BRGSM2

GSM CONTROL

Device Configuration Guide

Introduction

BRgsm2 device is made for remote steering of one executive device through mobile phone network (one remote channel). It was made for free and easy remote steering of entry gate or barrier of authorized people by using their mobile phone or home phone numbers. BRgsm2 is not descoping the usage of remote pilots or cards. Steering is global, restricted by GSM network. BRgsm2 is also well prepared for remote control of gas ovens, air conditioners, lights, car heating systems, immobilization of a car, remote reset of computer devices, using a text message command in which, user may include time of start.

BRgsm2 contains industrial GSM module, which must have an active mobile phone simcard of any cellular operator. Configuration of the controller may be done by remote text message commands or locally by computer software. There are two versions: "light" for up to 10 users, and "full" for up to 2000 users.

1. Primary device functions

1.1 Remote control of one output (contacts) of executive relay

Remote control is done by mobile phones, which numbers have been written on the list of authorized devices and which have active presentation of theirs number. It can be done by:

• Free CLIP (short, signal, bolt)

Making a free herald of connection ("CLIP") on your BRgsm2 simcard number. Device instantly after receiving signal of coming connection ("bell"), discards the connection (busy line), analysis if the number is authorized and it controls the output of executive relay

• SMS

Sending a specified text message for given simcard number of BRgsm2. Device picks up the text message and it controls the executive relay. It's not free, charge is given by your mobile operator.

• Short call

Making a short, paid call for a given number. Device hangs up and after 1 second it discards it, analysis if the number is authorized and controls the relay executive. It's not free, 2 second call charge is given by your mobile operator.

1.2 Work mode of executive relay

NO-normally opened

NC- normally closed

Monostable

Bistable

1.3 List of authorized phone numbers

Controlling the output of the BRgsm2 may be made by phone that is on the list of authorized numbers. Try of using not authorized number is ineffective. The list may contain according to the version from 10 up to 2000 numbers stored in non-volatile memory, with positions from 0 to 2000, where "0" and "1" are booked for special control panel settings.

With active data protection mode (lack of JMP jumper, look 4.2, picture 1) phone number associated to the position:

"0" – INSTALLER, is the only one having access to remote change of each parameter of the device, using specified text messages commands (look table 4.2)

"1" – ADMINISTRATOR, is the only one having access to remote change of users authorized numbers (add/delete). It doesn't have access to change the technical configuration and the number of installer (look table 4.2)

There is a possibility to disable authorizing list (only by computer software). Then any user knowing the number of BRgsm2 may control it.

1.4 Protection of memory data and its delete or change.

Important is the protection of configuration data BRgsm2 from its accidental or intentional modification by users. It is made by jumper JMP built in board. For protection of data we take off jumper JMP, then only position "0"-instalator and "1"-administrator users have an access to make changes. Took on jumper JMP – protection of data mode inactive. Change of configuration parameters allowed from all authorized mobile numbers.

1.5 BRgsm2 installation software for configuration of parameters and backup of authorized numbers.

BRgsm2 software serves full and comfortable configuration of device parameters with use of PC. e.g.

• addition/delete of authorized numbers

• import/export of table with authorized numbers list in .csv file

• configuration of working mode of executive relay

• backup (save in file) full configuration with authorized numbers list

• data reading from backup file

Software usage is proper especially for BRgsm2 in cases, where there are many authorized users and data loss may result in another, long input with text message commands. Backup is useful for quick copying data to another BRgsm2 device. Connection of PC with BRgsm2 is made by specialized connection cable, that is an extra accessory. Currently software may be downloaded from our website: www.kompo.pl
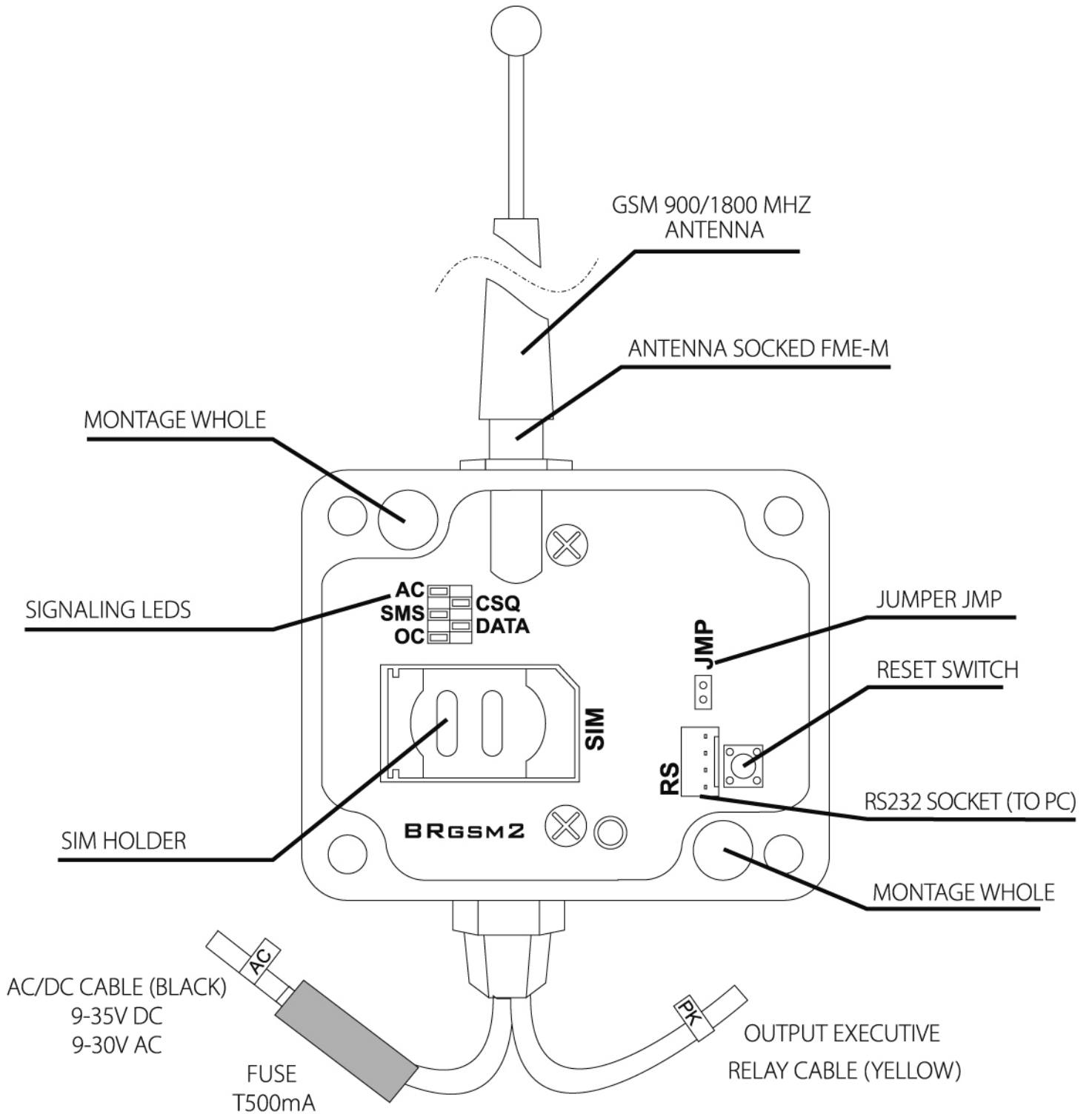
2. Manual for quick installation of BRgsm2 with the use of no computer programme via remote text message commands

• Purchase SIM card with a gsm operator, which guarantees sufficient range within operation of the BRgsm2 controller

• Prepare SIM card temporarily installing in any gsm device:

• set card PIN to 1111

• switch off voice mail and other other connections through the command in the menu of other connections through the command in the menu of your phone: cancel all transmissions or through the contact with your gsm operator

• check the possibility to realize all outgoing and incoming calls as well as the level or range on the spot of planned controller installation

• Install SIM card in BRgsm2

• Put in JMP jumper

• connect power supply within 9-30 VDC or 9-35 VAC/ 0,3A to black wiring in BRgsm2

• Wait for your BRgsm2 to log in gsm (blue led should flicker 2-5 times). It's constant flickering means " not logged in (see table 2.3 in the proper manual)

• Key in your phone number - on the authorized index position " 0" (INSTALLER)

• Sending 0#601123123 text message to BRgsm 2 (digits mean your installer number)

• After several seconds, you are able to control BRgsm2 from your phone and configure other parameters

• Reconnect power supply of BRgsm2 - the device is now ready for remote configuration of remaining parameters through text message commands (see table 4.2 in the manual) and , most importantly , key in all numbers of the authorized users

• Connect the device to the gate device according to the manual (yellow wiring are usually connected to wire terminal of the controlling button or additional remote controls radio)

2.1 Device's interior design

Case has 4 screw pieces, after unscrewing them and taking off the case there is a free and adequate access to the interior of device presented in the picture. All nuances used for configuration are accessible without need to unmount printed board. After removing the case there are two visible montage wholes that are used to mount the device to the ground. It's prescribed to ask experienced installer for mounting the BRgsm2 with usage of proper tools. Case is splash-proof.

Pic. 1

GSM 900/1800 MHZ ANTENNA

ANTENNA SOCKED FME-M

MONTAGE WHOLE

SIGNALING LEDS

AC
SMS
OC
CSQ
DATA

JMP

JUMPER JMP

RESET SWITCH

SIM

RS

RS232 SOCKET (TO PC)

SIM HOLDER

BRGSM2

MONTAGE WHOLE

AC/DC CABLE (BLACK)
9-35V DC
9-30V AC

AC

FUSE
T500mA

PK

OUTPUT EXECUTIVE
RELAY CABLE (YELLOW)

2.3 Signaling LEDs

Devices have LED, shown in the picture, which visualizes basic modes of work. Table shows the description of action of specified LED.

LED	Continuous shine	Low blinking	Fast blinking	Others
AC (green)	Current plugged			
CSQ (blue)	No simcard / wrong PIN		Searching for GSM network	Number of blinks (1-5) shows the power of GSM range (1-min, 5-max)
OC (yellow)	Shows switching on the contacts of executive relay NO-normally opened NC-normally closed			
SMS (red)	For 1,5 second, receive of text message or CLIP from unauthorized user		For 5 seconds, receive of text message or CLIP from authorized user	
DATA (red)	Improper work of GSM module	Periodical blink, proper link between GSM module and device processor		

3. Specification of parameters and functionality of BRgsm2 device

3.1 Default settings
• SIM card PIN number: "1111"
• Executive relay configuration: NO - normally opened
• Executive Relay working mode – monostable
• Hold time of contacts of executive relay – 3 seconds
• Sending text messages to users – disabled
• Control of executive relay via text message – disabled
• Control of executive relay via CLIP – enabled
• Authorization of INSTALLER and ADMINISTRATOR to remote configuration – enabled
• Control with numbers not on the users list – disabled
• Respond for CLIP – busy call (free control)

3.2 JMP jumper – data protection
Protection of configuration data of accidental or purpose delete or modification by device users
• jumper on – memory is not protected, every authorized user may make changes via text message
• no jumper – memory protected, change of parameters only from "0" INSTALLER and "1" ADMINISTRATOR numbers

3.3 Configuration of working mode of executive relay

Executive relay may work in one of following modes of contacts configuration

NO – contacts normally opened, receive of and order causes close-up of contacts of executive relay

NC – contacts normally closed, receive of and order cause depart of joints of executive relay

MONOSTABLE mode,

Adjustment of close-up/depart time of relay contacts in predefined time interval:

From 0 to 99 hours, time can be set as: seconds, minutes or hours

Text message commands have greater priority than CLIP signals. Example:

• if the output was started by CLIP, it can be stopped with text message

• if the output was started by text message, it ignores CLIP signal during whole time of work

BISTABLE mode,

Receive of a control order makes change of executive relay contacts for opposite position until receiving another order. In bistable mode text messages and CLIPs are equal. Example:

• if the output was started by text message it can be stopped by CLIP

• if the output was started by CLIP it can be stopped by text message

3.4 Block of text messages from users

There is a possibility to disable/enable text messages – answers for "status" to users. Look table 4.2 and computer software

3.5 CLIP and SMS control

There is a possibility to choose the control method as CLIP and/or SMS. Look table 4.2 or computer software

3.6 Installer and Administrator entitlement

There is a possibility to disable remote, via text message, configuration of BRgsm2 from INSTALLER and ADMINISTRATOR phones. Look table 4.2 or computer software

3.7 Disable of authorized numbers list

With computer software we can disable the authorized numbers list. Then any user knowing the BRgsm2 number may control it.

3.8 RESET button

RESET button is to delete all users list and also to restore default settings. Steps of deleting and restoring default settings:

• unplug current

• press and hold RESET button

• plug-in current

• hold RESET button while 10 seconds

4. List of text messaging commands to conduct remote configuration and controlling

In the case of remove JMP jumper the commands listed below are efficient according to columns "authorizations". For jumper which is on commands are efficient from each user's phone number. In the content Text Message the size of letters (either small or big) does not matter. There is a possibility to block controlling through text message commands for a user (SMS#0 or option in computer programme). Then the user controls through CLIP thus controls a big amount of gates and toll-bars.

4.1 Special commands STATUS

Sending STATUS command to the device results in sending back by BRgsm2 a text message containing the following pieces of information :

• Number of programmed users

• JMP position

• Last performed command (excluding command STATUS) and telephone number it came from

• Blocking text message sending

• GSM signal power in -dBm unit /-100dBm low level - -50dBm hi level/

• Current output state

4.2 Table of text message configuration commands

Example of text message	Appropriation	INSTALLER'S privileges	ADMINISTRATOR privileges	User's privileges
#601123123	Write the number of 601123123 to the first free item on the entitled list	Yes	Yes	No
5#601123123	write the number of the user's no 5 as 601123123	Yes	Yes	No
28#604123123	write the number of the twenty-eighth end user as 604123123	Yes	Yes	No
5#	delete the number of the 5th user	Yes	Yes	No
18#	delete the number of the 18th user	Yes	Yes	No
601123123#	delete the user from the list of phone number 601123123	Yes	Yes	No
0?	Send back the phone numbers of 10 users starting with user no 0	Yes	Yes	No
23?	Send back the phone numbers of 10 users starting with user no 23	Yes	Yes	No
NO#	set the pin of the executive relay as normally open	Yes	No	No
NC#	set the pins of the executive relay as normally closed	Yes	No	No
RM#	set the mode of operation of the executive relay on monostable	Yes	No	No
RB#	set the mode of operation of the executive realay on bistable	Yes	No	No
RC#02s	set the time for short-circuit pins for 2 sec. (executive relay hold time)	Yes	No	No
RC#15m	set the time for short-circuit pins for 15 minutes	Yes	No	No
RC#01g	set the time for short-circuit pins for 1 hour	Yes	No	No
Z#	switch on the output (executive relay)	Yes	Yes	Yes
W#	switch off the output (executive relay)	Yes	Yes	Yes
Z#02s	Switch on the output for 2 sec .(for monostable mode)	Yes	Yes	Yes
Z#15m	Switch on the output for 15 minutes (for monostable mode)	Yes	Yes	Yes
Z#01g	Switch on the output for 1 hour (for monostable mode)	Yes	Yes	Yes
WYS#0	block sending text messages to users other than the INSTALLER	Yes	No	No
WYS#1	allow sending text messages to all the users	Yes	No	No
CLIP#1	control of the executive relay through the clip allowed	Yes	No	No
CLIP#0	control of the executive relay through the clip not allowed	Yes	No	No
SMS#1	control of the executive relay through text messaging permitted	Yes	No	No
SMS#0	control of the executive relay through text messaging not permitted	Yes	No	No
INS#1	give permissions SETUP	Yes	No	No
INS#0	remove permissions SETUP	Yes	No	No
Status	read the status of the device	Yes	Yes	No

5. Technical data of BRgsm2 device

Current supply	9-35 VDC (stabilized or nonstabilized voltage) 9-30 VAC **DO NOT ATTACH DANDEROUS VOLTAGES!**
Current consumption	While device realization ca 0,15 A, in standby position on average 0,015A
Overloading relay contacts	1A/35 VDC , 0,3 A / 25 VAC, **DO NOT ATTACH DANGEROUS VOLTAGES TO THE CONTATCS RELAY (OUTPUT) !**
Configuration modes of actuator	NO/NC, bistable/monostable time of reaction regulated within 1 second – 99 hours Time entity- seconds or minutes or hours
Cellphone	Industrial cellphone, does not contain SIM-LOCK , Coadjuvancy with sim-cards of each GSM operator
GSM /UMTS antenna connector	FME male, 900/1800 Mhz
Range of operator temperatures	-10 degrees Celsius - + 50 degrees Celsius
Shell dimensions	75x 60x 40 [mm]

6. General warranty conditions

6.1. We supply 12 months warranty . The warranty comprises charge free repairs or replacement of non-repaired devices due to the factors independent of the producer.

6.2. The producer guarantees to convey warranty repairs in the shortest possible time , no longer , however, than 14 days starting from the date of delivery the device to the service point. The device should be delivered to the point -of-sales or directly to the producer.

6.3. Warranty does not apply to damages which occurred due to:

- mechanical damages

- use which is in accordance with warranty conditions or device destination

- natural damages such as flooding, chemical factors , thunders and others

- alterations or repairs not performed by the service point

6.4. Damage of warranty seal shall result in breaking warranty conditions.

6.5. Producer liability towards consumer is limited to the amount of product value and doesnot apply to damages which occurred while using it or faulty device performance.

7. Security

7.1 BRgsm2 cables must not be attached to dangerous voltage cables

7.2 While connecting BRgsm2 indirectly with voltage network (e.g. 230 VAC) only second-class isolation feeder should be used (voltage of power supply and controllable circuit should come from either a battery or safely separated voltage sources)

7.3 BRgsm2 device guarantees security for the difference of potentials between feeding and contacts of relay not higher than 60VDC

7.4 Gsm antenna socket shall be used exclusively to connect 900/1800 Mhz gsm antenna

7.5 Device secured with fuse overlay T500mA . Fuse replacement can be performed only while BRgsm2 is entirely disconnected from current feeding and circuit