



EasyLine 4G

MINIATURE PHONE LINE (PSTN) SIMULATOR



INSTALLATION AND USER GUIDE

Index

Device description an operation	3
Module buildup	4
Installation guide	5
Connecting the module (PC)	7
Connection procedure using a USB adapter	7
Connection procedure using a BT adapter	7
Programming with PC software	8
Connection to the GSM/GPRS module	8
The structure of the program	8
Checking the status of the module	9
Read event log	10
GSM signal reading	11
Basic datas	11
Add phone numbers for notification	11
Add control phone numbers	11
INPUT settings	12
Output settings	12
Power monitor settings	12
Input other settings	13

Device description an operation

The GSM device is an analog telephone line simulator, which can be used as an accessory to an alarm center to replace an already existing telephone line of poor quality or in a location that is otherwise difficult to install. The advantage of the module is the so-called Plug&Play design, thanks to which only an active SIM card is required to use the line simulator function.

A full PSTN line simulation can be achieved by generating line and ringing voltages and transmitting DTMF tones. This standard telephone line guarantees that you can connect the module to the existing system without any particular transition difficulties.

The GSM module is capable of two-way communication. In case of an incoming call, the device connected to the TIP/RING points can be remotely accessed and programmed (if the device is suitable for this and the available network conditions allow this).

Using the module SMS command, knowing the security code, the module settings can be modified at any time without having to establish physical access.

The module has 1 SMS input. This input can be closed to the GND point in the Normal position, i.e. Normal Close (NC). An SMS notification can be triggered by interrupting the closed loop formed between the input and the GND point. You can change the text of this SMS and the phone number to be notified at any time using 1 SMS.

The module has 1 open collector output, which is connected to GND when activated. If a relay is connected to it, one half of the relay must be connected to +12V and the other half to the Open collector for proper operation. For inductive loads (e.g. when using the aforementioned relay), the use of a protective diode is mandatory!

The output can be controlled with a free call from an unlimited number. When controlling by calling number identification, the numbers are stored in the internal memory of the module (in this case, 1000 numbers can be entered). Call number identification prevents unauthorized control of the device connected to the output.

The output can be loaded with 300mA and a maximum voltage of 30V can be connected to it.

In addition to continuously monitoring the power supply, the module also checks the status of the GSM field strength. It can be read on a graph that can be displayed with a resolution of up to 1 hour using the programming software.

The module can be programmed using an SMS command or programming software on a PC.

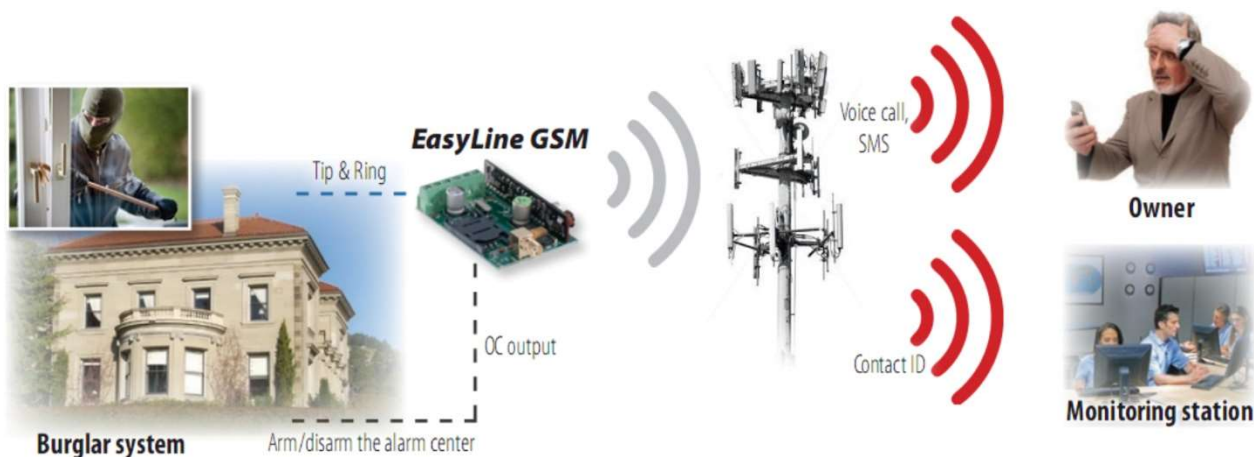


Figure 1: Device operation

In a later development, with a simple FW update, it will be possible to convert Contact ID codes from the alarm center into text and send SMS to 8 specified phone numbers in addition to the line simulator functions.

Module buildup

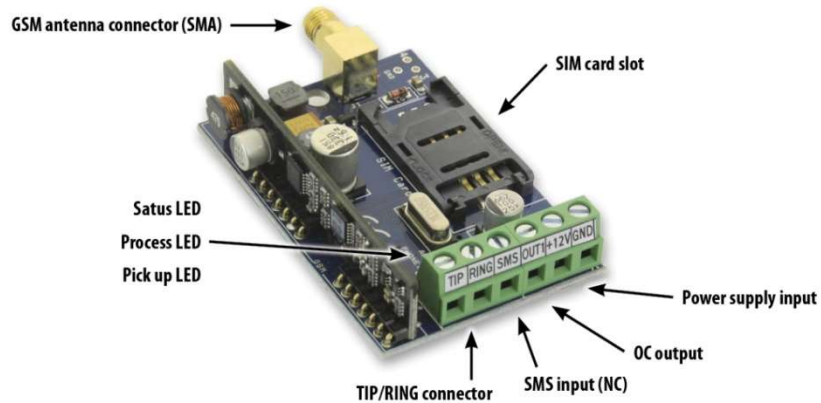


Figure 2: the buildup of the module

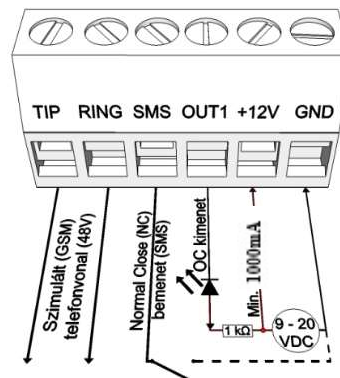


Figure 3: Wiring diagram

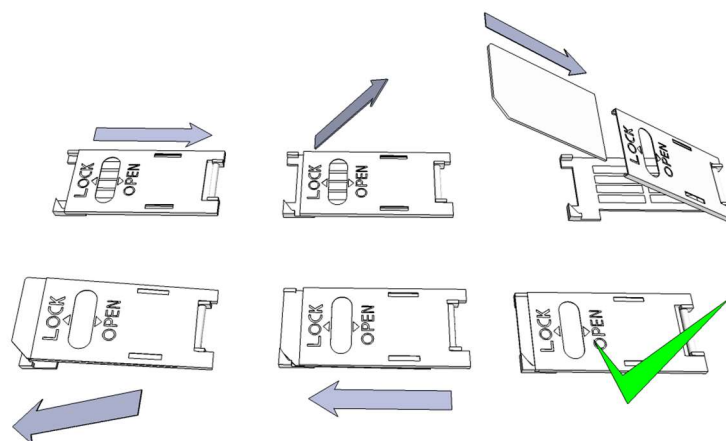


Figure4: Inserting the SIM card

Installation guide

Technical parameters

- Power voltage: 9-24 VDC
- Simulated voltage: 48V (line), 72V (ringing)
- Standby power drain: 80 mA
- Maximum power drain: 1000 mA
- Open Collector output load: max. 30V/300 mA
- GSM module type: SIMA7672
- GSM frequency: 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)
- Dimensions: 62 x 42 x 16 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 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!

Do not install in watery places or in places with great humidity!

2. Connecting the antenna: antenna 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!

3. **You should opt out the SIM card PIN number request, voicemail and call notification!**

Sometimes new SIM cards must be activated (usually an 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. calls only)

4. It is practical to check the satisfying operation of a SIM card in a cell phone prior of insertion into a module. At this step it is practical to also save controlling telephone numbers on the SIM card. Number identifying at the caller and the called has to be checked. At certain service providers this function must be enabled formerly.

5. Insert the SIM card in the SIM card slot of the module.

6. Connectors have to be connected according to the wiring diagram. If you are dealing with OC output mind the correct wiring of the relay protecting diode.

7. If you are working with OC relay be cautious especially in avoiding electric shocking. A proper contact protection must be established. If you are not qualified ask for professional help.

8. 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.

9. Now the device can be powered.

10. 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).

11. If red LED goes off and green LED is blinking module is online and connected to network. The blinking number(s) indicates GSM signal strength.

The power supply must be connected for programming!

LED signals

Signals give essential information of the module, of GSM signal strength and of possible errors. By blinking we mean flash numbers between two longer pauses.

- A **Phone** LED (red) lit indicates the device connected to the module "picked up the phone". Blinking of the LED indicates DTMF sound reception and dialing process.
- A **STATUS** LED (green) gives feedback of signal strength 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 checkings.
In any other case an event sending is proceeded (SMS or voice call).
- A **STATUS** LED (green) gives feedback of signal strength based on the chart below:

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

Connecting the module (PC)

Connection procedure using a USB adapter

Connect the USB adapter to the connector labeled Program on the module.

1. The USB adapters are able to provide sufficient power supply for the GSM module for programming.
2. Using a USB extension cable, insert the USB connector of the adapter into any USB port on the computer.
3. ATTENTION! For Windows OS, the system will offer to install the driver automatically. It is IMPORTANT that you do the installation using the USB driver, not the system.

Manually install USB driver in 10 steps

- ✓ Get the required driver from our website
 - ✓ Use the 32-bit or 64-bit driver compatible with your system for the rest of the installation
 - ✓ Compatibility can be determined in the menu item Control Panel → System
 - ✓ Connect the USB programmer to your computer
 - ✓ Turn off the automatic installation option offered by the system.
 - ✓ Open the Device Manager window under the Control Panel → System → Hardware tab.
 - ✓ In the window that appears here, look for the unknown device that appeared among the other devices (which in this case is the programmer itself, later it will appear as USB Serial port). If you do not see such a device, start the "Search for hardware changes" process from the top menu bar of the window.
 - ✓ By double-clicking on the unknown device, the properties of the device will be displayed
 - ✓ Start the driver update function
 - ✓ In the resulting installation window, choose to manually determine the location of the driver, and then select the directory for the 32-bit or 64-bit version of the driver.
- Click the next button and start the installation
4. Open the device manager (by clicking System → Properties → Hardware tab → Device Manager)
 5. Find the device labeled USB Serial port (COM...) under Ports
 - If it is necessary to reinstall the driver, then by clicking on the device here, first click to remove the driver, then proceed as described in the previous step.
 6. Open the programming software
 7. You must set the value in the bracket [USB Serial port (COM...)] in the programming software.
 8. After this, the name of the module appears next to the Start button after the connected GSM module.

Connection procedure using a BT adapter

Connect the Bluetooth adapter to the GSM module and then power it on.

1. Activate the Bluetooth connection option on your programming device (PC and mobile phone).
2. Search for the programmer using your Bluetooth-enabled device.
3. After finding the adapter, use the default code 1234 to pair your computer, smartphone, or tablet with the adapter. After pairing, the programmer can be found under the name WiFi/BT Programmer.
4. Find the COM port identification number of the connection
(Usually found under Properties -> Hardware tab)
5. Also set the Port number on the programming software (PC).
6. Connect to the GSM module.

In any case, you can confirm that a successful connection has been established by the name of the connected GSM module appearing next to the Start button of the programming software, and the green LED on the programmer starting to flash.

If the connection is established between the adapter and the computer or mobile phone, you can start configuring the module.

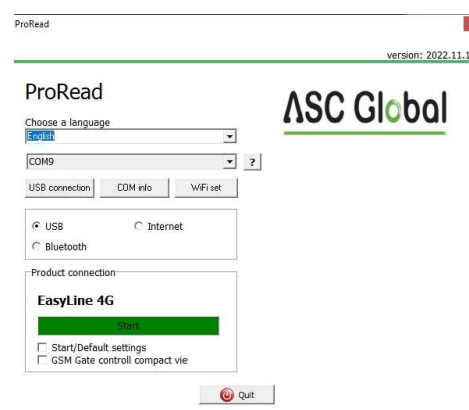
- By clicking the Start button, the module settings will be read after connection
- Clicking on the Start/Default config button resets the module to the factory default value (after confirmation)

Programming with PC software

- For PC settings and programming, use our software, which you can download for free from our website.
- The program can be run independently and does not require installation.
- Compatible with Windows 7, 8 and 10 operating systems
- Make sure you are always using the latest software!
- If newer software is used, it is recommended to update the module before the first configuration.

Connection to the GSM/GPRS module

- Choose whether you want to program the module using a USB or Bluetooth connection.
- In the drop-down list below the selection of the program language (COM9 in the picture), you can choose which port you want to communicate with the module's programmer. You can find this value (in case of Windows operating system) under the device manager -> COM port by selecting the connected programmer. If you can't find it, press the COM info button to jump to the Device Manager, where you can find the required COM port.
- In case of successful connection, you will see the name of the module on the product connection panel.
- By clicking the start button, the software connects to the module and reads its contents.
- By pressing the Start/Default config button after connecting to the module, it will be reset to the factory default values (The software will ask for this before the operation, if this function was not previously disabled).
- If you do not want to connect a module yet and are only interested in the setting options, you can freely choose which module's setting options you want to learn about in the Products - trial window. At the same time, it gives the possibility to program the module in advance.



The structure of the program

Elements of the top menu bar:

- Maintenance: Basic menu items with the menu items required for module maintenance (e.g.: to view the status of the module, read the event log, deactivate the SIM PIN code, update the firmware)
- File operations: Save and load settings
- Descriptions: View wiring diagram
- Settings: Set window size, Disable confirmation questions
- Language: Select language (available languages: English, Hungarian, Italian, German, Slovak, Slovenian, Dutch, Czech, Finnish, Romanian)
- Contact: Our contact details, e-mail addresses, telephone numbers
- You can use the tabs to switch between windows with different setting options

ProRead

Service File Manuals Setting Language Contact GSM Quit

15:20:58

Time sync RX

Client:

ASC Global

Parameters

Phone numbers

Caller ID

Inputs

Outputs

Voice

Other

Ext. power monitor

Life signal

Basic data

Client name:

Username:

GSM phone number:

Type of alarm center:

Type of GSM module: EasyLine 4G

Date of installation: 2022. 11. 15. 10:01:40

Read Send Restart Quit

COM9 EasyLine 4G Firmware: 9.4 ProRead verzió 2022.11.17

- By clicking the Clock Synchronization button on the main page (Basic data tab), the module synchronizes its internal clock with the computer clock.
- After the device is connected to the GSM network, this synchronization will be performed automatically through the service provider (if the network supports this service).
- The Read and Send button at the bottom is used to read and change the configuration on the module. These buttons are available everywhere except the Control phone numbers tab.

It is advisable to use the Send button after all important and larger settings.

Before submitting your settings, please make sure that it does not cause an unexpected alarm. Before doing so, it is recommended to view the current status of the module (Maintenance tab).

ATTENTION! After connecting, always read the settings first if you want to change them!

- You can restart the module with the Restart button. After monitoring, it is recommended to restart the device.

In the bottom menu bar, you can find out the following:

- Communication port number
- GSM module name
- Firmware version number
- A note about the current software operation
- ProRead software release number

Checking the status of the module

The current status is displayed in the **Maintenance** → **Display module status** button.

When querying the status of the module, you can find out the following information:

- Status of inputs
- Status of outputs
- Tamper tamper indication
- Power voltage error indication
- External telephone line voltage
- Listing of possible errors/events (e.g.: SIM card not inserted, SIM card locked with PIN code)
- GSM connection status (e.g.: Registered to network, Roaming, No connection, Connection refused)
- Current GSM field strength (updated in a few seconds)

Disable SIM card PIN code

The PIN code request **must be switched off on the SIM card** before it is .

Read event log

Event log

Event Log					
					
					
	EVENT	DATE	GSM 0-31	GSM Network	Note / parameters
152	SMS Send OK.	2022.11.15. 12:51:22	28	Connected	+36704204008/ EasyLine 4G Rendben
153	GSM logged	2022.11.15. 12:51:21	28	Connected	IMEI:866011050725191 SW:09.4.7
154	SMS Send OK.	2011.01.01. 00:00:47	28	Connected	+36704204008/Stored: 1 Error: 0 GSM: 5 D: 0
155	Incoming SMS	2011.01.01. 00:00:43	28	Connected	+36704204008/ OK4SMSTEXT16=Back result*
156	Microcontroller START/RE	2011.01.01. 00:00:03	0	Not connected	
157	RESET No Signal	2022.11.15. 12:47:01	0	Not connected	
158	GSM sinal lost	2022.11.15. 12:06:28	29	Connected	
159	SMS Send OK.	2022.11.15. 12:05:08	29	Connected	+36704204008/ Bemeneti jelzes
160	Input 1.	2022.11.15. 12:05:00	29	Connected	
161	SMS Send OK.	2022.11.15. 12:04:54	29	Connected	+36704204008/Stored: 1 Error: 0 GSM: 5 D: 1
162	Incoming SMS	2022.11.15. 12:04:51	29	Connected	+36704204008/ OK4SMSTEXT10=Power OFF*
163	SMS Send OK.	2022.11.15. 12:04:02	31	Connected	+36704204008/Stored: 1 Error: 0 GSM: 5 D: 1
164	Incoming SMS	2022.11.15. 12:03:59	31	Connected	+36704204008/ OK4SMSTEXT10=Power OFF
165	OUT call (successful)	2022.11.15. 12:01:53	29	Connected	+36704204008
166	Phone RING	2022.11.15. 12:01:51	29	Connected	+36704204008
167	CALL	2022.11.15. 12:01:50	29	Connected	+36704204008
168	SMS Send OK.	2022.11.15. 12:01:49	29	Connected	+36704204008/ Bemeneti jelzes
169	Input 1.	2022.11.15. 12:01:45	29	Connected	
170	SMS Send OK.	2022.11.15. 12:00:04	29	Connected	+36704204008/ EasyLine 4G Rendben
171	OUT1	2022.11.15. 11:53:24	31	Connected	On
172	Incoming calls identified	2022.11.15. 11:53:23	31	Connected	+36704204008
173	SMS Send OK.	2022.11.15. 11:52:51	31	Connected	+36704204008/Stored: 1 Error: 0 GSM: 5 D: 1
174	OUT1	2022.11.15. 11:52:51	31	Connected	Off
175	OUT1	2022.11.15. 11:52:48	31	Connected	On
176	Incoming SMS	2022.11.15. 11:52:48	31	Connected	+36704204008/ OK4OUT1=00003
177	SMS Send OK.	2022.11.15. 11:51:57	28	Connected	+36704204008/Stored: 0 Error: 1 GSM: 5 D: 1
178	Incoming SMS	2022.11.15. 11:51:54	28	Connected	+36704204008/ OK4OUT=00003
179	SMS Send OK.	2022.11.15. 11:51:20	28	Connected	+36704204008/Stored: 1 Error: 0 GSM: 5 D: 1
180	OUT1	2022.11.15. 11:51:16	28	Connected	Off
181	Incoming SMS	2022.11.15. 11:51:16	28	Connected	+36704204008/ OK4OUT1=RUN
182	SMS Send OK.	2022.11.15. 11:50:05	31	Connected	+36704204008/Stored: 1 Error: 0 GSM: 5 D: 1
183	Incoming SMS	2022.11.15. 11:50:01	31	Connected	+36704204008/ OK4OUT1=ON
184	OUT1	2022.11.15. 11:50:00	31	Connected	On
185	SMS Send OK.	2022.11.15. 11:49:33	23	Connected	+36704204008/Stored: 0 Error: 1 GSM: 4 D: 1

You can open the event log with the **Maintenance → Read log** button:

- The GSM module can store the last 16,000 events in FILO (First in - last out) mode
- You will receive brief information about the event in the Signal column.
- In the Date column, you can see the time of the event (year, month, day, hour, minute, second resolution).
IMPORTANT! The date will be accurate if the module's internal clock is synchronized with a computer clock or the GSM network. The latter is done automatically by the module as soon as it is connected to the provider's network.
- GSM 0-31 shows the value of the field strength when registering the signal. 31 is the highest value and 0 indicates no connection.
- Other extra information about the signal is entered in the comment/parameter column.
- When opened, the table is empty, to start reading, click the **Read Event Log** button.
- In terms of order, the most recent data will appear at the top of the list and the older entries will appear downwards.
- If it is not necessary to read the entire list, you can stop the reading by clicking the **Stop Reading** button.
- The read list can be exported from the software as a "csv" table (e.g. Excel), so it can be easily sent and stored for later analysis.

GSM signal reading

You can display the graph shown in the picture about the state of the GSM signal strength.

- You can display the GSM field strength with the button **Maintenance → Display GSM signal**.
- You can read the values by pressing the read button.
- The change in field strength is displayed in hourly resolution. The elapsed time must be read backwards accordingly
- The diagram is divided from 0 to 31 on the vertical scale, the value 31 means the best field strength.
- The figure can be enlarged as desired with the left mouse button.

Basic datas

You can enter more important information about the installed GSM module. In addition to the customer's name and installation address, you can also specify the phone number of the SIM card inserted in the module and the type of the connected alarm center.

- The entered data is stored on the module
- Completing it can be useful in case of maintenance performed later.

Add phone numbers for notification

In the phone numbers menu, you can enter the numbers to which you want to send SMS and/or voice messages. The numbers entered here must be in international format for reliable operation. (Pl.:+36301234567 vagy 0036301234567)

- You can enter a maximum of 8 phone numbers to be notified.
- You can select these numbers in other parts of the program.
- You can also edit the list here via SMS with the command "TELx=Telephone number", where "x" denotes the serial number of the phone number you want to edit.
- (Example: 1234TEL1=+36301234567, 1234TEL2=+36304564323)
- More under SMS commands

Add control phone numbers

- In the Control phone numbers window, you can specify which numbers can control your outputs.
- Phone numbers can be stored in the module's internal memory (up to 1000), and you can save additional numbers on the SIM card inserted in the module. Phone numbers on the SIM card can only be read with ProRead.
- If internal memory is used, the module will be independent of the memory content of the inserted SIM card.
- Before editing the list, always read the contents of the memory using **the Read numbers from memory** button. To save, use the **Write numbers to memory** button and then the send button.
- Entered phone numbers must be in international format. Here, due to the length of the number, +36 is recommended (e.g.: +36301234567).
- It is also possible to save, edit and open stored numbers (from a .csv file).
- You can also assign phone numbers to specific outputs.
- You can also modify the list using an SMS command using the commands ADD=Phone number (add) and DEL=Phone number (delete). (Példa: 1234ADD=+36301234567, 1234DEL=+36301234567)

INPUT settings

The module has 1 SMS input. The type of input can be changed. It can connect to the GND point in a normal closed position, i.e. Normal Close (NC) or in a normal position, i.e. Normal Open (NO). By changing the loop formed between the input and the GND point, an SMS notification or a phone call can be triggered to up to 8 phone numbers. You can change the text of the SMS and the phone number to be notified at any time using 1 SMS.

In the **Input panel**, you can choose how the input should work:

- At the input, you can specify whether it should be open (NO – Normal Open) or closed (NC – Normal Close) by default.
- We can also request an **SMS notification** of the status of the input. The reset SMS text can be entered on the other tab in the SMS text for input reset.
- In the case of signaling with a siren sound, the **voice call message** will be a 25-second siren sound, while if you also select the voice message, then only 5 seconds.
- It is possible to set the call not to be answered. In this case, the module will not initiate a call again in case of a successful call, regardless of whether the call was actually received or not.
- In the SMS text field, you can enter the **content of the message**, which can be a maximum of 32 characters long.

After saving the input settings, restart the module for the settings to work correctly!

Output settings

In the **Output** window, you can make settings related to the outputs. The type of output can be **monostable**, i.e. single-state (it switches for a preset time, then returns to its original state), or **bistable**, i.e. two-state (it returns to its original state only in case of a new control).

In the case of **monostable operation**, the desired switching time can be specified in seconds or minutes. The maximum length of this can be 65,535 seconds.

After saving the output settings, restart the module for the settings to work correctly!

Setting the output is possible by sending the following message:

1234OUT1= → Optional parameteres: **ON, OFF, RUN** or switching for a specified time (specified in 5 characters) ex: **1234OUT1=00003** → Control of Output 1 for 3 seconds.

Power monitor settings

The GSM device is capable of monitoring its own power supply and sending notifications in the event of a problem.

- On the Power Monitor tab, you can set the voltage value below which the module sends an alarm.
- The additional settings of the function are the same as the settings of the inputs.

You can change the sending of the vital sign message with the SMS command below:

1234LIFETEST=cccsstttttt

ccc → sending cycle specified in days (e.g.: 007 days)

ss → what time to send the messages on a given day

ttttttt → Which one phone number to send the messages to (ex.: 00100000 → sends the messages to 3rd phone number)

Input other settings

Other module-related input settings are available here.

ProRead

Service File Manuals Setting Language Contact GSM Quit

15:36:51

Time sync RX

Client:

ASC Global

Parameters

Phone numbers

Caller ID

Inputs

Outputs

Voice

Other

Ext. power monitor

Life signal

Settings of inputs

Input 1. **Even More settings**

SMS text for Input restore:

Restore:

Ring Time [sec]: 30

Max number of redials: 50

Talking time: 90

Time between calls: 0

Time between round calls: 0

Circular calling ☐

Help

On this page you can select which phone numbers you want to send SMS and/or voice message notification in case of "IN" alarm input. You can send notification to the same phone number in both ways. You can specify the content of SMS message in the "SMS text" field, which can be up to 32 characters long. In the "Input type" window you can select how the input should work:

00/Not used: Turn off the input, to avoid any trouble from electrical noise.

01/24h normal input: in this case the device will indicate all contacts.

02/Reserved: For later use.

03/ Autonomous mode input: Input, which controls the output only, when the module is alarmed.

04/ Autonomous mode delayed input: When the module is alarmed, it will start a counter ("Other" page -> Entry/Exit time). We can disarm the module during this time.

Read Send Restart Quit

COM9 EasyLine 4G Firmware: 9.4 ProRead verzió 2022.11.17

The **Even More settings** menu:

- Voice call parameters: **specifying the ringing and conversation time**, as well as the number of **call repetitions**. (SMS command: 1234RINGTIME=030 → 30 second ringing)
- By selecting the **round call function**, all designated phone numbers included in the given alarm must acknowledge the alarm.

In the **other** menu, the **SMS** tab contains the following informations are available:

- SMS forwarding to one of the 8 phone numbers to be notified.

Attention! Never select the modules' own phone number here!

- It is possible to enter the SMS programming security code here.

ProRead

Service File Manuals Setting Language Contact GSM Quit

15:40:04

Time sync RX

Client:

ASC Global

Parameters

Phone numbers

Caller ID

Inputs

Outputs

Voice

Other

Ext. power monitor

Life signal

Other settings

General **SMS**

☐ SMS redirection:

+36704204008

SMS security code:

1234

Daily SMS limit:

30

Max. retry on error:

4

If = 255, then disabled

SMS header:

120 character

Help

On this page you can configure some other useful parameters of the module: Choose the expand module (EXP Relay, EXP Alarm) The SMS redirection to a phone number selected. The SMS security code. Voice call's parameters: Ringing time, number of recalls and the talking time. Circular calling: Call every selected numbers till everyone notified it with their phones. Entry/Exit time for EXP Alarm. Set to turn off the module's LED, when the case of it is closed. Set the SMS message, when the inputs are set back. Set to Arm/Disarm the module with Caller ID Check Microphone mode on will give you the availability to turn on the connected microphone. Sensitivity of digital Input (In switched off status: 10ms; Normal: 400ms; Medium: 1sec; Strong: 5sec)

Read Send Restart Quit

COM9 EasyLine 4G Firmware: 9.4 ProRead verzió 2022.11.17

- Daily SMS limit: You can define how many SMSes the module can send in a day. This function can be turned off by setting the value to 255. If you set this limit to 0, the module will not send SMS!
- The maximum number of attempts in the event of an SMS sending error can also be set.
- Redirection of SMS received on the module to a given number to be notified. (SMS command: 1234REDIR=1...8)
- SMS header, the text of which will appear before the text of every SMS.

Programming with SMS command

You can program the device by sending even 1 SMS. The text of the SMS must always start with the security code. Commands can be concatenated separated by commas, so you can change several parameters at once. The length of the SMS command cannot exceed 160 characters.

The list of commands is as follows:

Example of programming with the SMS command:

**1234SMSTEL=0630111111,TELBE=0630222222, OUT=003, SMSPIN=1234,
1234ADD=+36301234567***

The EasyLine 4G module has an internal memory, so there is no need to save the phone number on the SIM card. Save our control phone numbers in the internal memory.

After successful programming, the module sends back an SMS with the following text:

„Stored:1 Error:0 V4.7“

If there was an error in the programming SMS, the device will return the following text:

„Stored:0 Error:1 V4.7“

If you do not want to receive this message, use the **NOSMS** command or the **RECALL** command, after which the module will call to indicate successful programming.

Criteria for commands:

- cannot contain accented characters
- all characters of the command are uppercase
- commands must be separated by a space
- you can also use # instead of the equals sign.
- messages must always start with the security code, after which the first command comes immediately without a space (the second command must be preceded by a space).
- the SMS text command must always be closed with a * character

Description	SMS command	x value	value after = sign	Example
editing SMS security code	CODE	=	new security code	1234CODE=4321
adjust clock (basically, it is updated automatically when connecting to the mobile network, but if the network does not support it, it can be set. After a network update or until the next restart, it keeps the manual settings)	CLOCK	=	yyymmddhhmm yy: year, mm: month dd: day, hh: hour mm: minute	1234CLOCK=2211230731 The date will be: 2022. 11. 23. 07:31
save telephone number for caller identification	ADD	=	Phone number (with +36)	1234ADD=+36305551234
removing telephone number from caller number identification list	DEL	=	Phone number (with +36)	1234DEL=+36305551234

saving/editing telephone number for notification	TEL	x	telephone ordinal number from 1 to 8	=	Phone number (with +36)	1234TEL1=+36305551234
Input setup	INPUT	x	input ordinal number	=	tnneeeeeeee t: 0 → switched off 1 → 24h normal, nn → NO vagy NC eeeeeeee: 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	1234INPUT1=1NC00100000 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 number	=	iiiiirhn iiii→if 00000 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	1234OUTCONF1=00003010 The output must be in monostable mode for 3 seconds, it can be controlled by calling and the identification of the calling number must be mandatory.
Life sign sending	LIFETEST			=	cccssttttttt ccc→cycle time, how often to send message (ex.:030days) ss→on the given day at what time (ex.: at 12 o'clock) ttttttt→ which one telephone number to choose from the 8 ex.: 00100000→3rd phone number, 01010000→2nd and 4th etc.)	1234LIFETEST=0071100100100 in 7 days -at 11 a.m. -sending to 3rd and 6th telephone number
Setting up notification sending	SEND	x	1: input 10: power 12: life sign	=	ssssssssvvvvvvv ssssssss → selecting phone numbers for SMS notification (0 or 1) vvvvvvv → selecting phone numbers for call (0 or 1)	1234SEND1=0010000011000000 -SMS notification to the 3rd phone number - Call notification 1-2. to phone number
SMS text - enter/edit	SMSTEXT	x	1: input 10: power 12.: life sign 16.: reverting text	=	SMS text ending with *. Text must not contain accented character!	1234SMSTEXT1=messages text*
Forwarding inbound SMSs	REDIR			=	phone number serial from 1 to 8	1234REDIR=2
Cancel forwarding of incoming SMS	REDIR			=		1234REDIR=0
Setting ringing time	RINGTIME			=	from 001 to 255 (in seconds)	1234RINGTIME=030 rings for 30seconds
Requesting module status information	INFO				Command	1234INFO

no SMS after SMS programming	NOSMS	Command				1234command1 command2... NOSMS
Output control	OUT	x	output number	=	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 1234OUT1=OFF Output2 switches off 1234OUT1=RUN Controlling output 3 1234OUT1=00003 Output 3 switches on for 3 seconds
Restarting module	RESTART	Command				1234RESTART

SMS command examples:

Input setting and 3. for notification of the phone number to be notified. Sending SMS and voice messages to the 3rd phone number.

**5384TEL3=+36201255335 CLOCK=2211230731 INPUT1=1NO00100000
SEND1=0010000000100000**

The content of the SMS is as follows:

5348 → SMS security code, every new SMS must start with this code (Use the CODE command to change it. Default code: 1234).

TEL3= → 3. adding/changing the phone number to be notified. Enter the phone number in international format.

CLOCK= Change date to next: 2022. 11. 23. 07:31