GECON LITE PLUS

www.zadako.com

INSTALLATION GUIDE

Version 4, SW 3.1

WARNING:

This device conforms to the STN EN 55022 standard, class A. It is designed for the connection to a control panel conforming to STN EM 60950 standard.

Manipulation with the device in other ways than described in this guide could lead to its damage. Don't modify the device and don't try to repair it by yourself. In case of malfunction contact the manufacturer of the product. To avoid the risk of fire and damage do not expose the device to moisture, rain nor direct sunlight.

Content:

Basic information

GECON Lite plus is a GSM communicator that serves for data transfer through the GSM network via text messages and voice calls.

Applications

GECON Lite plus is a universal device, it can be used for:

- property protection – through the connection with the security system it can send alarm messages, inform about the system status and differentiate the type of alarm (through a voice or a text message),
- remote control – it can control one electric appliance (1 relay) through a text message,
- technological devices monitoring – the device can inform about the power failure, heating failure, etc.,
- temporary protection of buildings, garages, construction sites, summer houses etc. with up to four alarm inputs

Technical parameters

Technical parameters:

Number of inputs: 4
Inputs modes: alarm/trouble
Number of outputs: 1 relay
Nominal driving voltage: 8 to 16V DC
Idle current consumption: 25 mA at 12V
Maximum current consumption: 250 mA at 12V
Operating temperature: -10℃ to +40℃
Max. voltage RELAY 30 V
Max. current RELE 0,5 A
Device includes 900/1800/1900 industrial GSM module.

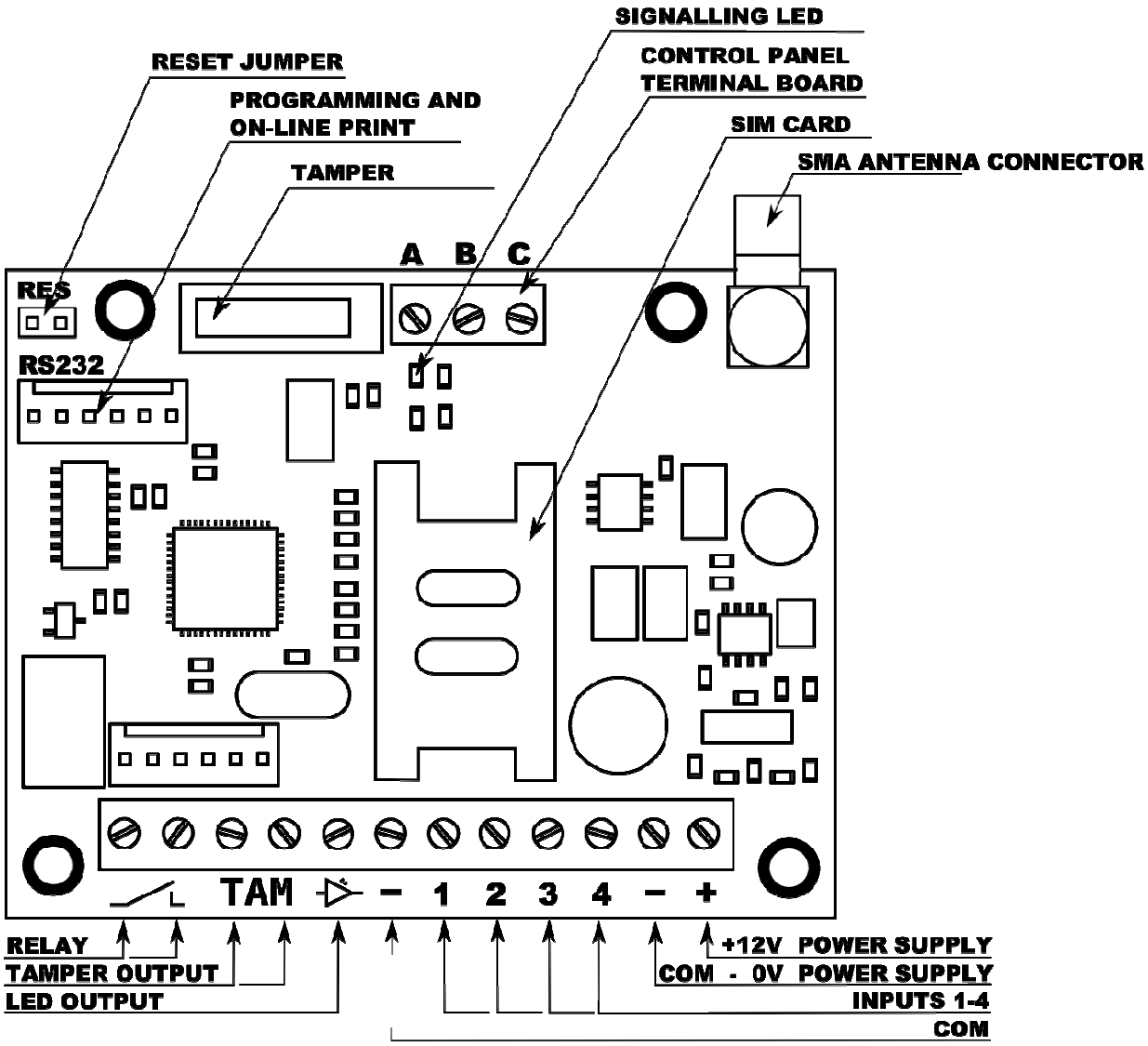
Package includes

Package includes: GSM communicator GECON LITE PLUS, manual, warranty card, 4 pcs of mounting stickers

Optional accessories

- Control panel, 4 pcs of DALLAS chips
- Programming cable, CD with programming SW
- Installation case with transformer and backup power source
- External antenna 3dB, 5 dB

Device description



Installation

GECON Lite is supplied as a board with four holes for mounting. You can mount the Gecon by attached special stickers or screws (screws are not included in the package). If you are placing the Gecon inside of metal box, use an external antenna and place it outside the box. External antenna is also recommended in locations with lower signal level.

Warning !!!

You have to disable PIN on the SIM card and delete all SMS messages before placing it into the communicator.

Disabling PIN code

Put the SIM card into a standard mobile phone and turn the phone on. Insert the PIN code during phone startup. Navigate through the phone menu to security settings and disable PIN code protection. Now the SIM card is ready for configuaration in the Gecon communicator. Turn off the phone, remove the SIM card.

GECON Lite Startup

- Insert the SIM into the Gecon Lite (be sure PIN code is disabled)
- Connect the Gecon to voltage.
- Registration to GSM network. If the Gecon is not registered within 60 seconds (see **LED status signalization** section below), please check the SIM card and signal strength.
- Gecon is ready for use.

LED status signalization:

- Slow LED blinking (on/off in 1:1 seconds) – GSM network unavailable.
- Short LED blinking (one blink every 4 seconds) – registered into GSM network
- **Permanent shine**– event detected on the input (alarm/trouble), device is sending SMS and calls according to the settings.

If the shines only for few seconds (2.5 seconds) the numbers for the input are not set correctly.

Gecon Lite Plus Setup

GECON LITE PLUS is GSM gateway that allows several modes of operation, therefore it is necessary to setup parameters according to customer needs.

1. Phone numbers
2. Input logic NO/NC
3. Type of input ALARM/TROUBLE
4. Additional functions

For convenient setup, settings of Gecon are set by SMS commands from mobile phone. For security reasons, each SMS has to begin with password. Default password is abcd, it is recommended to change the password immediately. Gecon is not case sensitive, you can use both small and capital letters.

Current settings:

You can view the current settings by sending following query SMS to GECON phone number. Gecon will reply you with SMS containing current settings

VER	- device version
PHONE	- phone numbers settings
TEXT	- texts settings
SETUP	- other parameters settings
WPRINT	- dictionary for online print (reply by TWO SMS messages)
HELP	- lists all query SMS options
?	- current status of inputs and relays

Example: abcd SETUP

Note: While setup SMS message can contain several commands, query SMS above can contain only one commad in one query SMS.

Phone number settings:

GECON Plus can send reports to 4 phone numbers. Numbers are set following:

T1=090311111
T2=
T3=
T4=65464464

To delete a number from Gecon, use the command with # character instead of number.

Example:
Setup of first phone number
abcd T1=0901777555

Delete of first number
abcd T1=#

By inserting a phone number, all events from all inputs are reported to all numbers.
You can change this by function of report routing. (See Additional functions)

Input logic:

Digital input can have two states – open and close. Therefore it is necessary to determine which state is normal, and which is a reason for triggering of alarm. Two states are commonly used with security devices – NO and NC.

NO - normally open
NC - normally closed

The inputs can be set by SMS following:

O - normally open
C - normally closed

Example:
LOG=OCCO

Input 1 is normally open NO
Input 2 is normally closed NC
Input 3 is normally closed NC
Input 4 is normally open NO

Setup of input type

Digital inputs can have two functions- to report alarm and information about trouble/recovery.
Alarm is reported by SMS and voice call on predefined numbers. Recovery after alarm is not reported.
Trouble/recovery from the trouble is reported by SMS.

A- alarm input
T- trouble input

Example:
IN=AAAA
All inputs are alarm inputs..
IN=ATTT
First input is alarm input and remaining three are trouble inputs.

Additional functions

These function specify or modify basic functioning of Gecon Lite plus Gateway.

Reports routing

By default, all events (alarms and troubles) are reported to all numbers in address book. This setting is possible to change, that selected phone numbers (T1-4) will be only reported about events on selected inputs. In this way, you can sort out the reports according to the level of importance.

VT1=1234 - T1 will be informed about events on all inputs
VT2=34 - T2 will be informed about events on inputs 3 and 4

Example:
VT1=2 - events from input 2 are reported to phone number T1

Note:
Every setting of new phone number with T1 –T4 commands resets this routing to default, meaning that newly set number will be informed about all events on all inputs.

Input delay

For some applications, it is necessary that the events will be reported only in the case their duration is longer as defined period. In this way you can filter out the events that have no impact on the protection of the building.

Input delay is by default set to 0 minutes, meaning that the event is reported immediately. You can set the parameter between 0 and 120 (minutes). You can set it following:

D1=time delay of input 1 reporting and time in minutes
D2=time delay of input 2 reporting and time in minutes

For example, in most cases it is not necessary to report power cuts immediately (circuit breakers could be switched back on in few minutes). But power cuts longer than few minutes shall be reported.

D1=30 - input 1 will report only events lasting longer than 30 minutes.

Alarm filtering:

Alarm filtering is a cost-saving function.
If the time filter is on, subsequent alarms triggered on the same inputs are ignored by Gecon. The idea is not to report any addition alarms during predefined time period (in minutes). This function can save you the prepaid credit. This function is off by default that means set to 0 minutes. Filter works independently for every input.

Example:
Set time filter for 15 minutes.

abcd F=15

Example:
Turn time filter off: abcd F=0

Texts setup:

GECON LITE PLUS sends predefined SMS messages to report what type of event has occured. You can change these predefined messages that are sent by Gecon. If you would like to see current texts settings, please send query SMS TEXT to phone number of GECON LITE PLUS.

Example:

abcd TEXT - get current texts settings

Reply SMS from GECON LITE PLUS will contain object name or event type, and text message after = sign:

OBJ - object name
AL1 … AL4 - texts for alarm/trouble reports from inputs 1 … 4
RE1 … RE4 - texts for recovery reports from inputs 1 … 4
REP - text report SMS

You can edit the message by typing the type of report, = sign, and text message after the = sign. # sign has to be at the end of the setup command. Maximum length of the text is 15 characters.

Example:

abcd AL1=message1# - setup of message about the alarm on input 1
abcd RE3=message2# - setup of message about the recovery on input 3

If you would like to delete a particular message, you can do this by simply putting only the # sign instead of message. Reports will not be sent.

Example:

abcd RE4=# - delete the message RE4

Password change:

Default password is abcd. It is highly recommended to change the password immediately.

H=pqcr - command to change password

Example:

abcd h=pqcr SETUP

When putting SETUP at the end, Gecon will confirm you the change with SMS message.

RELAY output:

Gecon contains one switch relay. Relay is normally switched off. You can control it remotely by SMS command or you can use it for signalization of trouble.

R=OFF - switch off the relay
R=ON - switch on the relay
R=TROUBLE - set the relay to signal the trouble
R=10 - generate 10 seconds impulse [time interval can be 1...60 seconds]
(impulse is understood as change from current status of relay to opposite and back)

Periodical test:

Periodical test is control mechanism to verify if the gateway is functional and connected. Test is performed by ringing to the first number in the list (T1) in defined time intervals. In case of accepting the call, gateway will close the call automatically. Periodical test is setup by command

test=time_in_hours

If set to 0, periodical test is switched off. First report is executed one hour after the setup and than regularly in the defined interval. Maximum interval is 240 hours.

Example:
abcd test=24 - periodical test will be performed every 24 hours

SMS periodical test:

SMS test report is similar control mechanism to check gateway's functionality.
Report message is sent to the first number in the list (T1). It is set by command

report=interval_in_days

If set to 0, SMS periodical test is switched off. First report is executed 24 hours after the setup and than regularly in the defined interval.

Example:
abcd report=14 - setup of SMS report with 14 days period

You will receive SMS message „GECON LITE PLUS: report" to the T1 number.

Practical example:

You can send all commands in one configuration SMS if you follow these rules:

- SMS needs to begin with 4 characters password
- Query SMS has to be at the end of the SMS message
- Commands have to be separated by space

Example:

```
abcd T1=090xxxxxxx T2=090yyyyyyy VT2=1  IN=AT  LOG=CC
        |                  |                  |      |              |
        |                  |                  |      |              +-- input logic NC / NO
        |                  |                  |      +---------- first input is alarm, second input is trouble
        |                  |                  |
        |                  |                  +------------ power cut is reported to only the first number
         |                 |
        |                  +------------------------ second number
        +-------------------------------------- first number
```

First input is alarm with NC logic, second is trouble with NC logic. Alarm is reported to both numbers, and power cut is reported to only the first number.

GECON LITE PLUS – On line print

On-line print function is an universal interface for connection of security system control panel and Gecon lite plus. This function enables monitoring of the control panel with detailed evaluation of all events based on analysis of dictionary of key words. The dictionary defines, on which key words will Gecon lite plus react. If the word is present in the dictionary, standard reaction is sending a SMS message that contains the key word.

On line print is mapped as input number 5. It is set by vt1 to vt4 command (see section report routing).

Additional option is to define priority message, which will cause not only SMS message to be sent, but also voice dial to alert customer. The key word starts with ! character.

In special case you might need to cancel sending of message that would have been otherwise sent. To cancel sending the message, put $ character before the keyword.

For example, you do not need to report about disarming if done by particular person (code)

Message sent from the control panel: 10:45 disarm code 45

With W1=disarm command active, Gecon lite would by default send all messages containing word disarm to SMS. However when $ character is in front of the keyword, such keyword would cancel sending of the message. As the result the report would not be sent.

Configuration SMS example for cancel function.

abcd print=on W1=disarm# W2=$code 45#

To activate online print function, use following command: print=on

To deactivate online print function: print=off

You can set the key words by SMS commands w1 - w16. Each key word has to be ended with character #. Maximum length of each key word is 15 characters. You can also set the keywords via PC program in ON-LINE section.

GECON LITE PLUS is not case sensitive.

Commands for SMS settings:

w1 .. w16	- setting of key words
print=on	- activation of the function
print=off	- deactivation of the function
BAUD=1200	- speed of serial port

Allowed speeds are: 1200, 2400, 4800, 9600, 19200

Example :

Use of Online print function of the purpose of control of arming and disarming of security system

Security system sends messages ARM and DISARM during the arming and disarming process, ALARM at the alarm event and at the malfunctions and power supply outage.

Settings:

abcd print=on w1=!ALARM# w2=ARM# w3=DISARM# w4=FAIL# t1=090xxxxxx vt1=5

Example of online report from the security system:

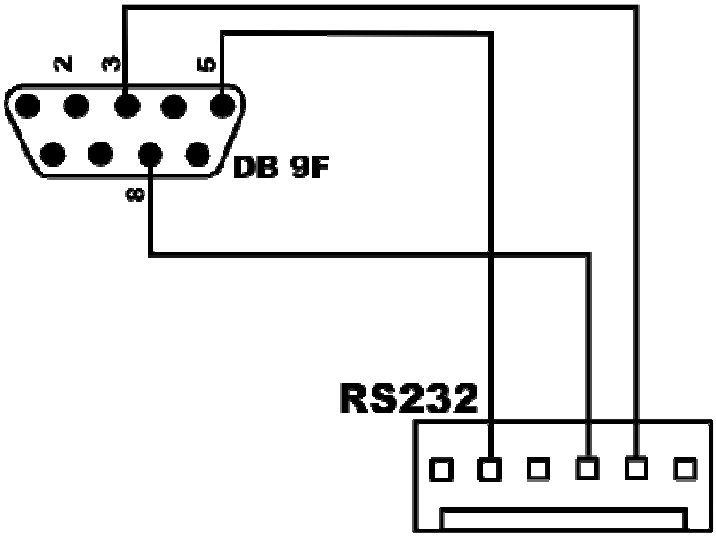
14:25 ALARM PIR-hallway

14:26 DISARM John Smith

Example of practical use of this function:

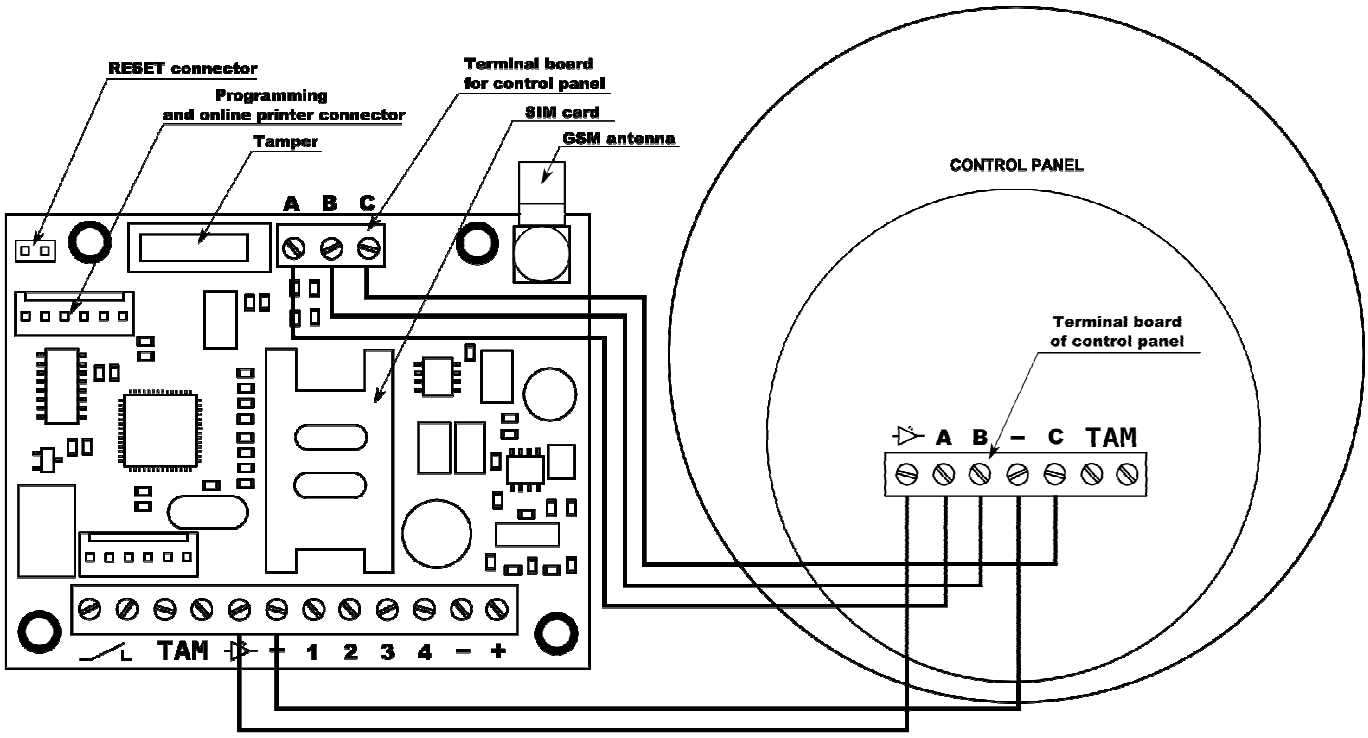
1. Signalization of the alarm event with exact localization
2. Control of arming – disarming
3. Control which particular person armed – disarmed security system
4.

Connection scheme for Online print



GECON LITE PLUS in control panel mode

New feature of Gecon lite is a functionality of a small independent control panel. You can connect Dallas key reader supporting up to 8 keys that serve for arming and disarming. Control panel also contains buzzer and control LED diodes. The connection scheme is following:



You will need to power the device from external backed up power source with nominal voltage of 12V or use the back-up power supply provided by manufacturer.

You can **activate control panel mode** by sending the command:

IBUT=ON

GECON LITE PLUS is now set to the control panel mode. Subsequently you will need to programm iButton (Dallas Keys) if they were not already programmed.

WARNING !!! Delay of inputs is not functioning in this mode and has to be set to zero level.
Note: Function of alarm filtering affects only calls, it does not affect the siren output.

If the input is set as status or permanent, it reacts both in armed and disarmed state. (please see below for input types settings)

Turning off the „control panel mode“

To turn off the control panel mode and return to caller mode, send SMS command in following form:

IBUT=OFF

Note: Programmed DALLAS keys will remain in the memory, the memory for the numbers is same for the caller and control panel mode.

To delete and program Dallas keys please use following commands:

To delete all programmed Dallas keys: command **IBDA**

To program Dallas keys fo free positions: command **IBRN**

After receiving above command, buzzer will beep and LED diode will blink with high frequency. In this moment you can add codes of additional keys to memory of Gecon lite plus. You can do it by attaching the keys. Programming (learning of the particular keys) is signalized by double beep of the buzzer. If you attached the key twice, long beep will sound. It is possible to program (learn) up to 8 Dallas keys. The learning regime will end after one minute, or by attaching of 8 Dallas keys.

If the programming was already performed, new programming will not erase previously programmed keys, it will only add new ones.

Setting of input type:

Digital inputs in control panel mode can be set in several ways:

A – Delayed loop – the breach will not trigger alarm if a Dallas key is attached to the control panel in entrance delay

I – Instant loop– the breach will trigger alarm immediately in armed status.

P – Permanent loop – the breach will trigger alarm both in armed and disarmed status.

T – Status loop– input is active both in armed and disarmed status and sends SMS by every change of status

You can set loop type by command **IN** by putting = character after IN and defining each of 4 inputs.

The sequence of symbols **A,I,P,T** after = defines also the sequence of set inputs. That means that first letter defines first input, second letter second input and so on.

Example:

abcd IN=AIPT - 1= **Delayed** 2= **Instant** 3= **Permanent** 4= **Status**

abcd IN=AIIP - 1= **Delayed** 2= **Instant** 3= **Instant** 4= **Permanent**

Setting of exit delay:

This setting is done by command **abcd EXIT=10**

This command will set exit delay to 10 seconds. Allowed range is from 3 to 240 seconds.

Setting of entrance delay:

This setting is done by command **abcd ENTRY=20**

This command will set entrance delay to 20 seconds. Allowed range is from 3 to 240 seconds.

Setting of timer of external siren

This setting is done by commands **abcd ALARM=30**

This command will cause the siren to sound for 30 seconds. Allowed range is from 0 to 240 seconds. 0 will disable the siren during the alarm event.

Note: Commands ALARM and IBUT=on will cancel previous settings of RELAY. Vice versa, all RELAY commands will cancel siren settings.

Arming of the control panel:

In disarmed status, Gecon lite plus shall signalize as follows: blue LED diodes on the reader shine permanently and LED diode on the board shines permanently. After attaching valid Dallas key, buzzer will beep shortly twice and subsequently, short beeps together with short blinks of LED diodes signalize exit delay of 20 seconds (time is configurable). Last 6 seconds is signalized by faster beeps. If during exit delay one of alarm inputs is activated, long beep will sound and arming process needs to be restarted. The start of armed status is signalized by two long beeps and red signalization LED will shine permanently. In the moment of arming, no loop cannot be activated, otherwise the arming process will not finish.

Disarming of the control panel:

In armed status, red LED diodes on control panes are shining. Entry to the protected space is usually accompanied with activation of alarm detectors connected to Gecon lite plus input loops. This is signalized by short beeps of buzzer and blinks of blue LED diodes. During entry delay (default 20seconds, configurable) Dallas key needs to be attached to the control panel. This is signalized by accepting double beeps and permanent shine of blue LED diodes. If the Dallas key is not connected, alarm is triggered. Gecon lite plus performs all predefined actions such as relay activation, alarm calls and SMS reports. Alarm can be cancelled by attaching of valid Dallas key to the control panel.

Arming – disarming by SMS command:

Arming and disarming can be also performed by SMS command in form **abcd ARM** and **abcd DISARM**.

Detection of validity and value of credit on the prepaid SIM cards via SMS:

This command will return validity of SIM card and remaining credit on prepaid SIM cards

abcd CREDIT phone number

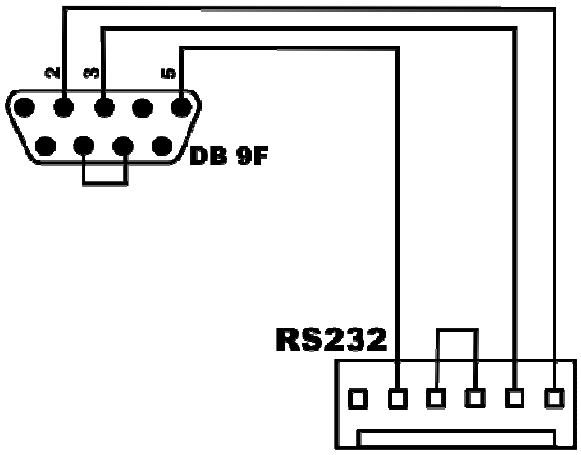
Example:

abcd CREDIT *111# on T-mobile Slovakia SIMs

abcd CREDIT *100*# on O2 Slovakia SIMs

Note: please check with your SIM card provider if this function is supported and for local settings.

Programming via SW ver. 3.1 and higher



Programming procedure:

1. Be sure that PIN code protection is disabled on the SIM card
2. Insert the SIM card to the GECON LITE PLUS SIM holder.
3. Connect power supply to GECON LITE PLUS.
4. Wait till GECON LITE PLUS registers into the cellular network. This is signaled by short flashing of status LED diodes.
5. Connect the programming cable to RS 232 connector and PC.
6. Run the configuration software, press Download button.
7. Configure the device according your requirements and confirm by clicking to Upload button.
8. If you would like to save the settings, you can do it by pressing Save and saving the configuration file to your hard drive.

Note:
The software uses auto detection of port, that means that it will automatically detect Gecon lite plus, there is no need for any special settings.
It is recommended to use test tablo to check if all settings are correct. The tablo enable visualization of Gecon lite plus activities without real calls and SMS sending, which could save costs, make settings check faster and more efficient and detects eventual wrong settings.
In case of configuration of on-line print function via software, the changes will only appear after disconnection of programming cable and Gecon lite plus restart (connection-disconnection of power supply).

Factory reset:

- This function will reset the device to factory setting. It is recommended to perform the reset before every installation to rule out the chance of previously applied settings.

Procedure:

1. Disconnect GECON LITE PLUS from power supply,
2. Put on jumper **RES,**
3. Connect power supply to GECON LITE PLUS,
4. Signaling LED will blink for 10 times and remains shining permanently,
5. Settings are reset,
6. Remove the jumper RES,
7. LED will stop shining, GECON LITE PLUS will register into the network,
8. GECON LITE PLUS is ready to be used.

Manufacturer:

ZADAKO spol. s r.o.
Segnáre 17
841 05 Bratislava

Tel: +421 2 6453 1086, Fax: +421 2 6453 1084
zadako@zadako.com
www.zadako.com