

VBIP-G

IP / GPRS / GSM Communicator



Installer Manual

13 May 2015

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1. INTRODUCTION

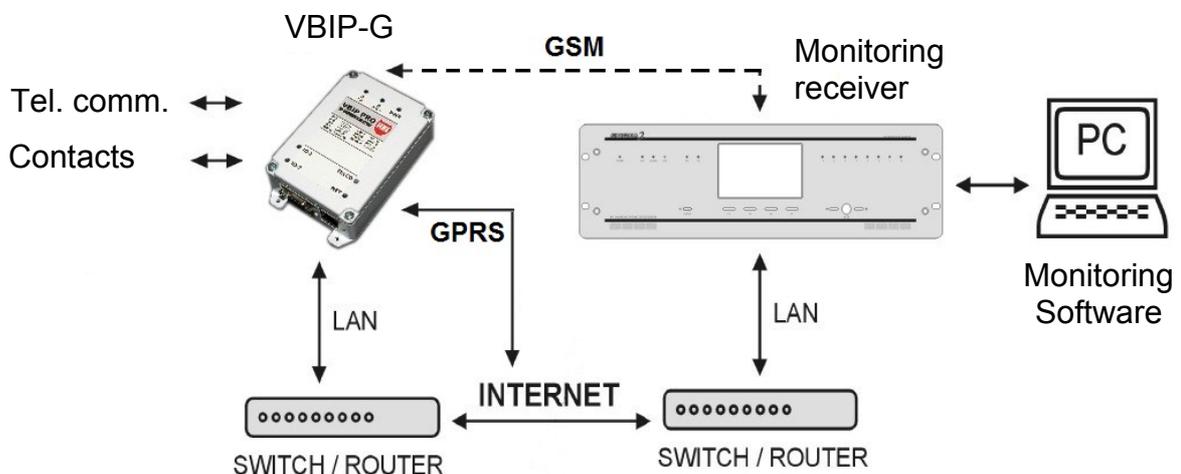
VBIP-G communicator is recommended for high security applications where backup transmission line is essential. The main reporting channel is wired Internet, which provides **immediate alarm transmission** and action **without additional operation cost**. The secondary reporting channel is GPRS (with GSM backup). Secondary GPRS channel can be used in backup way (if Ethernet network fails), in parallel way (Ethernet and GPRS transmission at the same time), and as a main transmission channel (if there is no Ethernet network at installation site). VBIP-G means high security solution in a cost-effective way.

To use the highest range of provided functions **please read** carefully the *Installer Manual*.

For the confident programming and secure usage please keep all warnings in *Installer Manual*, with highly focusing to security directions.

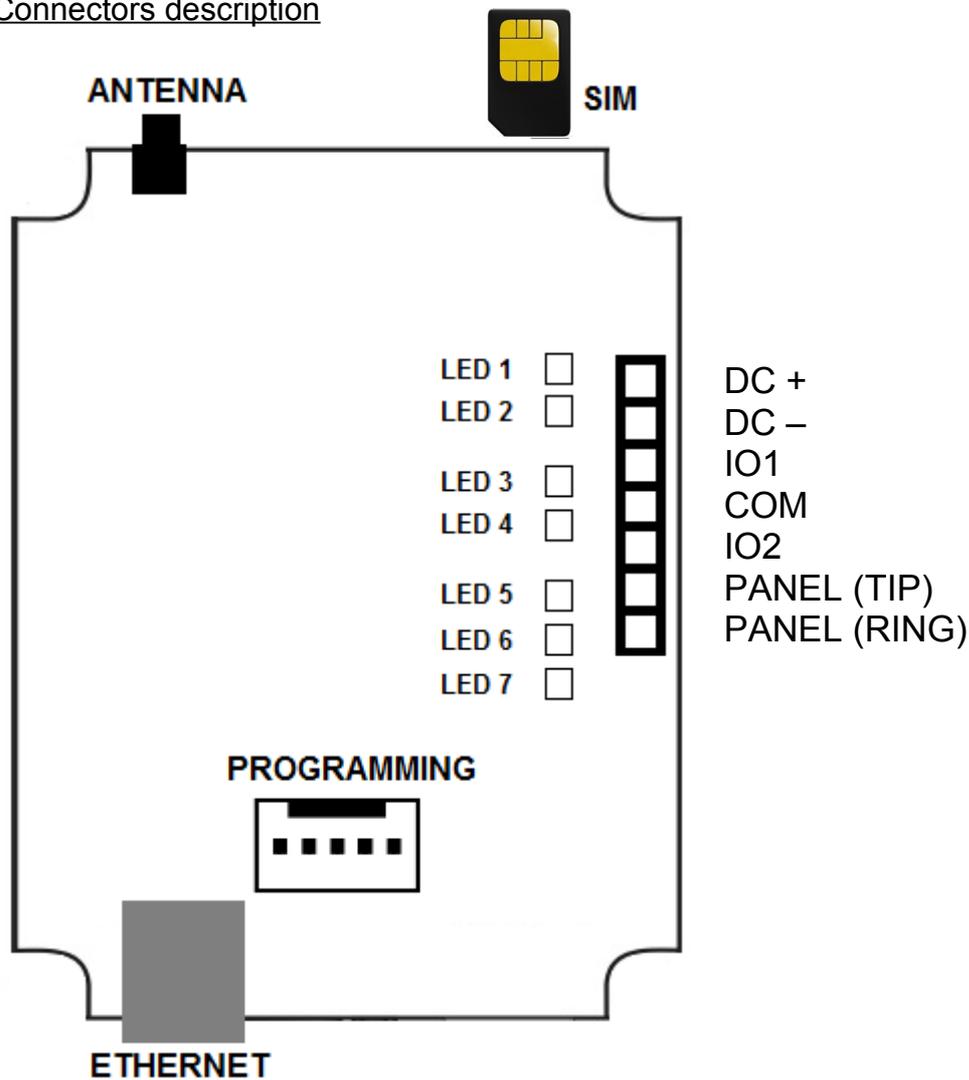
2. SYSTEM STRUCTURE

VBIP-G communicator receives the Contact ID signals from the PSTN line of the alarm control panel, or the contacts on its own inputs. These signals are transmitted to the monitoring station through Ethernet network / GPRS channel / GSM channel.



Note: Basic Ethernet network knowledge is always necessary to install VBIP-G module.

Connectors description



DC + – Positive +12 Vdc power supply

Note: Use at least 500 mA capacity power supply.

DC - – Negative power supply

IO-1 – External contact input/output

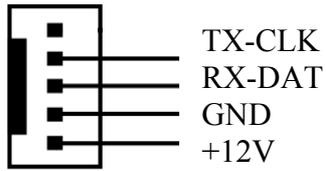
COM – Common negative point

IO-2 – External contact input/output

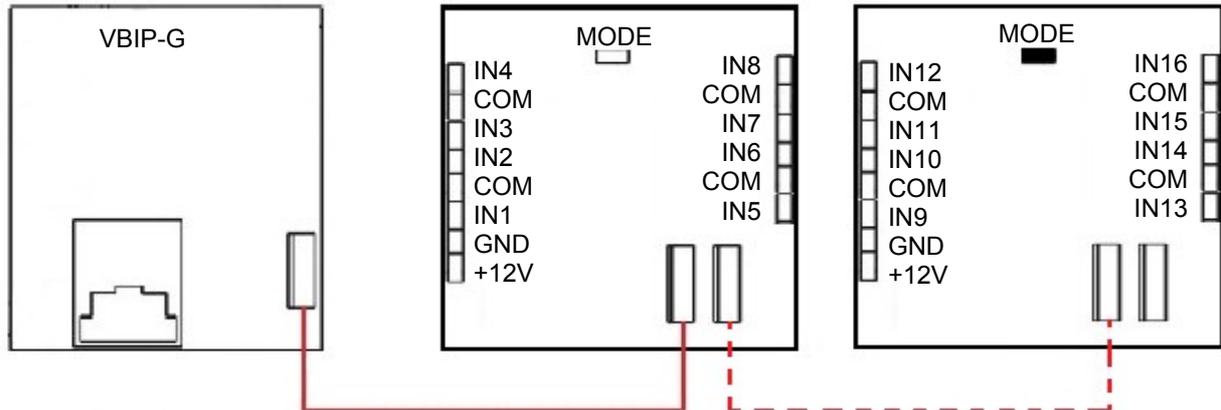
PANEL (TIP) – Alarm control panel telco communicator

PANEL (RING) – Alarm control panel telco communicator

Input extension with VBIP-IO8 module:



VBIP-G / VBIP-IO8 serial port

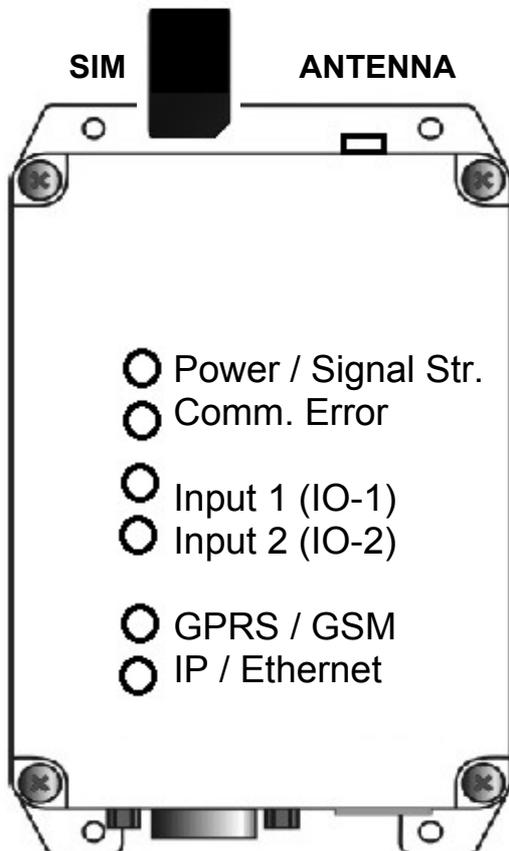


VBIP-IO8 modules connection

Note: If you want to use 16 inputs (instead of 8 inputs), the second VBIP-IO8 panel should be connected the way above, with placed MODE jumper on that.

Note: +12 Vdc power supply should be connected to each module separately. The connection of the devices should be made only with 3 wires cable provided in device package (RX, TX, GND).

Connectors description (box version)



„VGA” connector
- installation
- programming

Ethernet
connector

DC+ (Red, 1) – Positive +12 Vdc power supply

Note.: Use at least 500 mA capacity power supply.

DC- (Black, 15) – Negative power supply

IO-1 (Green, 2) – External contact input/output

IO-2 (Orange, 3) – External contact input/output

PANEL-TIP (Brawn, 6) – CP telco communicator

PANEL-RING (Blue, 11) – CP telco communicator

Serial RX (Grey, 13) – To connect control panel /
IO8 RX DAT connector

Serial TX (Violet, 14) – To connect control panel /
IO8 TX CLK connector

Yellow, 4 – Not used

White, 5 – Not used

3. VBIP-G LED SIGNALS

LED 1: In case of proper power supply it lights for 10 seconds continuously (in case of power failure there are quick blinks), then slow blinking indicates signal strength:

0, 1 blinks = no / poor signal strength;

2, 3 blinks = medium / good signal strength.

LED 2: No light = Everything is OK.

Continuous light = Any of the used (configured) reporting channels has physical connection problems (such as LAN cable is unplugged, no SIM card in device), but apart from this the communication is successful with monitoring station through an another reporting channel.

Blinking = Reporting failed to monitoring station through all possible reporting channels (in 1-2; 3-4; 5-6 and 1-3-5; 2-4-6 operation modes the communication problem of each operation strings is indicated by LED blinking).

Note: Quick alternate blinking of LED 1 and LED 2 means no transmission channel is programmed.

LED 3: IO-1 input status signal.

LED 4: IO-2 input status signal.

LED 5: Continuous light = GPRS / GSM connection is OK.

No light = There is no SIM card in communicator (or GPRS / GSM reporting channels are not configured).

Blinking = There is communication problem to monitoring station through GPRS / GSM channel.

LED 6: Continuous light = Ethernet connection is OK.

No light = There is no LAN cable connected to communicator.

Blinking = There is communication problem to monitoring station through Ethernet channel.

4. GENERAL RECOMMENDATIONS

Note: If you use GPRS transmission, please use network provider and subscription with at least 10 MB / month Internet data traffic (this value may change according to the event sending frequency).

Note: It is always recommended to disable PIN code of the SIM card.

The following settings should be applied in connected alarm control panel:

- Telco communication should be enabled
- DTMF (Tone) dialling should be selected
- There should be a simple phone number for dialling (recommended: **99999999**)
- There should be a client account (avoid using '0' digit if it is possible)
- There should be Contact ID Full communication format
- It is recommended to disable 'telephone line monitoring' function
- It is recommended to disable 'wait for dial tone' option
- In some cases 'force dial' option should be enabled in alarm control panel.

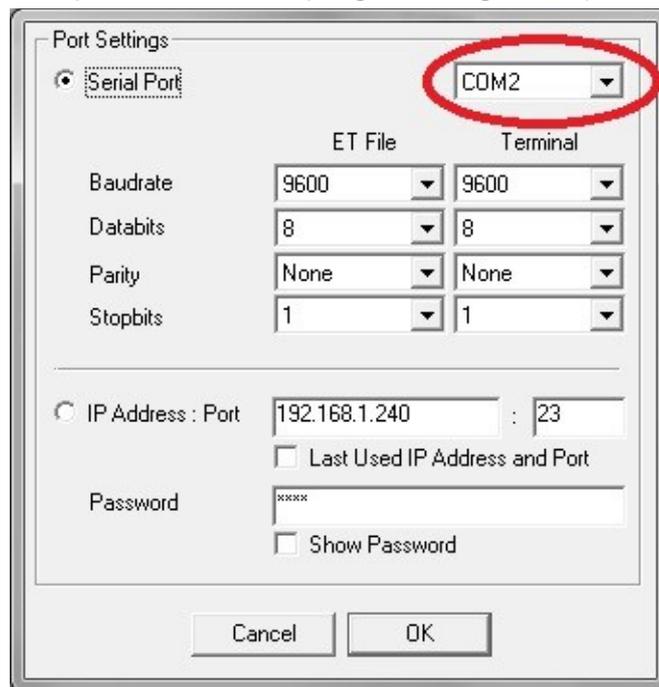
Note: If a communicator restart would be required because of any reason, you can restart communicator with the following SMS command: **#PASSWORD* reset** (password means the *Remote Programming Password* parameter, by default it is 1234).

The communicator restarts within 30 seconds after receiving SMS command.

5. SYSTEM PROGRAMMING WITH PC SOFTWARE

VBIP-G module programming is allowed through serial port by default, but after the appropriate IP settings it can be also configured through Ethernet network. Please use *EniTerm* software for programming. The programming steps are the following:

1. By means of VUP cable and mini USB cable, connect the VBIP-G module to the programming PC (for serial programming).
2. Please start *EniTerm* software.
3. Choose the ET (settings) file for programming:
 - VBIP.ET – VBIP-G module programming
4. In Communication / Port Settings menu set the communication port / IP address for programming (default password for IP programming: 1234).



5. By clicking to *Communication / Read Data* menu you can read settings from device.



The highlighted firmware version means the following (hexadecimal format):

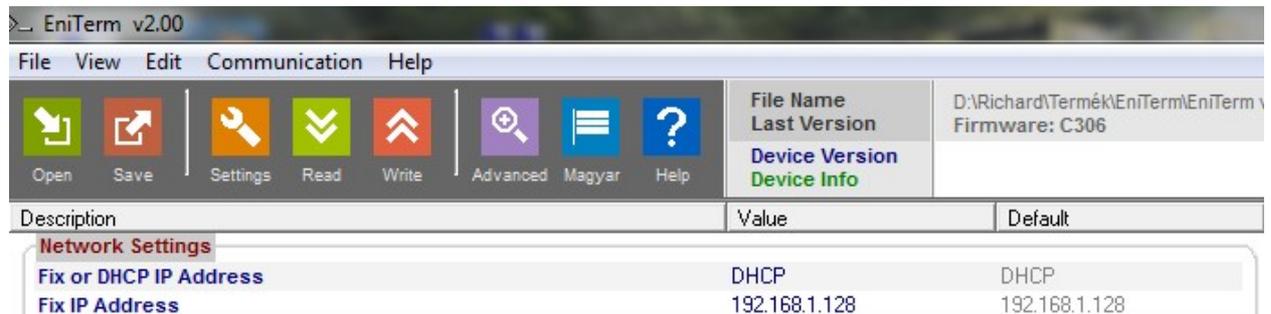
C – 12 (2012)

A – 10 (October)

02 – 2 (Second day)

6. Please execute the required settings in *EniTerm* software.

Note: The software functions are shown in *EniTerm* help menu.



7. Click to *Communication / Write Data* menu to send the modified settings to device.

Note: During data reading (and sending) VBIP-G firmware version can be checked.

6. TROUBLESHOOTING

TROUBLE: Any abnormal operation in functions during the usage of the device.

SOLUTION: Firmware upgrade with the newest firmware file usually solve these kind of problems (see *Firmware update* part in manual).

TROUBLE: There is no connection between programming PC and VBIP-G module (during serial programming).

SOLUTION: Check the cable plugging in PC side. In programming PC *Control Panel / Hardware / Device Manager* application you can check which COM port appears / disappears in device list during plug / unplug programming cable (with connected VBIP-G). Please check whether COM port setting is correct in programming software.

TROUBLE: VBIP-G settings seem fine, but GPRS communication is not received in CMS side.

SOLUTION: Please check monitoring receiver IP address and port settings.

Please check the APN setting of VBIP-G in programming software.

Please disable PIN code of SIM card in security settings of a mobile phone.

Please check the GSM signal strength of VBIP-G is adequate.

Please put the SIM card in a mobile phone, and check mobile Internet functionality.

TROUBLE: VBIP-G settings seem fine, but Ethernet communication is not received in CMS side.

SOLUTION: Connect a laptop in place of VBIP-G Ethernet cable, and set the same network settings as VBIP-G has. Then start ipt.exe program to check is it possible to connect to monitoring station from the installation place with the given settings. If there is no contact check the programmed network settings, and the local network parameters (router, server, switch, etc).

TROUBLE: No communication is received from alarm control panel to VBIP-G.

SOLUTION: Check, that the alarm control panel is set to DTMF (Tone) dial mode, communication should be enabled, there should be added phone number (avoid to use '0' digit), a client account, additionally Contact ID (Full) format should be selected.

TROUBLE: Alarm control panel detects telephone line error, communication problems.

SOLUTION: In some control panels (in control panel settings) there might be required to disable 'telephone line monitoring' and 'wait for dial tone' options. Additionally in some cases 'force dial' option should be enabled in alarm control panel.

It may help if you connect 1K resistor parallel to control panel TIP / RING connector.

There might be the following error messages generated in VBIP-G communicator:

1354 012 99 = LAN cable is unplugged.

1354 034 99 = SIM card is removed.

1354 999 99 = Communication problem between alarm control panel and VBIP-G.

1354 001 99 = Communication problem on Ethernet #1 channel.

1354 002 99 = Communication problem on Ethernet #2 channel.

1354 003 99 = Communication problem on GPRS #1 channel.

1354 004 99 = Communication problem on GPRS #2 channel.

1354 005 99 = Communication problem on GSM #1 channel.

1354 006 99 = Communication problem on GSM #2 channel.

1354 000 99 = Communication problem on all channels in 1-2-3-4-5-6 mode.

1354 010 99 = Communication problem on all 1-2 channels in 1-2; 3-4; 5-6 mode.

1354 020 99 = Communication problem on all 3-4 channels in 1-2; 3-4; 5-6 mode.

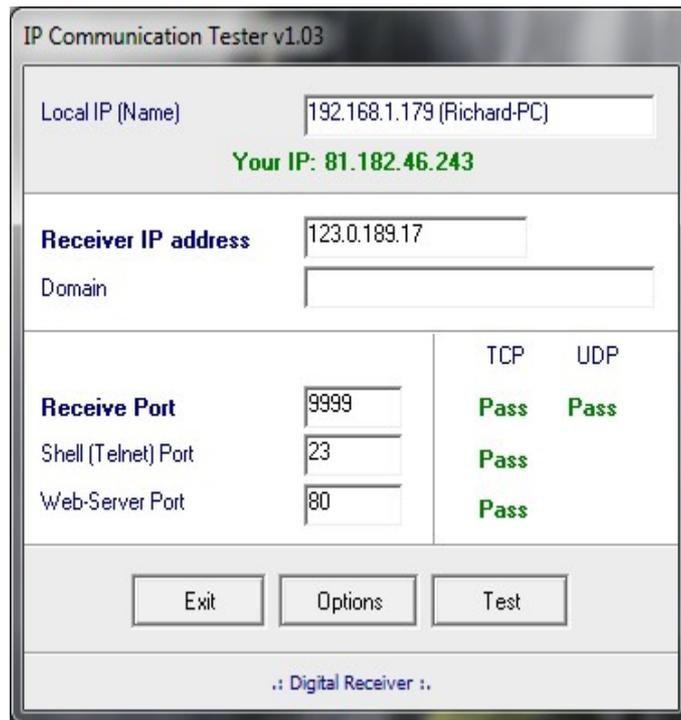
1354 030 99 = Communication problem on all 5-6 channels in 1-2; 3-4; 5-6 mode.

1354 100 99 = Communication problem on all 1-3-5 channels in 1-3-5; 2-4-6 mode.

1354 200 99 = Communication problem on all 2-4-6 channels in 1-3-5; 2-4-6 mode.

7. MONITORING RECEIVER IP TRANSMISSION TEST

Testing is useful to test data sending from an external installation place. The testing software in the given local IP network (where the VBIP-G will be connected) can help a lot to check monitoring transmission and find the reason of possible problems. For test please use ipt.exe software in the following way:



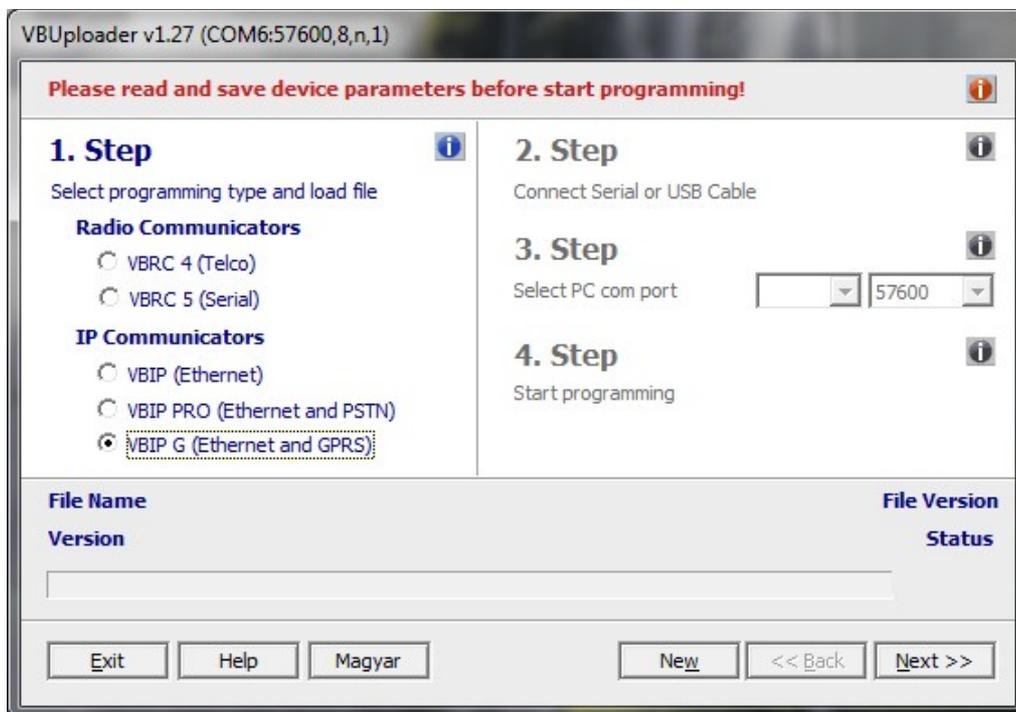
1. Enter the *IP address* or *Domain name* of the monitoring station.
2. Set the ports for communication with monitoring station (*Receive Port* = Monitoring transmission port; *Shell (Telnet) Port* = Remote programming port; *Web Server Port* = Event list access through web browser port).
3. After click to Test button it can be seen that test is successful (PASS) or not (FAIL).
4. If you want you can change the program settings in *Options* part:
 - *Enable TCP Test Report* = TCP connection test with test message;
 - *Enable UDP Test Report* = UDP connection with test message;
 - *Invisible TCP/UDP Test* = Test message can't be seen on receiver;
 - *Enable AES Crypted Test Report / AES Key* = Test of AES encryption function.

8. FIRMWARE UPGRADE

It is recommended to upgrade regularly device firmware to use new functions and eliminate possible bugs.

Firmware upgrade can be done by the following steps:

1. Get the latest firmware files from your distributor (vbipg.bot).
2. Save settings from the VBIP-G with *EniTerm* software (please check *System programming with PC software* chapter).
3. Start *VB Uploader* program for firmware upgrade.



4. Choose item (VBIP-G) for upgrade (1. STEP), then NEXT.
5. Choose the proper firmware file for upgrade (2. STEP), then NEXT.
6. Choose the COM port where VBIP-G is connected (3. STEP), then NEXT.
7. Upgrade process can be started with *START* button.
8. Do not forget to send back the saved VBIP-G settings at the end of the upgrade (please check *System programming with PC software* chapter).
9. To use new functions it might be required to get the latest *EniTerm* software with the newest ET (setup) files – please download and use newest version.

9. SMS PROGRAMMING

If it is required (and if the SIM card inside the device is suitable for this) the main device parameters can be configured with SMS messages. You can use the following SMS messages:

Note: PASSWORD is the *Remote Programming Password* device parameter (by default: 1234). SMS receiving is confirmed by „OK” SMS message.

#PASSWORD* reset – e.g.: #1234* reset (always use space between commands !!!)

Device restarts within 30 seconds.

#PASSWORD* dhcp – e.g.: #1234* dhcp

Device changes to DHCP operation, and restarts within 30 seconds.

#PASSWORD* ? – e.g.: #1234* ?

Device sends status of the inputs, and current firmware version.

#PASSWORD* apn=simcardapn – e.g.: #1234* apn=net

#PASSWORD* apn=simcardapn,id,password – e.g.: #1234* apn=private.apn,id,pw

You can set the APN for the SIM card, then device restarts within 30 seconds. If it is required you can add APN user name and password.

Channels: 1 = IP1; 2 = IP2; 3 = GPRS1; 4 = GPRS2; 5 = GSM1; 6 = GSM2

#PASSWORD* a=account – e.g.: #1234* a=1234

#PASSWORD* a3=account – e.g.: #1234* a3=5678

You can set account code globally (all channels), or for individual channels. Device restarts within 30 seconds after programming.

#PASSWORD* s1=ipaddress:port:protocol – e.g.: #1234* s1=18.36.23.132:9999:tcp

#PASSWORD* s4=ipaddress:port:protocol – e.g.: #1234* s4=alm.rcr.com:8888:udp

#PASSWORD* s5=phonenumber – e.g.: #1234* s5=36301234567

Here you can find sending parameters for individual reporting channels. Protocol is optional for 1 – 4 channels. In case of 5 – 6 channels, you should use international phone number without + or 00. s=0 value means disable sending in all reporting channels, s4=0 value means disable sending in channel 4. Device restarts within 30 seconds after programming.

#PASSWORD* t4=testperiod – e.g.: #1234* t4=10

You can configure the test period for individual reporting channels (in minute). t=0 value means disable test report in all reporting channels, t5=0 value means disable test report in channel 5. Device restarts within 30 seconds after programming.

#PASSWORD* tc=testeventcode – e.g.: #1234* tc=1603

#PASSWORD* tc5=testeventcode – e.g.: #1234* tc5=1602

You can set test event code code globally (all channels), or for individual channels. Device restarts within 30 seconds after programming.

Note: You can send more parameter setting commands in one SMS message, you should separate commands with space. E.g.: #1234* a=7897 s3=18.36.23.132:9999:udp t3=10

10. TECHNICAL DATA

Product	VBIP-G
Power supply	10,5 – 15,0 Vdc
Standby current consumption	120 mA
Maximum current consumption	500 mA
Input / Output	2
Output type / Load capacity	Open collector / max. 50 mA
Ethernet connector	10 Base-T
GPRS modem	Quad Band (Class 12)
GSM antenna	SMA
Event buffer	up to 64 events
Case protection level	IP53
Operating temperature	-10 °C / 50 °C
Sizes (W / L / H)	72 x 118 x 34 mm
Weight	235 g