g. entrance gate and garage gate, GSM Key HOME is a suitable solution while connected are two outputs (see the section INSTALLATION AND STARTING OPERATION). We recommend installing the equipment in the garage or other part of house; the best option would be the installation in a switchboard used to supply electrical drives. If one GSM Key controls two entrances, the operating mode is to be set subject to custom practice of using individual entrances by the user, as well as his needs.

Provided the user will open both entrances simultaneously or eventually only one entrance control will be connected to No. 1 output (entrance gate), we recommend setting the Device in operating mode Continual evaluation. In this mode the entrance No. 1 will start opening after ca. 5\* seconds. Provided the ringing signal has not been stopped, the entrance No. 2 will start opening after ca. 9\* seconds. Then the incoming call will be automatically cancelled and ended.

Provided the user is opening both entrances more frequently mutually independently, then we recommend setting the Device in operating mode Late evaluation. When using this setting, the user can select, according to number of ringing signals, which entrance has to open (entrance No. 1 or No. 2).

## **PARKING IN HOTELS, BOARDING HOUSES, APARTMENT HOUSES**

A suitable version of the Device to control entrances of hotels and boarding houses is GSM Key PRO. The guests when checking in simply disclose the respective number of their mobile phones that they are going to use to control the entrances. The administrator will then enter the data in SIM card of GSM Key via computer. After the guest's departure the number is deleted from call list of the SIM card of GSM Key. The use of GSM Key avoids the risk of damage or loss of remote controls having been rent to guests. The PRO version enables administering via mobile phone or via computer using special SW GSM Key ADMIN. This SW offers the opportunity of an easy and well-arranged simultaneous administration of several items of equipment, while providing the user perfect information of the Device setting and of users of individual entrances. The SW is saved in SIM card of GSM Key.

## **ENTRANCE TO COMPANY TERRITORY**

A suitable tool to meet the needs of controlling company entrances in hotels and boarding houses is GSM Key PRO. For you it will be easy, quick and convenient, as you can utilize the system of remote control to allow your business partners to drive in, disregarding if it is a single visit or regular meetings. Using SW of GSM Key ADMIN you will maintain perfect overview of setting of individual entrances and their users and overview of admittance.

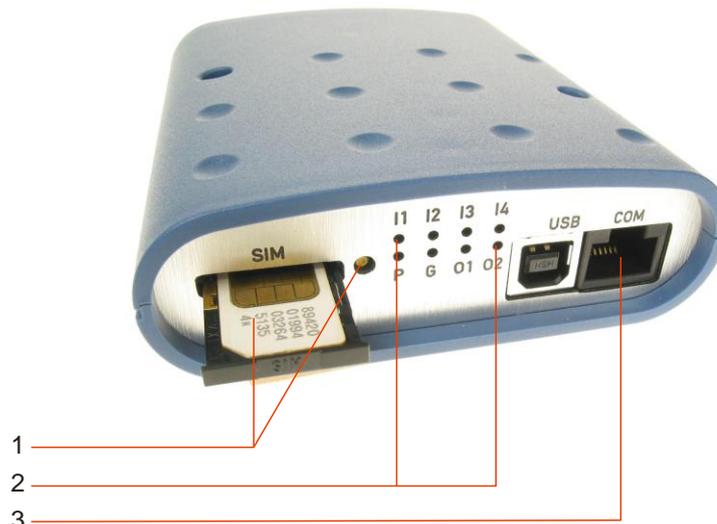
*\*The above-specified time data are of information value, since they are subject to serviceability of the particular mobile operator's network.*

# TECHNICAL DESCRIPTION

## FRONT PANEL

(Picture 1)

1. SIM: plug-in scanner of SIM card and a slot to open the scanner.
2. LEDs: (P, G, I1,I2,I3, I4, O1, O2 - see INFORMATION OF THE DEVICE STATUS)
3. COM: service connector intended for needs of configuration to be made mostly by servicing centre
4. USB: unplugged connector for version GSM Key PRO 2

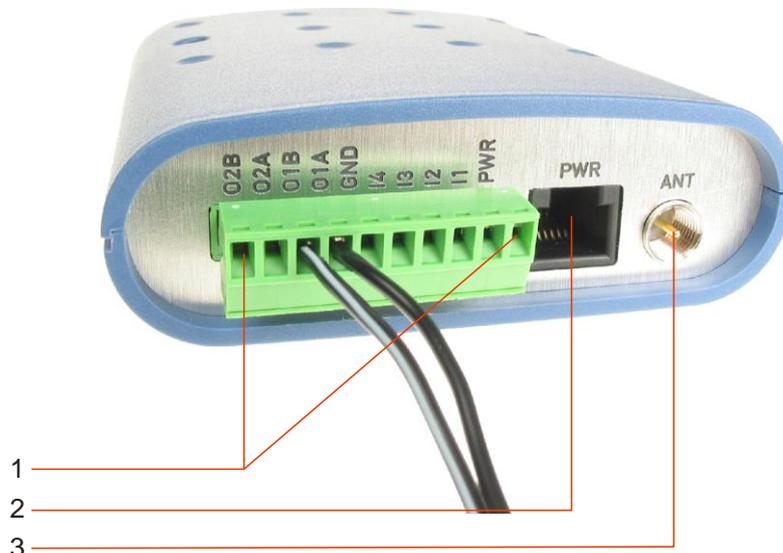


Picture 1: Front Panel

## REAR PANEL

(Picture 2)

1. MRT9 pin terminal (O2B, O2A, O1B, O1A, GND, I4, I3, I2, I1, PWR)
2. PWR: pin terminal to connect power supply adaptor
3. ANT: FME jack to connect GSM antenna



Picture 2: Rear Panel

# DESCRIPTIONS OF INTERFACE

## Input/Output

See Table 2

Table 2: INPUT / OUTPUT: Description of user's interface (MRT 9 connector)

Pin No.	Type of signal	Description
1	PWR	Output 12 V to connect other circuits (connected directly to modem power supply)
2	I1	Optically isolated input
3	I2	Optically isolated input
4	I3	Optically isolated input
5	I4	Optically isolated input
6	GND	Grounding for both supply net and signaling circuits
7	01 A	Relay output
8	01 B	Relay output
9	02 A	Relay output
10	02 B	Relay output

## COM Interface

See Table 3

Table 3: Description of servicing interface (RJ45 connector)

Pin No.	Type of signal	Description	Direction of data flow
1	RTS	Requirement to send off	Input
2	CTS	Clear To Send	Output
3	NC	Signal not connected	
4	NC	Signal not connected	
5	GND	Ground – grounding for signaling circuits	
6	RXD	Receive Data	Output
7	CD	Carrier Detect	Output
8	TXD	Transmit Data	Input

## PWR Interface

Power supply interface PWR is used to connect the source of power supply via jack RJ12. The Device requires supply voltage 11 – 15 V, 22 – 30 V. When receiving, it consumes 1 W. During data transmission peak consumption can reach 3.5 W. To guarantee proper operation of the Device, its power supply source must absorb the peak current intensity of 500 mA.

**CAUTION!** To ensure proper operation, the pins of pin terminal connecting power supply source RJ12 must be connected in a special manner. Recommended accessories meet this requirement (see Table No. 3 - DESCRIPTION OF POWER SUPPLY INTERFACE).

Table 4: Description of power supply interface (RJ 12 connector).

Pin No.	Type of signal	Description
1	+UN	+ Terminal of DC power supply voltage (11 to 30 V)
2	NC	Signal not connected
3	INAC	Check of voltage presence (range 0 to 16 V)
4	+UN	+ Terminal of DC power supply voltage (11 to 30 V)
5	GND	- Terminal of DC power supply voltage
6	GND	- Terminal of DC power supply voltage

**ANT Interface**

ANT designated radio frequency interface is used to connect two-band antenna GSM 900/1800 equipped with FME jack. The connection is attained using 50  $\Omega$  FME male jack.

**SIM Interface**

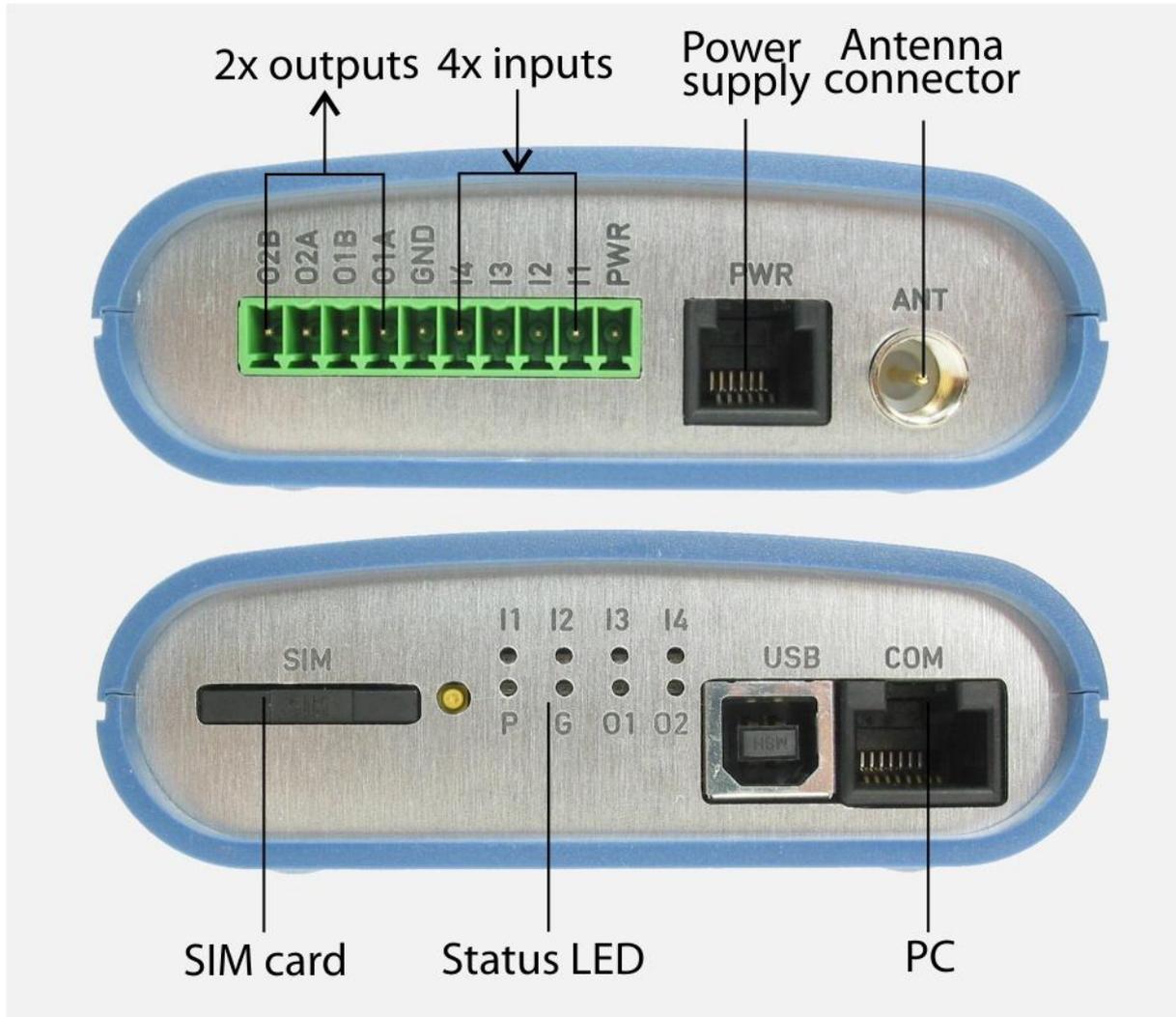
SIM Interface is intended for SIM card scanner with slide-out holder of SIM card. When inserting the SIM card, you should observe the required procedure (see section INSTALLATION AND STARTING OPERATION).

# INSTALLATION AND STARTING OPERATION

Prior to starting operation of the Device it is necessary to check construction setup of the installation site, get ready SIM card and connect cables and accessories.

During the installation pay increased attention to the issue of work safety. We recommend you to have the installation made by persons duly trained for the stint.

## Interfaces of GSM Key PRO 2



Picture 3: Interfaces of GSM Key PRO 2

### Work safety during installation

1. Only skilled and duly trained personnel should install the Device.
2. Ahead of starting the installation stint and starting operation of the Device, be sure to study carefully this manual.
3. Should the Device be power supplied via power supply source, it will have to meet requirements to add SELV circuits and be compliant with the standard EN 60950. The power supply source enclosed as a part of the delivery is compliant with this requirement (see section RECOMMENDED ACCESSORIES). Should batteries or accumulator batteries be used, these will have to meet provisions of relevant standards as well (see section RECOMMENDED ACCESSORIES).
4. Maximum admissible cable length between terminal station and power supply source is 3 m.
5. In case you may meet any unclear issues, do not hesitate to contact the authorized

service company or your distributor. Personnel of all these contact points will be pleased to inform you or provide needed technical assistance

### Installation site setup

Ahead of starting installation of the Device it is necessary to get ready the installation site and to ensure the following:

1. Select the installation site to be in compliance with operating conditions of the Device (see the table 1: Technical Parameters). Install GSM Key at the place of restricted access of unauthorized persons; preferably indoor. In this manner you can avoid both stealing the Device and its unauthorized tampering (e.g. unauthorized adding or changing phone number of administrator). The ideal solution is installing the Device in a lockable switchboard that is also power supply source for electrical drives.
2. Install the Device on a horizontal, non-conductive base plate or on a DIN strip 35 mm.
3. Get ready a supply socket outlet 230 V.
4. Ensure drawing of control cable between the gate drive and the place of GSM Key installation (for doorbell pushbutton we refer to the recommendation of the gate drive manufacturer). Choose the type of a multiple core cable regarding accessories of the gate drive to be connected to the Device. Make allowance for contingent cases of breaking the cable by adding reserve cores.

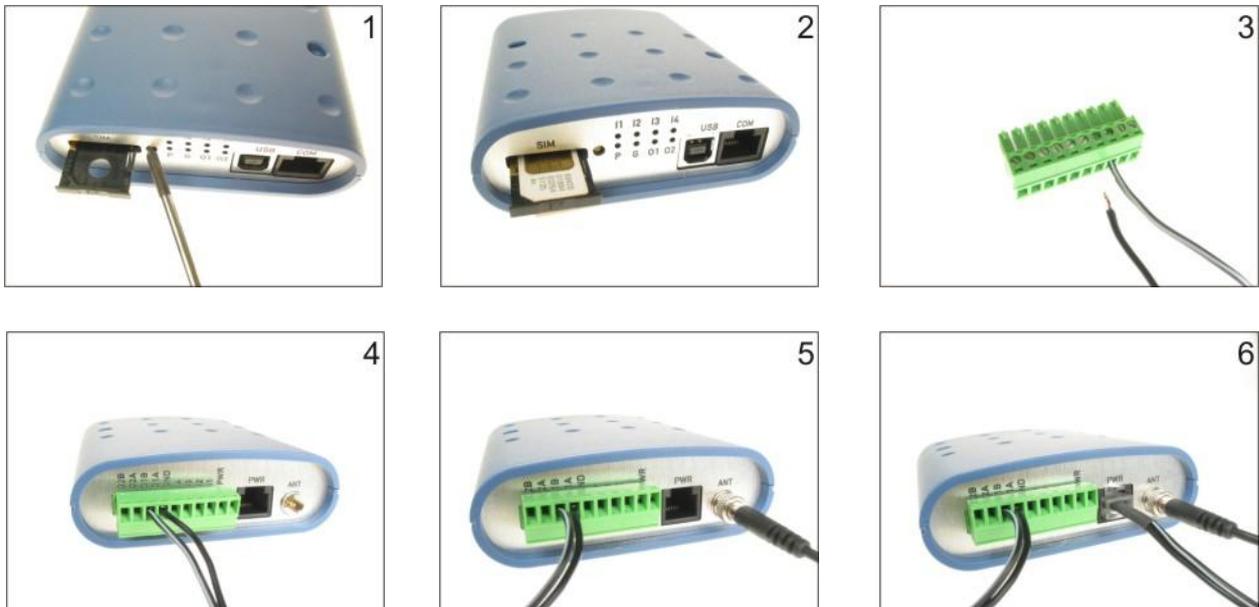
### Getting ready of the SIM card

1. Insert SIM card in a mobile phone and switch on.
2. According to mobile phone user guide deactivate a PIN of the SIM card.
3. Activate SIM card by outgoing call to hotline of operator.
4. Delete all records from SIM card (contacts, SMS), switch off voice box.
5. If you use a pre-paid card then inform yourself about operation conditions for pre-paid card by your operator.

### Starting operation

1. Unwrap GSM Key PRO 2 and all accessories from the package.
2. Pull out the SIM card holder by pressing a small yellow pushbutton (see picture 4/1), slide SIM card into holder and carefully insert into the device. (see picture 4/2)
3. Connect cables to the clamp (see picture 4/3) and plug clamp into the device (see picture 4/4)
4. Connect antenna (see picture 4/5)

Picture 4: Starting operation



5. Connect the power supply to the supply socket (230 V AC, 50Hz).
6. Connect the jack of the power supply to the device. (See picture 4/6). The device having been connected to the power supply is immediately activated and starts searching and registration to the mobile operator network.
7. Wait a minute for discontinuous signal of LED marked P (green color) which reports standby mode.

### Information of the device status (LEDs)

On the front panel you will notice 8 control / signaling lights (LEDs), signaling the Device status.

Table 5: Information of the device status

LED	Description
<b>P (power)</b>	Permanently being out - no power supply
	Permanently luminous – application uploading
<b>G (signal)</b>	Short blinking – properly functioning
	Permanently luminous - malfunctioning
<b>O1 (output 1)</b>	Slightly blinking - transmitting via rf channel
	Switched off - open contacts O1A and O1B
<b>O2 (output 2)</b>	Switched on - closed contacts O1A and O1B
	Switched off - open contacts O2A and O2B
<b>I1 (input 1)</b>	Switched on - closed contacts O2A and O2B
	Switched off - voltage 0 – 2 V between I1 and GND
<b>I2 (input 2)</b>	Switched on - voltage 4,5 – 20 V between I1 and GND
	Switched off - voltage 0 – 2 V between I2 and GND
<b>I3 (input 3)</b>	Switched on - voltage 4,5 – 20 V between I2 and GND
	Switched off - voltage 0 – 2 V between I3 and GND
<b>I4 (input 4)</b>	Switched on - voltage 4,5 – 20 V between I3 and GND
	Switched off - voltage 0 – 2 V between I4 and GND
	Switched on - voltage 4,5 – 20 V between I4 and GND

# CONTROL

Control tasks – control via mobile phone of GSM Key connected to the gate electric drive - drive for closing / opening gate doors, gateways and pikes – is quite easy. The Device is operating in one of two Operating modes (Continual evaluation / Late evaluation). The selected operating mode affects slightly the procedure of GSM Key control. The operating mode has been one-shot set by administrator, reflecting the particular mode features and its suitability to be used for given conditions (see section ADMINISTRATION).

## ***In which way the operation modes differ?***

 In the mode **Continual evaluation** you can open by a single call both entrances in the sequence they have been entered, without the necessity to break your calling. Initial setting of the Device will close the output No. 1 after the first ringing signal and do the same for the output No. 2 after receiving the 3<sup>rd</sup> ringing signal. If you end the call between the 1<sup>st</sup> and 3<sup>rd</sup> ringing signal, only entrance No. 1 will open. If you end the call after the 3<sup>rd</sup> ringing signal, both entrances will open.

In the mode **Late evaluation** you can open the entrance as saved in the output No. 1, without opening during one call also the entrance of the output No. 2. To open both entrances you will need two calls to GSM Key. Provided the call is ended between the 1<sup>st</sup> and 3<sup>rd</sup> ringing signal, only the entrance of the output No. 1 will open. Provided the call is ended after the 3<sup>rd</sup> ringing signal, only the entrance of the output No. 2 will open. To open both entrances you will have to end the call between the 1<sup>st</sup> and 3<sup>rd</sup> ringing signal (closing output relay of the output No. 1) and make another call with more than 3 ringing signals (closing output relay of the output No. 2).

## **CONTROL IN OPERATING MODE CONTINUAL EVALUATION**

1. Store in call list of your mobile the phone call No. of SIM card having been installed in GSM Key and name it in a suitable manner (e.g. GSM Key). Provided your mobile phone will allow it, select the function of accelerated dialing – by pressing and holding one of selected keys you will activate GSM Key.
2. To open / close the gate, select in your call list the name GSM Key and pushing the key you will select the call. Provided you have set the function of speedy dialing, you can select the call (i.e. order to open / close the gate given) by a mere pushing and holding (ca. 1 sec.) the selected key.
3. Following the first ringing signal the relay of output 1 will close, giving signal to electric drive to open / close the entrance No. 1
4. Following the 3<sup>rd</sup> ringing signal the relay of output 2 will close, giving signal to electric drive to open / close the entrance No. 2.
5. Following the 5<sup>th</sup> ringing signal the call will be cancelled and ended. The above-specified number of ringing signals is the initial setting that can be changed and set to meet your own needs.

## **CONTROL IN OPERATING MODE LATE EVALUATION**

1. Store in call list of your mobile phone the call No. of SIM card having been installed in GSM Key and name it in a suitable manner (e.g. GSM Key). Provided your mobile phone will allow it, select the function of accelerated dialing – by pressing and holding one of selected keys you will activate GSM Key.
2. To open / close the gate, select in your call list the name GSM Key and pressing the key you will select the call. Provided you have set the function of speedy dialing, you can select the call (i.e. order to open / close the gate given) by a mere pushing and holding (ca. 1 sec.) the selected key.

3. Provided you wish to open / close the entrance No. 1, hang up before the end of the 3<sup>rd</sup> ringing signal. Following end of the call, the relay of output 1 will close, giving signal to electric drive to open / close the entrance No 1.
4. Provided you wish to open / close the entrance on output No. 2, hang up after the end of the 3<sup>rd</sup> ringing signal. Following end of the call, the relay of output 2 will close, giving signal to electric drive to open / close the entrance No. 2.

### Permanent change of output status

By sending the order you will switch permanently status of binary output, switching from log. 0 to logical 1 or vice versa (open/closed or switched on/switched off). Connected to the binary output is electrical drive, controlling the entrance gate; you are free to connect another equipment to be remotely controlled (e.g. pump. electric drive of window-blinds, heat source). The order Change of binary output status (by SMS) has principally the same effect like ringing signal of GSM Key; the only difference is duration of the ordered effect. While ordering via ringing signal switches the state of logical state for the set time period (1 second – see parameter ImpulseRings), the SMS ordering will make the status switch permanent. The ringing signal and ensuing short change of logical state are suitable for devices that are triggered by a short signal (e.g. starting electric drives), use of SMS message and ensuing permanent change of logical state are suitable for, e.g. turning on pump or heating.

Write SMS like the following one:

**ST OUT[1-2]=value**

and mail it.

**Example:** ST OUT[1-2]=0

**Value:**           0 = switch off  
                  1 = switch on

### Status of input

By sending the message you will obtain information of the binary inputs status. The Device GSM Key contains two binary inputs and makes it possible to mail SMS message on the Device status or the information provided by sensor as connected to the input. (Connected to the input can be devices operating on the principle of a potential less switch. E.g. in cases of electrical drives equipped with position identification it is possible to transfer to mobile phone the information if the gate is open or closed.)

Write SMS like the following one

**GT IN[1-4]**

and mail it.

**Example:** GT IN1

Table 6: Summary of basic control – mobile phone

Meaning	R/W/WR*	Order	Values description	Initial value
Permanent change Output Status	W	ST OUT[1-2]=0	0 = switch off 1 = switch on	-
Status of binary input	R	GT IN[1-4]	-	-

# ADMINISTRATION

Administration of GSM Key PRO is remotely performed using mobile phone by mailing SMS messages including orders in the below-specified form or by provided software GSM Key ADMIN from computer with connected GSM modem. The authorization to administer in GSM Key is restricted solely to the representative of administrator. In practice it means the call number as saved in SIM card in GSM Key with the name starting with key word Master (the number of administrator is SIM card number in administrator mobile phone or SIM card number in GSM modem).

Text of SMS message must comply with the specified form (exact formulation of orders, the text spacing, etc.). The orders mailed as SMS messages consist of the order, parameter (if included in the order) and the value (if required by the order). One single SMS message can contain more orders that must be mutually separated by semicolons ";".

Orders setting and entering will be performed immediately after SMS message has been received, while respecting its original sequence of information as received. Some orders are responded by mailing back 1 or more SMS messages, either confirmative or containing the required information. To simplify the routine of SMS correspondence, we recommend to save in your mobile phone the templates of more frequented orders. SMS message is mailed to the call number of SIM card having been saved in the call list of GSM Key.

## Basic administration – mobile phone

Basic administration contains a set of orders to change basic configurations of GSM Key and administration of users.

### Adding a new user

By mailing your order you will add to the call list in SIM card of GSM Key another user entitled to control the entrance. Will you write SMS in the following form.

#### AD name number

and mail it to the call number of GSM Key.

**Example:** AD Novak +420606123456

### Deleting user out of call list

By mailing your order you will delete out the user of the call list in SIM card of GSM Key. Will you write SMS message in the following form.

#### DE name

and mail it off.

**Example:** DE Novak

### Current list of users

By mailing off the order LS you will obtain currently valid call list in SIM card of GSM Key. Will you write SMS message in the following form

#### LS

and mail it off.

In response you will receive a corresponding number of SMS messages in the form name1:number1 name2:number2, etc. The number of incoming SMS is subject to extent of the call list and names length. One SMS message contains at least 6 users.

### Deleting call list

By mailing off the order CL you will delete all the content of call list in SIM card. Make sure you have the call list backed up or that you will not need it any more.

Will you write SMS message in the following form

#### CL

and mail it off.



*Using the order CL you will delete all items of the call list, including those of administrator's MASTER. Having deleted the call list you lose the control of the situation – of the persons who are authorized to use GSM Key.*

### **Number of items of call list as saved in SIM card**

By mailing off the order GT you will obtain the information of number of call list items in SIM card.

Will you write SMS message in the following form

**GT PBS**

and mail it off.

### **Initial setting**

By mailing off the order DF you will restore the initial setting of GSM Key. Content of the call list in SIM card will remain there.

Will you write SMS message in the following form

**DF**

and mail it off.

### **Operational mode**

The device GSM Key can run in one of the operation modes – Continual evaluation or Late evaluation. The operation mode decides of the manner to evaluate number of ringing signals. The mode selection influences the procedure in which the user should proceed to open/close the entrance.

Will you write SMS message in the following form

**ST OUTLateEval=value**

and mail it off.

**Example:** ST OUTLateEval=0

**Value:** 0 = Continual evaluation

1 = Late evaluation

**Initial setting:** 0

### **Verifying of Operation mode value**

By mailing off the order you will receive its current value.

Will you write SMS message in the following form

**GT OUTLateEval**

and mail it off.

### **Number of ringing signals**

By mailing off the order you will specify number of ringing signals, after which the relay of particular output will close. Settings for both operation modes are identical. However, the respective GSM Key functions will differ, subject to the selected operation mode (see *In which way the operation modes differ?*).

### **Number of ringing signals in operation mode Continual evaluation**

Will you write SMS message in the following form

**ST OUT[1-2]ImpulseRings=value**

and mail it off.

**Example:** ST OUT1ImpulseRings=2

**Value:** 0 = closing of the given output immediately after the link has been gained.

1 to x = closing the given output, subject to number of received ringing signals

**Initial settings:** output No. 1 = 1

output No. 2 = 3

### **Number of ringing signals in operation mode Late evaluation**

Will you write SMS message in the following form

**ST OUT[1-2]ImpulseRings=value**

and mail it off.

**Example:** ST OUT1ImpulseRings=2

**Value:** 0 = closing of the given output immediately after the link has been gained  
1 to x = closing the given output, subject to number of received ringing signals

**Initial settings:** output No. 1 = 1  
output No. 2 = 3

### Verifying the value of Number of ringing signals

By mailing off the order you will obtain the current value.

Will you write SMS message in the following form

**GT OUT[1-2]ImpulseRings**

and mail it off.

**Example:** GT OUT1ImpulseRings

### *In which way the operation modes differ?*

*In the mode **Continual evaluation** you can open by a single call both entrances in the sequence they have been entered, without the necessity to break your calling. Initial setting of the Device will close the output No. 1 after the first ringing signal and do the same for the output No. 2 after receiving the 3<sup>rd</sup> ringing signal. If you end the call between the 1<sup>st</sup> and 3<sup>rd</sup> ringing signal, only entrance No. 1 will open. If you end the call after the 3<sup>rd</sup> ringing signal, both entrances will open.*



*In the mode **Late evaluation** you can open the entrance as saved in the output No. 1, without opening during one call also the entrance of the output No. 2. To open both entrances you will need two calls to GSM Key. Provided the call is ended between the 1<sup>st</sup> and 3<sup>rd</sup> ringing signal, only the entrance of the output No. 1 will open. Provided the call is ended after the 3<sup>rd</sup> ringing signal, only the entrance of the output No. 2 will open. To open both entrances you will have to end the call between the 1<sup>st</sup> and 3<sup>rd</sup> ringing signal (closing output relay of the output No. 1) and make another call with more than 3 ringing signals (closing output relay of the output No. 2).*

### Canceling incoming call

By mailing off the order you will specify number of received ringing signals, after which the incoming call will be automatically cancelled.

Will you write SMS message in the following form

**ST CallHangUpRings=value**

and mail it off.

**Example:** ST CallHangUpRings=4

**Value:** 0 = switched off  
1 to x = number of received ringing signals

**Initial setting:** 5

### Verifying the current value of Canceling incoming call

By mailing off the order you will obtain the current value.

Will you write SMS message in the following form

**GT CallHangUpRings**

and mail it off.

### Firmware version

By mailing off the order you will obtain the information of the firmware version as stored in GSM Key. This information can be important to solve technical problems and to communicate

with the line of technical support.

Will you write SMS message in the following form

**GT FW**

and mail it off.

### **Current Time detection**

By sending off the order you will activate or deactivate current time automatic detection. In case the time will be detected as not current (for example following a power failure and subsequent device reset not requested), an SMS with the text TIMEALARM will be sent to the phone number of a first administrator specified in the call list as MASTER. The SMS will be sent to this phone number repeatedly every 14 days until the module receives an SMS message for time setting.

Will you write SMS message in the following form

**ST TimeAlarm=Value**

and send it off.

**Example: ST TimeAlarm=1**

**Value:** 0 = switched off

1 = switched on

**Initial setting:** 0

### **Set time**

By sending off the order you will set the GSM key internal time to the entered value. The function Current Time detection is automatically activated simultaneously with receiving the Set time order.

Will you write SMS message in the following form

**ST DateTime="YYYY-MM-DD hh:mm"**

and send it off.

**Example:** ST DateTime="2005-12-24 17:00"

**Value:** "YYYY-MM-DD hh:mm" (Y- year, M-month, D-day, h- hour, m-minute – all characters are required)



### **Event register (records about attempts to open/close the gate)**

The GSM Key device registers in its memory 1000 last event records. An event is every change at the device output – entrance opening/closing, other connected device activation/deactivation weather carried out by ringing or by sending off an SMS with an order to a constant change of a logical output state. The record contains date, time, output and user (name and number) identification. Example: „2005-12-31 24:00 O2 MASTER +420603123456“. Each new record in Event register exceeding memory over 1000 records cause automatic deleting of the oldest record.

### **Reading records from the event register**

By sending off the order you will obtain the required number of last records in the event register.

Will you write SMS message in the following form

**RG=Value**

and send it off.

**Example:** RG=10

**Value:** number of required records - integer

### **Deleting records in the event register**

By sending off the order you will delete the entire event register.

Will you write SMS message in the following form

**RC**

and send it off.

**Example:** RC

Table 7: Summary of basic administration – mobile phone

Meaning	R/ W/ WR **	Order	Values description	Initial value
Adding a new user	W	AD name number	User's name and number	-
Deleting user	W	DE name	User's name	-
Current list of users	R	LS	-	-
Deleting call list	W	CL	-	-
Number of items in call list	R	GT PBS	-	-
Initial settings	W	DF	-	-
Operational mode	W R WR	ST OUTLateEval=value** GT OUTLateEval SC OUTLateEval=value**	0 = Continual evaluation 1 = Late evaluation	0
Number of ringing signals /Continual evaluation	W R WR	ST OUT[1-2]ImpulseRings=value ** GT OUT[1-2]ImpulseRings SC OUT[1-2]ImpulseRings=value **	0 = switched off 1 to x = number of received ringing signals	OUT1=1 OUT2=3
Number of ringing signals /Late evaluation	W R WR	ST OUT[1-2]ImpulseRings=value ** GT OUT[1-2]ImpulseRings SC OUT[1-2]ImpulseRings=value **	0 = switched off 1 to x = number of received ringing signals	OUT1=1 OUT2=3
Canceling call	W R WR	ST CallHangUpRings=value GT CallHangUpRings SC CallHangUpRings=value	0 = switched off 1 to x = number of received ringing signals	5
Firmware version	R	GT FW	-	-
Current Time detection	W R WR	ST TimeAlarm=value GT TimeAlarm SC TimeAlarm=value	0 = switched off 1 = switched on	0
Set time	W R WR	ST DateTime="YYYY-MM-DD hh:mm" GT DateTime SC DateTime="YYYY-MM-DD hh:mm"	Y-Year, M-Month, D-Day, h-hour, m-minute	-
Reading records	R	RG=value	# Required records	-
Delete records	W	RC	-	-
*R/W/RW:	W – Ordering (Out coming SMS) R – Verifying (Out coming and incoming SMS) WR – Ordering & verifying (Out coming and incoming SMS)			
**[1-2]	[1-2] – to select No. of input/output, e.g. GT IN2 for order GT IN[1-2]			

## Advanced administration – mobile phone

Function of Advanced administration enables adjusting GSM Key behavior in such a manner so that it can be suitable for and communicate with control units of all available and known types of electric drive. Moreover, to enable automatic sending of required data, following its evaluation of status of individual inputs.

### Pulse length

By sending off the order you will specify the length of pulse as generated at the output. The pulse length is an important parameter and is set, subject to the type of control unit of electrical drive. Will you select the value following recommendation of manufacturer of electrical drive, regarding time span needed to press the pushbutton. The initially set value (1 second) is sufficient for most of electrical drives.

Will you write SMS message in the following form

**ST OUT[1-2]ImpulseLength=value**

and send it off.

**Example:** ST OUT1ImpulseLength=2

**Value:** integer, in seconds

**Initial setting:** Output No. 1 = 1 second

Output No. 2 = 1 second

### Verifying the value Pulse length

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

**GT OUT[1-2]ImpulseLength**

and send it off.

**Example:** GT OUT1ImpulseLength

Table 8: Summary of advanced administration

Meaning	R/W/ WR**	Order	Values description	Initial value
Pulse length	W R WR	ST OUT[1-2]ImpulseLength=value GT OUT[1-2]ImpulseLength= value ST OUT[1-2]ImpulseLength= value	Integer in seconds	OUT1=1 OUT2=2

## Advanced administration, automatic sending information – mobile phone



### **Automatic sending information**

Both versions of GSM Key (HOME / PRO) offer the possibility of connecting and switching other equipment (e.g. heat source or a pump) via mobile phone, as well as sending back verification information (e.g. security system EZS or pump switched on or sensor information); these activities can be performed by means of SMS or by ringing signal of your mobile phone. Some applications require automatic mode of conveying (e.g. activation of security alarm, turning on pump as a result of exceeding specified level, exceeding minimum temperature, etc.). In such cases it is necessary so that the equipment itself, after the specified condition has been met, will send SMS or give ringing signal to the user's mobile phone.

### **Setting the function of automatic sending information**

The following instructions are used to set the function of automatic sending information; they are intended for the user advanced in programming. The prerequisite to attain proper operation of automatic sending information is to specify a few "variables" – type of action (calling, sending SMS) to be performed after specified conditions have been met at inputs and outputs, selecting group of receiving users, the addressees/recipients of the action, activation conditions for particular situation during the Device running (change of input electrical signal) and when switching on the Device, texts of SMS messages to be sent to users, etc.

#### **Action**

By sending off the order you will specify the Action (sending SMS, calling), which should be performed at the moment of meeting the activation condition for a given input.

Will you write SMS message in the following form

**ST IN[1..4]Action= value**

and send it off.

**Example:** ST IN1Action=1

**Value:** 0 = to send SMS

1 = to call

2 = to send SMS and to call

**Initial setting:** 0

#### **Verifying the value of Action**

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

**GT IN[1..4]Action**

and send it off.

**Example:** GT IN1Action

#### **User – Action recipient**

By sending off the order you will specify the group of users, who will be receivers of Action, having been activated at the given input.

Will you write SMS message in the following form

**ST IN[1..4]UserName=value**

and send it off.

**Example:** ST IN1UserName=1

**Value:** Key part of name as included in the call list

**Initial setting:** -

#### **Verifying the value User – Action recipient**

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

### **GT IN[1..4]UserName**

and send it off.

**Example:** GT IN1UserName

### **Text SMS – input log. 1**

By sending off the order you will specify text of SMS message that will be sent if the input signal reaches state of log. 1. The value of text must not be spaced (e.g. correct is: PumpSwitchedOn, while incorrect is: Pump Switched on)

Will you write SMS message in the following form

**ST IN[1..4]SMS1=value**

and send it off.

**Example:** ST IN1SMS1=HeatingSwitchedOn

**Value:** text SMS

**Initial setting:** -

### **Verifying the value Text SMS – input log. 1**

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

**GT IN[1..4]SMS1**

and send it off.

**Example:** GT IN1SMS1

### **Text SMS – input log. 0**

By sending off the order you will specify text of SMS message that will be sent if the input signal reaches state of log. 0. The value of text must not be spaced (e.g. correct is: PumpSwitchedOn, while incorrect is: Pump Switched on)

Will you write SMS message in the following form

**ST IN[1..4]SMS0=value**

and send it off.

**Example:** STIN1SMS0=HeatingTurnedOff

**Value:** text SMS

**Initial setting:** -

### **Verifying the value Text SMS – input log. 0**

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

**GT IN[1..4]SMS0**

and send it off.

**Example:** GT IN1SMS0

### **Number of attempts to send off SMS**

By sending off the order you will specify maximum number of sending off attempts. Failure to send off the SMS during these attempts will mean canceling the failed SMS.

Will you write SMS message in the following form

**ST SendRetry=value**

and send it off.

**Example:** ST SendRetry=3

**Value:** 0 = switched off

1 to x = number of attempts to send off SMS

**Initial setting:** 1

### **Verifying the value Number of attempts to send off SMS**

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

**GT SendRetry**

and send it off.

### **Activation condition on run**

By sending off the order you will specify activation condition that must be met to trigger the

Action. The Device will monitor continuously both binary inputs. In case the value of condition is fulfilled (e.g. the change is detected), the Action will be performed.

Will you write SMS message in the following form

**ST IN[1..4]TriggerRun=value**

and send it off.

**Example:** ST\_IN1TriggerRun=1

**Value:** **0** = switched off – if 0-value is specified, the Device will not evaluate fulfilling the activation condition. It implies the latter will be never met, thus no Action will be performed

**1** = ascending border – the Device will respond to input change from the level log. 0 to log. 1

**2** = descending border – the Device will respond to input change from the level log. 1 to log. 0

**3** = any border – the Device will respond to any input change

**Initial setting:** output No. 1 = 0

output No. 2 = 0

### **Verifying the value Activation condition on run**

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

**GT IN[1..4]TriggerRun**

and send it off.

**Example:** GT IN1TriggerRun

### **Power up Activation condition**

By sending off the order you will specify activation condition that must be met during switching on, to trigger the Action. Following its switching on the Device will check both binary inputs. Provided the specified condition has been fulfilled, the Device will perform the Action.

Will you write SMS message in the following form

**ST IN[1..4]TriggerStart=value**

and send it off.

**Example:** ST IN1TriggerStart=1

**Value:** **0** = switched off – if 0-value is specified, the Device will not evaluate fulfilling of the activation condition. It implies the latter will be never met, thus no Action will be performed

**1** = log. 1 level – the Device will respond provided during switching on the level of log. 1 has been found at the given input

**2** = log. 0 level – the Device will respond provided during switching on the level of log. 0 has been found at the given input

**3** = any logical level – the Device will respond provided during switching on the level of log. 1 or log. 0 has been found at the given input

**Initial setting:** input No. 1 = 0

input No. 2 = 0

### **Verifying the value Power up Activation condition**

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

**GT IN[1..4]TriggerStart**

and send it off.

**Example:** GT IN1TriggerStart



### **Activation condition on run / Power up Activation condition**

At the input sensor status change the Device actuates action (SMS sending, call ringing) according to activation condition. At common working **an Activation condition on run** is applied.

After power failure the input sensors status are verified and **Power up activation condition** is evaluated.

#### **Time span of evaluation of input level – log. 1**

By sending off the order you will specify time, for which the input signal of the given input must remain at the level of log. 1, to fulfill the activation condition and start the Action.

Will you write SMS message in the following form

**ST IN[1..4]AttackTime=value**

and send it off.

**Example:** ST IN1AttackTime=4

**Value:** time interval in seconds

**Initial setting:** input No. 1 = 0 seconds  
input No. 2 = 0 seconds

#### **Verifying the value Time span of evaluation of input level – log. 1**

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

**GT IN[1..4]AttackTime**

and send it off.

**Example:** GT IN1AttackTime

#### **Time span of evaluation of input level – log. 0**

By sending off the order you will specify time, for which the input signal of the given input must remain at the level of log. 0, to fulfill the activation condition and start the Action.

Will you write SMS message in the following form

**ST IN[1..4]ReleaseTime=value**

and send it off.

**Example:** ST IN1ReleaseTime=4

**Value:** time length in seconds

**Initial setting:** input No. 1 = 0 seconds  
input No. 2 = 0 seconds

#### **Verifying the value Time span of evaluation of input level – log. 0**

By sending off the order you will obtain the current value.

Will you write SMS message in the following form

**GT IN[1..4]ReleaseTime**

and send it off.

**Example:** GT IN1ReleaseTime

Table 9: Summary of automatic sending information – mobile phone

Meaning	R/ W/ WR **	Order	Values description	Initial value
ACTION	W R WR	ST IN[1..4]Action=value** GT IN[1..4]Action SC IN[1..4]Action=value	0 = send SMS 1 = call 2 = call and send SMS	-
User – the Action receiver	W R WR	ST IN[1..4]UserName=value GT IN[1..4]UserName SC IN[1..4]UserName=value	Key part of name in call list	-
Text SMS – input log. 1	W R WR	ST IN[1..4]SMS1=value GT IN[1..4]SMS1 SC IN[1..4]SMS1=value	-	-
Text SMS – input log. 0	W R WR	ST IN[1..4]SMS0=value GT IN[1..4]SMS0 SC IN[1..4]SMS0=value	-	-
Number of attempts of sending off SMS	W R WR	ST INSendRetry=value GT INSendRetry SC INSendRetry=value	0 = switched off 1 to x = number of attempts to send off SMS	1
Activation condition while Device running	W R WR	ST IN[1..4]TriggerRun=value GT IN[1..4]TriggerRun SC IN[1..4]TriggerRun=value	0 = switched off 1 = ascending border 2= descending border 3 = any border	IN1=0 IN2=0
Activation condition while Device switched on	W R WR	ST IN[1..4]TriggerStart=value GT IN[1..4]TriggerStart SC IN[1..4]TriggerStart=value	0 = switched off 1 = level log. 1 2 = level log.0 3 = any level	IN1=0 IN2=0
Time of evaluation of input level – log. 1	W R WR	ST IN[1..4]AttackTime=value GT IN[1..4]AttackTime SC IN[1..4]AttackTime=value	integer in seconds	IN1=0 IN2=0
Time of evaluation of input level – log. 0	W R WR	ST IN[1..4]ReleaseTime=value GT IN[1..4]ReleaseTime SC IN[1..4]ReleaseTime=value	integer in seconds	IN1=0 IN2=0
*R/W/RW:	W – Specification (Go-SMS) R – Verification (Incoming and Go- SMS) WR – Specification and verification (Incoming and Go- SMS)			
**[1..4]	[1..4] – to select No. of input/output, e.g. GT IN2Action for order GT IN[1..4]Action			

# ADMINISTRATION – GSM KEY ADMIN

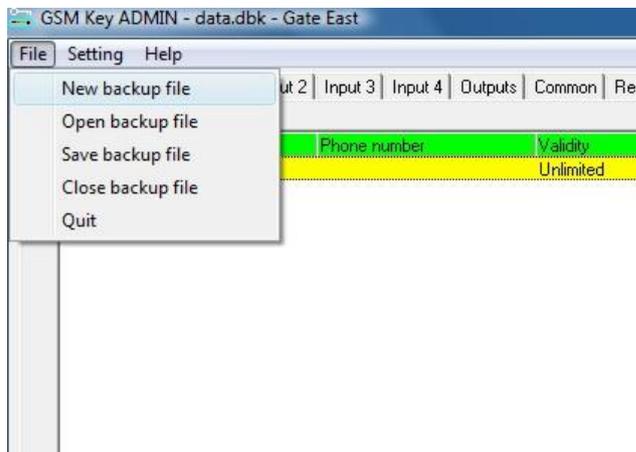
GSM KEY ADMIN is a simple software featuring full and convenient administration; even several GSM Keys can be simultaneously administered. Moreover, it is possible to add / delete users, to set required configuration, provide backups. Prior to the programme starting it is necessary, subject to the selected communication method, to connect GSM modem or service cable on selected port.

## INSTALLATION

### Programme installation

The software does not in fact require installation; in spite of it is recommendable to copy at first the directory of GSM Key ADMIN in your PC and then to start the programme from PC. When using for the first time, will you proceed following next steps:

1. Copy in your PC the directory of GSM Key ADMIN containing software.
2. Clicking on GSM Admin.exe file start the software. The file can be found in the copied directory.
3. Form a new backup to be used for administration of GSM Keys: Click on the new backup file „File/New backup file“ and name it entering its name in the address field File name.
4. Click on the order Save. The programme is now fully ready to administer GSM Keys, adding / canceling users, configuration and backing up.

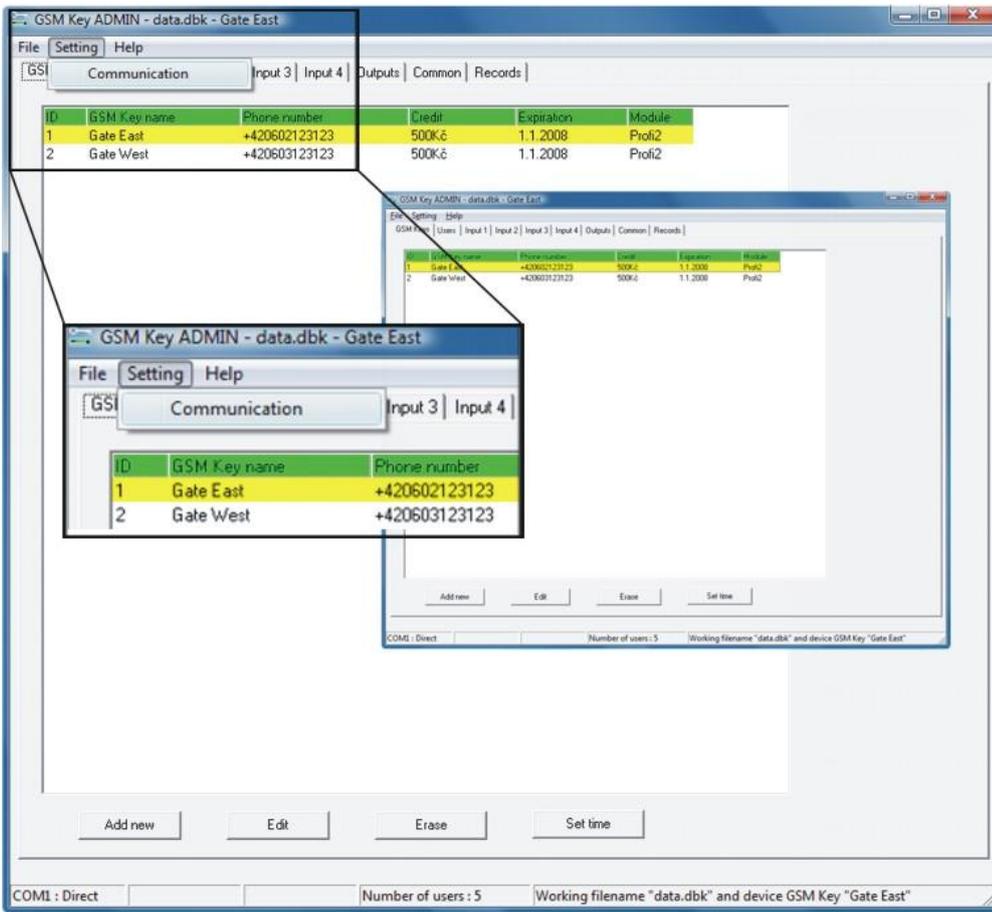


Picture 5: New backup file

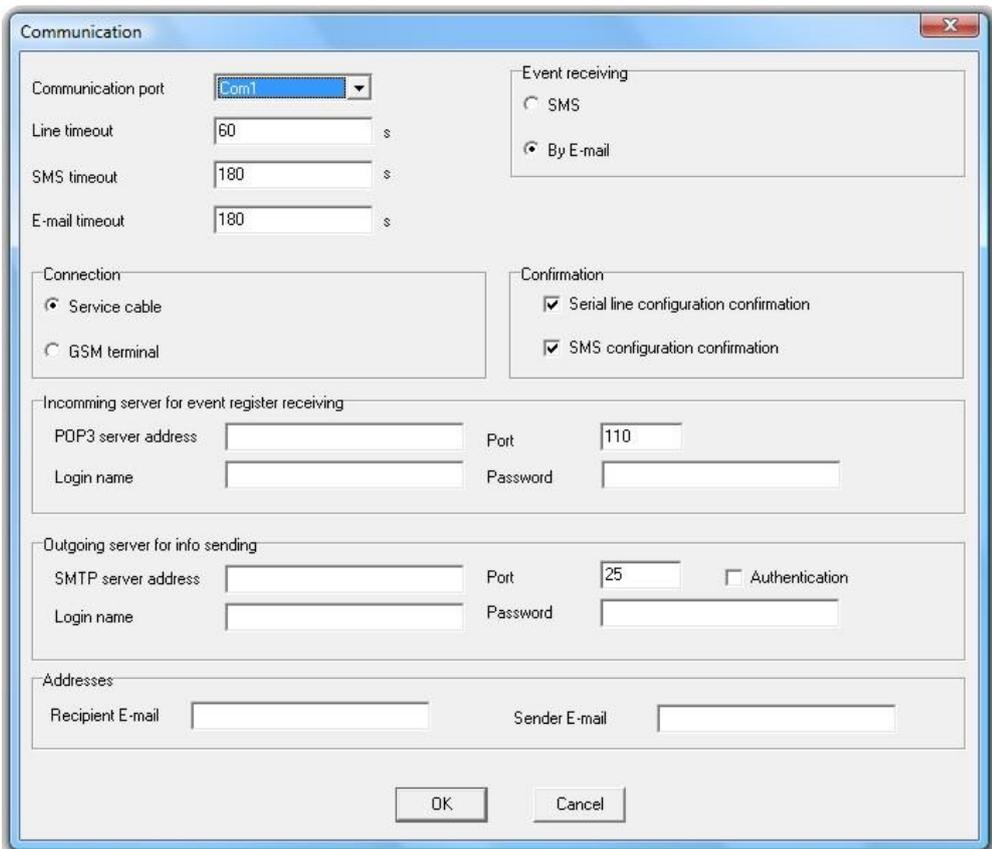
### Installation of GSM modem and Setting of Communication

Installation of GSM modem will differ according to the selected type and interface (RS232, USB, and PCMCIA). It is necessary to set the selected communication port (Com1- Com9) and type of connection (GSM Terminal) in the programme– see picture 7

According to your access of administration set item Connection either to „GSM Terminal“ (remote access via SMS) or „Service cable“ (direct access via cable).



Picture 6: Open dialogue Communication setup



Picture 7: Communication setup

## Control of programme

### Layout of operating window

The bookmark GSM Key enables working with individual GSM Keys, which can be added, edited or deleted.

Display of GSM Key is divided to several parts: Text menu, Bookmarks and Control keys along the side and bottom ledge.

### Control using mouse

Simple clicking with left mouse key can control order part of programme.

### Control using keys / pushbuttons

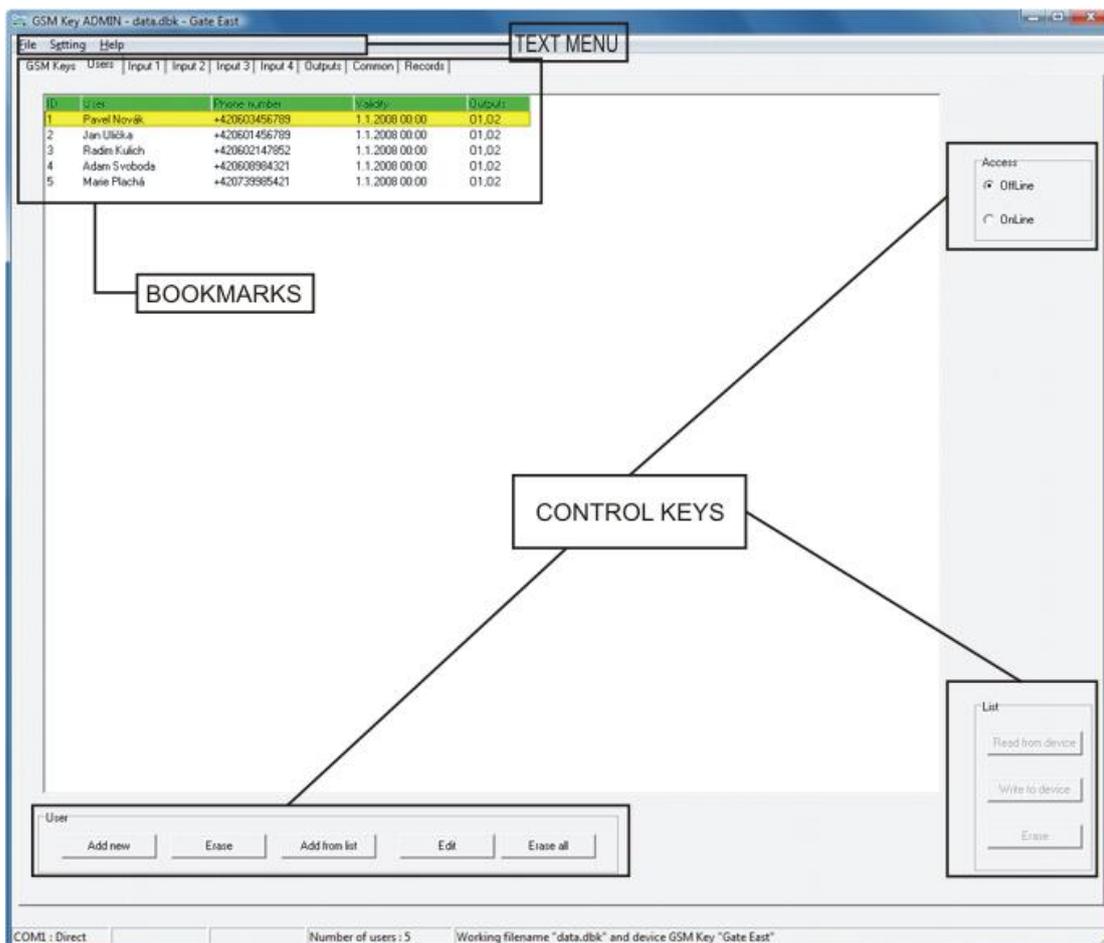
#### Movement in text menu

You can enter the text menu using swift keys specified at the orders. Between individual orders you can move using cursor/arrows.

- File Alt-S
- Setting Alt-N
- Help list Alt-H

#### Movement between bookmarks:

You can move between book marks using keys combination: Ctrl-Tab to move forwards, event. Ctrl-Shift -Tab to move backwards. Between individual orders you can move using cursor.



Picture 8: Basic control elements of GSM Key ADMIN

# BRIEF SUMMARY OF PROGRAMME FUNCTIONS

## **LIST OF GSM KEYS (bookmark GSM KEYS)**

The book mark GSM KEYS makes it possible to work with individual GSM Keys. Here you can add new, edit / delete GSM Keys that are installed at individual entrances.

### Bookmarks possibilities:

- List of GSM Keys
- Choice of current GSM Key
- Adding new/ Deleting/ Editing GSM Keys
- Setting time of GSM Key

## **LIST OF AUTHORISED USERS (bookmark USERS)**

The bookmark USERS provides possibility to display list of authorized users of currently used GSM Key.

### Bookmark possibilities:

- Current list of users
- Adding a new user, adding a user from list of users
- Editing a user
- Deleting a user

## **SETTING OF AUTOMATIC SENDING OFF INFORMATION (bookmark INPUTS)**

The bookmark INPUTS enables setting the function of current GSM Key - Automatic sending of information (SMS messages, ringing signals). Information items set in this way monitor / report changes of the monitored function. Similarly, they can monitor changes of a function or parameters of equipment being connected to one of inputs of GSM Keys. The information what does it mean 'Automatic sending off information' you can find in the part „A DETAILED DESCRIPTION OF PROGRAMME FUNCTIONS“.

### Bookmark possibilities:

- Setting the procedure of informing the targeted group of users, inc. text of SMS
- Setting the procedure to evaluate input signal of the monitored equipment.

## **SETTING BEHAVIOUR OF GSM KEY (bookmark OUTPUTS)**

The bookmark OUTPUTS is used to set the procedure in which GSM Key controls equipment (electro-motor of gate drive) that is connected to one of its outputs. This setting has a direct impact on the manner in which the opened gate will respond to receiving a ringing signal of mobile phone.

### Bookmark possibilities:

- Setting operation mode
- Setting number of ringing signals for responding in the selected operating mode
- Setting length of transmitted switching on pulse

## **ADDITIONAL ADMINISTRATION (bookmark COMMON)**

Other functions and settings of GSM Key.

### Bookmark possibilities:

- Entering number of ringing signals before the call will be cancelled
- Entering number of ringing signals before the call will be received (Receive call)
- Reading information of FW version
- Reading serial No. of GSM Key
- Setting of automatic time detection

## **EVENT REGISTER (bookmark RECORDS)**

Register of 1000 last records.

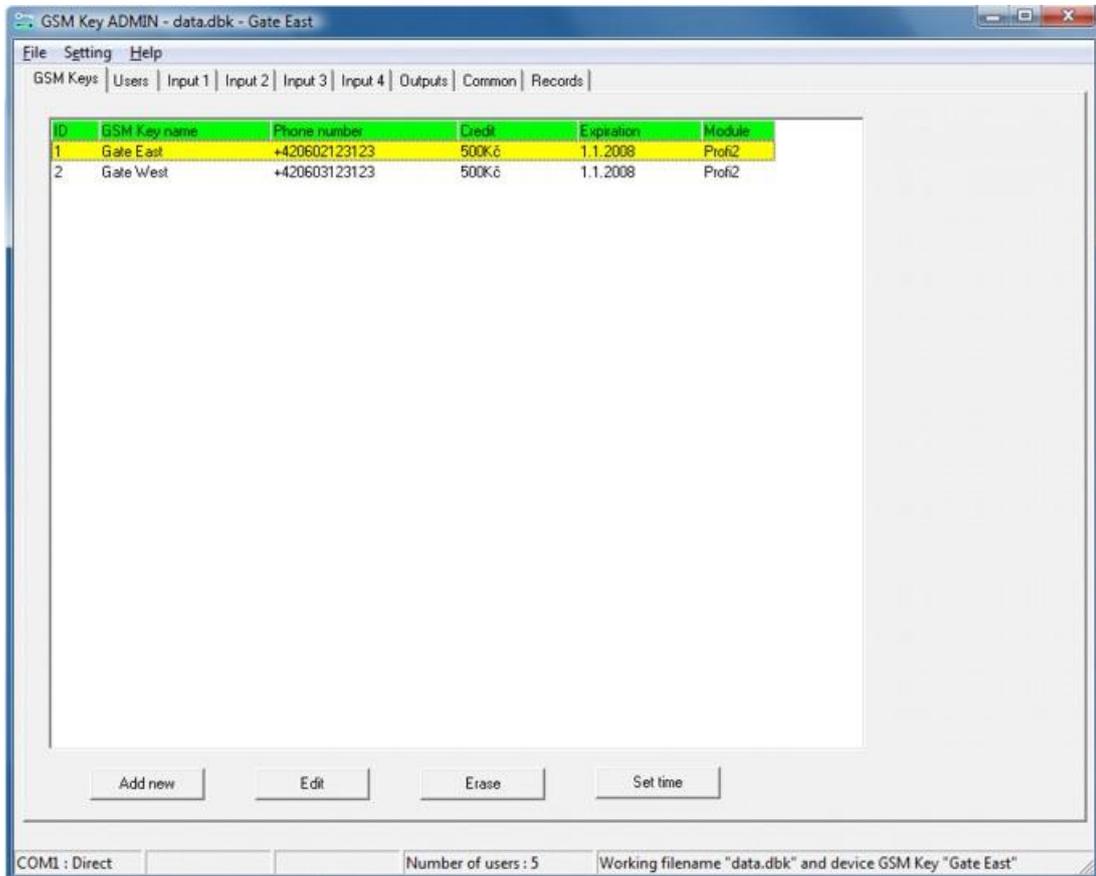
### Bookmark possibilities:

- Reading of Records from Device
- Automatic Records Saving to File
- Reading of Records from File

# DETAILED DESCRIPTION OF PROGRAMME FUNCTIONS

## LIST OF GSM KEYS (bookmark GSM KEYS)

The bookmark GSM Keys is used to operate individual GSM Keys, add a new one, edit or delete currently existing GSM Keys. Selecting currently existing GSM Key is performed in the bookmark by clicking left key of mouse on the name. Current GSM Key has yellow background. Any other performed actions in other bookmarks relate only to just currently active GSM Key!



Picture 9: List of GSM Keys

## List of GSM Keys

You will find the List of GSM Keys, incl. details in bookmark GSM Key (see the Picture 9. below).

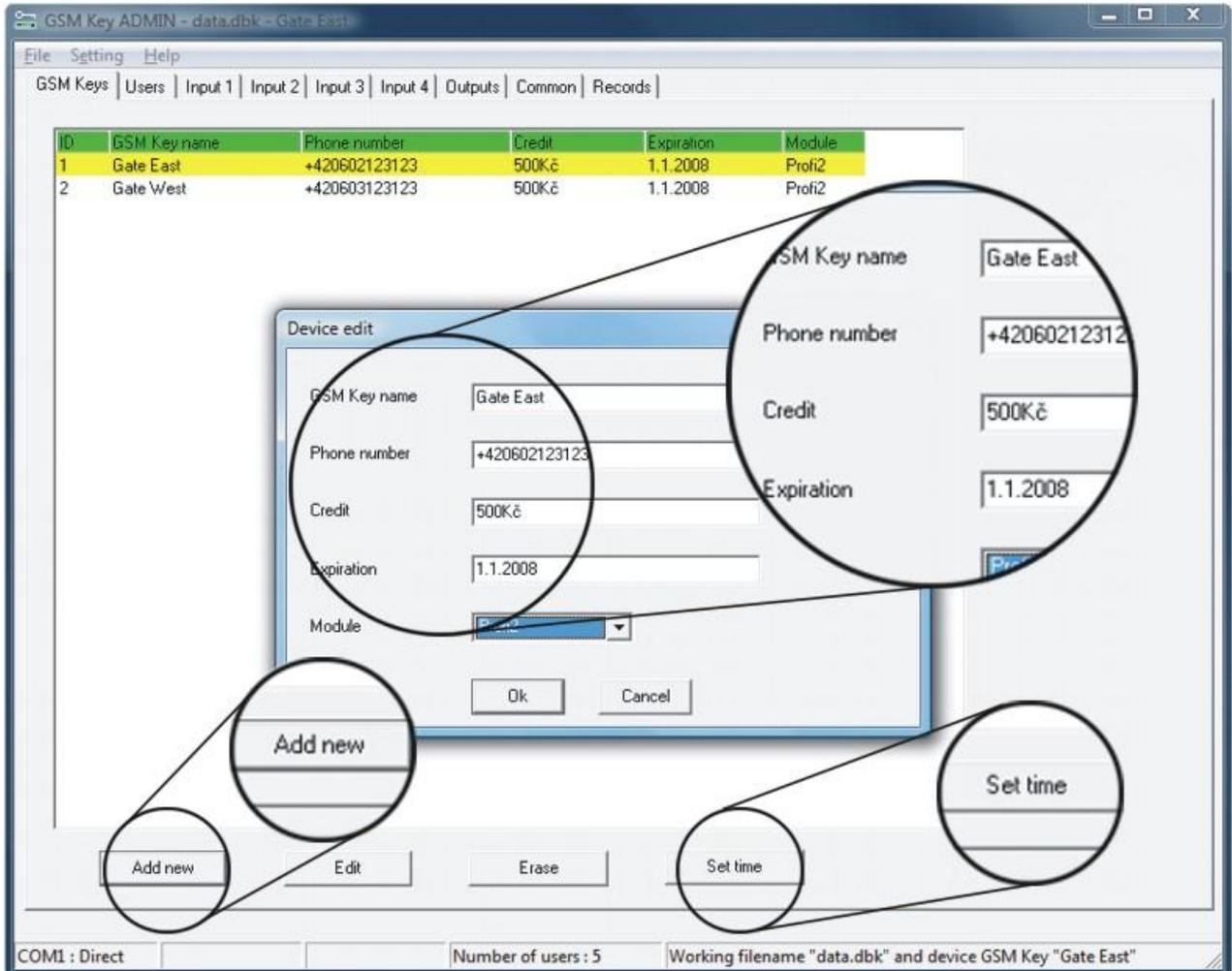
## Adding new GSM Key

1. Push control pushbutton ADD NEW
2. ADD NEW (see Picture 10)
3. GSM Key name – enter any name of GSM Key (e.g. Northern gate)
4. Phone number – enter call No. of GSM Key
5. Credit – enter informative information of credit amount in SIM card
6. Expiration – enter the date of SIM card expiration
7. Module – version of GSM Key PRO 2
8. OK – saving new GSM Key
9. CANCEL – return without saving



### **Adding a new GSM Key - choice of version**

It is important to set a Module type of GSM Key (PRO or PRO 2) on field Device edit for correct further function (see picture 10). Identification data of you GSM Key version is on label bottom of the device.



Picture 10: Add a new GSM Key

### **Removing GSM Key**

1. Mark the GSM Key to be removed with left mouse key
2. After removing selected GSM Key press control pushbutton ERASE. You will be asked for confirming your selection (see Picture 11)



Picture 11: Removing GSM Key

## Editing GSM Key

1. Mark with the mouse left key the GSM Key to be edited
2. Press control pushbutton EDIT
3. EDITING
4. GSM Key Name – use to edit the name of selected GSM Key
5. Phone number – use to edit call No. in SIM card of GSM Key
6. Credit
7. Expiration
8. OK – saving changes of GSM Key
9. CANCEL – return without saving

## Setting Time

1. Mark the GSM Key with left mouse key
2. Press control pushbutton Set Time and wait until will not be send the actual system PC time from your computer to chosen Device.



*Access Offline is status which not allows confirming synchronization (read/write) and all changes are made only in GSM Key ADMIN.*

## LIST OF AUTHORISED USERS (bookmark USERS)

The bookmark USERS is used to add simply new users, those authorized to open/close the entrance and to edit/remove current users of GSM Key. As a minimum, enter one call No. of administrator. **Enter user's names, always without diacritic marks!** Administrator is the user authorized to add or delete other users in SIM card and send to it configuration SMS messages. For such activities he uses a mobile phone (SMS messages) or SW of GSM Key ADMIN. Administrator is the item of SIM card call list being marked by a key word MASTER (e.g. MasterNovak).\*



*\*When using software GSM Key ADMIN, it is necessary so that call No. of SIM card in GSM modem will be set also as MASTER!*



*Not accessible for Offline work is pushbutton confirming the order to synchronies GSM Key with PC. All changes are performed only in application of GSM Key ADMIN. To synchronies GSM Key with PC, it is necessary to switch to Online mode and press confirmation pushbutton WRITE TO DEVICE.*

## Current list of users

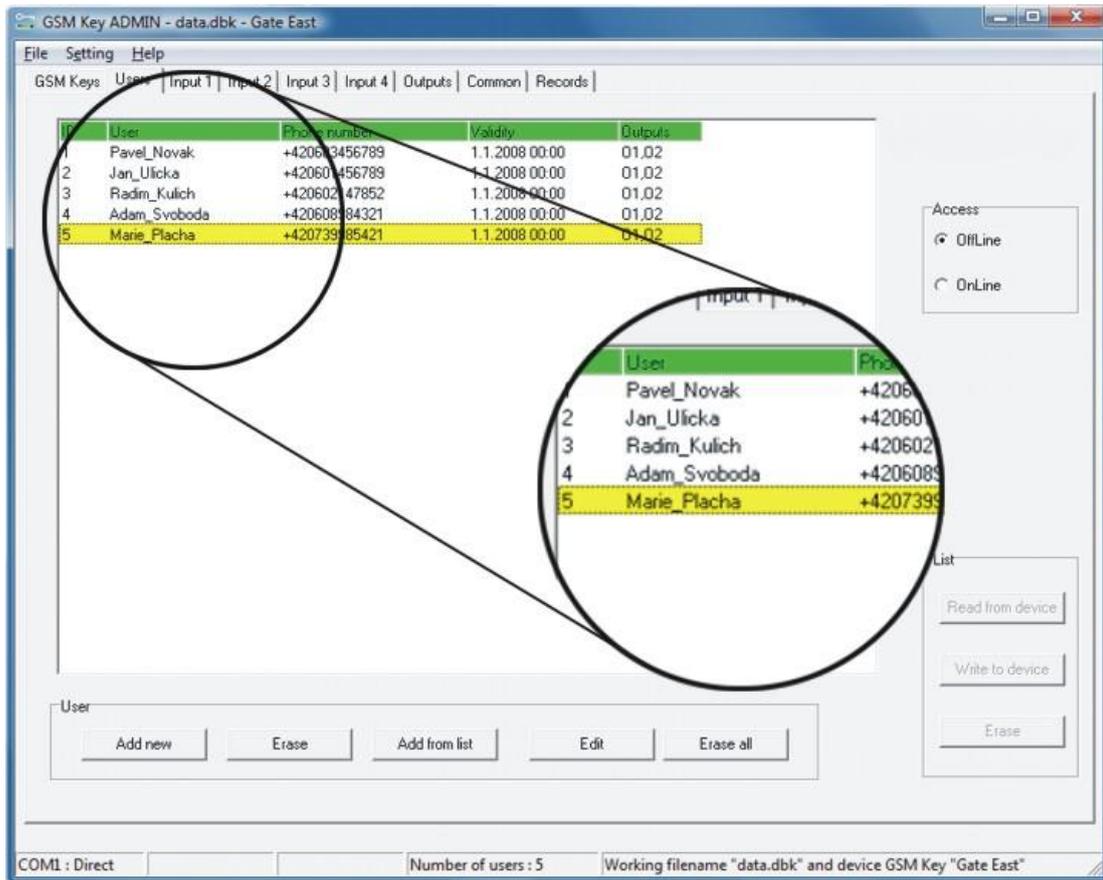
You will find current list of users, incl. details in bookmark Users (see Picture 12.).

## Adding new user

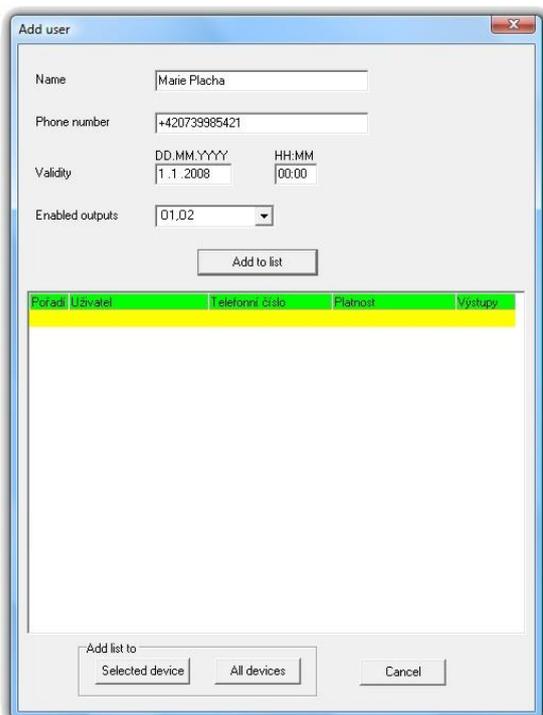
1. Press control pushbutton ADD NEW
2. ADD NEW
3. Name – enter name of a new user
4. Phone number – enter No. of a new user
5. VALIDITY – specify by which date the user will be authorized to operate GSM Key (e.g. 01.01.2005 12:00). On this day you will be asked in an active window to either remove the user from the list or prolong the validity date. No entry means not limited validity.
6. ENABLED OUPUTS - Enter combination of authorization rights for selected outputs.
7. ADD TO LIST (you will use the list when adding more than one user. Contrary to this case you can directly press ADD LIST TO SELECTED DEVICE or ADD LIST TO ALL

DEVICES)

8. ADD LIST TO SELECTED DEVICES- by pressing you will add the LIST to active GSM Key
9. ADD TO ALL DEVICES - by pressing you will save the LIST to all GSM Keys
10. CANCEL - return without saving



Picture 12: Current list of users

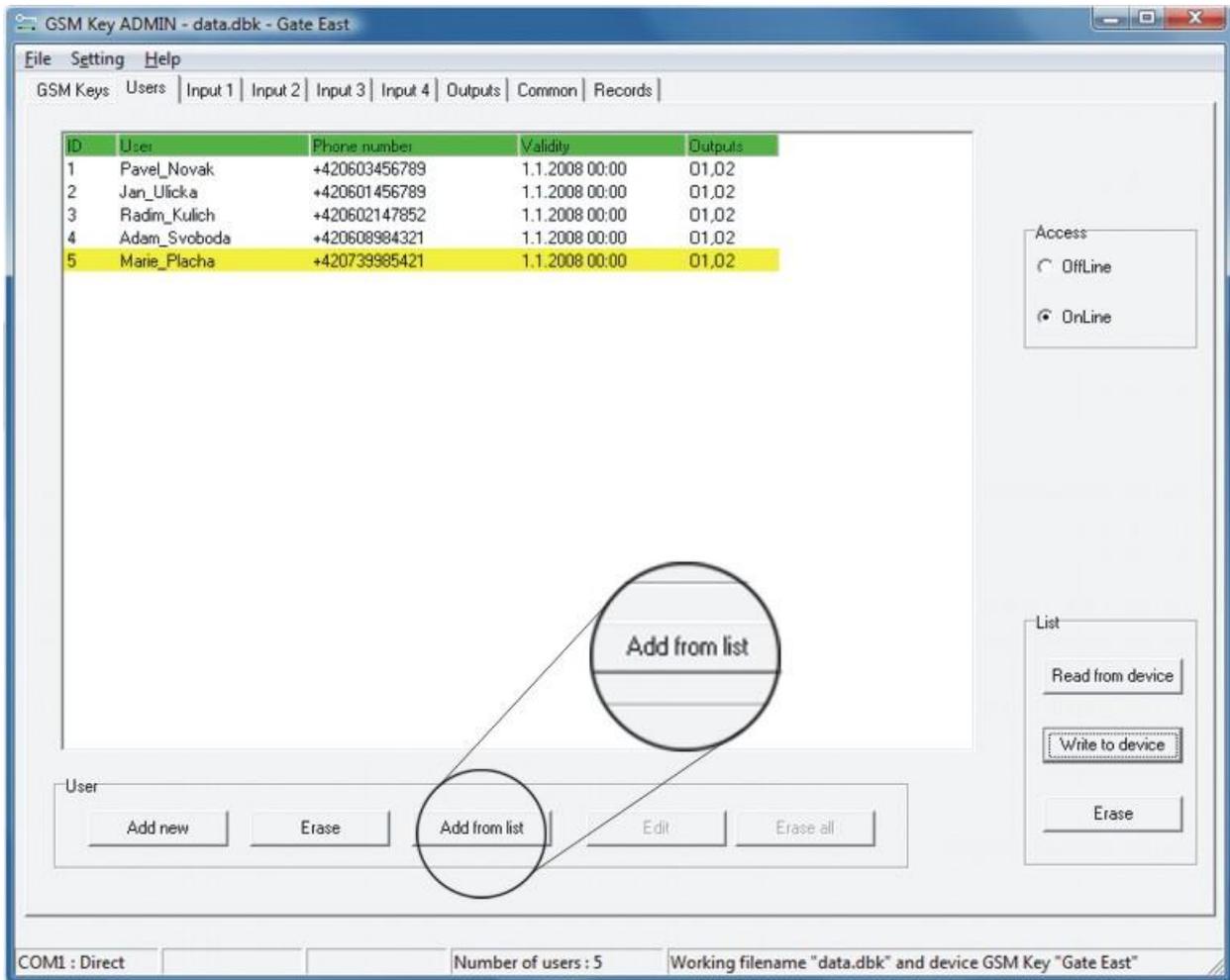


Picture 13: Add user

## Adding user from list

It is used to add the user that is registered in another GSM Key. By pressing pushbutton ADD FROM LIST you will generate the list containing names of all available GSM Keys.

1. Press pushbutton ADD FROM LIST
2. Select by the mouse left key the user you wish to add to active GSM Key
3. ADD – by pressing you will add the user to active GSM Key
4. CANCEL – return without saving



Picture 14: Add user from list

## Editing user

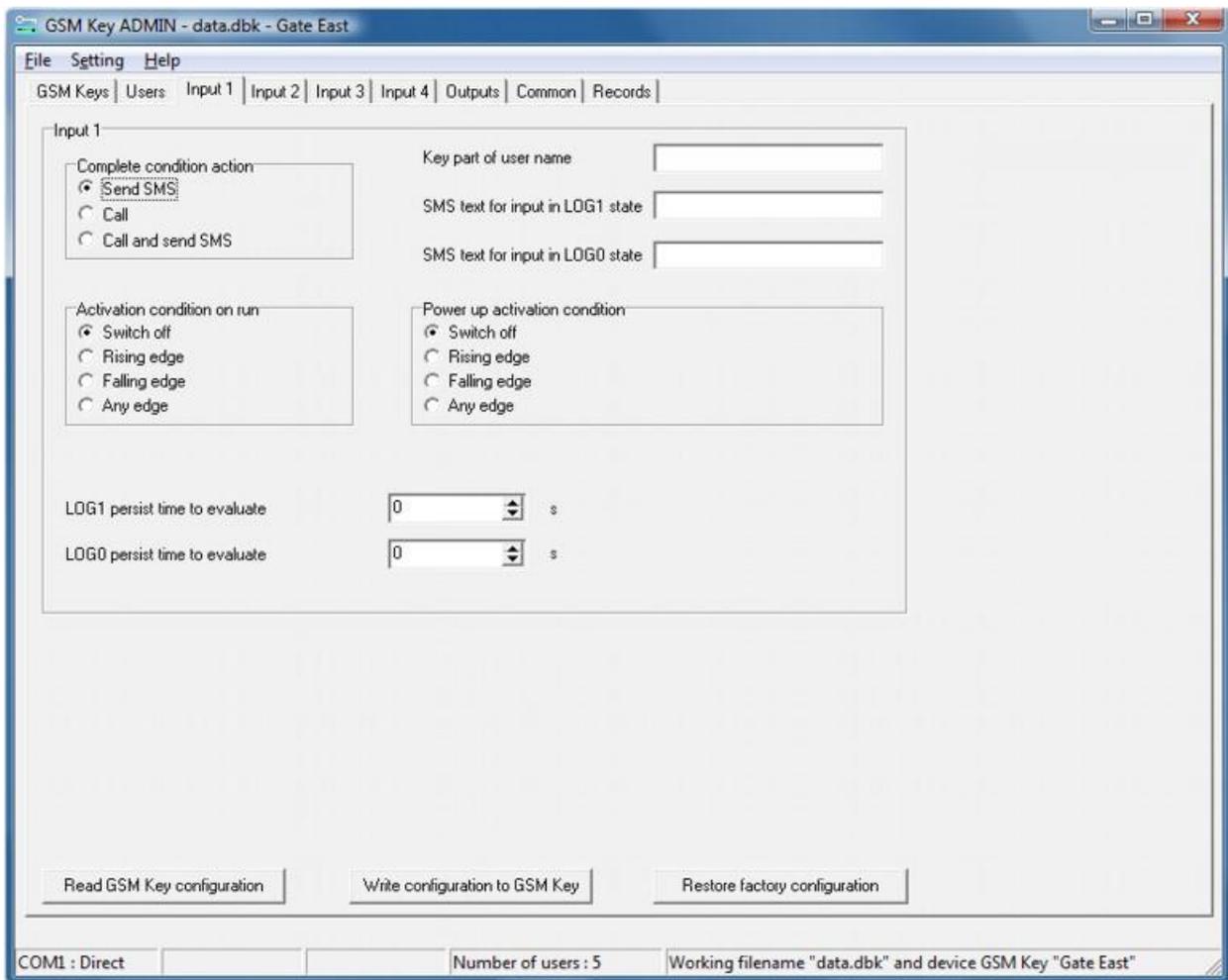
1. Mark by the mouse left key the user you wish to edit
2. Press control pushbutton EDIT
3. EDIT
4. Name – enables editing the user's name
5. Phone number – enables editing the user's call No.
6. Validity – enables editing the validity date
7. OK – saving changes
8. CANCEL – return without saving

## Removing user

1. Mark by the mouse left key the user you wish to remove
2. After completing the task press control pushbutton ERASE
3. To remove the selected user from all GSM Keys press the pushbutton ERASE EVERYWHERE. Pushbutton Is enabled only mode Offline access and later on insert all list into the Device.

## SETTING THE FUNCTION OF AUTOMATIC SENDING INFORMATION (bookmark INPUTS)

The bookmark INPUTS is used to set the function of an automatic sending off information (SMS messages, ringing signals) of currently existing GSM Key. The items of information set in this manner will announce changes of monitored function or parameter of equipment as connected to one of GSM Key outputs.



Picture 15: Bookmark Input 1

When working Offline you will not have access to pushbuttons confirming the order of synchronizing GSM Key with PC. Thus all changes will be made only in application of GSM Key ADMIN. To get the possibility of synchronizing, you shall switch to Online mode and press confirming pushbutton WRITE CONFIGURATION IN GSM KEY.

### **What does it mean Automatic sending information?**

#### Automatic sending information

Both versions of GSM Key (HOME / PRO) offer the possibility of connecting and switching other equipment (e.g. heat source or a pump) via mobile phone, as well as sending back verification information (e.g. security system or pump switched on or sensor information); these activities can be performed by means of SMS or by ringing signal of your mobile phone. Some applications require automatic mode of conveying (e.g. activation of security alarm, turning on pump as a result of exceeding the specified level, exceeding minimum temperature, etc.). In such cases it is necessary so the equipment itself, after the specified condition has been met, will send SMS or give ringing signal to the user's mobile phone.

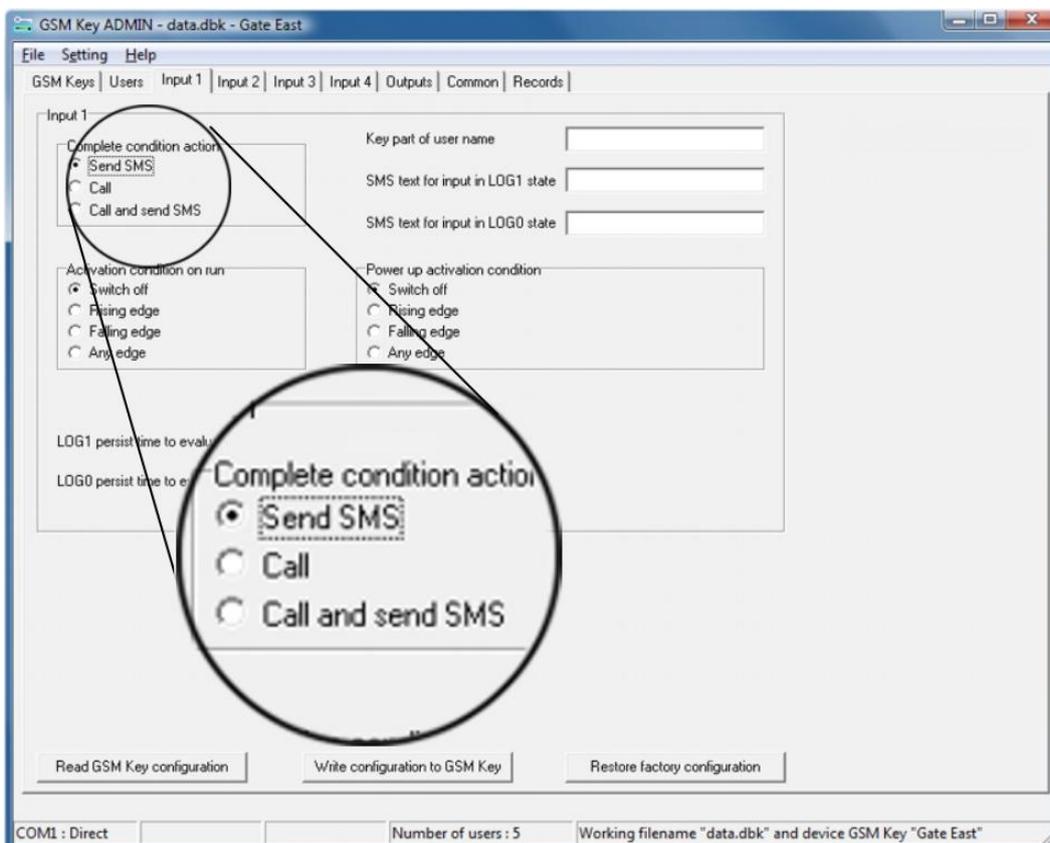


#### Setting the function of automatic sending information

The following instructions are used to set the function of automatic sending information; they are intended for the user advanced in programming. The prerequisite to attain proper operation of automatic sending information is to specify a few "variables" – type of action (calling, sending SMS) to be performed after specified conditions have been met at inputs and outputs, selecting group of receiving users, the addressees of the action, activation conditions for particular situation during the Device running (change of input electrical signal) and when switching on the Device, texts of SMS messages to be sent to users, etc.

### **Setting of Automatic sending information**

Following instructions are for setting of Automatic sending information and it is intended to be used by advanced user. For correct functioning must be a few variables entered – type of the Action (call ringing, SMS sending), which is actuates after fulfilling of activation condition on input /output, further the group of the addressees, Activation condition on run and Power up condition, text of SMS and so on...



Picture 16: Setting of the Action after fulfilling of the activation condition.

### **Actions following fulfilling the activation condition**

The area COMPLETE CONDITION ACTION is used to set that kind of action, which should be made at the moment of meeting the activation condition. Such an action can be giving a ringing signal (calling) or sending SMS message to the selected user, eventually, combination of both options. The action is entered by ticking off the selected option, separately for each of entrances (see picture 16)

### **User – Key part of user's name**

The field KEY PART OF USER'S NAME is used to enter the addressee – the action receiver (SMS or ringing signals). The addressee or the group of them you can enter by writing in the key (identical) part of name from the users' list.

### **Text SMS**

The field SMS TEXT is used to enter wording of SMS message to be received by the user (entered by the key part KEY PART OF USER'S NAME) after the action has been triggered. The message should not be spaced (space should be replaced by an underscore sign; e.g. – correct: PumpSwitchedon, wrong: Pump Switched on) and should not exceed size of 160 characters.

#### **SMS Text – input level log. 1**

This SMS message will be sent off when the input signal gets to the level of log. 1 (reach voltage higher than 3 V against to GND).

#### **SMS Text – input level log. 0**

This SMS message will be sent off when the input signal gets to the level of log. 0 (reach voltage lower than 2 V against to GND..)

### **Activation condition on run**

The field ACTIVATION CONDITION ON RUN is used to enter the activation condition that must be fulfilled to start the Action. The Device is continuously monitoring both binary inputs and as soon as the specified condition is fulfilled, it will start the Action. (see picture 17)

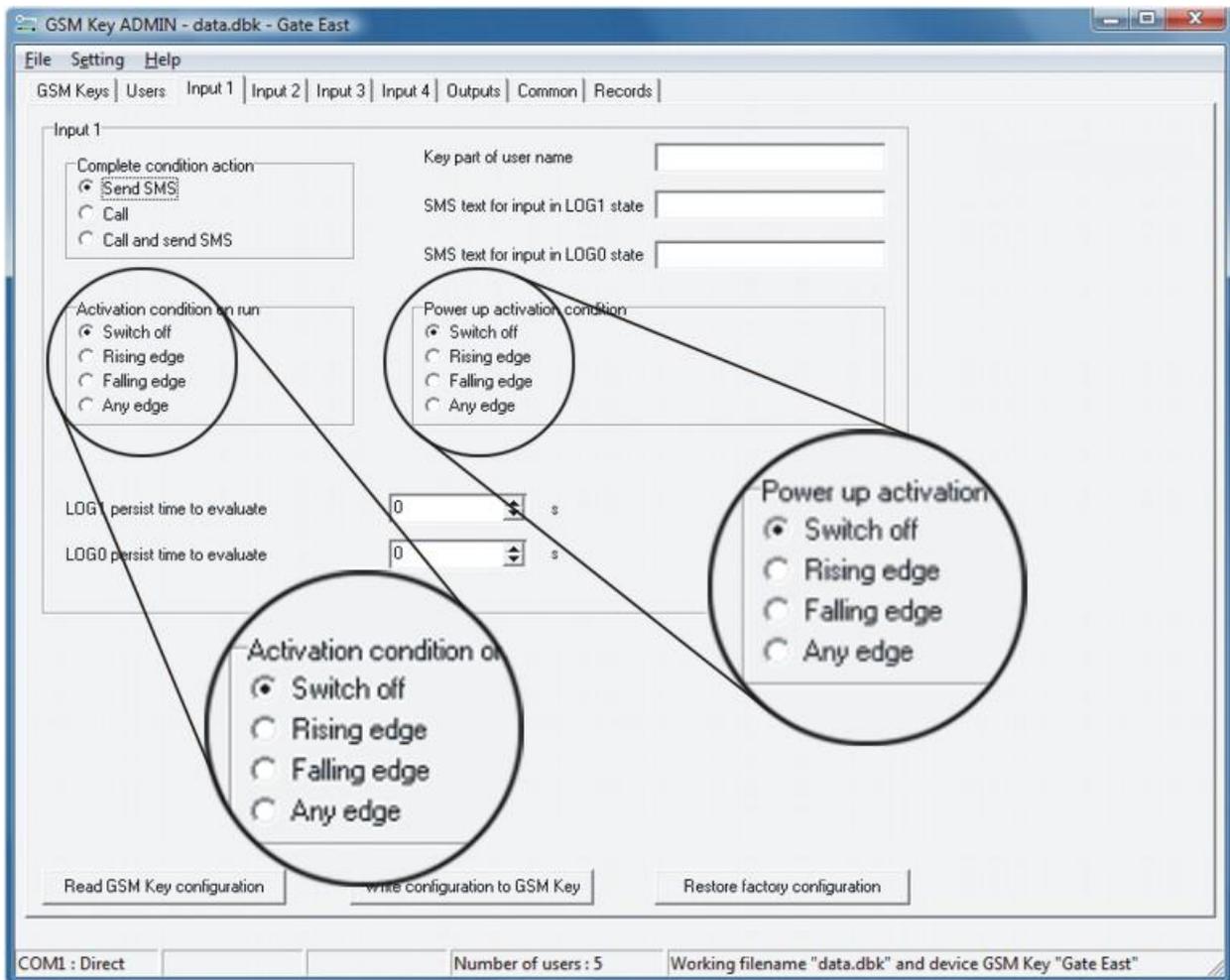
Values:

Switched off –the Device will not evaluate fulfilling the activation condition. It implies the latter will be never met, thus no Action will be performed

Rising edge – the Device will respond to input change from the level log. 0 to log. 1

Falling edge – the Device will respond to input change from the level log. 1 to log. 0

Any edge – the Device will respond to any input change



Picture 17: Setting of the activation conditions

### Power up activation condition

The field POWER UP ACTIVATION CONDITION is used to enter the activation condition that must be fulfilled at the moment of switching on, to allow starting the Action. The Device will check both binary inputs at the moment of starting. Provided the specified condition has been fulfilled, it will perform the Action (see picture 17).

Value:

- Switched off – the Device will not evaluate fulfilling of the activation condition. It implies the latter will be never met, thus no Action will be performed
- Rising edge – the Device will respond provided during switching on the level of log. 1 has been found at the given input
- Falling edge – the Device will respond provided during switching on the level of log. 0 has been found at the given input
- Any edge – the Device will respond provided during switching on the level of log. 1 or log. 0 has been found at the given input

### Time persist to evaluation (Time for which the Device stays at the given logical level)

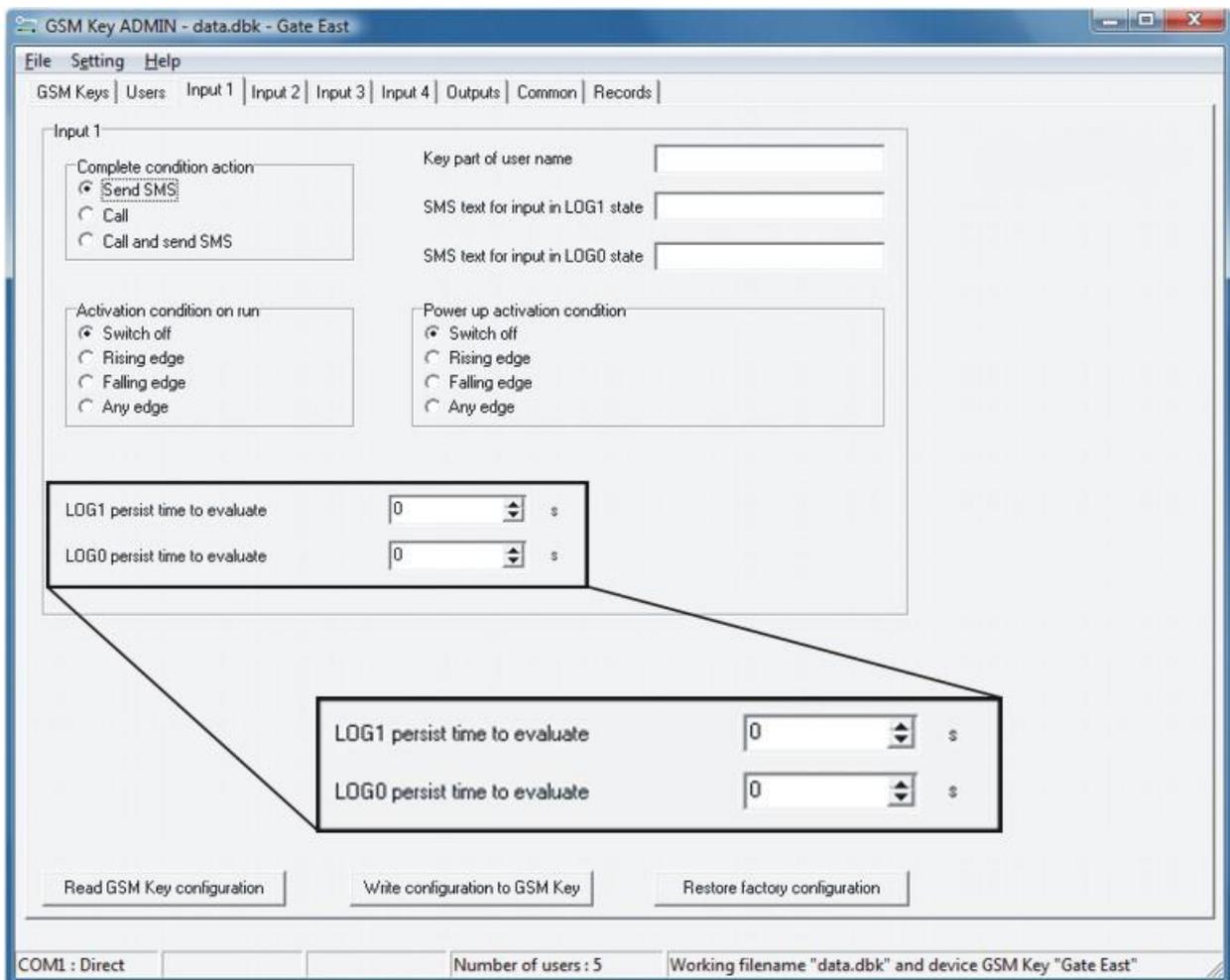
The field LOG.1 /LOG.0 PERSIST TIME TO EVALUATE is used to effect advanced settings for such equipment, that through its nature can oscillate during certain phase around the evaluated state. This could result in short, undesired intervals of triggering the Action (e.g. when monitoring the increasing level, the state of exceeding the specified level should be reported via SMS, etc.). The field enables setting a longer time span of delay that must precede triggering the Action. The initial setting value is 1 second. (see Picture 18)

### Log.1 persist time to evaluate

It is used to enter the time span (in seconds), for which the input signal of a given input must dwell at the level log. 1., to fulfill the activation condition, i.e. to trigger the Action.

### Log.0 persist time to evaluate

It is used to enter the time span (in seconds), for which the input signal of a given input must dwell at the level log. 0., to fulfill the activation condition, i.e. to trigger the Action

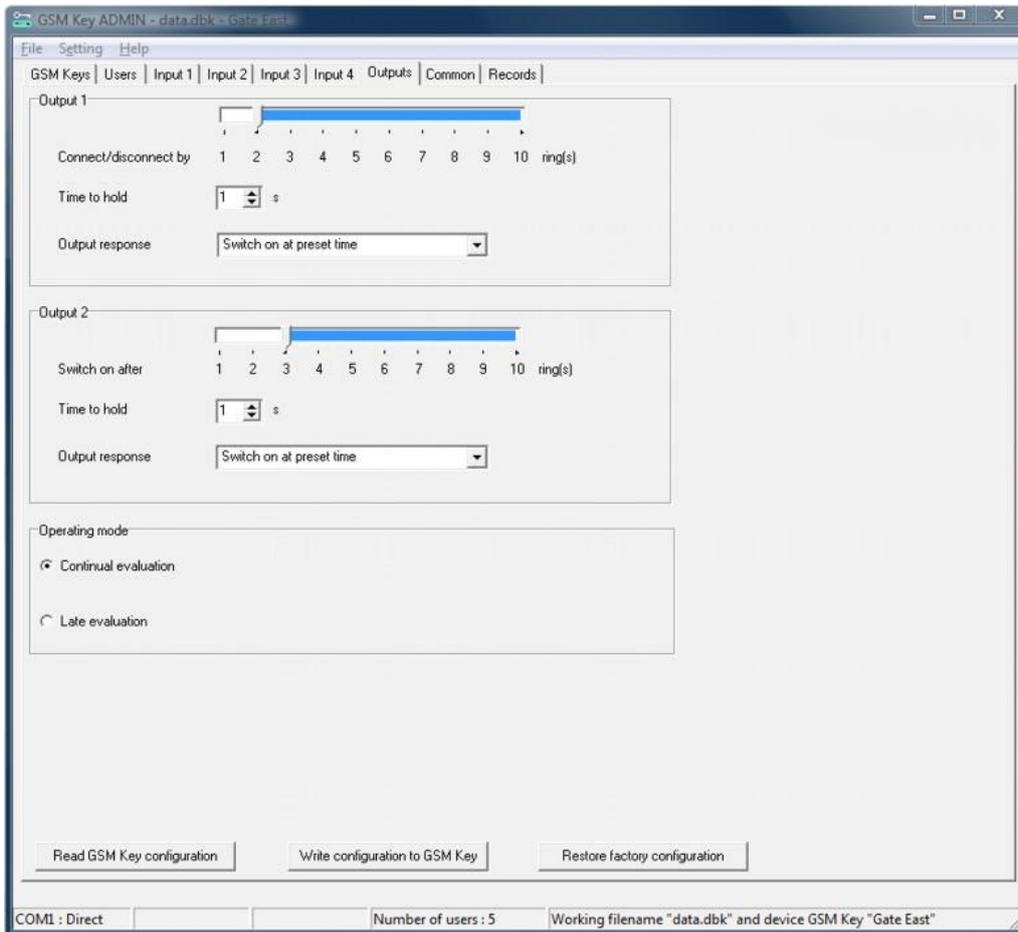


Picture 18: Setting up the persist time to evaluate

### SETTING BEHAVIOUR OF GSM KEY (bookmark OUTPUTS)

It is used to set the response of GSM Key to receiving the ringing signals of a mobile phone – the number of ringing signals to be received before the signal to open/close the gate will be transmitted. Set at first Operating mode, then select the number of ringing signals necessary for individual entrances (input No. 1..4).

When working Offline, you will not have access to pushbuttons confirming the order of synchronizing GSM Key with PC. Thus all changes will be made only in application of GSM Key ADMIN. To get the possibility of synchronizing, you shall switch to Online mode and press confirming pushbutton WRITE CONFIGURATION TO GSM KEY.



Picture 19: Bookmarks Outputs

## Settings of operation mode

GMS Key device can be operated in one of two operating modes – Continual evaluation or Late evaluation. The field OPERATING MODE determines the manner of evaluating the number of ringing signals. The mode selection will affect the procedure to be applied by user when opening/closing the entrance.

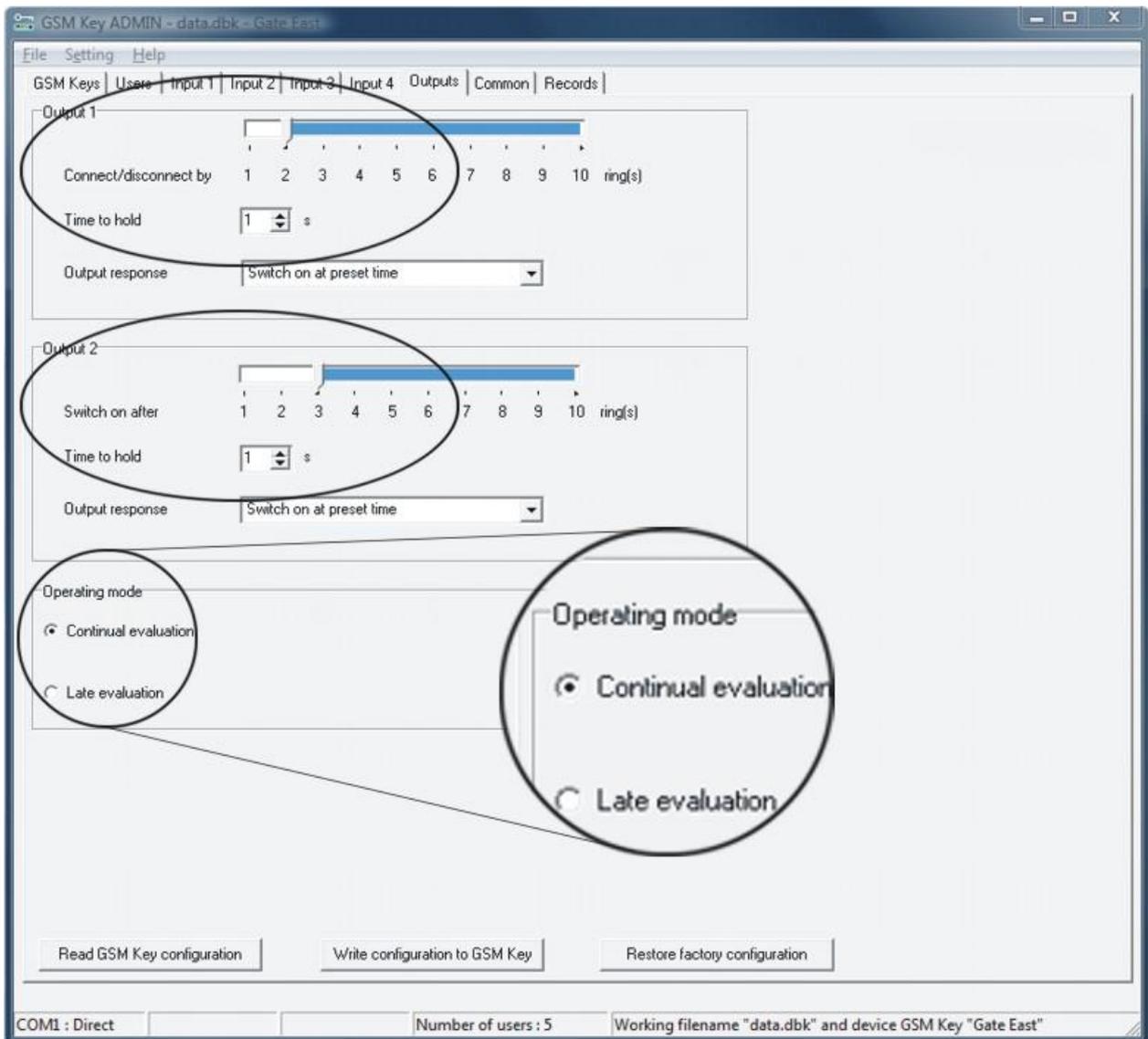
Will you effect the selection by ticking off the selected mode (see Picture 19).

### **What is the difference between operational modes?**

In the mode **Continual evaluation** you can open both entrances by one call – in the sequence having been specified (entered) and without the necessity of interrupting the call. It means (in case the initial setting is preserved) the 1<sup>st</sup> ringing signal will be followed by switching on the output No.1 and the 3<sup>rd</sup> ringing signal will switch output No. 2. If you end the call between the 1<sup>st</sup> and 3<sup>rd</sup> ringing signals, only entrance No. 1. will open. If you end the call after the 3<sup>rd</sup> ringing signal, both entrances will open.



In the mode **Late evaluation** you can open the entrance as saved in the output No. 1, without opening during one call also the entrance of the output No. 2. To open both entrances you will need two calls to GSM Key. Provided the call is ended before 3<sup>rd</sup> ringing signal, only the entrance of the output No. 1 will open. Provided the call is ended after the 3<sup>rd</sup> ringing signal, only the entrance of the output No. 2 will open. To open both entrances you will have to end the call before 3<sup>rd</sup> ringing signal (closing output relay of the output No. 1) and make another call with more than 3 ringing signals (closing output relay of the output No. 2).



Picture 20: Setting of number of ringing signals and operating mode

### Number of ringing signals

In fields OUTPUT No. 1 and OUTPUT No. 2 you can enter number of ringing signals to be followed by closing the relay of the given output and transmitting the order to open/close the entrance.

To effect setting, move in the field "SWITCH ON AFTER" (see Picture 20) - either with cursor by mouse or with arrows by keys

### Setting pulse length

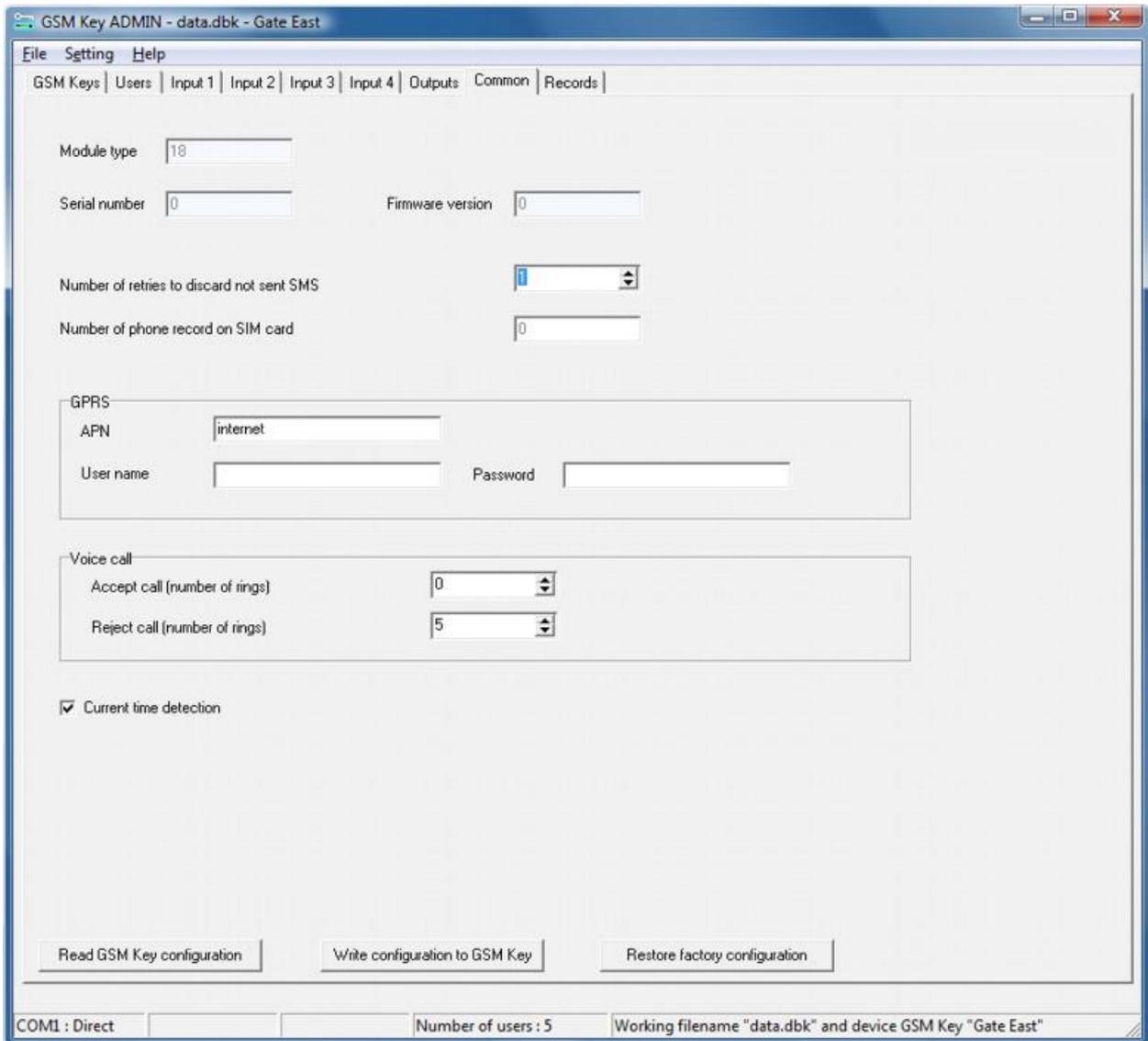
You can use the field TIME TO HOLD to set the duration of electric pulse as transmitted to electrical drive. The pulse duration is a very important characteristic and you can set it regarding type of control unit of the electrical drive. Will you reflect in your selection the recommendation given by manufacturer of the electrical drive regarding length of pressing control pushbutton. The initially set value (1 second) is sufficient for most electrical drives.

TIME TO HOLD is set when the field OUTPUT RESPONSE is set on "Switch on at present time".

### Output response

Outputs can be switched at present time or permanently. When you want to switch at present time set OUTPUT RESPONSE to "Switch on at present time" and set TIME TO HOLD to required pulse length. When you want to switch output status permanently that set OUTPUT RESPONSE to Turn to another state.

## OTHER ADMINISTRATION (bookmark COMMON)



Picture 21: Bookmarks Common

### Voice call - Accept call

Field ACCEPT CALL is utilizable only with hardware version GSM Key PRO 1. (Software GSM Key ADMIN is compatible with all GSM Key PRO hardware versions.)

### Voice call - Reject call

Using the field REJECT CALL you can set the number of received ringing signals, after which the call will be cancelled. To ensure proper operation, you should select this value to exceed that entered by the function NUMBER OF RINGS. The initially set value is 5 ringing signals.

### Number of attempts to send off SMS

Using the field NUMBER OF RETRIES TO DISCARDNOT SEND SMS you can enter the number of trials, after which the attempts will be stopped and the sending order cancelled. The initial setting is 1 attempt.

### Number of phone record on SIM card

Field NUMBE OF PHONE RECORD ON SIM CARD is utilizable only with hardware version GSM Key PRO 1. (Software GSM Key ADMIN is compatible with all GSM Key PRO hardware versions.)

## Firmware version

Having entered the order READ GSM KEY CONFIGURATION you will receive updated information of firmware version saved in current GSM Key.

## Current time detection

Ticking off the Current time detection box you will activate or deactivate automatic Current time detection. In case the time will be detected as not current (for example following a power failure and subsequent device reset not requested), an SMS with the text TIMEALARM will be sent to the phone number of a first administrator specified in the call list as MASTER. The SMS will be sent to this phone number repeatedly every 14 days until the module receives an order of time setting. (for Set time see bookmarks GSM Keys)

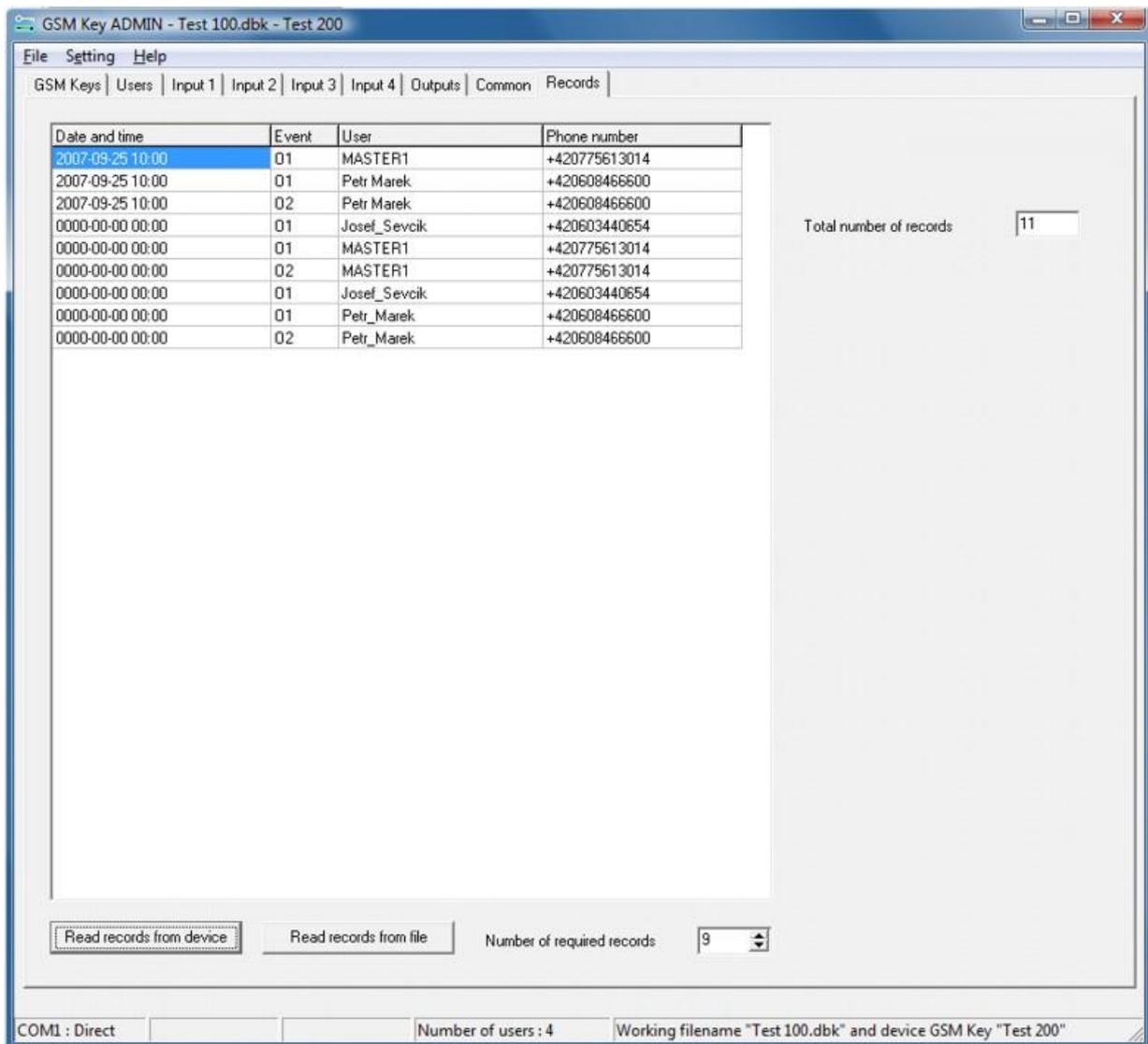
## EVENT REGISTER (bookmark Records)

Bookmarks Records offers a records list of Event.



### Event register (records about attempts to open/close the gate)

*The GSM Key device registers in its memory 100 last event records. An event is every change at the device output – entrance opening/closing, other connected device activation/deactivation weather carried out by ringing or by sending off an SMS with an order to a constant change of a logical output state. The record contains date, time, output and user (name and number) identification. Example: „2005-12-31 24:00 O2 MASTER +420603123456“. Each new record in Event register exceeding memory over 1000 records cause automatic deleting of the oldest record.*



Picture 22: Bookmarks Records

### Read records device

Pressing control pushbutton "READ RECORDS FROM DEVICE" you get a list of records. The records are automatically saved to the file where you can later read them from. Before pressing pushbutton set the Number of required records. (maximum is 1000).

### Read records from file

Pressing control pushbutton "READ RECORDS FROM FILE" you get a list of records from file. The records in file are automatically stored and saved on computer after downloading from device.

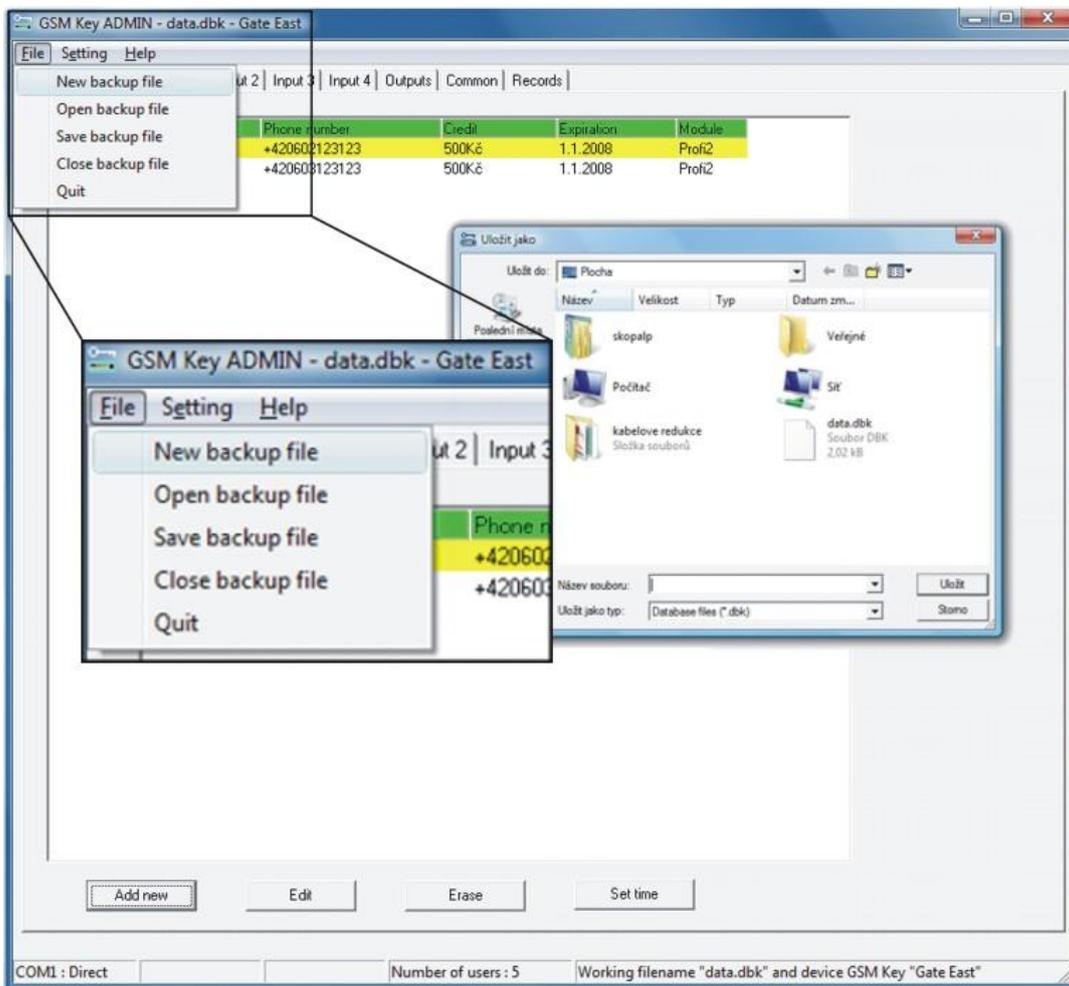
### Total number of records

The field contains information about number of total records in device or in file.

# TEXT MENU

## BACKUP FILE

Backup file is the file in which you can file and administer GSM Keys. In most cases you can do with one backup file. Using a few files can be of importance for a more complicated case; e.g. an administrator taking care of more objects and entrances, if there are different owners or if there is any reason to keep file separately for gates and keys.



Picture 23: New backup file

### New backup file

Entering the order NEW BACKUP FILE you will open another file (suffix\*.dbk). When pressing the order, you will be asked by a dialogue window SAVE AS to name the file.

### Open backup file

Entering the order OPEN BACKUP FILE, you will open existing file (suffix\*.dbk).

### Save backup file

Entering the order SAVE BACKUP FILE you will save the existing file.

### Close backup file

Entering the order CLOSE BACKUP FILE you will close the current file. The application remains open.

### End

Entering the order END you will close the application. When re-starting the application, it will automatically open the last used backup file.

## SETTING/COMMUNICATION

### Communication

For communication of application GSM Key ADMIN choose one choice of communication way from several possibilities:

#### 1. Administration of GSM Key connected to PC

*Operation costs:* free of charge

*Technical solution:* GSM Key is connected via service cable

#### 2. Remote Administration GSM Key – communication: query-SMS, reply-SMS

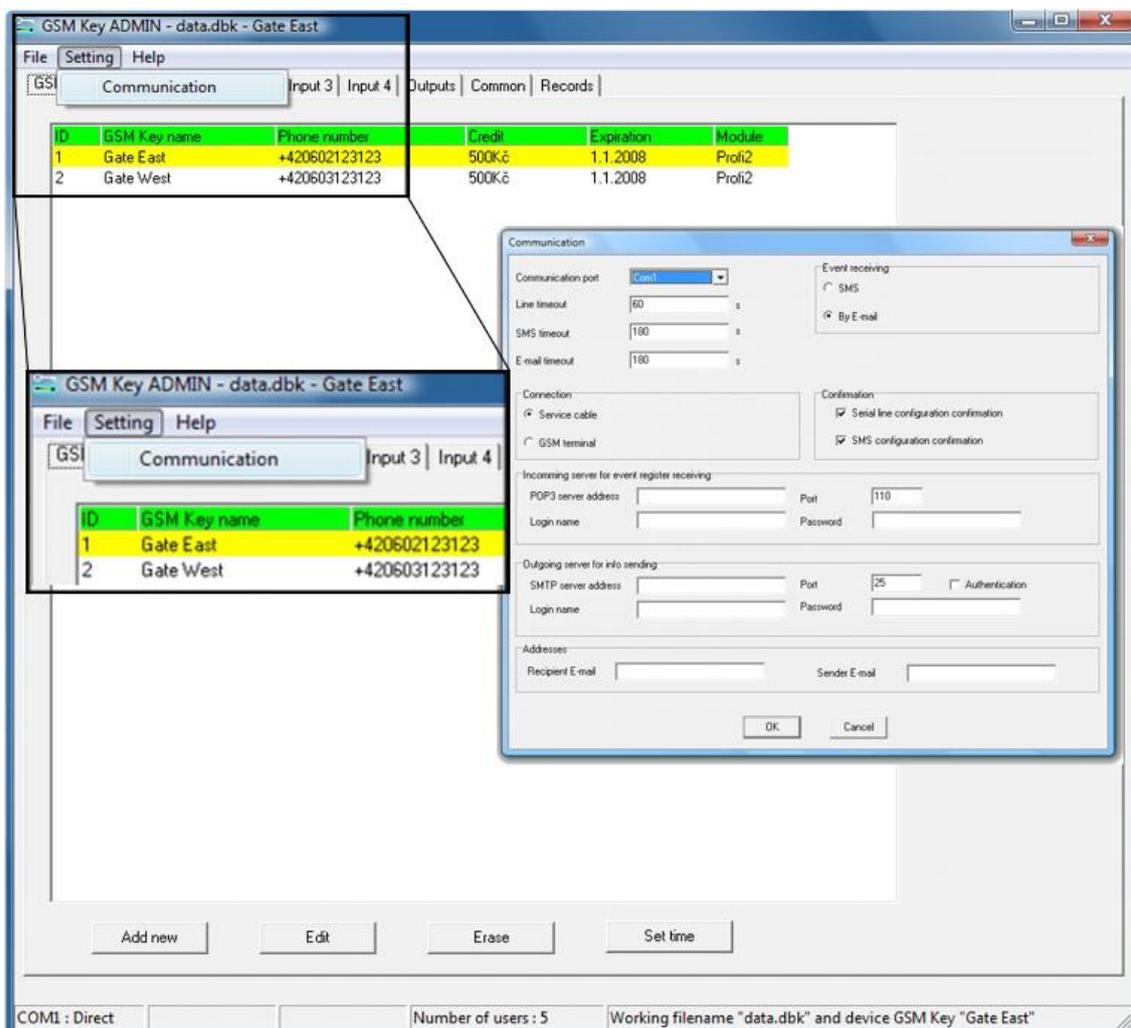
*Operation costs:* communication costs are dependent on price of SMS of SIM card used in both devices GSM Key and GSM Terminal.

*Technical solution:* GSM Key communicates with application GSM Key ADMIN in PC via mobile network and GSM terminal (modem connected to PC). Queries from application to GSM Key are sent via SMS, replies back to application from GSM Key are sent also via SMS.

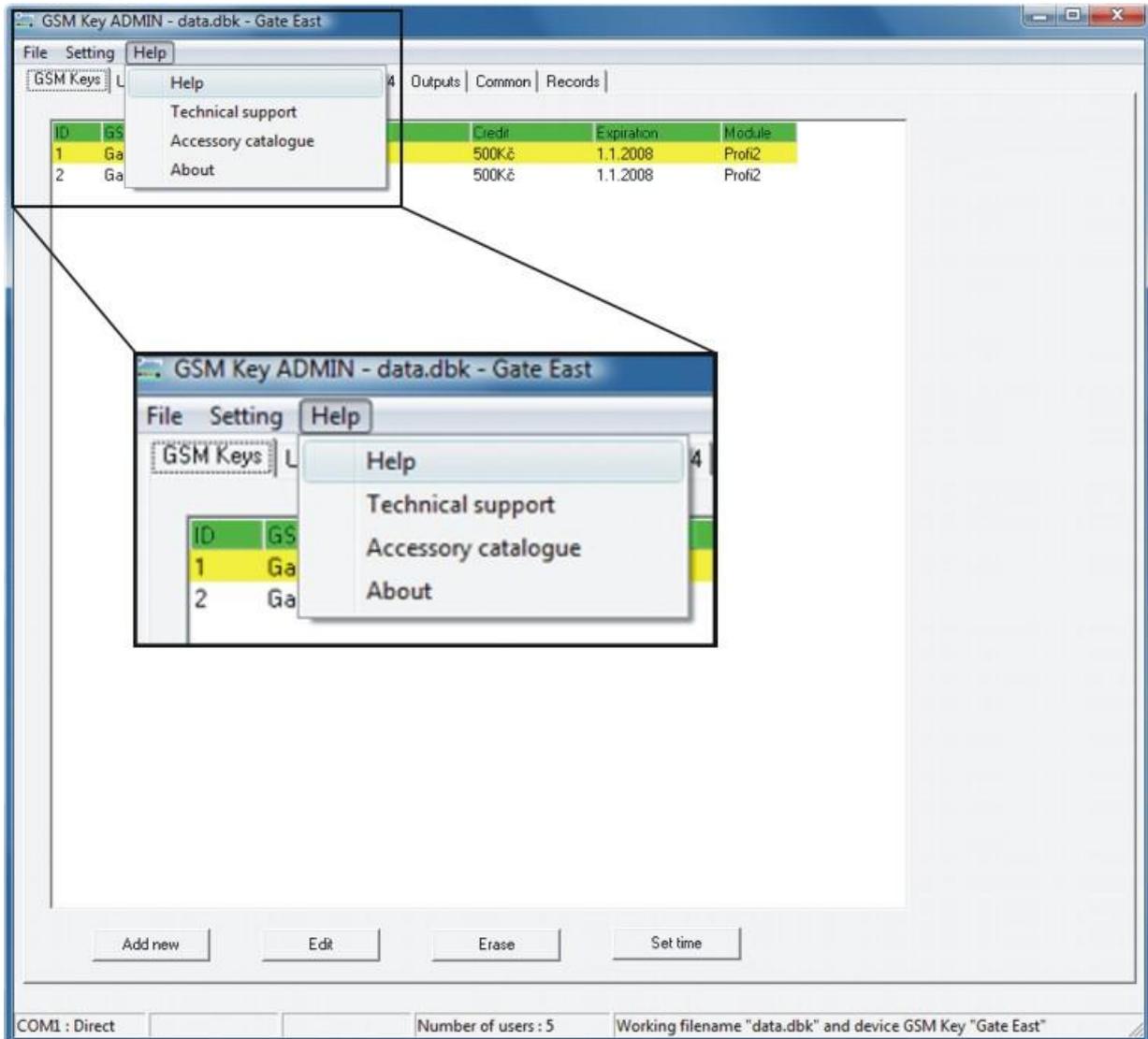
#### 3. Administrace vzdáleného GSM Klíče – komunikace: dotaz-SMS, odpověď-GPRS (email)

*Operation costs:* Communication costs are dependent on price of SMS of SIM card used in both devices GSM Key and GSM Terminal.

*Technical solution:* GSM Key communicates with application GSM Key ADMIN in PC via mobile network and GSM terminal (modem connected to PC). Queries from application to GSM Key are sent via SMS, replies back to application from GSM Key are sent via email using GPRS. This solution requires email mailbox and activation of GPRS on SIM card in GSM Key.



## HELP LIST



Picture 24: Help

### Help list

By clicking on this order you will open this manual in .pdf format.

### Technical support

By clicking on this order you will be redirected on website of technical support for GSM Key.

### Accessory Catalogue

By clicking on this order you will be redirected on website of GSM Key.

### About

By clicking on this order you will be able to obtain more detailed information of current version of GSM Key.

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