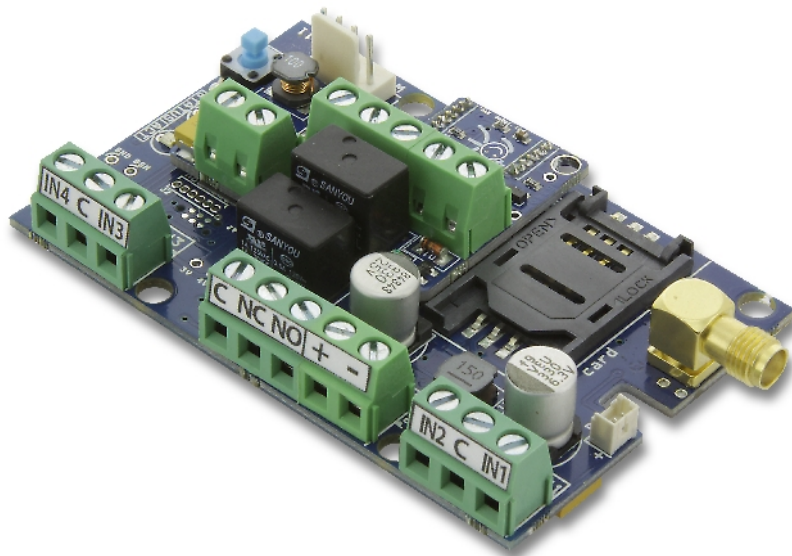




# InterCom GSM

GSM INTERCOM



INSTALLATIONAL AND USER'S GUIDE

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## Device description and function

The InterCom GSM can be used as an accessory of external units of intercoms until 4 flat systems as well as applicable as a gate control unit too. By using the InterCom GSM, it is not necessary to build a complete intercom system on the grounds that the mobile phones will be used instead of the internal unit. Depending on the type of the intercom, the already existing external unit and the GSM module can be used simultaneously as well.

It can be linked to 4+n wire, up to 4 flat intercom systems. One main phone number and 1-1 reserve phone number can be given at each flat. In case the main phone number is not answering, the module initiates a call to the second reserve phone number. The ring time can be modified.

Between the module and the mobile phone a voice call will be taken place, which involves call charges. Therefore, it is worth to take the package of the SIM card which is in the phone into account in order to charge the owner of the SIM card the least costs. Moreover, you can determine the maximum time of the call, thus, you can avoid the further costs that are caused by long talks.

After answering the call, a two-sided communication will be taken place between the person who is at the gate and who uses the mobile phone. The GSM module allows controlling the two outputs separately during the voice call, hence, the gate can be opened remotely without breaking the call.

The module is equipped with two relay outputs ( the first is NO/NC, the second is NO), which can be activated during voice call with the 4. and 6. button of the phone. The outputs can be applied in monostable or bistable mode as well.

The output control is possible with free call from unlimited number. In case of caller identification, we can store up to 1000 numbers in the inner memory of the module. Also we can save numbers to the SIM card, which can be 250/500 numbers depending on the type of the SIM card. By caller identification the unauthorized controlling can be forbidden.

The device allows to use a night shift mode. It means that we can set a time interval, in between the module will not initiate a call. In this mode, the outputs can be managed by incoming call.

The module can store up to 16,000 events in which the states of the inputs and outputs, power supply resets, GSM network and module state related information, incoming and outgoing calls and SMSs are saved.

The tamper input on the module can be used as a sabotage indicator with setting possibilities alike to inputs. Shortening it before powering on then cut short in 3 seconds functions as a "reset" that can revert the module back to its original factory state.

Implemented Anti Jammer System (AJS) protects from GSM jammers. The significant dropping of the GSM strength or a network connection failure initiates a prompt alarm. In these situations module tries to send notifications using network possibilities still available. It can be set that by controlling the output even a siren can be managed. This possibility is especially useful if we would like to fob the person who committed the sabotage.

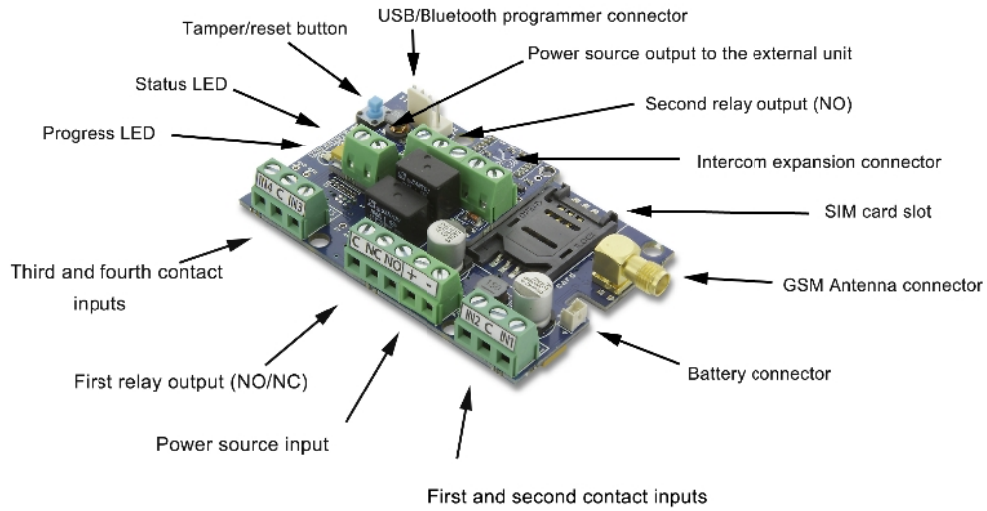
Besides continuous voltage monitoring the module observes also the GSM strength. These data can be readout and these can be charted even by hourly divisions by the programming and surveillance software.

The module can be programmed by SMS command, voice menu, PC or by Android mobile phone.

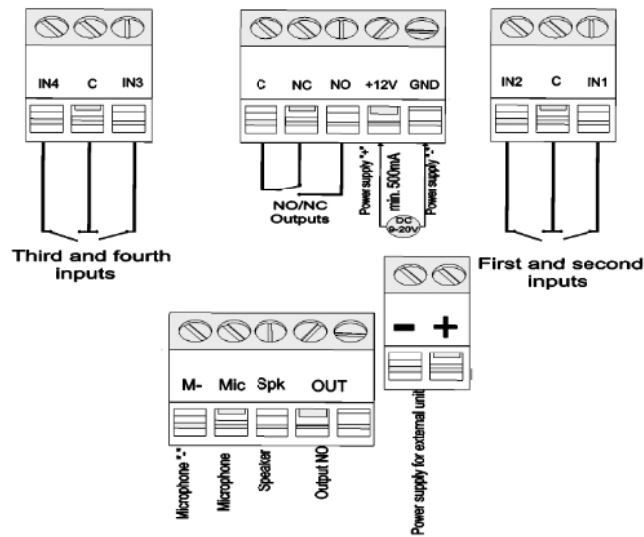
**Figure 1: Device operation**



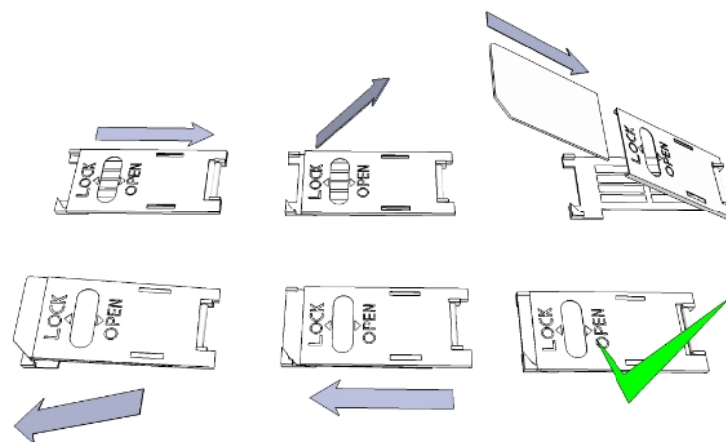
# Module buildup



**Figure 2: the buildup of the module**



**Figure 3: wiring diagram**



**Figure 4: Inserting the SIM card**

# Installation guide

## Technical parameters

- Power voltage: 9-20 VDC
- Standby power drain: 40 mA + external unit current consumption
- Maximum power drain: 400 mA + external unit current consumption
- Relay output load: max. 20V / 500 mA
- GSM module type: SIMCOM 900
- GSM frequencies: GSM 850 / EGSM 900 / DCS 1800 / PCS 1900 (Multi- Band)
- SIM card usage: brand free GSM module
- GSM antenna type: SMA connector (comes with package)
- Size: 78 x 51 x 20 mm, packed: 132 x 128 x 32 mm
- Operation temperature: -20°C - +50°C

## Installation steps

1. Carry out a signal strength check with your mobile phone. Sometimes occurs there is no sufficient signal strength at the commissioning site. In this case it is recommended to change the module position prior to installation. Do not install the device to places where strong electromagnetic waves might occur, ex. next to electric motors or alarm transformers.
2. Do not install in watery places or to places with great humidity.
3. Connect the antenna that can be secured with an SMA connector. If you are reading low signal strength use antenna with higher gain. Signal strength grow can also be achieved by repositioning the antenna. **Do not position the antenna under various metal covers as those might significantly ruin the signal strength.**
4. **You should opt out the PIN number request, voicemail and call notification of the SIM card.** Sometimes new SIM cards must be activated (usually one outgoing call has to be made). Check the validity of the card. If you have a prepaid card check its balance and its usage possibilities (ex. can be used only for calls).
5. Number identification of caller and at call initiations has to be checked. This function at certain service providers. Must be enabled formerly.
6. Insert the SIM card in the SIM card slot of the module.
7. Connectors have to be connected according to the wiring diagram. If you are dealing with OC output (output of EXP Alarm expansion panel) mind the correct wiring of the relay protecting diode.
8. If you are working with OC relay be cautious especially of avoiding electric shock. A proper contact protection must be established. If you lack the appropriate experience ask for professional help.
9. Check if the power supply performance will be sufficient for the module. Mind the polarity. If wiring is reversed the module will not operate or might get damaged.
10. Now the device can be connected to the power supply.
11. If you have purchased also a battery connect it to the device. **Use only the appropriate battery for reserve powering the device!**
12. After connecting the voltage supply the red LED is lighted indicating the device establishing connection with the **GSM system (this can be 1 minute utmost).**
13. If red LED goes off and green LED flashes module is online and connected to network. The **flash number(s) indicates GSM signal strength.**

**For programming the power supply must be connected! Power needed for programming can be supplied to the module also from USB adapter.**

## LED signals

Signals give essential information of the module, of GSM signal strength and the actual error codes. By blinking we mean flashes between two longer pauses.

- A STATUS LED (green) gives feedback of signal strength value based on the chart below:

Flashes	Signal quality
1	Bad
2	
3	Decent
4	Good
5	Excellent
LED lighted	GSM connection rejected

- An ACT LED (red) lit means the initiation process at startup. At this phase module performs the initial checks. During operation this reflects an event (SMS or voice call).
- If the red and green LED are lighted simultaneously it tries to communicate an error that can be identified with the chart below:

Flashes	Error code
1	Initializing
2	Bad GSM module
3	SIM card not inserted
4	SIM card locked with PIN code
10	Modem mode

- Alternating flashes of red and green LEDs means the "reset" function of the tamper input. This way the GSM module can be reverted back to its original factory settings.

## Connecting the module (PC)

### Establishing connection using a *USB adapter*

1. Connect the USB adapter to the *Program* labeled slot of the module.
2. USB adapters can provide the sufficient voltage for programming the GSM module.
3. Attach the USB connector of the adapter to a USB extension cable and plug into any USB port of a PC.
4. **WARNING! If you are using Windows Xp operating system** the system offers an automatic driver installation. IMPORTANT, do not use the offered driver but carry on the installation with the **USB driver**.

#### Installing the USB driver manually in 10 steps

- ✓ get the required driver from our web site or from the "USB driver" directory on the CD if you have the USB Kit
- ✓ use the appropriate 32 or 64 bit version for your operating system in the installation process
- ✓ to check this use the Control Panel System menu path (when using Windows XP "x64 Edition" will only appear if the system is running on 64 bit)
- ✓ connect the USB programmer to your PC
- ✓ do not chose the automatic installation offered by the system
- ✓ Open the path Control Panel System Hardware **Device Manager** window.
- ✓ In this window search for **Unknown device** (which will be the programmer now, later the **USB Serial port**). If you cannot find it start the "Scan for hardware changes" process from the upper window menu.
- ✓ Device properties can be achieved by double clicking on the unknown device.
- ✓ Start the Update driver process

- ✓ In the installation window choose the manual selection of the driver location then choose the appropriate folder containing the 32 or 64 bit driver
- ✓ Click on the Next button to start the installation.

5. Open the Device Manager (click on System Properties Hardware tab Device manager)
6. Search for a device named USB Serial port (COM...) under Ports
  1. If a driver reinstall is needed click on the device then choose driver removal then follow instructions above.
7. Start the programming software.
8. You have to set the value in brackets [USB Serial port (COM...)] in the programming software
9. Establish a connection to the GSM module.

**Establishing connection using a Bluetooth adapter**

1. Connect the Bluetooth adapter to the GSM module and provide power to it.
2. Switch on the Bluetooth connection possibility on your device (PC or Android mobile phone).
3. Search for programmer with the help of your Bluetooth enabled device.
4. After finding the adapter you can pair your PC/smart phone with the adapter using the code "1234".  
**Search for the COM port number of the connection (usually under Properties Hardware tab)**
5. Search for the COM port number of the connection (usually under Properties Hardware tab)
6. Set the port number also in your programming software (PC) or choose the automatic port finding option.
7. Establish a connection to the GSM module.

**If you use Windows 8 operating system the programming software should be started in "Windows XP SP2/SP3" compatibility mode (Right click on the starting icon of the program Properties Compatibility)**

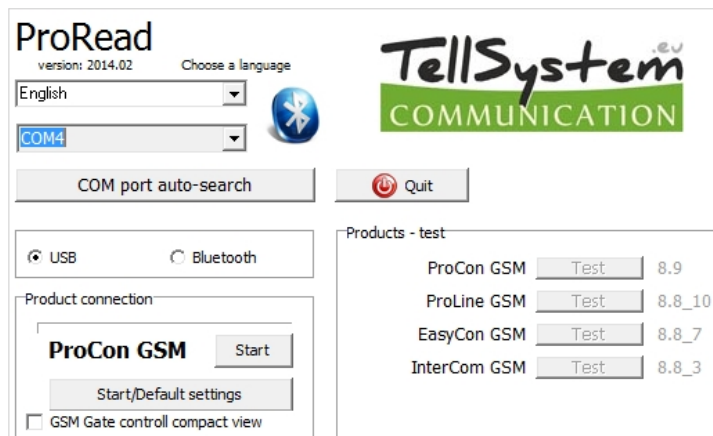
In every case you can check the connection if you see the connected module name next to the Start button in the programming software and the green LED on the programmer starts to flash.

**If you have a connection established between the adapter and your PC or mobile phone you can start the module configuration.**

- **By clicking the Start button after the connection was established modules settings will be acquired.**
- **By clicking the Start/Default config button (after a confirmation) it will revert back the module to factory settings.**
- **Using the Android application settings are always acquired after establishing a connection.**

**Programming using the PC software**

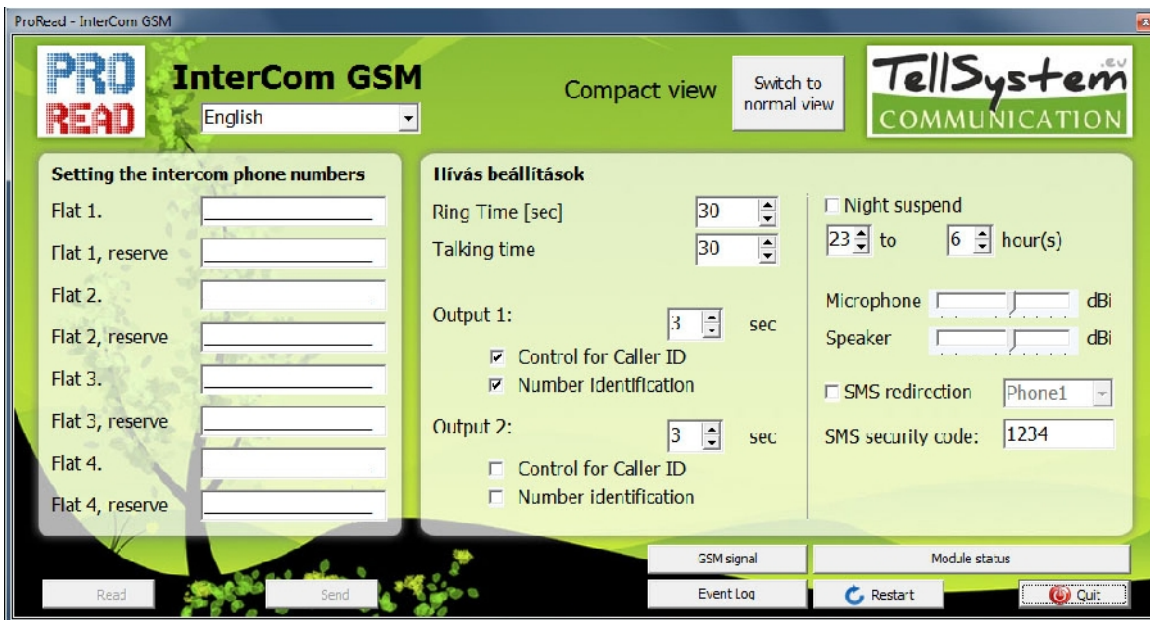
- If you have chosen configuration by PC you can use our software that is freely downloadable from our website or you can find it on the installation CD in the USB KIT.
- The program runs automatically, no installation needed
- Compatible with operating systems Windows XP, 7 and 8
- Make sure you always use the latest software!
- If newer software is out the module should be updated prior to the first configuration.



## Connecting process

- To program the module choose between USB or Bluetooth connection.
- Below the language selection in the scroll down list (COM 4 in the picture) you can select the port through which you would like to communicate with the module programmer. You can find this value (in Windows operating system) under Device manager Com port at the connected programmer. If you cannot decide you might let the program to search for it by pressing the **automatic COM port finding**. The automatic COM port search might take several minutes.
- If the connection was successful you will see under the Product connection tab the name of the module.
- Clicking the **start** button the software connects to the module and reads out its settings.
- By clicking the **Start/Default config** button the module will be set back to default factory settings after the connection was established. (Before the operation the software asks for confirmation if this feature has not been switched off before).
- If you do not want to attach a module just to inspect the settings options you can select the **Products-tryout** window where you can freely make a specific module properties selection and also module preprogramming.

## Compact view



The most important settings, which are necessary for the programming, are summarized on the compact view. By clicking on the switch to **normal view** button we can return to the original programming surface.

On the compact view the following data can be given:

Setting the intercom phone numbers	
Flat 1.	+36301111555__
Flat 1, reserve	+36205555111__
Flat 2.	+36201111222__
Flat 2, reserve	+36701111117__
Flat 3.	
Flat 3, reserve	
Flat 4.	
Flat 4, reserve	

- Here you can give the phone numbers to which you would like to send SMS or voice call. **The numbers here have to be in international form in order the stabile working!** (Ex.: +36201111155 or 0036201111133).
- You can give phone numbers to 4 flat ( the buttons are linked to the inputs of the module that belongs to the certain flat)
- When the ring time expired, and the primary number did not answer the call, the reserve numbers will be phoned
- This list can be modified with SMS as well, with the „Telxxy=Phone number” command. Here the „xx” indicates the number of the flat, the „y” indicates that it is main (1) or reserve number (2) (Example: 1234TEL011=+36301234567, 1234TEL012=+36302222233) You can read more information about



the **SMS commands** on **page 18.**

The **ring time** determines that the module how long is trying to reach the certain number. If the ring time expires and the called number does not answer the call, then the module will phone the reserve number that belongs to the certain flat.

We can determine how long the external unit can be after answering the call.

used with the **talking time**. Regardless of the line is broken by the mobile phone, the Intercom GSM does not initiate a call until the talking time expire.

**Hívás beállítások**

Ring Time [sec]:

Talking time:

Output 1:  sec

Control with Caller ID

Number identification

Output 2:  sec

Control with Caller ID

Number identification

- By default the two outputs work in monostable mode.
- Here you can give the control time of the output. The maximum value is 65.000 secundum.
- We have the possibility to manage the outputs with or without caller identification.
- Without caller identification, anybody can activate the outputs who knows the number of the SIM card.
- In case of caller identification, the module rejects the initiating of the

control from numbers which are not in the control number list. This function contributes to the protecting of the device, which is connected to the output, from the unauthorized control.

- By switching on the **night suspend** mode, the GSM module can be turn off temporarily; hence, it does not initiate a call. The blocking will be applicated for all of the flats. For switching on the **night suspend mode** restart required.
- The gate or door can be managed during the night suspend time as well.

Night suspend

to  hour(s)

Microphone:  dBi

Speaker:  dBi

- By configuring the signal level of the microphone and the speaker, you can modify the speaker volume and the sensitivity of the microphone of the device which is connected to the InterCom GSM.
- It is crucial that the module is not equipped with an internal amplifier for the

speaker so that it has to be ensured by the external unit. In case of lack of amplifier, any kind of 0,5-1 W amplifier can be appropriate.

- You can require SMS forwarding to one of the eight phone numbers. **Attention! Never chose the own number of the GSM module here!**
- Also, here you can modify the SMS security code. With this code, you can configurate the settings of the module after set up. ( in case the certain configuration does not require direct connection to the device)
- At the bottom of the screen, you can read out the event log as well as the GSM signal strength. In addition, here you can checked the current state of the GSM module

SMS redirection:

SMS security code:

GSM signal      Module status

Event Log      Restart      Quit

**Checking module status**

Module status

**TellSystem**  
COMMUNICATION

Input 1.:  OFF  ON

Input 2.:  OFF  ON

Input 3.:  OFF  ON

Input 4.:  OFF  ON

Output 1.:  OFF  ON

Output 2.:  OFF  ON

Output 3.:  OFF  ON

Output 4.:  OFF  ON

Tamper:  OFF  ON

Power supply:  OFF  ON

Arm/Disarm:  OFF  ON

network power:

Error ccde/CID:

GSM Status:

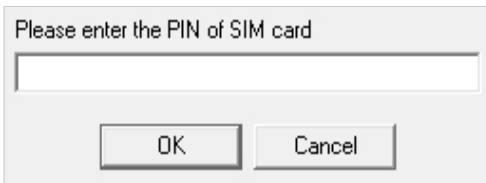
Quit

You can reach the actual status through **Maintenance Show module status** button

By the module status query you will be informed of the followings:

- input statuses
- output statuses
- Tamper sabotage notification
- power supply failure notification
- armed/disarmed module status
- displaying occurring error/event codes (ex.: no SIM card inserted, SIM card locked by PIN code)
- checking Contact ID code (to monitoring station) sending process (ex. handshake status)
- GSM connection status (ex. connected to the network, roaming, no connection, connection rejected)
- actual GSM signal strength (refreshing in seconds)

**Switching off PIN code request on SIM card**



Before inserting SIM card in the module the **PIN code request should be switched off**

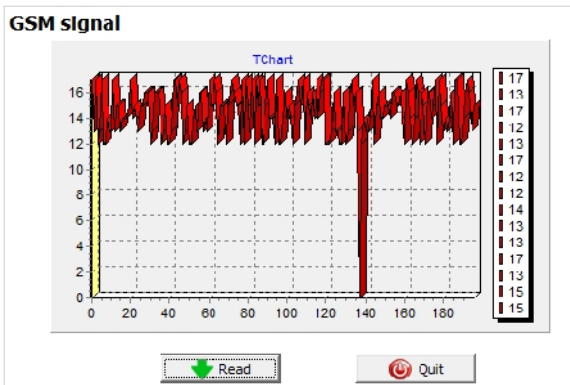
- If you have not done yet then you can switch off at **Maintenance Switch off PIN code request**.
- You will see the following window, where you can input the code and its request will be switched off.

Filter	Filter	Date	Time	GSM Network	Comment/parameter
20	GSM module	2014-04-20	14:27:47	10	Disconnected
21	Power supply failure	2014-04-20	14:28:45	11	Disconnected
22	Power supply failure	2014-04-20	14:29:58	15	Disconnected
23	Power supply failure	2014-04-20	14:30:55	15	Disconnected
24	Power supply failure	2014-04-20	14:31:52	15	Disconnected
25	Power supply failure	2014-04-20	14:32:51	17	Disconnected
26	Power supply failure	2014-04-20	14:33:51	17	Disconnected
27	Power supply failure	2014-04-20	14:34:50	17	Disconnected
28	Power supply failure	2014-04-20	14:35:52	21	Disconnected
29	Power supply failure	2014-04-20	14:36:52	21	Disconnected
30	Power supply failure	2014-04-20	14:37:51	21	Disconnected
31	Power supply failure	2014-04-20	14:38:51	21	Disconnected
32	Power supply failure	2014-04-20	14:39:52	21	Disconnected
33	Power supply failure	2014-04-20	14:40:52	21	Disconnected
34	Power supply failure	2014-04-20	14:41:51	21	Disconnected
35	Power supply failure	2014-04-20	14:42:51	21	Disconnected
36	Power supply failure	2014-04-20	14:43:52	21	Disconnected
37	Power supply failure	2014-04-20	14:44:52	21	Disconnected
38	Power supply failure	2014-04-20	14:45:52	21	Disconnected
39	Power supply failure	2014-04-20	14:46:52	21	Disconnected
40	Power supply failure	2014-04-20	14:47:52	21	Disconnected
41	Power supply failure	2014-04-20	14:48:52	21	Disconnected
42	Power supply failure	2014-04-20	14:49:52	21	Disconnected
43	Power supply failure	2014-04-20	14:50:52	21	Disconnected
44	Power supply failure	2014-04-20	14:51:52	21	Disconnected
45	Power supply failure	2014-04-20	14:52:52	21	Disconnected
46	Power supply failure	2014-04-20	14:53:52	21	Disconnected
47	Power supply failure	2014-04-20	14:54:52	21	Disconnected
48	Power supply failure	2014-04-20	14:55:52	21	Disconnected
49	Power supply failure	2014-04-20	14:56:52	21	Disconnected
50	Power supply failure	2014-04-20	14:57:52	21	Disconnected
51	Power supply failure	2014-04-20	14:58:52	21	Disconnected
52	Power supply failure	2014-04-20	14:59:52	21	Disconnected
53	Power supply failure	2014-04-20	15:00:52	21	Disconnected
54	Power supply failure	2014-04-20	15:01:52	21	Disconnected
55	Power supply failure	2014-04-20	15:02:52	21	Disconnected
56	Power supply failure	2014-04-20	15:03:52	21	Disconnected
57	Power supply failure	2014-04-20	15:04:52	21	Disconnected
58	Power supply failure	2014-04-20	15:05:52	21	Disconnected
59	Power supply failure	2014-04-20	15:06:52	21	Disconnected
60	Power supply failure	2014-04-20	15:07:52	21	Disconnected
61	Power supply failure	2014-04-20	15:08:52	21	Disconnected
62	Power supply failure	2014-04-20	15:09:52	21	Disconnected
63	Power supply failure	2014-04-20	15:10:52	21	Disconnected
64	Power supply failure	2014-04-20	15:11:52	21	Disconnected
65	Power supply failure	2014-04-20	15:12:52	21	Disconnected
66	Power supply failure	2014-04-20	15:13:52	21	Disconnected
67	Power supply failure	2014-04-20	15:14:52	21	Disconnected
68	Power supply failure	2014-04-20	15:15:52	21	Disconnected
69	Power supply failure	2014-04-20	15:16:52	21	Disconnected
70	Power supply failure	2014-04-20	15:17:52	21	Disconnected
71	Power supply failure	2014-04-20	15:18:52	21	Disconnected
72	Power supply failure	2014-04-20	15:19:52	21	Disconnected
73	Power supply failure	2014-04-20	15:20:52	21	Disconnected
74	Power supply failure	2014-04-20	15:21:52	21	Disconnected
75	Power supply failure	2014-04-20	15:22:52	21	Disconnected
76	Power supply failure	2014-04-20	15:23:52	21	Disconnected
77	Power supply failure	2014-04-20	15:24:52	21	Disconnected
78	Power supply failure	2014-04-20	15:25:52	21	Disconnected
79	Power supply failure	2014-04-20	15:26:52	21	Disconnected
80	Power supply failure	2014-04-20	15:27:52	21	Disconnected
81	Power supply failure	2014-04-20	15:28:52	21	Disconnected
82	Power supply failure	2014-04-20	15:29:52	21	Disconnected
83	Power supply failure	2014-04-20	15:30:52	21	Disconnected
84	Power supply failure	2014-04-20	15:31:52	21	Disconnected
85	Power supply failure	2014-04-20	15:32:52	21	Disconnected
86	Power supply failure	2014-04-20	15:33:52	21	Disconnected
87	Power supply failure	2014-04-20	15:34:52	21	Disconnected
88	Power supply failure	2014-04-20	15:35:52	21	Disconnected
89	Power supply failure	2014-04-20	15:36:52	21	Disconnected
90	Power supply failure	2014-04-20	15:37:52	21	Disconnected
91	Power supply failure	2014-04-20	15:38:52	21	Disconnected
92	Power supply failure	2014-04-20	15:39:52	21	Disconnected
93	Power supply failure	2014-04-20	15:40:52	21	Disconnected
94	Power supply failure	2014-04-20	15:41:52	21	Disconnected
95	Power supply failure	2014-04-20	15:42:52	21	Disconnected
96	Power supply failure	2014-04-20	15:43:52	21	Disconnected
97	Power supply failure	2014-04-20	15:44:52	21	Disconnected
98	Power supply failure	2014-04-20	15:45:52	21	Disconnected
99	Power supply failure	2014-04-20	15:46:52	21	Disconnected
100	Power supply failure	2014-04-20	15:47:52	21	Disconnected

**Event Log Readout**

The event log can be viewed by clicking **Maintenance Read Event Log** button:

- It can store up to 16,000 events in FILO (first in-last out) mode
- The acquired list can be saved in "csv" file for later examination. This can be done also in the event list by clicking the "Open csv" button.
- In the **Token** column there are short event information.
- In the **Date** column notification dates are stored. IMPORTANT! Date will be accurate if the clock of the module is synchronized with a PC or with GSM system. The latter is automatically done by the module when connected to

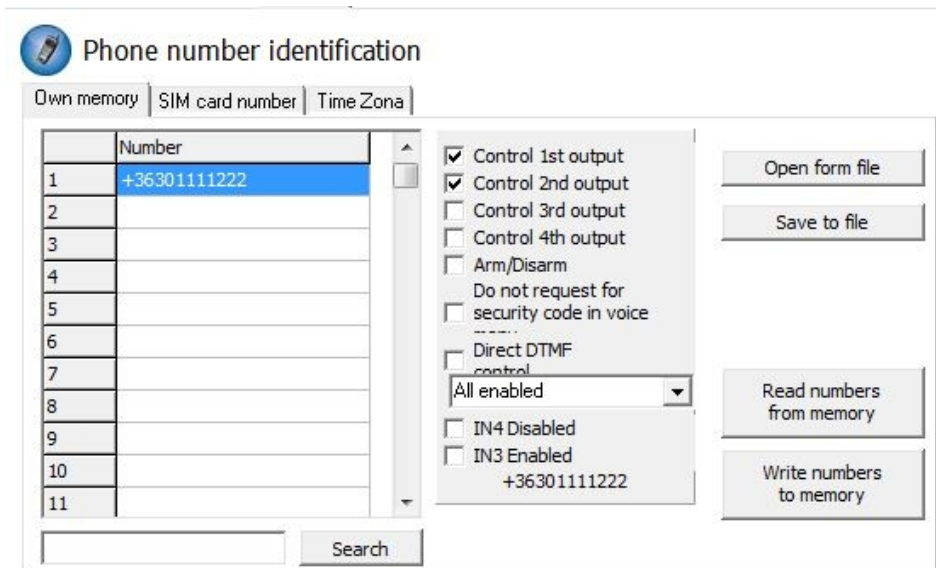


- the network of the operator.
- The **GSM 0-31** indicates the signal strength at the time of creation. 31 is the highest, 0 indicates state with no connection.
- Network indicates if the module was connected to the network carrier at the time of creation.
- In the **Comment/parameter** column notification related extra information are stored.
- Initially the chart is empty; the readout can be commenced by pressing the **Readout event log** button.
- The newest data will appear at the top of the list followed by

older entries as you go down the chart.

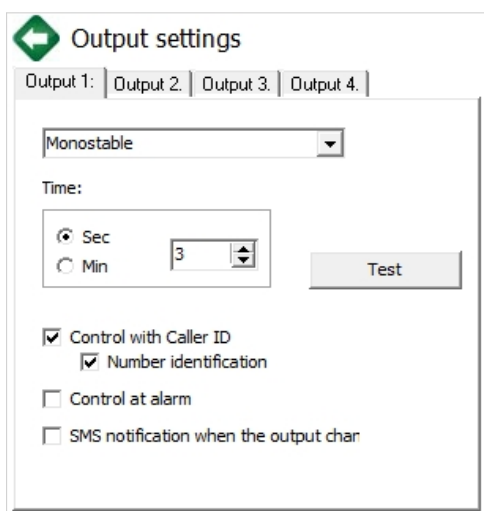
- If the whole chart readout is not necessary you can stop it with the **Readout stop** button.
- Read out list can be exported from the software in "csv" (ex. Excel) chart so later it can easily be sent and stored.

### Saving controlling phone numbers



- At the Controlling phone numbers section you can set telephone numbers that can control the outputs.
- Phone numbers can be stored in the memory of the module (maximum 1,000 pcs). Moreover additional phone numbers can be stored in the SIM card.
- By using inner memory the module will be independent from the SIM card memory.
- Always read out the memory before editing the list with the **Readout numbers from memory** button. For saving use the **Save numbers to memory** button.
- **Stored numbers must be in international format.** Due to number length using "+" is suggested (ex.: +36301234567).
- Storing, editing and opening of numbers are also possible (from .csv file).
- Controlling numbers can be associated with specific outputs.
- By choosing DTMF controlling outputs can be controlled with cell phone buttons (1, 2, 3, 4). Module can be armed/disarmed with DTMF command (\*).
- The list can be modified also by **SMS command** with **ADD=phone number** (addition) and **DEL=phone number** (removal) commands
- (Example: 1234ADD=+36301234567, 1234DEL=+36301234567)
- You can find additional information on **SMS commands** on page 20

### Adjusting outputs



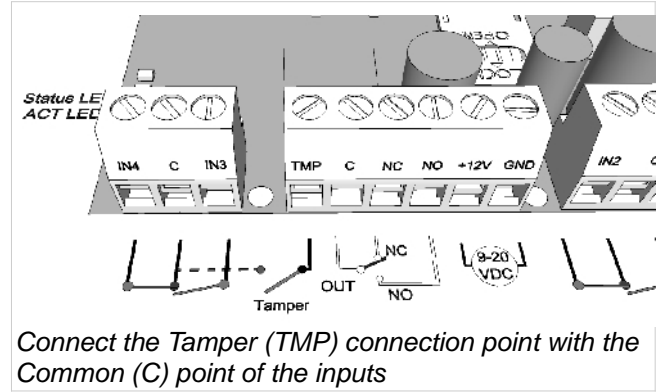
On the **Output** window the output settings can be changed. The output type can be **monostable** namely one statused, (switches for the given period than reverts back to the original status), or **bistable** namely two statused (it only will revert back to original state after a new controlling).

- Regarding monostable operation switch time can be set in seconds or minutes. This can be max 65,000 seconds.
- The **Unsuccessful SMS** means output will be controlled when network operator rejects an SMS sending.
- Choosing **GSM fault** output will be controlled as long as GSM network reverts to its normal state
- Regarding output controlling it can be set if you want to control with incoming call or it should be activated by an alarm event (ex. in

### Tamper settings

The GSM module facilitates the connection of a tamper protection. Essential of this protection is that module will trigger an alarm if GSM case is removed.

- Its connector is next to the first output shared connector of the main panel. Connector usage is similar to input: only suitable for monitoring short or open circuit.
- Connector must be connected according to the wiring diagram. You can use any shared input terminal. DO NOT USE SHARED OUTPUT TERMINAL (C).



**Settings of Tamper**

Select phone number(s) to send SMS:

+44123456789  Phone5  
 +44987654321  Phone6  
 Phone3  Phone7  
 Phone4  Phone8

Select phone number(s) to call:

+44123456789  Phone5  
 +44987654321  Phone6  
 Phone3  Phone7  
 Phone4  Phone8

Type of input:  
 01/ 24h normal input

Normal Close  
 Normal Open

SMS/Call when input set back  
 Siren in the phone Call  
 Voice message  
 Monitoring station notification  
 When a call is not to be taken!  
 DTMF acknowledge during call (#)

SMS text:  
 Tamper alarm

Connect the Tamper (TMP) connection point with the Common (C) point of the inputs

Tamper connector settings do not differ from any other input settings. On demand connector can be used as a 5<sup>th</sup> input.

- If you are using tamper for monitoring case removal input type should be set as closed by default.
- Shortening the terminal before powering on than releasing in 3 seconds will revert the GSM module back to its factory settings. This progress is indicated by the alternate flashes of the ACT and STATUS LEDs.

### Power supply monitoring setup

The GSM device is able to monitor its power source and send notification of its problems

- On the **Power monitor** tab the trigger voltage level can be set. Below this the module sends an alert.
- Our Pro series modules have battery connectors that can be used to connect the Pro Battery.
- **IMPORTANT!** Modules without auxiliary power supply will switch off if there is no main power supply.
- The remaining function settings equals with the input settings.

**Settings of Ext. power monitor**

Select phone number(s) to send SMS:

+44123456789  Phone5  
 +44987654321  Phone6  
 Phone3  Phone7  
 Phone4  Phone8

Select phone number(s) to call:

+44123456789  Phone5  
 +44987654321  Phone6  
 Phone3  Phone7  
 Phone4  Phone8

Alarm voltage value:  
 11V

SMS/Call when input set back  
 Siren in the phone Call  
 Voice message  
 Monitoring station notification  
 When a call is not to be taken!  
 DTMF acknowledge during call (#)

SMS text:  
 Internal power alarm

### Life signal sending setup

**Life signal settings**

Life signal sending

Select phone number(s) to send Life signal messages:

+44123456789  Phone5  
 +44987654321  Phone6  
 Phone3  Phone7  
 Phone4  Phone8

7 Day(s)  
 12 At ... o clock  
 0 First, after ... day(s)

SMS text:  
 Life signal, system OK...

Voice call to the 1st phone number

Test

- By life sign sending the user can be sure about the flawless operation of the system.
- The life sign sending periods and also exact hour can be set for notifications.
- **To use this feature Send life sign check has to be selected!**
- It is also important the day of the first signal can be scheduled not to arrive on the setup day. The life sign activation day can be set.

- You can modify life sign sending with the following SMS command: 1234LIFETEST=cccsstttttt
- ccc sending cycles/days (ex.: 007 days)
- ss hour of sending on a day

- ttttttt which telephone number will be notified (ex.: 00100000 it will send the message to the 3<sup>rd</sup> phone number)
- **You can find more information on SMS commands on page 20.**

**Anti Jammer System (AJS) settings**

- By using a GSM jamming device (GSM jammer) the GSM module can be sabotaged by suppressing heavily the signal strength of the network or by its complete suspension. The Anti Jammer System (AJS) is monitoring changes in network signal strength.
- You can set which output you would like to control instantly when there is an Anti Jammer System event. In this situation it will control a peripheral device connected to its output (ex auxiliary siren).  
Sending SMS/making voice call can be achieved only if there is still some connection with the network. If there is no connection sending will be completed when network signal is available.

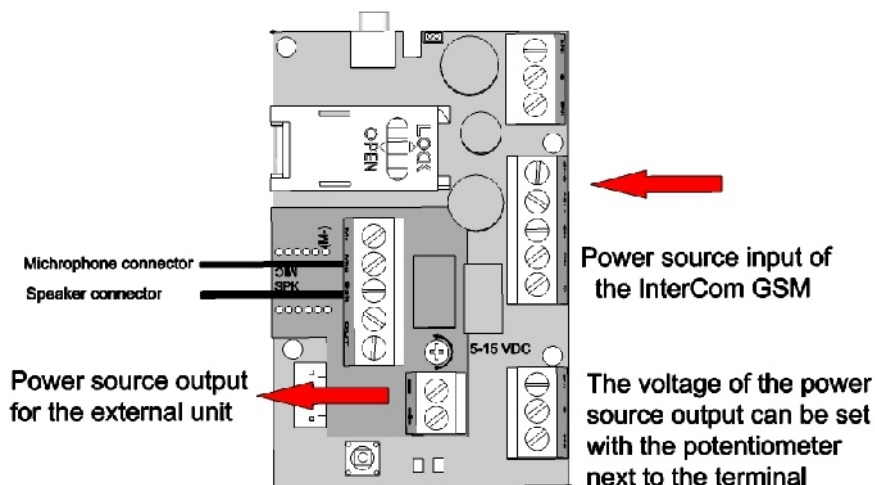


**Available wiring diagrams**

**Attention!** The wiring diagrams were made for the certain brand/type. In case you your device is different, or the name is different, please read the manual of that device.

Before setup please check the followings:

- The power supply provides sufficient current both, to the GSM module and to the external unit.
- The SIM card which is used for the GSM module is activated along with capable to call and to receive a call.
- The GSM device is wired appropriately to the microphone and speaker of the external unit.
- The volume of the external unit is adjusted properly (when we switch on the device first time, it is advisable to set the speaker and microphone potentiometer in middle position). If the InterCom GSM provides the power to the external unit, the voltage to the external unit has to be set properly (The voltage can be modified with the potentiometer, next to the outgoing power connector ,between 5-15 V).
- It is important that if the module ensures the power to the external unit, the power source input of the GSM module has to be connected to the appropriate place



- In case you connect the power source to a wrong place, the device can be damaged or go wrong.
- On the figure it can be seen that the power source of the InterCom has to be connected to the main panel to the indicated connector.
- The power source of the external device can be available on the indicated place on the little panel which is placed on the main panel.

TellSystem  
COMMUNICATION **InterCom GSM**  
WIRING DIAGRAM

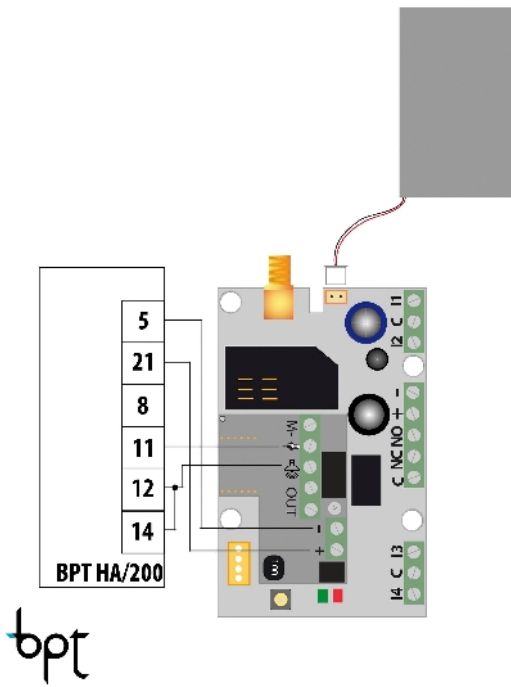


Figure 1: BPT HA/200 wiring diagram

TellSystem  
COMMUNICATION **InterCom GSM**  
WIRING DIAGRAM

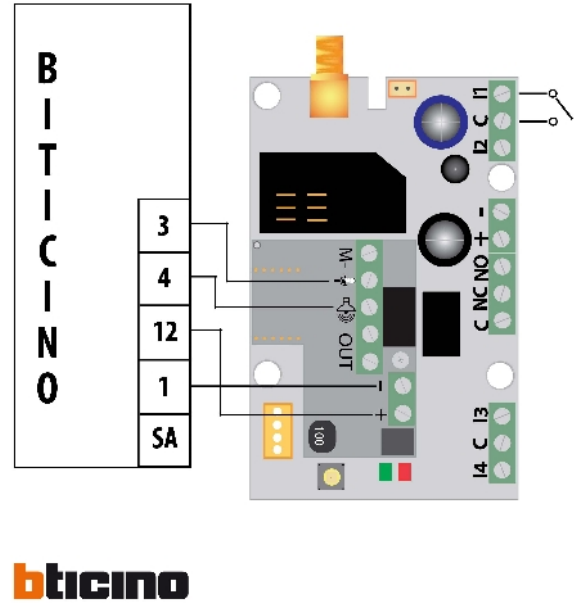


Figure 2: Biticino general wiring diagram

TellSystem  
COMMUNICATION **InterCom GSM**  
WIRING DIAGRAM

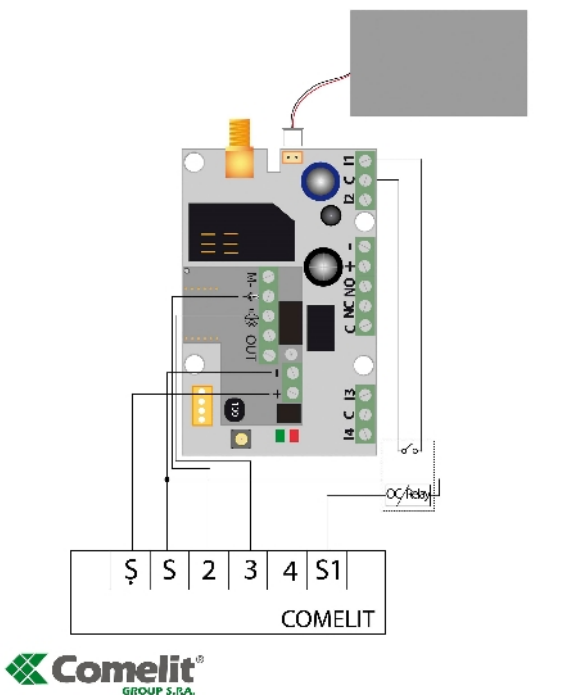


Figure 3: Comelit general wiring diagram

TellSystem  
COMMUNICATION **InterCom GSM**  
WIRING DIAGRAM

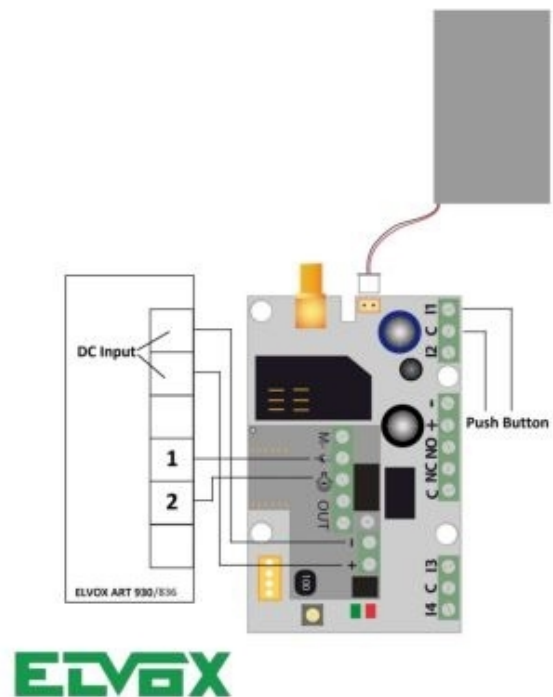


Figure 4: Elvox.ART. 930 wiring diagram

TellSystem COMMUNICATION InterCom GSM WIRING DIAGRAM

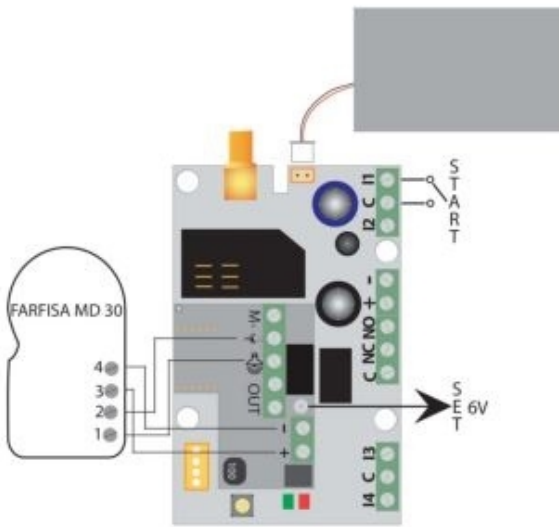
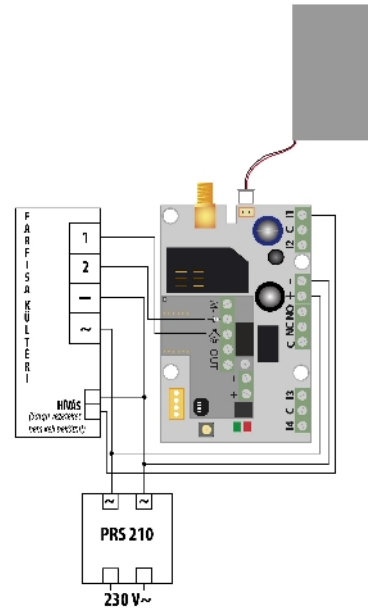


Figure 5: Farfisa MD 30 wiring diagram

TellSystem COMMUNICATION InterCom GSM WIRING DIAGRAM



1UPS

Figure 6: Farfisa 1UPS wiring diagram

TellSystem COMMUNICATION InterCom GSM WIRING DIAGRAM

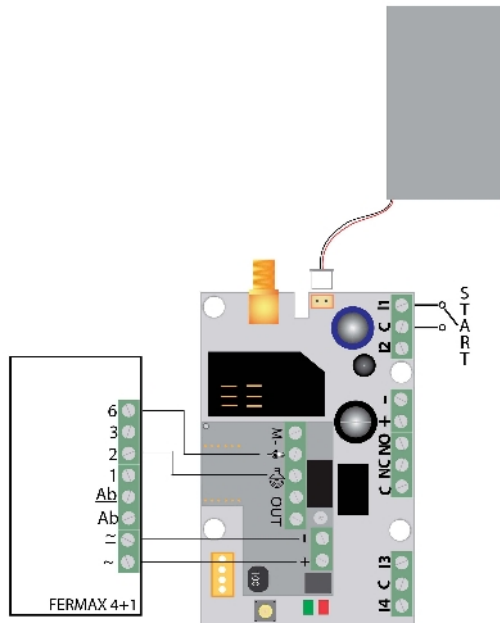


Figure 7: General wiring diagram

TellSystem COMMUNICATION InterCom GSM WIRING DIAGRAM

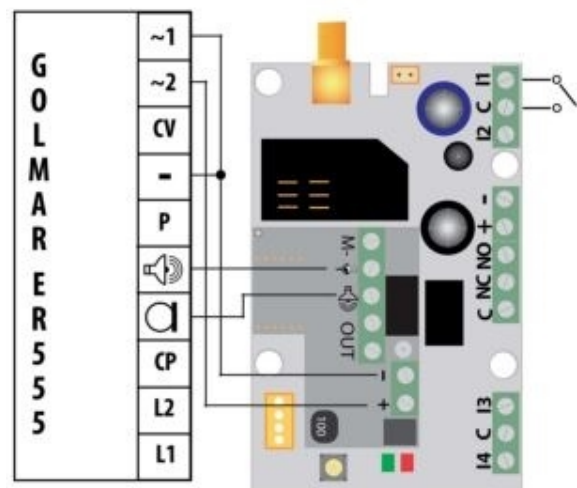
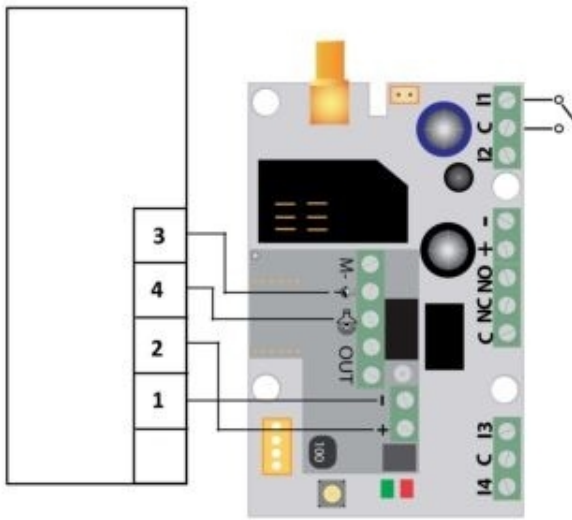


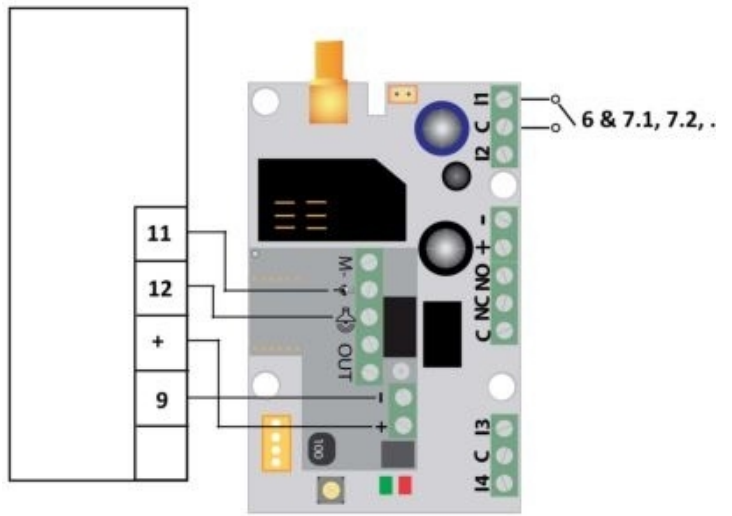
Figure 8: Golmar ER555 wiring diagram

TellSystem<sup>®</sup> **InterCom GSM**  
COMMUNICATION WIRING DIAGRAM



Kanrich S913

TellSystem<sup>®</sup> **InterCom GSM**  
COMMUNICATION WIRING DIAGRAM



SSS SIEDLE

Figure 9: Kanrich S913 wiring diagram

Figure 10: Siedle general wiring diagram

TellSystem<sup>®</sup> **InterCom GSM**  
COMMUNICATION WIRING DIAGRAM

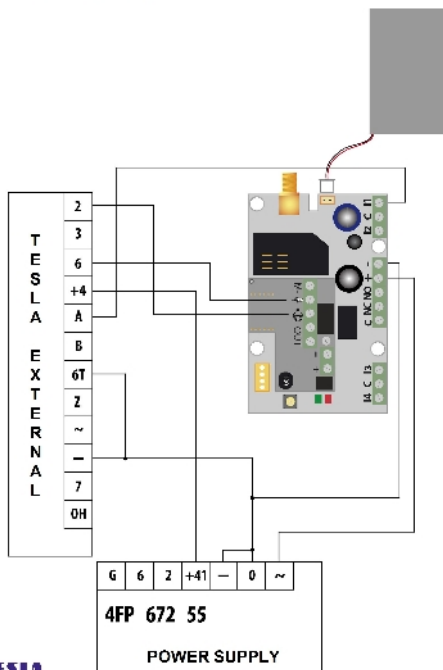


Figure 11: Tesla general wiring diagram

TellSystem<sup>®</sup> **InterCom GSM**  
COMMUNICATION WIRING DIAGRAM

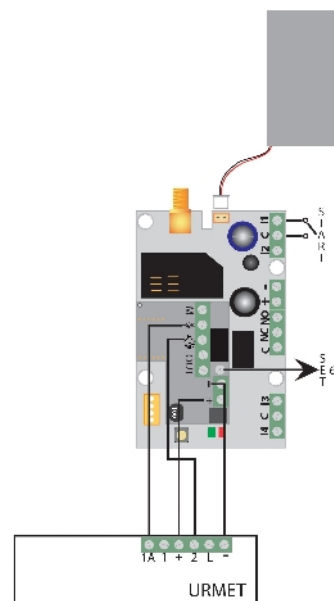


Figure 12: Urmet general wiring diagram



## Programming with SMS commands

Module can also be programmed by SMS commands. SMS starts always with the security code that can be modified whenever you want. Commands can be piled but the SMS length must be under 160 characters.

The module (if it is possible) will send reply SMS after every message. You can switch this off with **NO SMS** command or with the **RECALL** command when the module makes a call to confirm the successful programming.

Command criteria:

- can not contain accented characters
- command characters are capitals
- commands have to be separated with space
- besides = you can also use #.
- messages have to start with security code that is followed by first command without space
- SMS text command has to end with # character

### Command List:

Description	SMS command	x	x value	value after = sign	Example
editing SMS security code	CODE			= new security code	<b>1234CODE=4321</b>
adjust clock	CLOCK			= yymmddhhmm yy: year, mm: month dd: day, hh: hour mm: minute	1234CLOCK=1401200922 Date will be: 2014.01.20 09:22
save telephone number for caller identification	ADD			= telephone number (with +36)	<b>1234ADD=+36305551234</b>
removing telephone number from caller number identification list	DEL			= telephone number (with +36)	<b>1234DEL=+36305551234</b>
saving/editing telephone number for notification	TEL	x	telephone ordinal number from 1 to 8	= telephone number (with +36)	<b>1234TEL1=+36305551234</b>
input setup	INPUT	x	input ordinal number	= t:0 switched off, 1 24 h normal, 2 backup; 3 normal alarm 4 delayed alarm nn NO or NC eeeeee...: Other parameters: 1.e=1 send SMS of status reversion 2.e=0 compulsory 0 3.e=1 siren sound 4.e=1 voice message 5.e=1 remote surveillance 6.e=1 no need to pickup when calling 7.e=1 DTMF confirmation (#) 8.e=0 compulsory 0	<b>1234INPUT1=INC0010000</b> First input is: -24 h normal -Normal Close - not sending SMS when reverts back to initial state - plays siren sound when calling - no voice message - no remote surveillance notification - when calling must be picked up -no need for DTMF confirmation
Output setting	OUTCONF	x	output serial	= iiiirhn iiii if 0000 then it will be bistable, otherwise it is the duration of control in seconds r controlled when alarm h controlled when call n =1 without caller identification	<b>1234OUTCONF=00003110</b> output is in 3 seconds monostable mode, it can be controlled by call and alarm and number identification is a must during a call
Life sign sending	LIFETEST			= cccssttttt ccc cycle time, how often to send message (ex.:030 days) ss on the given day at what time (ex.: at 12 o'clock) tttttt which telephone number to choose from the 8 ex.: 00100000 3 <sup>rd</sup> phone number, 01010000 2 <sup>nd</sup> and	<b>1234LIFETEST=0071100100100</b> -in 7 days -at 11 a.m. -sending to 3 <sup>rd</sup> and 6 <sup>th</sup> telephone number

				4 <sup>th</sup> etc.)	
Setting up notification sending	SEND	x	1: 1 <sup>st</sup> input 2.: 2 <sup>nd</sup> input 3.: 3 <sup>rd</sup> input 4.: 4 <sup>th</sup> input 9.: tamper 10.: power source monitor 12.: life sign	= sssssssvvvvvvvv ssssssss selecting phone numbers for SMS notification (0 or 1) vvvvvvvv selecting phone numbers for call (0 or 1)	1234SEND2=0010000011110000
	SMSTEXT	x	1.: 1 <sup>st</sup> input 2.: 2 <sup>nd</sup> input 3.: 3 <sup>rd</sup> input 4.: 4 <sup>th</sup> input 9.: tamper 10.: power source monitor 12.: life sign 16.: reverting text	= SMS text ending with *. Text must not contain accented character!	1234SMSTEXT1= alarm text*
Forwarding inbound SMSs	REDIR			= phone number serial from 1 to 8	1234REDIR=2
Setting ringing time	RINGTIME			= from 001 to 255 (in seconds)	1234RINGTIME=030 rings for 30 seconds
Maximum time of speaking	CALLTIME			= Maximum time of speaking in seconds.	1234CALLTIME=30
Setting of the microphone signal level	GAINMIC			= 0..9 (0 - Disabled)	1234GAINMIC=3
Setting of the speaker signal level	GAINSPK			= 0..9 (0 - Disabled)	1234GAINSPK=5
Night suspend mode	NIGHTDIS			OFF: function blocked aa: the beginning of the blocking in hour bb: the end of the blocking in hour	1234NIGHTDIS=23,06
Requesting module status information	INFO			Command	1234INFO
no SMS after SMS programming	NOSMS			Command	1234command1 command 2 ... NO SMS
output control	OUT	x	output numbers	= ON switch on OFF switch off RUN controlling according to settings sssss controls the output for a limited time (in seconds)	1234OUT1=ON Output 1 switches on 1234OUT2=OFF Output2 switches off 1234OUT3=RUN Controlling output 3 1234OUT4=00003 Output 3 switches on for 3 seconds
Restarting module	RESTART			Command	1234RESTART

**SMS command examples:**

1<sup>st</sup> message: input setup and selecting 3<sup>rd</sup> telephone number for notification. Sending SMS and voice message to the 3<sup>rd</sup> number.

**5384TEL3=+36201255335 CLOCK=1401200922 INPUT2=4NO00100000 SEND2=0010000000100000**

SMS text is the following:

**5348** SMS security code, every new SMS can be started with this code (to change it use the CODE command. Default code: 1234)

**TEL3=** changing 3<sup>rd</sup> telephone number for notification. Give the number in international format.

**CLOCK=** change the date to the following: 2014.01.20 09:22

**INPUT2=** setting 2<sup>nd</sup> input to the following: delayed normal open input that sends siren alarm when there is an event.

**SEND2=** second input sends SMS and voice message to the 3<sup>rd</sup> telephone number

2<sup>nd</sup> message:

- to modify the SMS text of the second input
- output and life sign message setup and

- saving an output controlling number for controlling
- finally modify the SMS security code

**5384=SMSTEXT2=second input alarm” OUTCONF1=00003010 ADD=+36705553456**

**LIFETEST=007123000100000 CODE=2345**

**SMSTEXT2=** modify SMS text of second input. No accented characters!

**OUTCONF1=** output setup: monostable for 3 seconds with caller identification

**ADD=** Adding telephone number to caller identification

**LIFETEST=** sending life sign weekly at 12:30 to the 3<sup>rd</sup> telephone number



Az 1999/5/EC számú európai irányelv  
szerint kijelölt magyar tanúsító (1413)

Hungarian Notified Body (1413)  
according to 1999/5/EC Directive

## Tanúsítvány

EC Certificate of Conformity

Tanúsítvány száma: B-12-094-TAN

Certificate Number: B-12-094-TAN

Kelt: Budaörs, 2012. március 7.

Date: Hungary, Budaörs, 7th of March, 2012

Jogosult felhasználó: TellSystem Communication Kft. (2040 Budaörs, Károly Király út 90.)

Certificate Holder: TellSystemCommunication Ltd. (Hungary, H-2040 Budaörs, Károly Király str. 90.)

A termék megnevezése és rendeltetése:

Type and description of apparatus

**InterCom GSM**

InterCom GSM

**GSM átjelző Simcom SIM900 GSM modulal**

GSM Data Transmitters using Simcom SIM900 GSM module

A MATRIX\*

a rádióberendezésekről és az elektronikus hírközlő végberendezésekről, valamint  
megfelelőségük kölcsönös elismeréséről szóló 5/2004. (IV.13.) IHM rendelet (4.  
számú melléklet) megfelelés-vizsgálati eljárása alapján tanúsítja, hogy a  
készüléktípus

megfelel\*\*

- a 2003. évi C. törvény 80. § (1) bekezdésben az EMC előírásokra, továbbá a (2)  
bekezdés előírásaira vonatkozóan az alábbi normatív dokumentum(ok)ban foglalt  
követelményeknek:

MATRIX certifies according to Annex 4 of the "Ministerial Decree on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity" as Hungarian transposition of 1999/5/EC Directive the apparatus is conform with the Article 3.1. (b) and 3.2. of the Directive according to the normative documentations listed below:

A MET Laboratories Inc. (tanúsító száma: 0980) által, az EMC28544 regisztrációs számon kiadott

Tanúsítványa alapján:

Based on the Certificate registered EMC28544, issued by MET Laboratories Inc, notified body 0980:

EN 301 511 v9.0.2 (03/2003)

EN 301 489-1 v.1.8.1 (04/2008)

EN 301 489-7 v.1.3.1 (11/2005)

EN 60950-1:2006+A11:2009

E Tanúsítvány kiállításával egy időben MATRIX a minősített készüléket a következő  
azonosítószámmal lajstromba vette:

Issuing this Certification of Conformity MATRIX registered this apparatus by identification number:

**12-094**

A gyártó (forgalomba hozó, importőr) a minősített készüléken – a készülékre vonatkozó minden  
követelmény teljesülése esetén – az alábbi megfelelési jelet köteles feltüntetni:

The apparatus should be marked by the manufacturer (importer), if it fulfils all relevant requirements, with

**CE1413**

továbbá jogosult a MATRIX tanúsító védjegyének használatára.

furthermore the manufacturer is entitled to use the trade-mark of MATRIX.

  
tanúsítási igazgató  
Director of Certification

  
ügyvezető igazgató  
Managing Director

\*\*A MATRIX Kft. a 004/2008/2M. számú Kijelölési Okiratban a közlekedési, hírközlési és energiaügyi miniszter által kijelölt tanúsító szervezet  
MATRIX is designated by Hungarian transport telecommunications and energy-supply minister in Charter of Appointment No. 004/2008/2M.

\*\* A mérések során alkalmazott beállítások esetén (dedikált antenna, szoftverbeállítások, hardver konstrukció)  
As arranged during measurement (dedicated antenna, software settings, hardware construction)