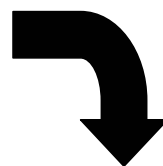
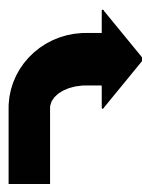




ALBANO ELETTRONICA S.r.l.

PRODUZIONE APPARECCHIATURE ELETTRONICHE PER LA SICUREZZA

AE/GSM 3 OPEN GATE



TWO CHANNELS GSM DIALLER

Remote tele-activation

- ◆ A channel for open gate command
- ◆ 512 telephone numbers that can be recorded
- ◆ A tele-activation channel with password

GSM Function

- ◆ A voice alert channel
- ◆ 6 telephone numbers that can be recorded
- ◆ 8 inputs for sending text messages (SMS)

Programming with Personal Computer

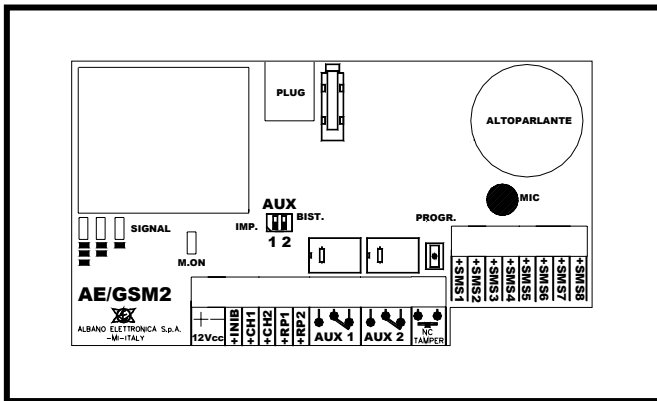
- ◆ AE/DSC-2 Program for the installation

first edition

INSTALLATION MANUAL

CE Marking in comply with the 99/5/CE standard

TELEPHONE DIALLER "OPEN GATE" WITH MODULE GSM/GPRS DUAL BAND



The telephone dialler **AE/GSM-3 OPEN GATE** uses a professional GSM/GPRS "dual band" module, and is used in those installations in which control of a remote device is required as an alternative to a remote control, magnetic badge or keypad with numerical combination, for example, to be used for opening an automatic gate at a distance. By entering the pre-set telephone number in the dialler from your own mobile 'phone, the communication is immediately cancelled to prevent payment for the call, if recognised and, at the same time, the output of the 'AUX 2' relay is activated in impulse mode, for controlling the alarm station which activates the automatic device (ex.gate, barriers or else).

The **AE/GSM-3 OPEN GATE** dialler enables a recorded voice message to be sent directly to the card for the

emergency call function and eight text messages, which can be set via PC using the special AE/DSC-2 program, to be requested at the time of purchase, to be sent; the programmed text messages can be varied at any time by sending a special text message from a remote mobile 'phone. The tele-activation function is active in the dialler. By calling the **AE/GSM-3 OPEN GATE** dialler from outside, a relay output can be controlled for the activation of auxiliary type functions such as turning on lights, activation of alarm installations, turning on boilers, etc. and with confirmation via pre-recorded voice message in real time (if the device activated permits this). When the voice alert channel (+CH1) is activated, all the telephone numbers previously recorded are called through the AE/DSC-2 programmer; for unsuccessful calls, the dialler will repeat the call a maximum of 5 times. If the number called is activated for the service, a text message will be sent. It is possible to interrupt the complete calls sequence by sending a DTMF tone during the message listening, by pressing a dialling key included from 0 to 9. The telephone dialler can be used with any Italian or foreign telephone company :TIM or VODAFONE as the dialog parameters with their bridges are already memorized inside the telephone dialler and automatically recognized. **IT'S NOT POSSIBLE TO USE SIM CARDS OF H3G AND WIND COMPANIES.**

The use of two **AE/GSM-3 OPEN GATE** becomes a radio-link without limits of distance, so that each one activates the other (see example).



TECHNICAL CHARACTERISTICS

- Power supply 12Vdc
which is compulsorily equipped by a buffer battery min. 12V 2,5Ah.
- Consumption in standby 52mA, in a peak transmission phase 1,5 A.
- GSM/GPRS DUAL BAND professional module
- 1 alarm input for vocal message
- 8 alarm inputs for SMS messages
- 1 output relay in commutation for the activation of the 'open gate' function for a maximum 512 users
- 1 output relay in commutation for tele-activation via password recognition
- 1 input per answer on activation of services by tele-activation
- Recording of a vocal message of 12 seconds for name and address of the user
- 1 vocal message of 2 seconds to define the alarm type
- 2 vocal messages of 2 seconds combined with the responder function
- Possibility of remote blocking of calls via DTMF tone
- Possibility to record 6 telephone numbers for each channel of vocal alarm
- 1 Telephone number dedicated to the credit SMS messages
- Automatic delivery of the SIM CARD residual credit at every alarm cycle with a SMS message
- Automatic delivery of the SIM CARD expiry date with a SMS message
- Identification of the successful call for the vocal calls
- 5 call attempts for the unsuccessful vocal calls
- Delivery of an SMS to the unobtainable numbers (if activated for the service)
- Possibility to change the texts of the programmed SMS from remote telephone
- Control of the signal by means of a led scale .
- Self starting and resetting of the module GSM/GPRS with the phone repeater with which it is connected.
- Programming through Personal Computer with special AE/DSC-2 kit to record the numbers to associate with the 'OPEN GATE' function of text messages and the telephone numbers to call.
- Possibility to replace the standard external antenna with another one complete with a cable of 2,5m length to improve the remote transmission with the telephone repeater. Ask the supplier for the antenna code AE/ANT-GSM.

1. CONNECTION TO THE TERMINAL STRIP

Terminal	Connection
"12Vdc"	Power supply input: from 9 to 15Vdc. Max. consumption 35 mA. Peak absorption 1,9A <u>WARNING! Ensure that the supply with which the telephone dialler is powered is supported with a buffer battery of min 12V 2,5 Ah.</u>
"+INIB"	Voltage input: +12V. Automatic reset of the undergoing calls by sending this tension to the terminal.
"+CH1"	Input for the activation of the first alarm channel. The telephone dialler is activated when the positive pole (+ 12 V) is not connected for a min. time of 500ms.
"+CH2"	<u>NOT ACTIVATED.</u>
"AUX 1"	Relay output relative to the first responder channel, free exchange contact, voltage 1A/125Vac. The commutation of this relay can be programmed in a bistable or impulsive way (see paragraph 4.2)
"+RP1"	Input for reply activation of the first channel of the responder "AUX1"; this input is associated to the vocal message NR4 (see paragraph 3.3). The vocal reply messages are activated in every mood change of this input: <ul style="list-style-type: none"> • presence of a positive tension (+12V) = activation of a vocal message No. 6 • absence of connection = activation of a vocal message No 7
"AUX 2"	Output of the impulse relay relating to the 'open gate' function; free contact in exchange, capacity 1A/125Vca.

“+RP2”	NOT ACTIVATED.
“NC TAMPER”	Output of the normally closed contact of the protection tamper of the telephone dialler (opening)
“+SMS 1.....8”	Input for SMS message activation. The telephone dialler is activated when the positive (+12V) is lacking for a minimum time of 500ms. For the working of these reset inputs see paragraph 5.

IMPORTANT! THE UNUSED INPUTS (+CH1, +CH2, +RP1, +RP2, +SMS etc.) MUST BE SHORT CIRCUITED TO THE POSITIVE SUPPLY TERMINAL!

2. PROGRAMMING OF THE TELEPHONE DIALLER

The CD-ROM with the **AE/DSC-2** program to install on a PC to be used for programming telephone numbers and texts of messages to record must be acquired with the **AE/GSM-3 OPEN GATE** dialler. Proceed as follows to program:

INSTALLATION OF THE AE/DSC-2 PROGRAMMER

The programming kit consists of a CD-ROM complete with the software program and a cable for interfacing between the dialler and a personal computer with an RS232 or USB socket (see the instructions in paragraph 2.2.1).

2.1 Installation of the software

The software on the CD-ROM is compatible with the following MICROSOFT operating systems:

- WINDOWS 95, WINDOWS 98, WINDOWS 2000, WINDOWS XP

1. Turn the PC on and close all applications.
2. Put the CD into the appropriate unit.
3. Click **Start** in the WINDOWS applications bar and then click ‘Run’. Key in: **D:\Setup**, where D is the letter designating the CD reader.
4. At this point, the guided procedure for the installation of the application in the user’s chosen destination starts.

2.2 Connecting the dialler to the PC

The management software communicates with the dialler via the serial port of the PC (COM1, COM2, COM3, COM4, etc); connection is made ensuring that the apparatus **is not powered**, using the cable supplied with the kit, putting the PLUG into the connector on the dialler (see Fig. 1) and the RS232 connector in the ‘COM’ port of the PC.

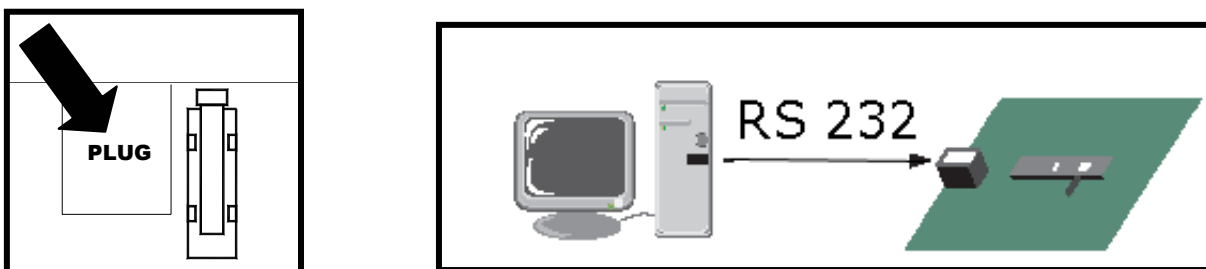


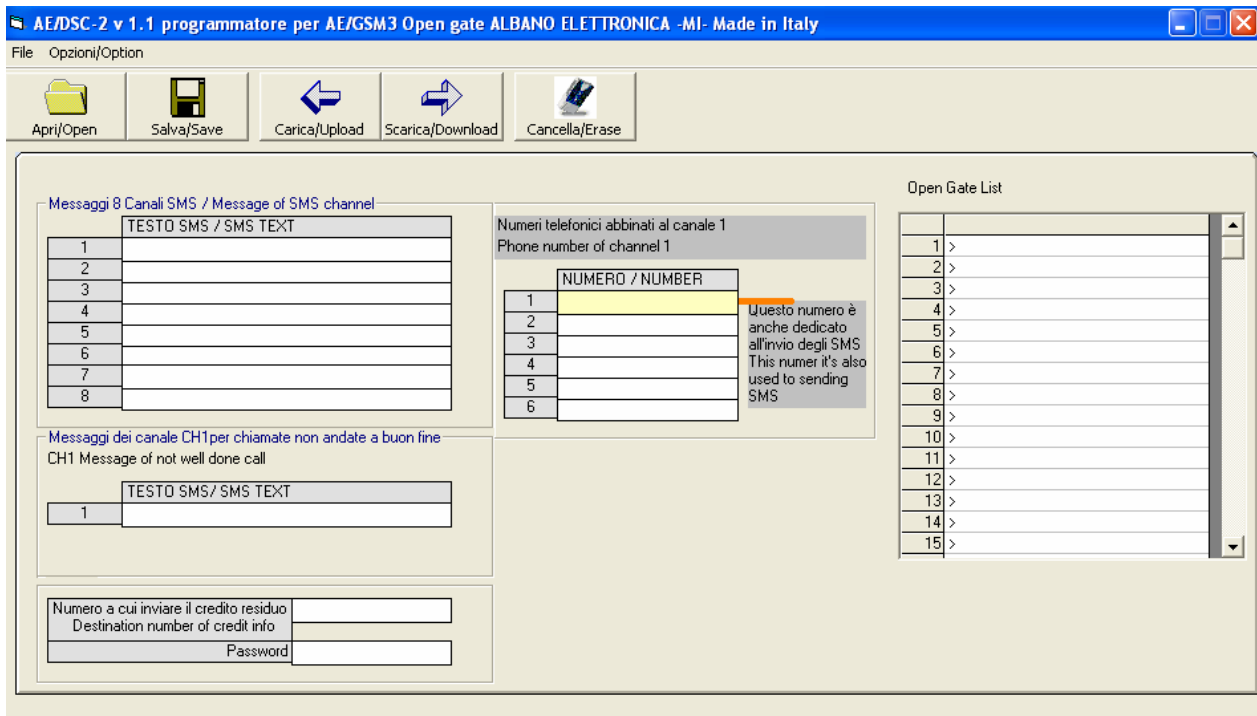
Fig. 1

2.2.1 Connection via USB socket

Buy the ‘RS232/USB adapter’ kit from any shop selling accessories for personal computers and connect it to the computer using the cable supplied with the AE/DSC-2 kit. Install the ‘driver’ of the USB port in the CD-ROM supplied with the adapter into the computer.

2.3 Programming the AE/GSM 3 OPEN GATE dialler

After installing the program and connecting the dialler to the Personal Computer, open the AE/DSC-2 file; the following programming screen will appear:



PLEASE NOTE! If the programming screen is not as shown in the diagram, vary the resolution of the monitor of the personal computer, as follows:

- Go to **START** (WINDOWS START BAR)
- Choose **CONTROL PANEL**
- Choose **SCREEN**
- Choose **SETTINGS**
- Vary the resolution of the screen setting the **1024 x 76**
- Choose **APPLY**

The screen is set for the configuration required.

The program has three management sections:

- **Menu**
- **Tool Bar**
- **Message and telephone number tables**

2.3.1 Menu




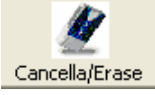
The user has two sub-menus - **File** and **Options**. The **File** menu gives access to three other commands – **‘Open’**, **‘Save’** and **‘Save as ...’** ; the first two also have two symbols on the Tool Bar. The **‘Open’** command gives access to an existing file and, on opening it, the previously saved data is uploaded into the tables. The **‘Save’** command enables the data previously entered or modified in the file with which you are working to be saved. The **‘Save as ...’** command enables the data previously entered or modified to be saved in a new file and then archived inside the Personal Computer with the name, for example, assigned to the customer for whom the dialler has been installed.

The **Options** menu enables the ‘COM’ port to be used to program the dialler to be selected with the **‘Select port’** command.

2.3.2 Tool bar

The commands for carrying out five operations are set out in the Tool Bar:

	<p>The file containing the previously saved data is uploaded from the archive of the Personal Computer with the ‘Open’ command.</p>
--	--

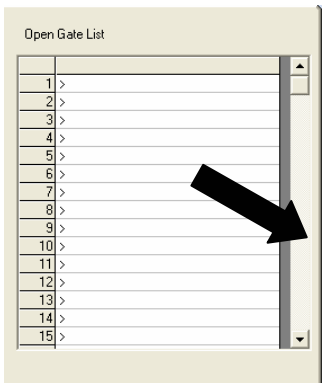
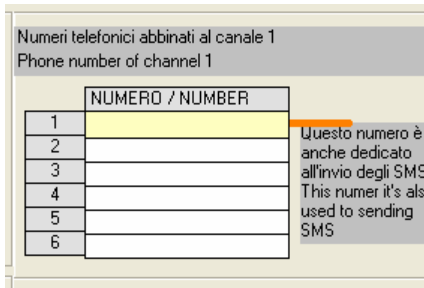
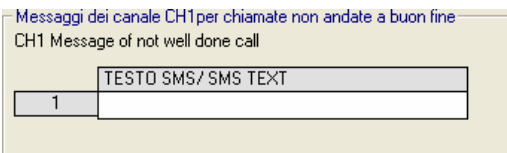
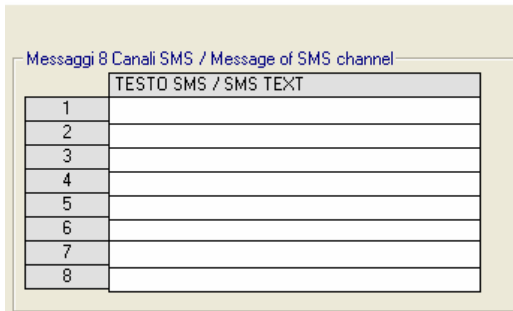
 <p>Salva/Save</p>	<p>The file with previously entered data is saved in the archive of the Personal Computer with the 'Save' command.</p>
 <p>Carica/Upload</p>	<p>The data which the program reads inside the memory of the dialler are uploaded into the tables with the 'Upload' command.</p>
 <p>Scarica/Download</p>	<p>The memory of the dialler is programmed with the data in the tables with the 'Download' command.</p>
 <p>Cancella/Erase</p>	<p>The data in the tables is cancelled, ONLY on the video with the 'Erase' command.</p>

PLEASE NOTE!

The AE/DSC-2 programmer only acts on the memory of the AE/GSM-3 dialler and not on that of the SIM CARD.

2.3.3 Message and telephone number tables

The following must be entered in the spaces on the programming screen:

<p>A. 'Open gate list', maximum 512 telephone numbers, activated for the 'open-gate' function, to record. Move the cursor right (see figure below) to scroll the whole list.</p> 	<p>B. The six telephone numbers to call using channel CH1. Maximum 22 figures. Note! Enter the telephone number which should receive the SMS shown in section D, if used, in position 1.</p> 
<p>C. The text of the SMS for unsuccessful messages, to be sent to telephones activated for the receipt of text messages (SMS) in the channel 1 list, after five attempts at calling without an answer. Maximum 31 characters.</p> 	<p>D. The text of the eight text messages. Maximum 31 characters.</p> 

- E. The number of a mobile 'phone to which the text message with the residual credit and the expiry of the SIM CARD can be sent. Maximum 17 figures.
- F. The password to use for the tele-activation function. Maximum 6 figures.

Numero a cui inviare il credito residuo Destination number of credit info	<input type="text"/>
Password	<input type="text"/>

PLEASE NOTE! Remember to key in the password to be able to use the tele-activation function!

Use the mouse to position the cursor in the box concerned and the computer keyboard to write the text and/or numbers to be recorded to complete the different parts.

2.4 Quick guide to programming the AE/GSM-3 OPEN GATE dialler

1. Connect the cable supplied to the PC and the dialler.
2. Start the program on the PC.
3. Select the COM port used.
4. Power the AE/GSM-3 dialler.
5. Key the data into the table or upload the file with the previously saved data from the archive.
6. Use the command '**Download**' to program the memory of the dialler.

3. ACTIVATION OF THE SIM CARD

The SIM CARD to be put in the dialler must have a **minimum memory of 128K** and must be either of the prepaid type or linked to a subscriber's contract with one of the operators in the state where it is used (in Italy: TIM and VODAFONE). **The SIM CARD cannot be used with the operators 'H3G' and WIND.** It is important that the following operations are carried out before putting the SIM CARD in the dialler:

1. Insert the SIM CARD in whichever GSM mobile phone (make reference to its instruction manual)
2. Switch the telephone on
3. Digit the PIN CODE of the SIM CARD (the number is reported on the packaging of the SIM containing the telephone number)
4. Enter the telephone menu and disable the PIN code finally. If this operation is not carried out the proper working of the telephone dialler is compromised.
5. Check the SIM CARD working and start its working, by making a test phone call.
6. Cancel all the telephone numbers and the messages that are stored on the SIM

3.1 Registration of the SIM CARD

Input the SIM CARD in the GSM module and power the telephonic dialler, check that the led "**M.ON**" turns on (see draw 2). The telephonic dialler **AE/GSM-3 OPEN GATE** activates automatically the registration of the radio link with the selected telephonic company, and in the research phase, some "beep" signals are sent by the speakerphone. When the registration is completed three "beep" signals are emitted in succession for confirmation. Wait for the lighting of the led "**SIGNAL**" (see draw3) to display the signal present in the position selected for the installation of the telephone dialler.

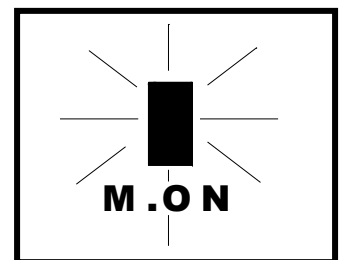


Fig. 2

Three leds lighted up (green, yellow, red) = max. signal, optimal condition.

Two leds lighted up (yellow, red) = sufficient signal, normal condition

One led (red) lighted = min. signal, insufficient condition

After the lightening, the signal test is carried out automatically every 20 seconds.

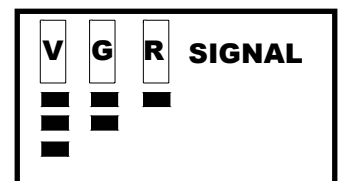


Fig. 3

WARNING!

If the signal is not sufficient, try to find a new position for the telephone dialler or ask for an external additional antenna mod. AE/ANT-GSM.

IMPORTANT!

The 12V power supply **MUST** be disconnected before removing the SIM CARD from the dialler. Failure to respect this procedure will prevent the dialler from working!

To restore correct operation, disconnect all the power supply terminals (+/-12V, +CH1, +CH2, +INIBIT, +SMS, etc.), insert the SIM CARD and then reconnect the power supply terminals.

3.2 Vocal messages storage

Once the installation of the telephone dialler has been completed, start the vocal message storage. Position at about 10 cm from the receiver present on the circuit (see draw.4), and start the message recording.

Keep the button "PRG" pushed (see draw.5), until when the loudspeaker issues two "beep" tones, and the green and the red lights lighten. The yellow light starts blinking, indicating the time available to carry out the message registration. A beep signal and the flashing stop of the yellow led indicates the elapsing time of the registration time. Push again the "PRG" button to start a new registration.

Repeat this procedure for all the six messages to record.

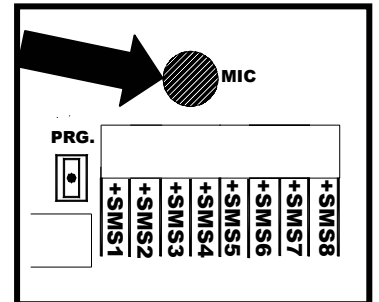


Fig. 4

The messages are divided in the following way:

- First message : 12 seconds duration. Recording of the name and address of the user.

Ex. "Automatic alarm system of Mr. Dante, Via Petrarca nr.6 Milano."

- Second message : 2 seconds duration, linked to channel 1. Record the reason of call.

Ex. "alarm activated"

- Third message : 2 seconds duration. Do not make any recording.

- Fourth message : 2 seconds duration, linked to channel 1 of the responder function (Relay AUX 1). Record the operation mood to activate.

Ex. "Alarm system"

- Fifth message : 2 seconds duration. Do not make any recording.

- Sixth message : 2 seconds duration, for the output status signalling. This message is sent if there is positive voltage (+12V) on the '+RP1' input. Record the condition to be communicated.

E.g.: "Entered"

- **Seventh message 2 seconds long, to indicate the status of the outputs.** This message is sent if there is no positive voltage (+12V) on the '+RP1' input. Record the condition to be communicated.

E.g.: "Not entered"

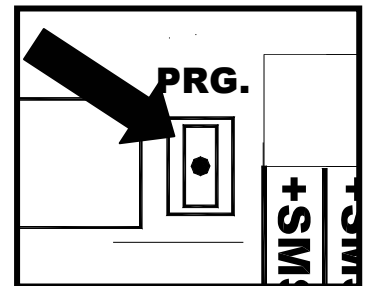


Fig. 5

When the recording is completed push the button "PRG" again and the three led "SIGNAL" turn off and all messages can be automatically listened again.

IMPORTANT!

The memory in which the voice messages have been inputted is not volatile; for this reason they are memorized also if the AE/GSM-3 OPEN GATE telephone dialler is not powered.

3.3 Vocal messages deleting

In case of mistakes in the recording phase repeat what indicated at paragraph 3.6.

4. CHANNELS ACTIVATION

4.1 Activation of the 'OPEN GATE' function

Carry out the following procedure to activate the 'OPEN GATE' function of the dialler:

- Call the telephone number of the SIM CARD in the dialler from your own mobile 'phone.

IMPORTANT! Ensure that the function 'Hide Caller ID' is deactivated in your own telephone (see instructions with the telephone used)!

- If the number calling is recorded among the 512 numbers of the '**Open gate list**', and is recognised by the dialler, the 'AUX2' output will be activated for about 2 seconds and, at the same time, the communication is closed without any cost for the call.
- If the number calling is not among those recorded, even if sent with 'Hide Caller ID', the dialler will activate the responder function and, if the password is sent and recognised, AUX1 output will be activated (see paragraph 4.3)

4.2 Activation of channel CH1 (voice call)

The telephone dialler *AE/GSM-3 OPEN GATE* activates the call cycle, for lack of positive electricity on terminals "CH1" and "CH2" for a minimum time of 500 milliseconds.

After the activation of the selected channel, the telephone dialler activates the following procedure:

1. Dialling of the programmed number on the activated channel
2. To confirm that the line is engaged, the telephone dialler emits three "beep" tones by the loudspeaker:
 - if the reference number is engaged or not available the following number is dialled
 - If the reference number is free, the telephone dialler makes max 8 rings, in case of reply in this interval time after testing the real vocal reply, it sends the message. In case of no reply, the following number is dialled.
 - If the telephone call is successful, the loudspeaker of the telephone dialler issues three "beep" tones:
 - In case of reply, the reference number will be no longer called.
3. The message will be sent for the programmed time duration. After this message, it will be possible to prevent the telephone dialler from making the following calls by sending a TTMF tone, pushing a key button from 0 to 9, the telephone dialler stops the calls succession. N.B. The code must be dialled after listening 2 "beep" tones.
4. Completes the calling to all the programmed numbers
5. Recalls only the reference numbers that have given no reply in the previous cycle making other 5 call attempts.
6. Send a text message (SMS) with the text entered during the programming stage with the AE/DSC-2 program to users not reached, **see paragraph 2.3 section C**.
N.B. The message is only sent to telephone numbers activated for the receipt of text messages (SMS).
7. Stops the call cycle.
8. When the call cycle is completed, if a rechargeable card has been used, the telephone dialler sends automatically, a call to the SIM CARD telephone company to ask for the residual credit, and sends it in a SMS format to the telephone number memorized with the AE/DSC-2 program, **see paragraph 2.3 section E**.
9. The rest condition is restored.

4.3 Activation of channel AUX1 (tele-activation function)

The telephone dialler *AE/GSM-3 OPEN GATE* is preset for the responder function; by means of the password code recorded using the AE/DSC-2 programmer (see paragraph 2.3 section F), the user can phone from outside, digit the password code, and if the code is accepted, have the possibility to activate the relay "AUX1". This function can be used for example for the remote controlling of the alarm system, the partition of some zones, the starting of the heating system, the irrigation system etc., and have the confirmation of the activation/deactivation in real time (if the activated device enables this operation)..

The relay can be programmed to work in an impulsive as well as bistable way, by means of a programming carried out by means of a dip-switch "AUX", (see draw.6). Put the dip-switch in an upward position to have the bistable function, set it in downward position to obtain the impulsive operation mode.

PLEASE NOTE! The position 2 dip-switch is not activated for the operation.

To get in touch with the telephone dialler from outside, the following actions are required:

- Using a DTMF tone telephone, call the telephonic number of the telephone dialler.
- Wait after 2 call rings, that the telephone dialler engages the line.
- Digit the password code followed by the "#" key
- If the code is accepted, the telephone dialler sends a confirmation tone.
- Push dialling key 1 to activate channel "AUX1". the telephone dialler answers with the recorded message at position 4 for the channel "AUX1" and commutes the relative relay
- If the activated device enables the receiving of a signal for the mode shift on terminal "+RP1", it is possible to listen to the messages recorded in position 6 and 7 (see paragraph 3.2), that confirm the activation or deactivation of the activated device.
- Every time the key 1 is activated there is a change of mode of the relays "AUX1".

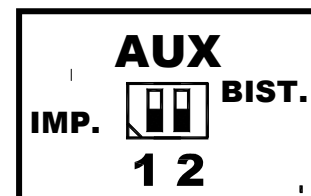


Fig. 6

Important note: the keys must always be pressed after the message listening, namely in the pause periods.

- To close the connection, press "9" for some seconds.

ATTENTION! In case you use the tele-activation for connecting or disconnecting an alarm system, don't link "+INIBIT" terminal between telephone dialler and alarm station!

PLEASE NOTE! If the telephone number used for tele-activation is in the list of telephone numbers entered for the 'Open gate' function, set the Hide Caller ID mode, i.e. without identification, in your own telephone! As a result:

- **If the number is sent in Hide Caller ID mode (without identification) = tele-activation function;**
- **If the number is sent 'visible' = Open gate function.**

5. ACTIVATION OF SMS MESSAGES

The telephone dialler AE/GSM-3 OPEN GATE permits to send 8 messages in SMS format to the telephonic number of a mobile phone, included in position 1 of the table provided for in the AE/DSC-2 programmer (see paragraph 2.3 section B).

The activation of the message is obtained by turning off the tension at +12 V on terminal "+SMS 1...8".

When an SMS input is activated, the AE/GSM-3 OPEN GATE dialler first emits a 'beep' to confirm activation then, during the transmission, it emits another two beeps and, another one on closure to indicate that the message has been sent.

WARNING!

Do not send other messages until the telephone dialler sends the last "beep" signal! On the contrary the telephone dialler will not send the activated messages afterwards.

5.1 Change of SMS texts by means of remote control

The AE/GSM-3 OPEN GATE telephone dialler enables the texts of 8 messages in SMS format to be varied using the remote control sent from a telephone activated for the transmission of text messages (SMS). Proceed as follows to programme the new texts replacing the pre-set ones:

- Using the AE/DSC-2 programmer, ensure that telephone numbers from the address book to call the number which should receive the text messages (SMS) have been keyed into position 1 (see paragraph 2.3 section B).
- Using the AE/DSC-2 programmer, ensure that a number code has been keyed into the 'PASSWORD' position (e.g., 1234) (see paragraph 2.3 section F).

The text of the SMS message to send by the mobile telephone is composed in this way:

(password code) (spacing) 2 (spacing)(index no.)(spacing)(text of new SMS)(spacing) F

where:

- ♦ **Password code** = identification code
- ♦ **2** = compulsory fixed number
- ♦ **Index number** = number corresponding to the position of the SMS text to change (see table)
- ♦ **Linked message** = new SMS text. The sentence can be numerical or alphanumerical, on condition that it's written without intermediate spacings. For example if you want to write "GAS ALARM" you should write "GASALARM".
- ♦ **F** = compulsory letter for closing the SMS message.

MESSAGE	KIND OF MESSAGE
1234 2 N gas alarm F	Literal message
1234 2 N ab372ch4 F	Alphanumerical message
1234 2 N 37245681 F	Numerical message

For replacing the message, send the new modified SMS message to the SIMCARD telephone number of AE/GSM-3 OPEN GATE.

Examples

You'll find here-below some examples of change of the message programmed in position of channel 1 of the SMS inputs of AE/GSM-3 Open Gate telephone dialler.

SUMMARY TABLE

User password

--	--	--	--	--	--	--	--

First message or General message (12 seconds long)

--

<u>Second message. Associated with Channel 1</u>	<u>Third message.</u> NOT USED. DO NOT RECORD
<u>Fourth message.</u> <u>Associated with the RP1 responder function</u>	<u>Fifth message.</u> NOT USED. DO NOT RECORD
<u>Sixth message. Associated to the 1st answer of the function of reply device.</u>	<u>Seventh message. Associated to the 2nd answer of the function of reply device.</u>

CHANNEL 1 "CH1"

Pos	Phone number	Name
1		
2		
3		
4		
5		
6		

TELEPHONE DIALLER AE/GSM -3 OPEN GATE
--

Manufactured by: ALBANO ELETTRONICA - Milano - ITALY

Installed by: (stamp and signature)

Date: