GSM DIALING MODULE FOR REMOTE CONTROL AND EMERGENCY COMMUNICATION

GSM SMART DIALER modules are widely used in variety of applications, where remote control and management is required. They are available in two different sets with same functionality and setup:

SMART DIALER set – suitable for home or other automation, for monitoring and security in home and office. It can be used to remote control any electric appliances like air conditioners, heaters, smart home systems and many more.

SMART DIALER VOICE set – suitable for any emergency communication. Especially designed for public lifts and elevators when emergency technical service or support is necessary. It can be used for remotely restart the elevator's main controller.

These modules can operate via GSM/GPRS networks only with SIM cards from any mobile operator. They will trigger their outputs based on the predefined settings that can be an incoming voice call, SMS message or both of them.

They can also initiate a voice call, send an SMS to predefined number or trigger an output after any of the inputs is set. Many other combinations also can be setup, depends on the user's preferences.

These modules can connect to the ***SG Cloud*** system. Like this, they can use all the benefits that this system provides for remote control and monitoring via smartphone and PC:

- Remote monitoring of all inputs, outputs and power supplies;
- Remote control of all outputs;
- Push notifications for predefined activities;
- Remote setup of all parameters;
- Remote sharing the control of the modules with other users of *SG Cloud*;

Device description:

- Can work with GSM/GPRS network of any mobile operator.
- Very quick and simplified setup via PC with free software application.
- Very quick and simplified setup via free smartphone application.
- Ready to use after a single SMS setup also.
- Supports **500** phone numbers for remote control and voice communication.
- Supports **5 main** phone numbers which can be dialed and notified with SMS for events.
- Internal algorithms for automatic redialing of all 5 predefined main numbers.
- Two digital inputs are available and when triggered they can initiate a voice call, send SMS, activate an output or all of the above.
- Separate triggering filter can be set for each input.
- Any alarm system can be connect to dialer's inputs, so the module can notify with voice call or SMS in case of alarms or troubles.
- Two programmable outputs are available at user control. These outputs can be set for different mode operation: can be trigger with SMS, with voice call, after an input set or all of the above. Suitable for remote control of external electric devices.
- By connecting one of the outputs to a LED indicator, the status of a voice call can be visualize – dialing, ringing and active call.
- In case of power supply failure, each output keeps its last state and resumes it after power restore.
- SMS message can be send to predefined numbers each time an output is activate. The message can be user customized.
- A dedicated 12VDC power output is available;
- Supports two-way audio communication when connecting additional microphone and speaker.
- Supports remote volume control and microphone adjustment in real time by using DTMF in active voice call.
- Full device state request via SMS.
- GSM signal level tracking for choosing best antenna position.
- SMS notification for power supply state.

Both SMART DIALER and SMART DIALER VOICE share same functionality and setup. The difference is in the VOICE set, which has in addition:

- Internal LiION battery with charger, which allows it to work after power failure up to 12 hours in standby mode and up to 60 minutes in active voice call.
- The dedicated 12VDC power output will continue to work because of the internal battery.
- Two-way audio communication is directly available in this set because of the integrated speaker and the microphone provided.
- With its compact size it is easy to install and it makes it suitable for all kind of lifts and elevators.
- This device has been designed and tested in accordance with the requirements for emergency remote alarm systems for passenger lifts and elevators, according to standard **EN81-28:2022**. It has all the necessary certifications issued by a Notified Bodies (for Technical Conformity Assessment).

Quick start installation Smart Dialer set

All settings can be made with *Smart Dialer Service Tool* via PC and a standard micro USB cable. *Smart Dialer Service Tool* is a completely free software-programming tool and is available for download from our website:

www.smart-hitech.eu

Further changes to the settings can be made via smartphone application or web browser through the *Cloud* system. In order to do this, the connection to the *Cloud* has to be establish first.

This device uses a SIM card from a mobile operator. This card has to be with allowed voice and SMS services. It has to be with mobile internet included in order to connect to the *Cloud* system.

Except the upper methods, manual setup via SMS commands sent to the SIM card inserted into the module is also available. Full description of all SMS commands can be find further in this complete user manual. We will use some basic SMS setup in this quick installation guide. It is very useful in case we do not have a PC or the inserted SIM card does not support mobile data.

To send a correct setup SMS, the following order must be keep:

t1,+44xxxxxxxxx or **t1,0044xxxxxxxxx**

Where the first part is the country code and **xxx…** are the digits of the phone number without the leading zeros.

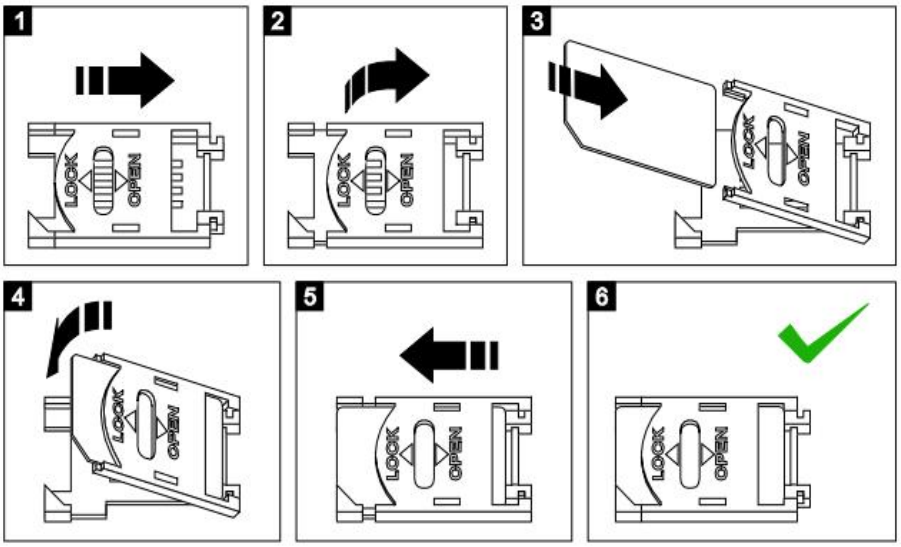
Example: a phone number 0888 123456 shall be send in the SMS body as:

t1,+359888123456 or **t1,00359888123456**

Installation steps

1. Open the device box and insert the SIM card into the holder as shown in the picture below. Make sure the **PIN code was disable** before that. The SIM card have to be with allowed voice and SMS services. It has to be with mobile internet included in order to connect to the *Cloud* system.
2. Connect the GSM antenna to the module.
3. Power up the module from a regulated 12VDC/24VDC power supply or other suitable power source.
4. After powering on the module, it will need up to 1 minute to connect to GSM network. The connection is successful after blinking of module's internal LED is change from fast to slow.
5. To program the **main** (service) number, following SMS have to be sent to the module: **t1,+44xxxxxxxxx** (where the first part is the country code and the

xxx... are the digits of the main service number). **For example:** a phone number 0888 123456 shall be sent in SMS as **t1,+44888123456**



6. If the module receives the sent SMS successfully, it will reply you back with confirmation.
7. In order to make a full run test, push and hold the **TEST** button for 3 seconds or trigger any of the inputs to a signal with the correct polarity. The LED indicator will start to blink and the module will start to dial the main number. The test will complete successfully when a call to this number is made.
8. To setup the triggering of output 1 after a phone call, the following SMS have to be sent: **call,out,t1** To test this functionality, make a call to the inserted SIM card. The output will change its state and will activate an external relay, if it is connected.
9. In order to enable the module's connection to the *Cloud* system, you have to enable the *IoT Cloud* checkbox in the ***Smart Dialer Service Tool*** via PC. There are settings for *APN*, *Username* and *Password* that have to be filled in also. The mobile operator for the used SIM card provides these settings.

   If you have no access to a PC, the following SMS can be send to enable the cloud connection:

   cloud,on,APN,USER,PASSWORD

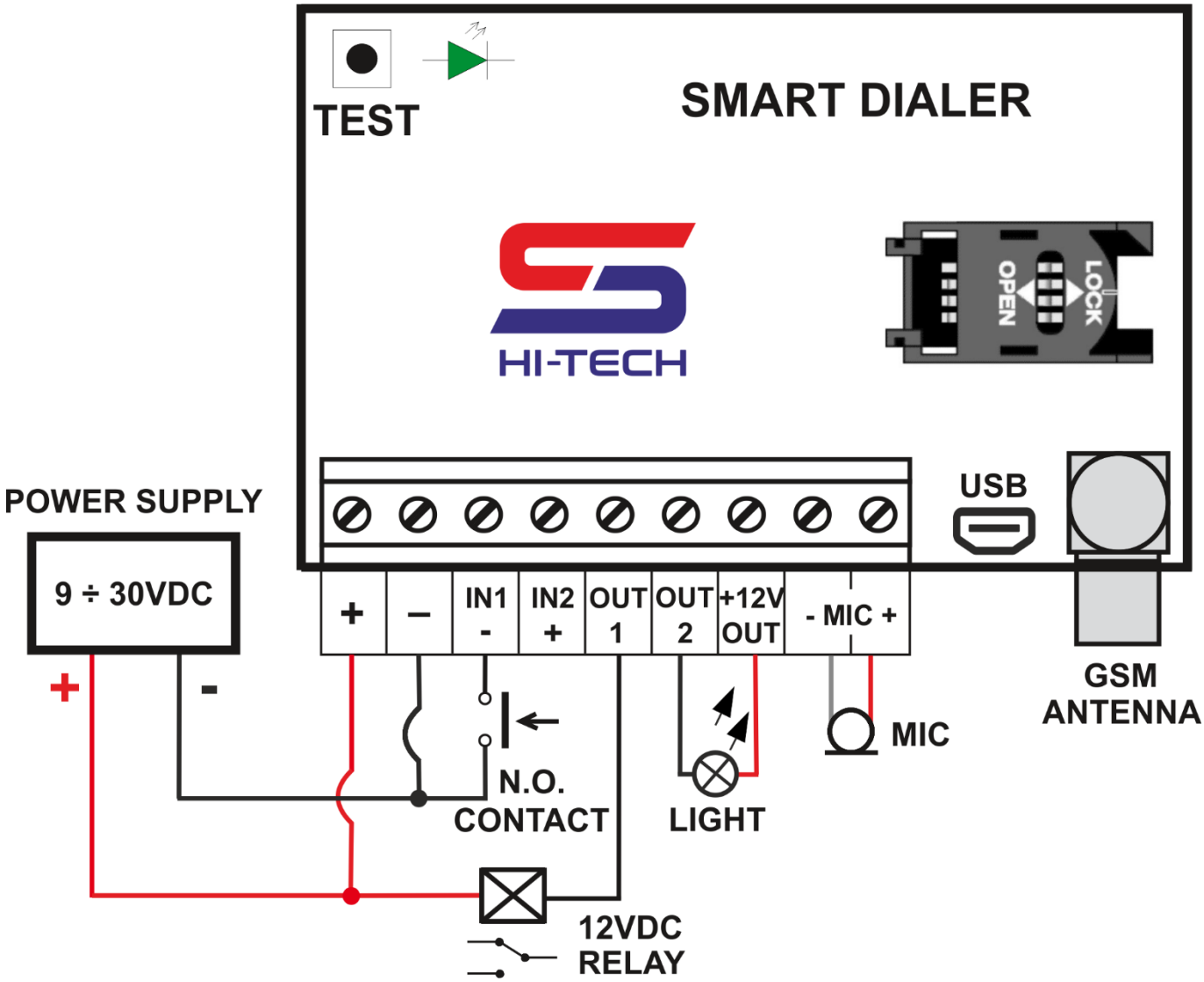
10. Close the device box and mount it on a suitable place.

IMPORTANT:

If the SIM card inserted is not allow to send SMS, then you will not be able to receive any replies from the module. As a backup option, the SMS delivery notification can be use. It has to be allow in the sending phone before that.

If the main number has not been send correctly or is not available any more, the only way to change or remove it is to reset the module to the factory settings.

TYPICAL WIRING DIAGRAM – SMART DIALER



Technical capabilities:

- Input 1 is negative triggering.
- Input 2 is positive triggering.
- Outputs 1 and 2 are open collector type.
- All inputs and outputs can operate with voltages up to the power supply.
- The power output +12VDC can supply up to 60mA. It has built-in short circuit protection.

In all installation, it is mandatory to keep all the safety precautions.

Quick start installation Smart Dialer VOICE set according to EN81-28

All settings according to the EN81-28 standard can ONLY be made with the *Smart Dialer Service Tool* via PC and a standard micro USB cable. *Smart Dialer Service Tool* is a completely free software-programming tool and is available for download from our website:

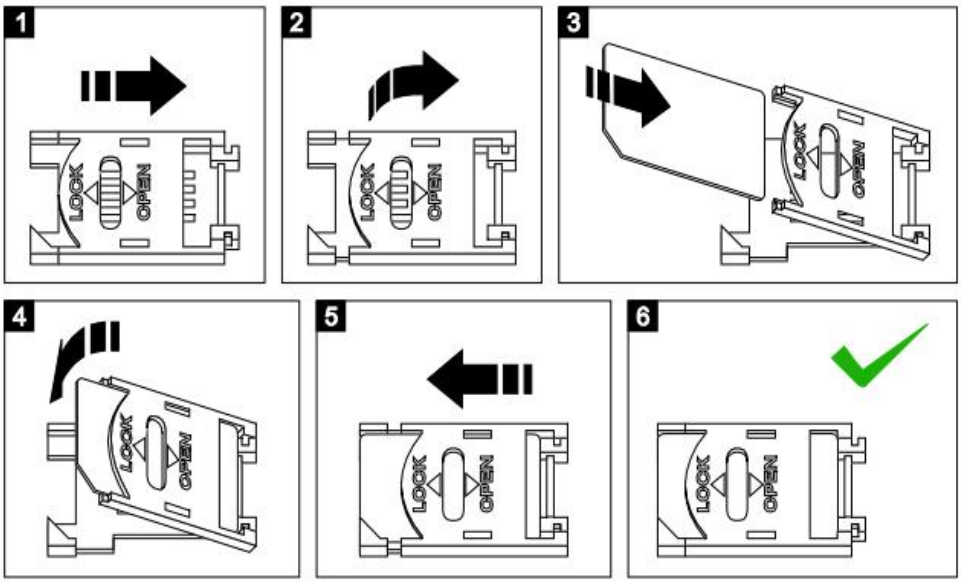
www.smart-hitech.eu

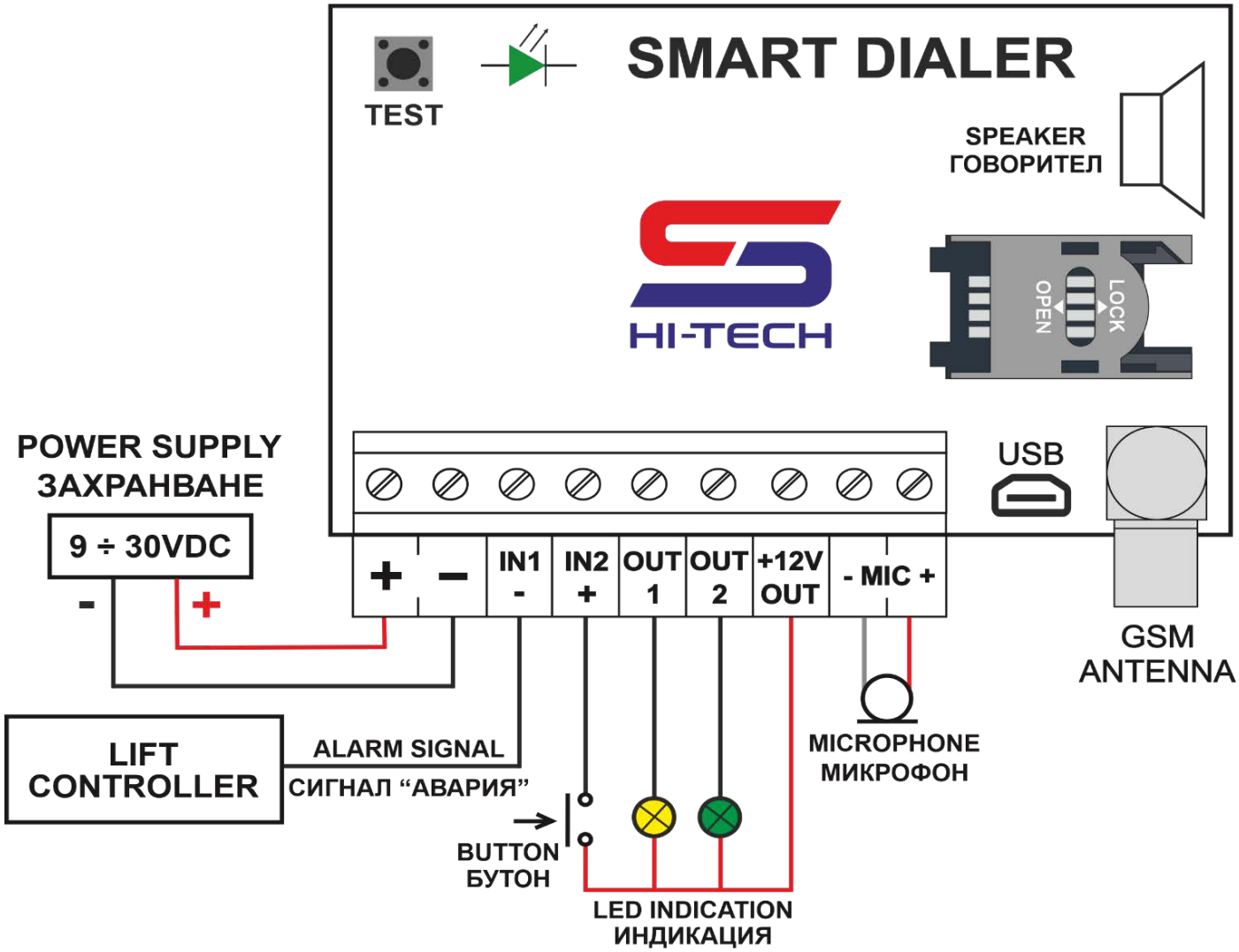
Further changes to the settings can be made via smartphone application or web browser through the *Cloud* system. In order to do this, the connection to the *Cloud* has to be establish first.

This device uses a SIM card from a mobile operator. This card has to be with allowed voice and SMS services. It has to be with mobile internet included in order to connect to the *Cloud* system.

Installation steps

1. Connect the device to a PC using the USB cable. After connecting it to the service tool, the phone numbers of the rescue service have to be set first – *T1, t2, t3* and so on.
2. From the "*Patterns*" button, select the "*EN81-28*" option. Thus, all settings related to the device operation according to lift standard EN81-28 are filled in automatically.
3. Finally, the "*Upload to device*" button must be set in order to save the changes into device.
4. In order to control the module remotely, the connection to the *Cloud* system have to enabled via "*IoT Cloud*" checkbox in the *Smart Dialer Service Tool*. The settings for the mobile network - *APN*, *Username* and *Password*, provided by the mobile operator, have to be set also.
5. Open the device box and insert the SIM card into the holder as shown in the picture below. Make sure the **PIN code was disable** before that.
6. Connect the GSM antenna to the module.
7. Inside the lift car, install a push button (*with N.O. contact*) for triggering an emergency call and yellow and green LEDs for alarm information.
8. Wire the button between terminals **IN2** and **+12V OUT**.
9. Terminal **IN1** connect to the alarm signal from the lift controller (*or the sensors for unlocking zone and landing doors*).





TYPICAL WIRING DIAGRAM – SMART DIALER VOICE EN81-28

10. Connect the yellow LED indicator to terminals **OUT1** and **+12V OUT**. Connect the green LED to terminals **OUT2** and **+12V OUT**. The indicators have to be rate for 12VDC or have to be terminate with resistors in series. Keep in mind LEDs polarity.
11. Connect the microphone to the **MIC-** and **MIC+** terminals. The red wire has to be connect to **MIC+** terminal.
12. Power up the module from a regulated 12VDC/24VDC power supply or other suitable power source.
13. After powering on the module, it will need up to 1 minute to connect to GSM network. The connection is successful after blinking of module's internal LED is change from fast to slow.
14. In order to make a full run test, press and hold the emergency push button for 30 seconds. The green LED indicator will start to blink and the module will start to dial the main rescue number. The test will complete successfully when a call to this number is made.
15. Close the device box and mount it on a suitable place.

General information about EN81-28:

As this device is certified for use in passenger lifts according to the standard **EN81-28**, it has to meet its requirements. Some of these requirements are:

- The alarm equipment shall be installed at places only accessible to authorized persons. Some suitable places for a device installation are in or above the car's operating panel.

- The emergency push button and the LED indicators shall be mounted on the front panel. For a better acoustics, it is recommended to have some openings in front of the microphone and the speaker.

- In case of alarm, this device has to allow connection to the rescue service and provide 2-way voice communication between the trapped user and the rescue team.

- Initiation of the 2-way communication shall be allowed only after an alarm filtering. In our case it is provided with two level filtration - after alarm signal enable followed by pressing the push button for a minimum time of 3 seconds.

- After the voice communication is running, the passenger is not allowed to terminate it. It can be done only by the rescue service center. But it can be triggered by the user as long as the conditions exist for it (having an active alarm).

- The emergency system have to be equipped with audible and visual signaling for the start and end of an alarm.

- In order to allow manual and service testing, the filtering algorithm can be bypassed by pressing the push button for 30 seconds.

- The emergency system has to be fully functional in case of power supply failure. It has to provide 1 hour of function including 15 minutes voice communication.

- To have an automatic periodic test report of the system (at least every 72 hours).

The signal for alarm enable event can be taken from the lift controller or from the sensors for a moving car and landing doors. This signal is connected to input ***IN1*** of the module and gives permission to use the emergency call button connected to input ***IN2***. When the alarm signal appears, an audible alarm will sound from the speaker and a yellow LED indication will light (from output ***OUT1***). Pressing and holding the emergency push button for 3 seconds initiates a voice call to the numbers of the rescue service. The alarm sound will stop. The green LED indication (from output ***OUT2***) will start. When the operator from the rescue service center answer the call, the 2-way voice communication will takes place. When the voice call ends, the green light goes out. With the lift fault removed, the end of alarm appears. The corresponding signal on input ***IN1*** is removed and the yellow light also stops.

LED INDICATIONS	**OFF**	**ON**	**BLINK**
	Alarm OFF	Alarm ON	X
	Voice OFF	Voice ON	Dialing

SOUND ALARM	**OFF**	**ON**	**OFF**
	Alarm OFF	Alarm ON	Voice ON

Equipment installation must be carried out by a qualified technician, following all technical and electrical precautions. In case of not following the technical requirements, the manufacturer is not responsible for any property or physical damages.

ADVANCED SETTINGS

All settings can be made with *Smart Dialer Service Tool* via PC and a standard micro USB cable. *Smart Dialer Service Tool* is a completely free software-programming tool and is available for download from our website:

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Another way to make all the settings is via smartphone application or web browser through the *Cloud* system. In order to do this, the connection to *SG Cloud* has to be establish first.

Except the upper methods, the manual setup via SMS commands to the SIM card inserted into the module is also available. Full description of all these SMS commands will be describe in this document.

General description

Up to 500 phone numbers can be stored in the module. They can control its outputs remotely with voice calls to the SIM card inserted or make a two-way voice call. From these 500 phone numbers, only the first **5** (named as t1, t2, t3, t4, t5) can be dialed or notified by SMS for a predefined event. The phone number entered on the first position (**t1**), is considered as the administrative (or service) one. A setting SMS for **add**, **change** or **remove** any of the other 499 numbers can be send by him only.

With these first 5 phone numbers the module can make two way communication with voice calls and SMS. The voice calls can be with one or two way audio depending on the connected microphone and speaker. SMS notification can be done after an input or output is triggered, or regularly with current module status.

Calling any of the first 5 phone numbers can be done either by triggering one of the inputs or by pressing the built-in **TEST** button (*will call only t1*). The input triggering time can be setup, the factory settings are *1 second* for Input 1 and *3 seconds* for Input 2. Call order starts always with the first number (*t1*). If any of the calling numbers does not answer within 20 seconds, the internal algorithm will proceeds to call the next one in the list. Call redials can be set if all calls are unsuccessful, the factory settings are 2 redials. A call, less than 3 seconds will be repeated. A call more than 3 seconds will end the redial algorithm. During a call, the speaker volume and the microphone sensitivity can be adjust via DTMF codes from the caller's telephone. This is done by pressing the keypad numbers - **1** (Down) and **3** (Up) for the microphone and **7** (Down) and **9** (Up) for the speaker. Pressing the keypad number **5** during a call will activate output 1 (OUT1) for 5 seconds. Various type of devices can be control remotely if an external relay is connect to this output – water pumps and heaters, lighting, air conditioning, etc.

While the power supply of the module is designed to have a wide input range, to control external loads with conventional 12V relays, a dedicated 12VDC output is available. From this power can be supplied an external LED indicators and relays.

When internal battery is available (VOICE set), this 12VDC power output will continue to work even if the main power is off. This fact must be take into account, because it will draw the battery quicker than normally.

All outputs are open collector type and connect the loads to ground. Working mode for Output 2 can be change from a standard output to an indicator control output. Its factory set is indicator mode (LED) and is use to visualize the call status via connected LED indicator. It will light constantly when an input is trigger or the TEST button is pressed. Starting the call to a phone number from the list, will start blinking the LED and will switch to constant light again when the call is answer.

SMS COMMAND LIST

- Only the main number (the administrative one ***t1***) can set or change a setting via SMS.
- All SMS commands must be in English and are not case sensitive.
- The phone numbers have to be set in one of the following formats: +44… or 0044…

1. Phone numbers setup

1.1. Main phone number setup

To setup the main number in a factory reset module, a single SMS with the following text have to be send to the SIM card inserted: **t1,+44xxxxxxxxx** , where xxxxxxxxx is the main number digits

Command	**t1,+44xxxxxxxxx**
Example	*t1,+44123456789*
Answer	*Dialer 1. t1 is set successfully.*
Description	Set or change the main phone number.

In order to change already set **t1** number, an SMS command with the new phone number have to be send. This SMS have to be send from the old (already set) number.

If the main phone number has not been send correctly or is not available any more, the only way to change or remove it is to reset the module to the factory settings.

1.2. Additional phone numbers setup

Only the main number can add or change the additional phone numbers. The setup SMS commands are:

Command	**t2,+44xxxxxxxxx** **t3,+44xxxxxxxxx** **t4,+44xxxxxxxxx** **t5,+44xxxxxxxxx**

Example	*t2,+44123123123*
Answer	*Dialer 1. t2 is set successfully.*
Description	Set or change the specified additional phone number

To confirm the successful operation, the module will return an SMS to the specified additional number.

To change an additional phone number, the same SMS command with the new number have to be send. All settings from the old number will transfer to the new one.

The rest of the phone numbers (from t6 to t500) can be set with or without specifying the number position.

To set a phone number with specifying the position is as described so far.

Command	**t300,+44xxxxxxxxx**
Example	*t300,+44123123123*
Answer	*Dialer 1. t300 is set successfully.*

To set a phone number without specifying its position – the module will save it at the first available position. If there is no empty place, an error message will be send.

Command	**t,+44xxxxxxxxx**
Example	*t,+44123123123*
Answer	*Dialer 1. t10 is set successfully.* – The phone number was saved on the first available position, which in this case is t10.

REMINDER: *All additional phone numbers from* ***t6*** *to* ***t500*** *cannot be dial from the module and will not receive SMS notification for any change in inputs and outputs.*

1.3. Removing additional number

Command	**t2,del** **t3,del** **t4,del** **t5,del** **t100,del**
Answer	*Dialer 1. The command executed successfully.*
Description	Remove the specified additional number from the memory.

Removing a phone number will remove all its settings also. If we want to set a phone number to this position again, all connected parameters have to be set also.

1.4. Requesting numbers from t1 to t5

Command	**t?**
Description	Requests all phone numbers from t1 to t5. Unused positions are display with blank fields.

Answer	*Dialer 1. t1=+44123456789, t2=+44123456789, t3=+44123456789, t4=, t5=*

1.5. Requesting numbers from t6 to t500

Command	**t?,x**
Description	Requests the phone number at position **X**, where **X** is a number from 6 to 500.
Example	*t?,500*
Answer	*Dialer 1. t500=+44123456789*

2. Incoming call scenarios

How the module response to an incoming call from an authorized number can be set up. ***The factory settings are answering to calls from the first 5 numbers and triggering OUT1 if the calls are from the rest 495 numbers.*** Other possible options are rejecting the call, triggering one of the outputs or both.

Output 2 will work only if it is set as general output – Trigger and Pulse modes.

2.1. Incoming call scenarios for numbers t1 to t5

Command	**call,voice,t1,t2,t3,t4,t5**
Description	Sets the module to answer a call from the specified numbers. **This is the default setting after factory reset.**
Example	*call,voice,t1,t2* Will answer to calls from t1 and t2.
Command	**call,voice?**
Description	Requests the settings entered with **call,voice,t1,t2,t3,t4,t5**
Example	*call,voice?* Will return an SMS with *Dialer1. call,voice,t1,t2,*

Command	**call,out1,t1,t2,t3,t4,t5**
Description	Sets output 1 to activate after a call from the specified numbers.
Example	*call,out1,t1,t2,t3* Will activate the output 1 after a call from t1, t2 or t3.
Command	**call,out1?**
Description	Requests the settings entered with **call,out1,t1,t2,t3,t4,t5**
Example	*call,out1?* Will return an SMS with *Dialer 1. call,out1,t1,t2,t3,*

Command	**call,voice+out1,t1,t2,t3,t4,t5**

Description	Sets the module to answer a call from the specified numbers and to activate output 1.
Example	*call,voice+out1,t1* Will answer to call from t1 and will activate output 1.
Command	**call,voice+out1?**
Description	Requests the settings entered with **call,voice+out1,t1,t2,t3,t4,t5**
Example	*call,voice+out1?* Will return an SMS with *Dialer 1. call,voice+out1,t1,*

Command	**call,out2,t1,t2,t3,t4,t5**
Description	Sets output 2 to activate after a call from the specified numbers.
Example	*call,out2,t1,t2,t3* Will activate the output 2 after a call from t1, t2 or t3.
Command	**call,out2?**
Description	Requests the settings entered with **call,out2,t1,t2,t3,t4,t5**
Example	*call,out2?* Will return an SMS with *Dialer 1. call,out2,t1,t2,t3,*

Command	**call,voice+out2,t1,t2,t3,t4,t5**
Description	Sets the module to answer a call from the specified numbers and to activate output 2.
Example	*call,voice+out2,t1* Will answer to call from t1 and will activate output 2.
Command	**call,voice+out2?**
Description	Requests the settings entered with **call,voice+out2,t1,t2,t3,t4,t5**
Example	*call,voice+out2?* Will return an SMS with *Dialer 1. call,voice+out2,t1,*

Command	**call,outs,t1,t2,t3,t4,t5**
Description	Sets both outputs to activate after a call from the specified numbers.
Example	*call,outs,t1,t2,t3* Will activate the both outputs after a call from t1, t2 and t3.
Command	**call,outs?**
Description	Requests the settings entered with **call,outs,t1,t2,t3,t4,t5**
Example	*call,outs?* Will return an SMS with *Dialer 1. call,outs,t1,*

Command	**call,voice+outs,t1,t2,t3,t4,t5**
Description	Sets the module to answer a call from the specified numbers and to activate both outputs.
Example	*call,voice+outs,t1* Will answer to a call from t1 and will activate both outputs.

Command	**call,voice+outs?**
Description	Requests the settings entered with **call,voice+outs,t1,t2,t3,t4,t5**
Example	*call,voice+outs?* Will return an SMS with *Dialer 1. call,voice+outs,t1,*

Each new command for a specified phone number will override its current settings.

Example: If the following sequence of commands has been executed:

call,voice,t1,t2
call,voice+out1,t1,t2
call,voice+out2,t1,t2
call,outs,t1,t2

Then the settings from the last one will be valid for t1 and t2.

2.2. Incoming call scenarios for numbers t6 to t500

It is done the same way as for numbers from t1 to t5. The only limit is that one SMS can assign up to 5 numbers at once.

Command	**call,voice,t100,t223,t403,t414,t500** **call,out1,t100,t223,t403,t414,t500** **call,out2,t100,t223,t403,t414,t500** **call,outs,t100,t223,t403,t414,t500** **call,voice+out1,t100,t223,t403,t414,t500** **call,voice+out2,t100,t223,t403,t414,t500** **call,voice+outs,t100,t223,t403,t414,t500**

2.3. Request settings for incoming calls for numbers t6 to t500

Unlike the setup command, where up to 5 numbers can be set, the request command can ask for the settings of **only** one number.

Command	**call,t?,x**
Description	Requests the settings for incoming call from number with position **X**.
Example	*call,t?,200* Can return an SMS with *Dialer1. call,outs,t200* It means for incoming call from the number at position 200, the module will activate its both outputs.

The factory settings for all these numbers are to activate OUT1 after incoming call.

3. Output settings and control

Both outputs **OUT1** and **OUT2** can be trigger via voice call or SMS. In order to do it the corresponding permissions to the calling numbers have to be set.

Two main work modes can be set for the outputs: **Trigger** and **Pulse**. In **Trigger** mode, each call or SMS from authorized number will change (or invert) the output state. In **Pulse** mode, every call or SMS will activate (turn on) the output for a predefined period. After this period expires, the output will restore (turn off) automatically.

Trigger mode example: The output's current state is turned off. After a voice call from authorized number, the output will activate and will not change until the next time, when a new voice call will turn it off again.

Pulse mode example: The output's current state is turned off. After a voice call from authorized number, the output will activate for 5 seconds. After these 5 seconds, it will turn off. A new voice call will repeat the sequence.

For the second output can be setup additional working mode – driving an external LED indicator. This mode is its default factory set and is use to visualize the call status via a connected LED indicator. Starting a call to a phone number will start blinking the LED. When the call is answer, the LED light will change to constant light.

3.1. Voice call triggering

Command	**out1,trigger**
Description	Sets the **trigger** mode for OUT1 when dialed. **This is the default setting after factory reset.**
Command	**out1,pulse,XX**
Description	Sets the **pulse** mode for OUT1 when dialed with **ON** period XX seconds. Period can be change from 1 ÷ 60 seconds. **The default pulse period for OUT1 is 1 second.**
Example	*out1,pulse,10* Will activate the output for 10 seconds and then will turn it off.
Command	**out1?**
Description	Requests the settings entered with **out1, trigger** and **out1,pulse,XX**
Example	*out1?* Will return an SMS with *Dialer 1. out1,trigger* and *Dialer 1. out1,pulse,10sec*

Command	**out2,trigger**
Description	Sets the **trigger** mode for OUT2 when dialed. **This is the default setting after factory reset.**
Command	**out2,pulse,XX**
Description	Sets the **pulse** mode for OUT2 when dialed with **ON** period XX seconds. Period can be change from 1 ÷ 60 seconds. **The default pulse period for OUT2 is 3 seconds.**

Example	*out2,pulse,10* Will activate the output for 10 seconds and then will turn it off.
Command	**out2?**
Description	Requests the settings entered with **out2,trigger** and **out2,pulse,XX**
Example	*out2?* Will return an SMS with *Dialer 1. out2,trigger and Dialer 1. out2,pulse,10sec*

REMINDER 1: *In order to execute the settings for output 2, it has to be set as general-purpose output.*

REMINDER 2: *If the output has been activated when receiving a new SMS with setup command (**out, trigger** or **out, pulse, XX**), it will turn it off until the next trigger event.*

3.2. SMS triggering

The following commands are used to control the outputs via SMS:

Command	**setout1,on**
Description	Turns on output **OUT1**.
Command	**setout1,off**
Description	Turns off output **OUT1**.
Command	**setout1,pulse,XX**
Description	Turns on output **OUT1** for **XX** seconds.
Example	*setout1,pulse,5* Will activate output 1 for 5 seconds and then will turn it off.

Command	**setout2,on**
Description	Turns on output **OUT2**.
Command	**setout2,off**
Description	Turns off output **OUT2**.
Command	**setout2,pulse,XX**
Description	Turns on output **OUT2** for **XX** seconds.
Example	*setout2,pulse,5* Will activate output 2 for 5 seconds and then will turn it off.

REMINDER: *In order to trigger output 2, it has to be set as general-purpose output.*

3.3. SMS notification after output activation

The module can be set to send SMS notifications to the 5 main numbers when an output is set.

Command	**sms,out1,t1,t2,t3,t4,t5**
Description	Sets the module to send SMS to the specified numbers when OUT1 is set.
Example	*sms,out1,t1,t2,t3* The module will send SMS to t1, t2 and t3 after OUT1 is set.
Command	**sms,out1?**
Description	Requests the settings entered with **sms,out1,t1,t2,t3,t4,t5**
Example	*sms,out1on?* Will return an SMS with *Dialer 1. sms,out1on,t1,t2,t3,*

Command	**sms,out2,t1,t2,t3,t4,t5**
Description	Sets the module to send SMS to the specified numbers when OUT2 is set.
Example	*sms,out2,t1,t2,t3* The module will send SMS to t1, t2 and t3 after OUT2 is set.
Command	**sms,out2?**
Description	Requests the settings entered with **sms,out2,t1,t2,t3,t4,t5**
Example	*sms,out2?* Will return an SMS with *Dialer 1. sms,out2,t1,t2,t3,*

3.4. SMS notification after output is restore (OFF)

This option is disable by default. Can be set with:

Command	**sms,out1restore,on**
Description	Sets the module to send SMS after OUT1 is restore (is off). The SMS message will be send only to the numbers that have been register for output set notifications.
Example	*sms,out1restore,on* – the module will send SMS to the specified numbers after OUT1 is off.
Command	**sms,out1restore,off**
Description	Disables SMS send after OUT1 is off. **This is the default setting after factory reset.**
Example	*sms,out1restore,off* – the module will not send SMS after OUT1 is restored.
Command	**sms,out1restore?**
Description	Requests the settings entered with ***sms,out1restore***
Example	*sms,in1restore?* Will return an SMS with: *Dialer 1. sms,out1restore,off*

Command	**sms,out2restore,on**
Description	Sets the module to send SMS after OUT2 is restore (is off). The SMS message will be send only to the numbers that have been register for output set notifications.
Example	*sms,out2restore,on* – the module will send SMS to the specified numbers after OUT2 is off.
Command	**sms,out2restore,off**
Description	Disables SMS send after OUT is off. **This is the default setting after factory reset.**
Example	*sms,out2restore,off* – the module will not send SMS after OUT2 is restored.
Command	**sms,out2restore?**
Description	Requests the settings entered with ***sms,out2restore***
Example	*sms,in2restore?* Will return an SMS with*:* *Dialer 1. sms,out2restore,off*

3.5. Changing the output's name in the SMS body

Command	**out1text,xxx**
Description	Replace the name for OUT1 in the SMS body. Max length – 20 symbols. **The default name after factory reset is OUT1.**
Example	*out1text,Water pump* In all SMSs containing *OUT1* will be replaced with *Water pump*: *Dialer 1. Water pump: ON*
Command	**out1text?**
Description	Requests the settings entered with **out1text,xxx**
Example	*out1text?* – Will return an SMS with: *Dialer 1. OUT1: Water pump*

Command	**out2text,xxx**
Description	Replace the name for OUT1 in the SMS body. Max length – 20 symbols. **The default name after factory reset is OUT2.**
Example	*out2text, Lighting* In all SMSs containing *OUT1* will be replaced with *Lighting*: *Dialer 1. Lighting: ON*
Command	**out2text?**
Description	Requests the settings entered with **out2text,xxx**
Example	*out1text?* – Will return an SMS with: *Dialer 1. OUT2: Lighting*

4. Input settings and control

Two digital inputs are available and after triggering, they can initiate a voice call, SMS send, output activation or combination from all actions to the predefined 5 main numbers. Default factory settings for both inputs are to initiate a voice call.

4.1. Outgoing CALL scenarios after input triggering

Command	**voice,in1,t1,t2,t3,t4,t5**
Description	Sets the module to initiate voice calls to the specified numbers after Input 1 triggering.
Example	*voice,in1,t1,t2* Will dial t1 and t2 after Input 1 triggering.
Command	**voice,in1?**
Description	Requests the settings entered with **voice,in1,t1,t2,t3,t4,t5**
Example	*voice,in1?* Will return an SMS with *voice,in1,t1,t2,*

Command	**voice,in2,t1,t2,t3,t4,t5**
Description	Sets the module to initiate voice calls to the specified numbers after Input 2 triggering.
Example	*voice,in2,t1,t3* Will dial t1 and t3 after Input 2 triggering.
Command	**voice,in2?**
Description	Requests the settings entered with **voice,in2,t1,t2,t3,t4,t5**
Example	*voice,in2?* Will return an SMS with *Dialer 1. voice,in1,t1,t3,*

4.2. Outgoing SMS scenarios after input TRIGGERING

Command	**sms,in1,t1,t2,t3,t4,t5**
Description	Sets the module to send SMS to the specified numbers after Input 1 triggering.
Example	*sms,in1,t1,t2* Will send SMS to t1 and t2 after Input 1 triggering. *Dialer 1. IN1: ON*
Command	**sms,in1?**
Description	Requests the settings entered with **sms,in1,t1,t2,t3,t4,t5**
Example	*sms,in1?* Will return an SMS with *Dialer 1. sms,in1,t1,t2,*

Command	**sms,in2,t1,t2,t3,t4,t5**
Description	Sets the module to send SMS to the specified numbers after Input 2 triggering.
Example	Will send SMS to t1 and t2 after Input 1 triggering. *Dialer 1. IN2: ON*

Command	**sms,in2?**
Description	Requests the settings entered with **sms,in2,t1,t2,t3,t4,t5**
Example	*sms,in2?* Will return an SMS with *Dialer 1. sms,in2,t1,t2,*

4.3. Outgoing SMS scenarios after an input RESTORING

This option is **disable** by default. It can be enable with the following commands:

Command	**sms,in1restore,on**
Description	Sets the module to send SMS to the specified numbers in **sms,in1** command, after Input 1 restoring.
Example	*sms,in1restore,on* Will send SMS to the specified numbers after Input 1 restoring. *Dialer 1. IN1: OFF*
Command	**sms,in1restore,off**
Description	Sets the module to **disable** sending SMS to the specified numbers in **sms,in1** command, after Input 1 restoring. **This is the default setting after factory reset.**
Example	*sms,in1restore,off* The module will not send SMS after Input 1 restoring.
Command	**sms,in1restore?**
Description	Requests the settings entered with **sms,in1restore**
Example	*sms,in1restore?* Will return an SMS with *Dialer 1. sms,in1restore,off*

Command	**sms,in2restore,on**
Description	Sets the module to send SMS to the specified numbers in **sms,in2** command, after Input 2 restoring.
Example	*sms,in2restore,on* Will send SMS to the specified numbers after Input 2 restoring. *Dialer 1. IN2: OFF*
Command	**sms,in2restore,off**
Description	Sets the module to **disable** sending SMS to the specified numbers in **sms,in2** command, after Input 2 restoring. **This is the default setting after factory reset.**
Example	*sms,in2restore,off* The module will not send SMS after Input 2 restoring.
Command	**sms,in2restore?**
Description	Requests the settings entered with **sms,in2restore**
Example	*sms,in2restore?* Will return an SMS with *Dialer 1. sms,in2restore,off*

4.4. Outgoing CALL+SMS scenarios after an input TRIGGERING

Command	**voice+sms,in1,t1,t2,t3,t4,t5**
Description	Sets the module to send SMS and initiate voice call to the specified numbers after Input 1 triggering.
Example	*voice+sms,in1,t1,t* Will send SMS and then initiate voice calls to t1 and t2 after Input 1 triggering.
Command	**voice+sms,in1?**
Description	Requests settings entered with **voice+sms,in1,t1,t2,t3,t4,t5**
Example	*voice+sms,in1?* Will return an SMS with *Dialer 1. voice+sms,in1,t1,t2,*

Command	**voice+sms,in2,t1,t2,t3,t4,t5**
Description	Sets the module to send SMS and initiate voice call to the specified numbers after Input 2 triggering.
Example	*voice+sms,in2,t1,t2* Will send SMS and then initiate voice calls to t1 and t2 after Input 2 triggering.
Command	**voice+sms,in2?**
Description	Requests settings entered with **voice+sms,in2,t1,t2,t3,t4,t5**
Example	*voice+sms,in2?* Will return an SMS with *Dialer 1. voice+sms,in2,t1,t2,*

4.5. Disable actions after input triggering

Command	**none,in1,t1,t2,t3,t4,t5**
Description	Turns off the module response to specified numbers after Input 1 triggering.
Example	*none,in1,t1,t3* After Input 1 is triggered, the device will NOT make a call or send an SMS to t1 and t3.
Command	**none,in1?**
Description	Requests the settings entered with **none,in1,t1,t2,t3,t4,t5**
Example	*none,in1?* Will return an SMS with *Dialer 1. none,in1,t1*

Command	**none,in2,t1,t2,t3,t4,t5**
Description	Turns off the module response to specified numbers when Input 2 triggering.
Example	*none,in2,t1,t3* After Input 2 is triggered, the device will NOT make a call or send SMS to t1 and t3.

Command	**none,in2?**
Description	Requests the settings entered with **none,in2,t1,t2,t3,t4,t5**
Example	*none,in2?* Will return an SMS with *Dialer 1. none,in2,t1*

4.6. Changing the input's name in the SMS body

Command	**in1text,xxx**
Description	Replace the name of Input 1 with **xxx** in the SMS sent after Input 1 triggering. Max length – 20 symbols. **The default setting after factory reset is IN1.**
Example	*in1text,Panic button 1* Will send the following SMS after Input 1 triggering: *Dialer 1. Panic button 1: ON*
Command	**in1text?**
Description	Requests the settings entered with **in1text,xxx**
Example	*in1text?* Will return an SMS with *Dialer 1. Panic button 1*

Command	**in2text,xxx**
Description	Replace the name of Input 2 with **xxx** in the SMS sent after Input 2 triggering. Max length – 20 symbols. **The default setting after factory reset is IN2.**
Example	*in2text,Panic button 2* Will send the following SMS after Input 2 triggering: *Dialer 1. Panic button 2: ON*
Command	**in2text?**
Description	Requests the settings entered with **in2text,xxx**
Example	*in2text?* Will return an SMS with *Dialer 1. Panic button 2*

4.7. Change the input triggering filter period

Command	**in1,XX**
Description	Sets the triggering filter period for Input 1. Range from 1÷60 seconds. **The default setting after factory reset is 1 second.**
Example	*in1,5* Will trigger Input 1 after connecting it to **ground** or **negative** source for minimum 5 seconds.
Command	**in1?**
Description	Requests the settings entered with **in1,XX**
Example	*in1?* Will return an SMS with *Dialer 1. in1=5 sec.*

Command	**in2,XX**
Description	Sets the triggering filter period for Input 2. Range from 1÷60 seconds. **The default setting after factory reset is 3 second.**
Example	*in2,10* Will trigger Input 2 after connecting it to the **positive** power supply or Input 1 for minimum 10 seconds.
Command	**in2?**
Description	Requests the settings entered with **in2,XX**
Example	*in2?* Will return an SMS with *Dialer 1. in2=10 sec.*

5. Check the current module state

Information about the current state of all inputs, outputs, supply voltage, GSM signal level and device name can be request by SMS.

Command	**state?**
Description	Requests the current state of all inputs, outputs, power supply, GSM signal strength and device name.
Example	*state?* Will return an SMS with: *Dialer 1:* *IN1: OFF,* *IN2: OFF,* *OUT1: OFF,* *OUT2: ON,* *PowerSupply=24.32V,* *Vbat=3.89V,* *GSM=68%*

Current state of OUT2 will be send only if it is set as standard output.

6. Setup module state regular report

Command	**report,x**
Description	Sets a period (in hours) for automatic report of module current state. Range from 0 to 720 hours. **The default setting after factory reset is 0 (disabled).**
Example	*report,168* Will send SMS report with current state every week.
Command	**report?**
Description	Requests the settings entered with **report,x**.
Example	*report?* Will return an SMS with *Dialer 1. Report every 12 hours.*

7. Setup automatic call redials (if no answer)

Command	**retries,X**
Description	Sets the number of attempts for redial if there is no answer from dialed numbers. **The default setting after factory reset is 2 redials.**
Example	*retries,1* If there is no answer from the dialed numbers, the module will not make redialing.
Command	**retries?**
Description	Requests the settings entered with **retries,X**
Example	*retries?* Will return an SMS with *Dialer 1. retries=2*

8. Setup maximum call duration

Command	**duration,XX**
Description	Sets the maximum allowed call duration. When is reached, the module will close the connection automatically. Range from 1 ÷ 60 minutes. **The default setting after factory reset is 60 minutes.**
Example	*duration,20* Will set the max call duration to 20 minutes.
Command	**duration?**
Description	Requests the settings entered with **duration,XX**
Example	*duration?* Will return an SMS with *Dialer 1. duration=20*

9. Setup device name

For each device can be setup a different name. This will avoid any confusion when several modules with same phone numbers are used. The default settings for device name is its serial number. The maximum allowed symbols are 40.

Command	**name,XXXXXXXXXXXXXXXXXXXX**
Description	Sets user defined device name. Max length 40 symbols. **The default setting after factory reset is module's serial number.**
Example	*name,Dialer 1* Will set the device name to *Dialer 1.*
Command	**name?**
Description	Requests the settings entered with **name,XXXXXXXXXXXXXX**
Example	*name?* Will return an SMS with *name,Dialer 1*

10. Requesting information for device serial number, SIM card ID, hardware and software versions

Command	**ver?**
Description	Requests device SN, SIM card ID, FW and HW versions
Example	*ver?* Will return an SMS with *Dialer 1. SN:1234567890; FW:3.00; HW:3.00; BL:1.00; SIM:12345678901234567890*

11. Replies to unauthorized numbers

Replies to unauthorized numbers are supported but this option have to be enable with many precautions. It may lead to a lot of sent SMS and higher playbill to the mobile operator. By default, it is disabled.

Command	**acksms,on**
Description	Turn **ON** blocking of the SMS response to unauthorized numbers. **This is the default setting after factory reset.**
Command	**acksms,off**
Description	Turn **OFF** blocking of the SMS response to unauthorized numbers.
Command	**acksms?**
Description	Requests the settings entered with **acksms,on** and **acksms,off**
Example	*acksms?* Will send an SMS with *Dialer 1. acksms,on*

The SMS text to unauthorized number is always the same: <u>Not allowed!</u>

12. Dialing mode setup

When more than one phone numbers has to be dial, the internal dialing algorithm can be set to choose from two different modes – **Single response** and **Dial all**.

Command	**dialing,single**
Description	Sets the dialing mode to **Single response**. In this mode, the dialing algorithm will finish when a call more than 3 seconds is made to any of the numbers. **This is the default setting after factory reset.**
Example	*dialing,single* Will terminate the dialing after the first answer.
Command	**dialing,all**
Description	Sets the dialing mode to **Dial all**. In this mode, the dialing algorithm will make a call to all numbers from the list, no matter if there was an answer from any of them.
Example	*dialing,all* Will dial all phone numbers from the list.

Command	**dialing?**
Description	Requests the setting entered with **dialing**
Example	*dialing?* Will return an SMS with *Dialer 1. dialing,single*

13. Power supply notification – <u>available with internal battery only</u>

Command	**powerreport,X**
Description	Allows SMS notification when the external power supply changes. A triggering filter can be set in range from 5 to 180 seconds. When the value is set to 0 (zero), these notifications are disabled. **The default setting after factory reset is 0 (disabled).**
Example	*powerreport,10* Will send SMS notification if the external power supply changes and holds for more than 10 seconds. If the power supply changes before the filter time expires, no SMS is send. *Dialer 1. Power supply is OFF.* *Dialer 1. Power supply is ON.*
Command	**powerreport?**
Description	Requests the setting entered for **powerreport**
Example	*powerreport?* Will return an SMS with *Dialer 1. powerreport,10*

14. SG CLOUD connection setup

Smart Dialer modules can connect to the SG Cloud and this way they can use all the benefits that this system provides for remote control and monitoring via smartphone and PC:

- Remote monitoring of all inputs, outputs and power supplies;
- Remote control of all outputs;
- Push notifications for predefined activities;
- Remote setup of all parameters;
- Remote sharing the control of the modules with other users of *SG Cloud*;

Command	**cloud,on,apn,user,password**
Description	Enables the connection to the cloud system via mobile operator's GPRS network. The fields for ***apn***, ***user*** and ***password*** must be fill with the GPRS data provided from the mobile operator. **This option is disable after factory reset.**
Example	- *cloud,on,inet-gprs.mtel.bg* – enables the connection to the *Cloud* system via A1 (Bulgaria) network. In this particular case, there are no data for *User* and *password*, so they can be emitted.

	- *cloud,on,globul,globul* – in case of TELENOR Bulgaria network is used. - *cloud,on,internet.vivacom.bg,vivacom,vivacom* – VIVACOM Bulgaria
Command	**cloud,off**
Description	Disables the connection to the *Cloud* system. This command does not clear the GPRS settings.
Command	**cloud?**
Description	Requests the setting entered for *cloud,on,apn,user,password*
Example	*cloud?* – Will return an SMS with: *Dialer 1. cloud,on,inet-gprs.mtel.bg*

15. Device replies after SMS commands

The module will reply with confirmation SMS to a **correctly typed** command sent only by the **authorized** numbers.

After factory reset, the module will reply only to a command for main phone number setup (**t1**).

15.1. Reply to a valid command and successful execution

- When **t1** is setting for the first time.

Example	**t1,+44123456789**
Reply	t1 will receive: ***t1 is set successfully.***

Each SMS starts with the device name. After factory reset the device name is its Serial Number. For all examples this name will be omit.

- When **t1** setting up an additional number.

Example	**t2,+44123456788**
Reply	t1 will receive: *The command was execute successfully.* t2 will receive: *t2 is set successfully.*

- When setting the **t1** number as additional.

Example	**t2,+44123456789**
Reply	t1 will receive: *t2 is set successfully.*

- When **t1** setting up the input trigger filter.

Example	**in2,6**
Reply	t1 will receive: *The command was execute successfully.*

• When **t1** setting up the module to initiate voice calls to **t3**, **t4** and **t5** after Input 1 triggering.

Example	**voice,in2,t3,t4,t5**
Reply	t1 will receive: *The command was execute successfully.*

15.2. Reply to a valid command with wrong parameters

• When **t1** sends a valid command but its parameter is out of range - in such case, the command will not be set.

Example	**in2,61** *(Max allowed value is 60 seconds)*
Reply	t1 will receive: *The parameter of the command is out of range!*

• When **t1** sends a valid command but **one** of its parameters is not correct - in such case, only the wrong parameter will not be set.

Example	**voice,in2,t3,t4,t501** *(t501 is not valid, only t3 and t4 will be set)*
Reply	t1 will receive: *Wrong parameter:t501. Only correct parameters will be saved!*

• When **t1** sends a valid command but all parameters are incorrect - in such case, the command will not be set.

Example	**voice,in2,t,ta,t600** *(t,ta,t600 are not supported)*
Reply	t1 will receive: *All parameters are wrong! t,ta,t600*

Example	**voice,in2,t500** *(t500 cannot be dialed)*
Reply	*All parameters are wrong!*

• When **t1** sends a valid command but without parameters - in such case, the command will not be set.

Example	**voice,in2,** *(missing parameters)*
Reply	t1 will receive: *The command has missing parameters!*

15.3. Reply to a valid command and failure execution due to a technical problem

Example	**voice,in2,t3,t4,t6**
Reply	t1 will receive: *There is HW problem!*

15.4. Reply to t1 after incorrect command

Example	**t501,+44123456789** *(t501 is not supported)*
Reply	t1 will receive: *Unknown command!*

15.5. Reply to a valid command from additional number

Example	**t1,+44123456789** *(t1 is set only by itself)*
Reply	The additional number will receive: *Not allowed!*

15.6. Reply to a valid command for setting an additional phone number but the memory for all 500 positions is already full

Example	**t,+44123456789**
Reply	*Phonebook is full. The new phone number is not saved!*

16. Factory reset

In order to reset manually the factory settings to their defaults (*manually - without PC and software tool*), the following procedure must be fulfill:

1. Power off the module and disconnect the battery from its terminals.
2. Make wire connection between both inputs (to ensure good contact, the terminal screws must be tightened).
3. Power on the module.
4. After the start, the internal LED will blink quickly few times (for 2 seconds).
5. Then press and hold the module's TEST button for 10 or more seconds.

After these 10 seconds, the LED will light for 5 seconds and the module will restart itself. This means successfully finished procedure of factory reset.

The module will exit the procedure automatically, if the TEST button is not pressed within 10 seconds after the jumper restart.

After completing the factory reset, the default settings will be:

Settings	Description
t1	Empty.
t2	Empty.
t3	Empty.
t4	Empty.
t5	Empty.
t6 ÷ t500	Empty.
call,voice,t1,t2,t3,t4,t5	The module will answer to voice calls from the first 5 numbers.
call,out1,t6...t500	The module will turn on Output 1 after incoming call from numbers **t6** to **t500**.
out1,trigger	Output 1 will operate in trigger mode after activation.
out2,led	Output 2 will operate in indicator mode.
out1text,OUT1	The name of output 1 in SMS body is OUT1.
out2text,OUT2	The name of output 1 in SMS body is OUT2.
voice,in1,t1,t2,t3,t4,t5	The module will make voice calls to first 5 numbers after Input 1 triggering.
voice,in2,t1,t2,t3,t4,t5	The module will make voice calls to first 5 numbers after Input 2 triggering.
sms,in1	SMS notification after Input 1 activation is not set.
sms,in1restore,off	SMS notification after Input 1 restore is not set.
in1text,IN1	SMS text for Input 1 triggering is IN1.
in1,1	Input 1 triggering filter is set to 1 second.

sms,in2	SMS notification after Input 2 activation is not set.
sms,in2restore,off	SMS notification after Input 2 restore is not set.
in2,3	Input 2 triggering filter is set to 3 second.
in2text,IN2	SMS text for Input 2 triggering is IN2.
voice+sms,in1	No numbers are set for SMS and voice call notification after Input 1 triggering.
voice+sms,in2	No numbers are set for SMS and voice call notification after Input 2 triggering.
sms,out1,	No numbers are set for SMS notification after OUT 1 is set.
sms,out2,	No numbers are set for SMS notification after OUT 2 is set.
sms,out1restore,off	SMS notification after OUT1 restore is disabled.
sms,out2restore,off	SMS notification after OUT2 restore is disabled.
retries,2	Automatic call redials is set to 2 times.
duration,60	Maximum call duration is set to 60 minutes.
dialing,single	Dialing mode is set to Single response.
acksms,on	SMS response to unauthorized numbers is disabled.
powerreport,0	SMS notification for external power change is disabled.
report,0	Automatic report for device status is off.
cloud,off	Connection to the *Cloud* system is disabled.
name,0123456789	Device name is its serial number.

Technical parameters

Power supply	9 ÷ 30VDC
Digital inputs	1 negative input (15VDCmax) 1 positive input (95VDCmax)
Digital outputs	2 outputs (open collector type, 1A max)
Regulated power output	Vout = 12VDC, Imax = 60mA
Internal battery (Smart Dialer VOICE)	3.7V/300mAh Li-ion battery (provides power up to 12 hours in standby mode and up to 60 minutes in active voice call)
Microphone input	1 input, external
Speaker output	1 output, internal, 1W max
GSM module	850/900/1800/1900MHz
Consumption in STANDBY mode	up to 15mA @12VDC
Consumption in ACTIVE mode	up to 130mA @12VDC
Operating temperature	-40°C ÷ +85°C
Weight Smart Dialer	90g
Weight Smart Dialer VOICE	98g
Dimensions	74mm x 64mm x 28mm

SMART DIALER package set

Smart Dialer	1pcs. in plastic box
GSM antenna	1pcs. (length 3m)

SMART DIALER VOICE package set

Smart Dialer	1pcs. in plastic box
GSM antenna	1pcs. (length 3m)
LiION battery	1pcs. (300mAh, pre-installed internally)
Microphone	1pcs. (length 1m)
Speaker	1pcs. (1W, pre-installed internally)

LIST OF ALL SMS COMMANDS

Command	Description
t1,+44xxxxxxxxx	Set/change the number of the main phone number **t1**
t2,+44xxxxxxxxx	Set/change the additional number **t2**
t3,+44xxxxxxxxx	Set/change the additional number **t3**.
t4,+44xxxxxxxxx	Set/change the additional number **t4**
t5,+44xxxxxxxxx	Set/change the additional number **t5**
t,+44xxxxxxxxx	Add additional phone number to the first available position after **t5**
t2,del	Removes the additional phone number **t2** and all its settings
t3,del	Removes the additional phone number **t3** and all its settings
t4,del	Removes the additional phone number **t4** and all its settings
t5,del	Removes the additional phone number **t4** and all its settings
t?	Requests all phone numbers from **t1** to **t5**
t?,x	Requests the phone number at position **X**
call,voice,t1,t2,t3,t4,t5 **call,voice,t6,...,t500**	Sets the module to answer an incoming call from the specified numbers
call,voice?	Requests the settings entered with **call,voice,t1,t2,t3,t4,t5**
call,out1,t1,t2,t3,t4,t5 **call,out1,t6,...,t500**	Sets the module to activate Output 2 after incoming voice call from the specified numbers
call,out1?	Requests the settings entered with **call,out1,t1,t2,t3,t4,t5**
call,voice+out1,t1,t2,t3,t4,t5 **call,voice+out1,t6,...,t500**	Sets the module to answer a call from the specified numbers and to activate Output 1
call,voice+out1?	Requests the settings entered with **call,voice+out1,t1,t2,t3,t4,t5**
out1,trigger	Sets trigger mode to Output 1
out1,pulse,xx	Sets pulse mode to Output 1 and its period
out1?	Requests the settings entered with **out1,trigger** and **out1,pulse,XX**
call,out2,t1,t2,t3,t4,t5 **call,out2,t6,...,t500**	Sets the module to activate Output 2 after incoming voice call from the specified numbers
call,out2?	Requests the settings entered with **call,out2,t1,t2,t3,t4,t5**

call,voice+out2,t1,t2,t3,t4,t5 **call,voice+out2,t6,...,t500**	Sets the module to answer a call from the specified numbers and to activate Output 2
call,voice+out2?	Requests the settings entered with **call,voice+out2,t1,t2,t3,t4,t5**
call,outs,t1,t2,t3,t4,t5 **call,outs,t6,...,t500**	Sets the module to activate both outputs after incoming voice call from the specified numbers
call,outs?	Requests the settings entered with **call,outs,t1,t2,t3,t4,t5**
call,voice+outs,t1,t2,t3,t4,t5 **call,voice+outs,t6,...,t500**	Sets the module to answer a call from the specified numbers and to activate both outputs
call,voice+outs?	Requests the settings entered with **call,voice+outs,t1,t2,t3,t4,t5**
call,t?,x	Requests the settings for incoming call for the number at position **X**
setout1,on	Turn on Output 1 via SMS
setout1,off	Turn off Output 1 via SMS
setout1,pulse,XX	Turn on Output 1 for the specified period via SMS
out2,trigger	Sets trigger mode for Output 2
out2,pulse,xx	Sets pulse mode and its period for Out 2
out2?	Requests the settings entered with **out2,trigger** and **out2,pulse,XX**
out2,led	Sets indicator mode for Out 2
out2mode?	Requests the settings entered with **out2,led**
setout2,on	Turn on Output 2 via SMS
setout2,off	Turn off Output 2 via SMS
setout2,pulse,XX	Turn on Output 2 for the specified period via SMS
out1text,xxx	Changes the SMS text for OUT1.
out1text?	Requests the settings for **out1text,xxx**
out2text,xxx	Changes the SMS text for OUT1.
out2text?	Requests the settings for **out2text,xxx**
voice,in1,t1,t2,t3,t4,t5	Sets the module to initiate voice calls to the specified numbers after Input 1 triggering
voice,in1?	Requests the settings entered with **voice,in1,t1,t2,t3,t4,t5**
voice,in2,t1,t2,t3,t4,t5	Sets the module to initiate voice calls to the specified numbers after Input 2 triggering
voice,in2?	Requests the settings entered with **voice,in2,t1,t2,t3,t4,t5**
in1text,xxx	Changes the SMS text for Input 1

in1text?	Requests the settings entered with **in1text,xxx**
in2text,xxx	Changes the SMS text for Input 2
in2text?	Requests the settings entered with **in2text,xxx**
in1,XX	Sets the input triggering filter for Input 1
in1?	Requests the settings entered with **in1,XX**
in2,XX	Sets the input triggering filter for Input 2
in2?	Requests the settings entered with **in2,XX**
sms,in1,t1,t2,t3,t4,t5	Sets the module to send SMS to the specified numbers after Input 1 triggering
sms,in1?	Requests the settings entered with **sms,in1,t1,t2,t3,t4,t5**
sms,in2,t1,t2,t3,t4,t5	Sets the module to send SMS to the specified numbers after Input 2 triggering
sms,in2?	Requests the settings entered with **sms,in2,t1,t2,t3,t4,t5**
sms,in1restore,on	Sets the module to send SMS to specified numbers after Input 1 restore
sms,in1restore,off	Disables the module to send SMS to specified numbers after Input 1 restore
sms,in1restore?	Requests the settings entered with the upper two commands
sms,in2restore,on	Sets the module to send SMS to specified numbers after Input 2 restore
sms,in2restore,off	Disables the module to send SMS to specified numbers after Input 2 restore
sms,in2restore?	Requests the settings entered with the upper two commands
sms,out1,t1,t2,t3,t4,t5	Sets the module to send SMS to the specified numbers when OUT1 is set
sms,out1?	Requests the settings entered with **sms,out1,t1,t2,t3,t4,t5**
sms,out1restore,on	Sets the module to send SMS after OUT1 is restore (is off)
sms,out1restore,off	Disables SMS send after OUT1 is off
sms,out1restore?	Requests the settings entered with **sms,out1restore**
sms,out2,t1,t2,t3,t4,t5	Sets the module to send SMS to the specified numbers when OUT2 is set
sms,out2?	Requests the settings entered with **sms,out2,t1,t2,t3,t4,t5**
sms,out2restore,on	Sets the module to send SMS after OUT2 is restore (is off)
sms,out2restore,off	Disables SMS send after OUT2 is off

sms,out2restore?	Requests the settings entered with **sms,out2restore**
voice+sms,in1,t1,t2,t3,t4,t5	Sets the module to initiate voice calls and SMS to the specified numbers after Input 1 triggering
voice+sms,in1?	Requests the settings entered with **voice+sms,in2,t1,t2,t3,t4,t5**
voice+sms,in2,t1,t2,t3,t4,t5	Sets the module to initiate voice calls and SMS to the specified numbers after Input 2 triggering
voice+sms,in2?	Requests the settings entered with **voice+sms,in2,t1,t2,t3,t4,t5**
none,in1,t1,t2,t3,t4,t5	Turns off the module response to specified numbers after Input 1 triggering
none,in1?	Requests the settings entered with **none,in1**
none,in2,t1,t2,t3,t4,t5	Turns off the module response to specified numbers after Input 2 triggering
none,in2?	Requests the settings entered with **none,in2**
state?	Requests the state of all inputs and outputs, power supply and GSM signal level
report,x	Sets the automatic report interval
report?	Requests the settings entered with **report,x**
retries,X	Sets the number of automatic call redials
retries?	Requests the settings entered with **retries,X**
duration,XX	Sets the maximum call duration in minutes
duration?	Requests the settings entered with **duration,XX**
dialing,single	Sets the dialing mode to Single response
dialing,all	Sets the dialing mode to Dial all
dialing?	Requests the settings entered with **dialing**
acksms,on	Turn **ON** blocking of the SMS response to unauthorized numbers
acksms,off	Turn **OFF** blocking of the SMS response to unauthorized numbers
acksms?	Requests the settings entered with **acksms,on** and **acksms,off**
powerreport,X	Sets SMS notification for external power change and its triggering filter in seconds
powerreport?	Requests the settings entered with **powerreport,X**

cloud,off	Disables the connection to the *Cloud* system
cloud,on,apn,user,password	Enables the connection to the *Cloud* system via mobile operator's GPRS network
cloud?	Requests the setting entered with ***cloud,on…..***
name,XXXXXXXXXXX	Sets user defined device name
name?	Requests the settings entered with **name, XXXXXXXXX**
ver?	Requests module's serial number and versions