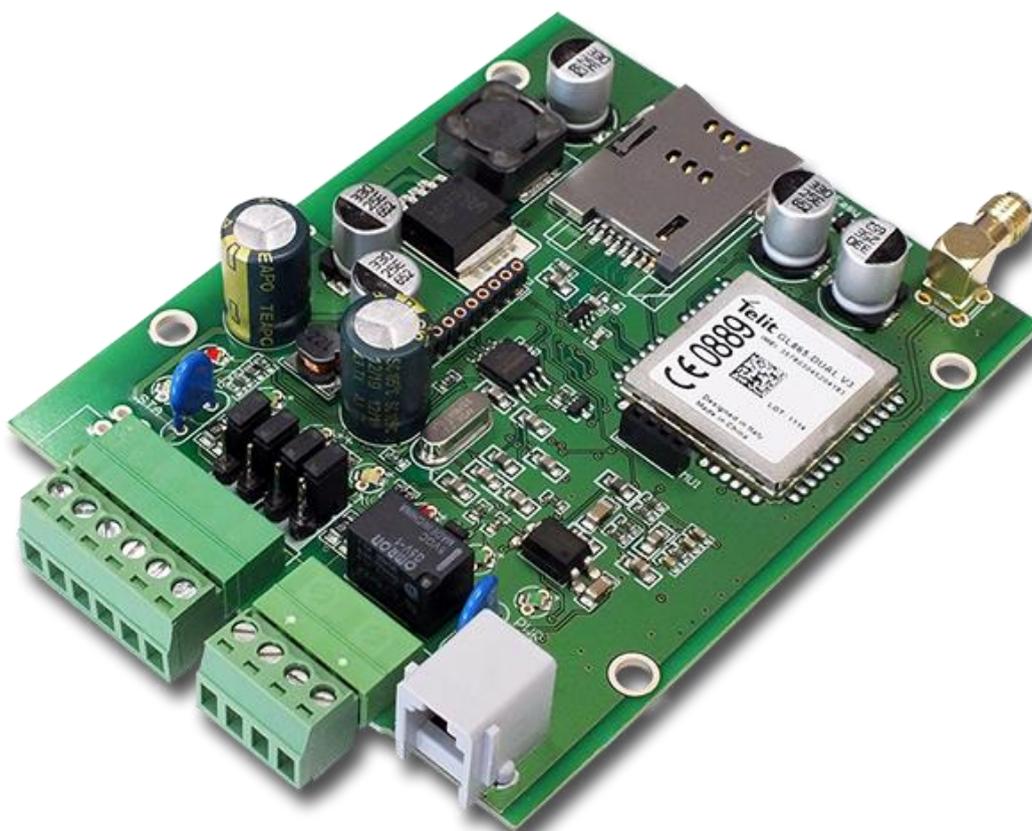


M2M Easy 2S Security Communicator[®]

2G, 2G/3G

Installation Guide

for PCB v9.3x



Document specifications

This documentation was made for the **M2M Easy 2S Security Communicator**[®] PCB revision V9.33 and newer 2G/3G versions, which were developed by *WM Systems LLC*.

The document contains the step-by-step description of its installation, the program update process and the detailed introduction of the setup parameters necessary for its operation.

| | |
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Chapter 1. Connecting the ports

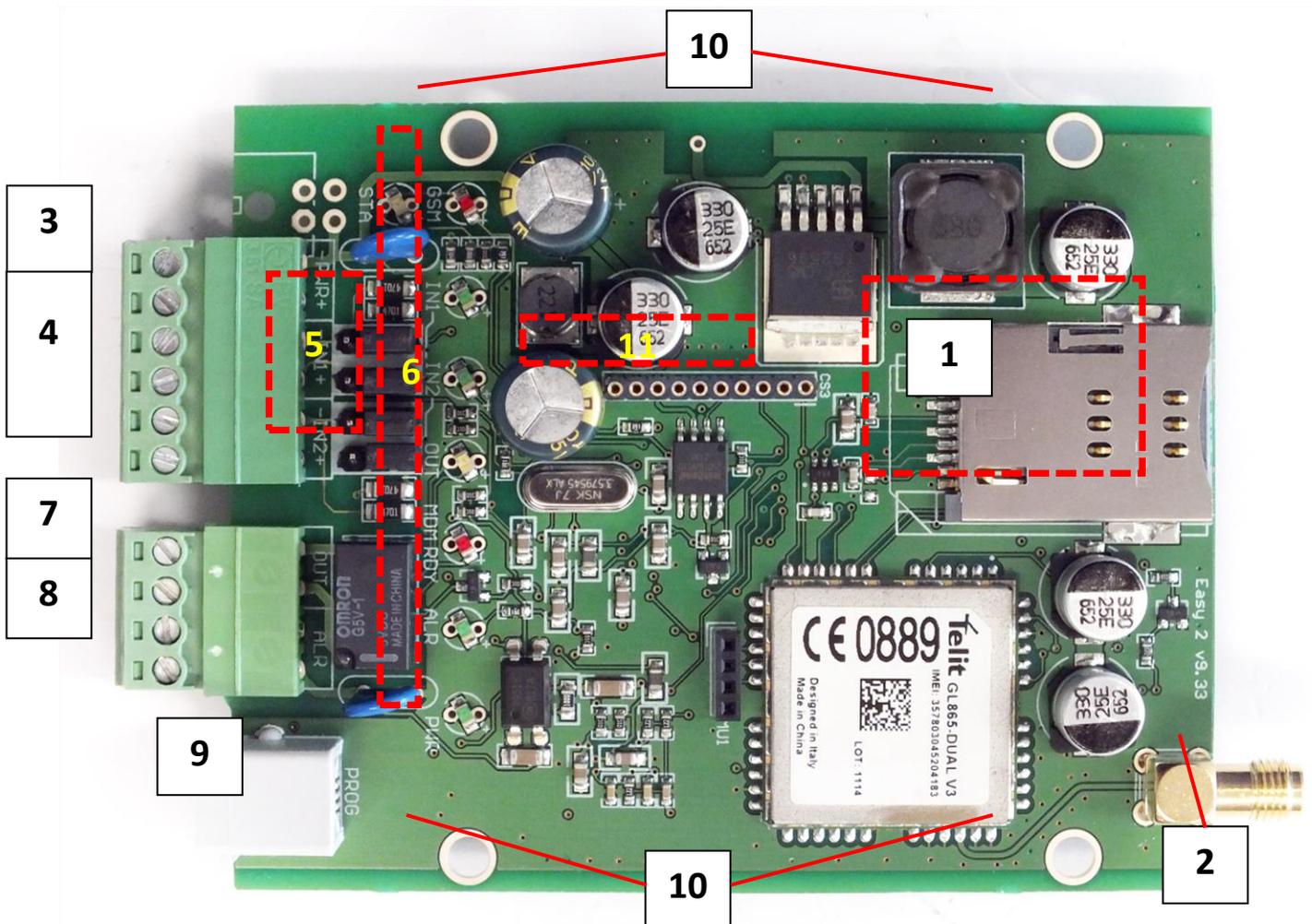
1.1 Connecting/wiring possibilities

■ Input, output connections

1 – SIM-card tray (push-insert)

2 – SMA antenna connector (for 2G or 3G antenna – depending on the module version) connector type: SMA-M, 50 Ohm

3 – PWR -/+ : Power supply connector (8-24VDC, 1A), alternative battery connection



4 – IN1, IN2 -/+ : connectors for input lines (for sensors, sabotage detection)

5 – Jumpers for handling the the input lines (IN1, IN2). You can select the following operation modes:

- galvanically splitted, independent voltage input lines
- contact input (detection of wire cut (by using a 10kΩ EOL resistor) or short)

6 – Status LEDs

7 – OUT: relay output (for control the output – open a gate, for siren)

8 – ALR: Alarm TIP RING input (for alarm center's connection) – simulated analogue phone line

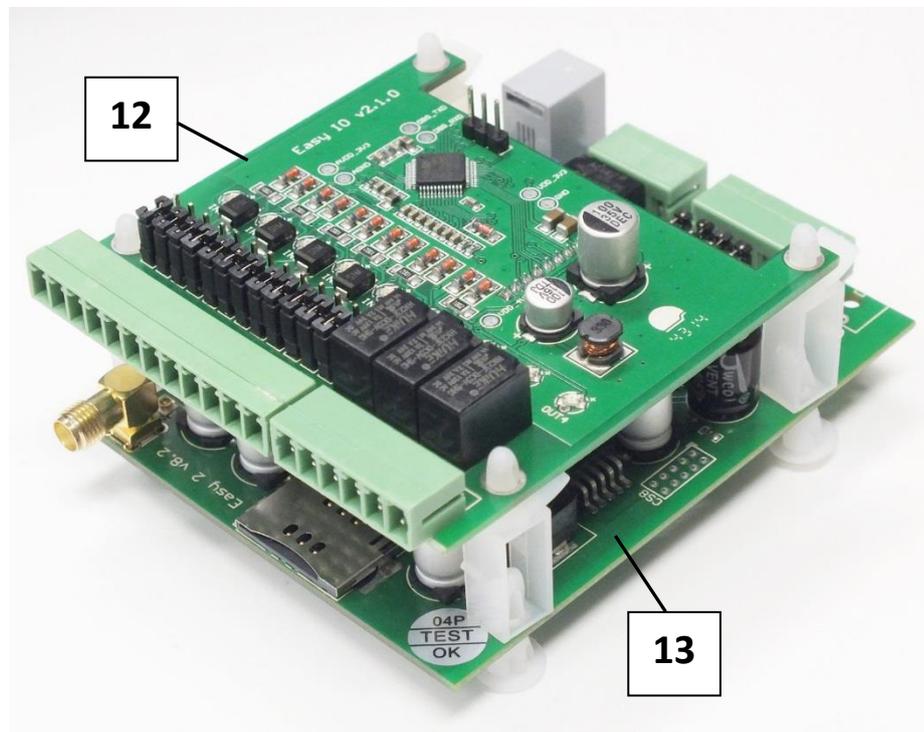
9 – PROG: RJ11 connector (for configuration, firmware refresh)

10 – Holes for fastening the PCB (into metal safety alarm system's box)

11– Expansion board connector (use in case of presence of the *Easy2 IO* expander)

12 – IO-expansion PCB (connects to the Easy2S mainboard through the no. 11 connector)

13 – Easy2S PCB mainboard

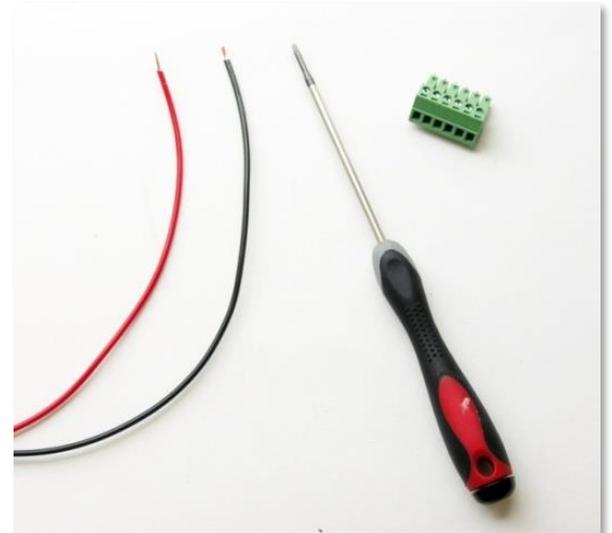
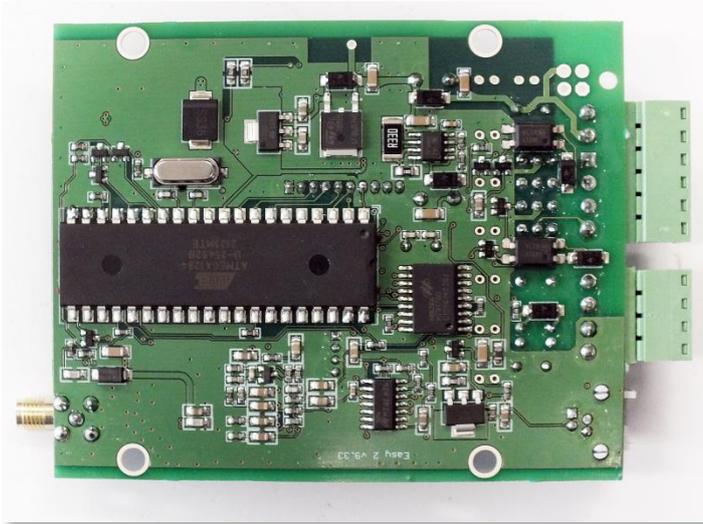


1.2 Wiring

■ Preparation

Take the 4 spacer fastening tabs (which are provided to the device), and place them into the PCB holes of the Easy2S and the safety box where you want to install the device.

Prepare a screwdriver, the 2 terminal blocks provided with the device, and the stripped wire pair necessary for connection, with appropriate distinctive colors (power connector – e.g. black-red, input-output wire pairs – e.g. black-blue, alarm input – e.g. black-white).



■ Connecting the inputs

The Easy2S has two input lines (**IN1**, **IN2**), where sensors can be connected by connecting its wire pairs, in accordance with the standard connection method shown below, by fixing the blanked cable wire pairs for each input.

In case of voltage inputs make attention to the order of polarity (+/-), the assembly must be done according to the inputs line titles (on PCB board).

Take care for the proper position of the input line jumpers.

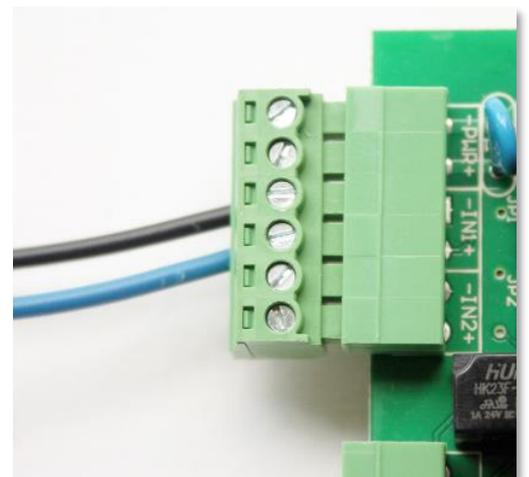
The device is able to detect wire cut on its input lines.

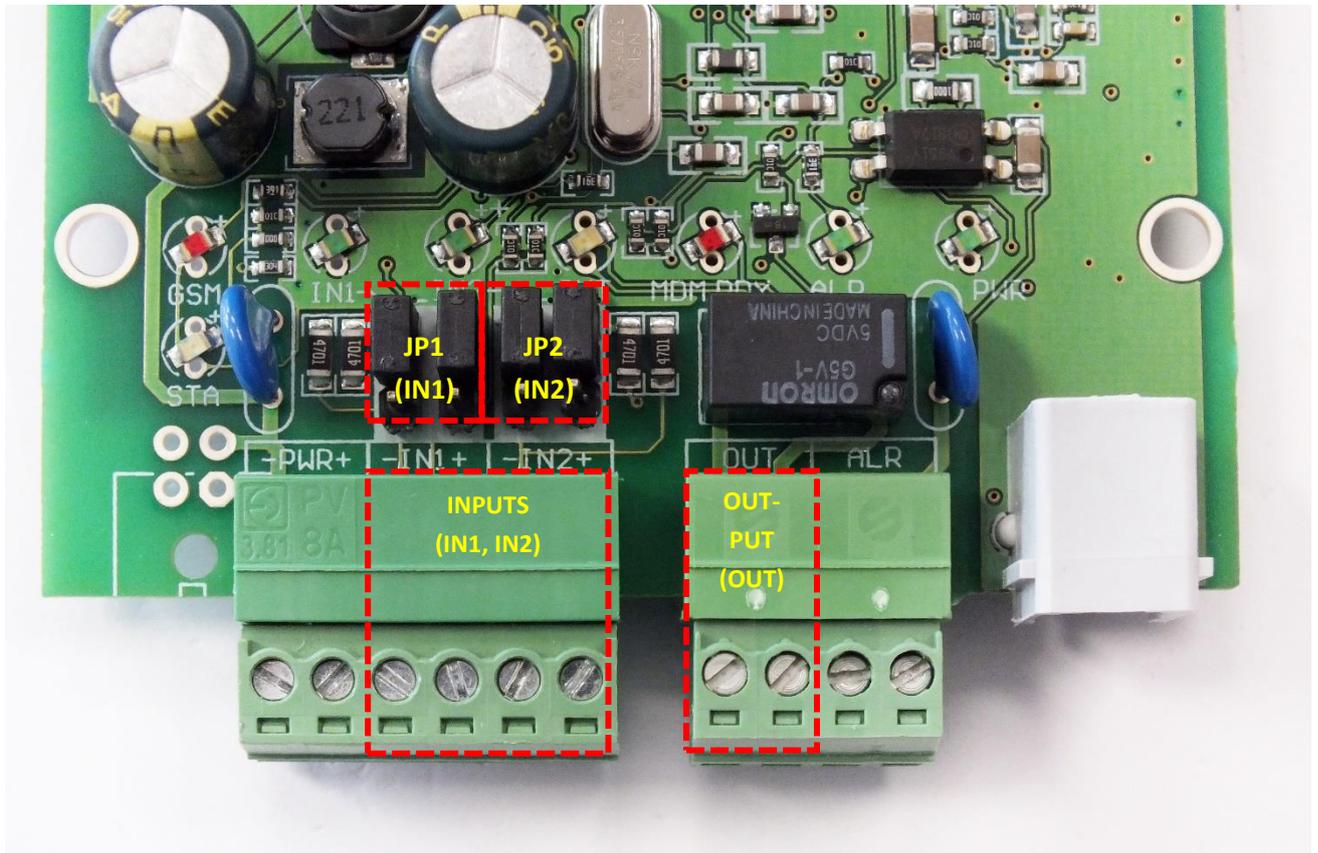
The inputs may also be used against sabotage purposes – e.g. detecting the opening of the alarm system enclosure / top cover (by connecting a magnetic switch wires to the device).

In voltage input operation mode, the input lines can be activated with 5-24V DC voltage, in opposite way these are inactive.

The proper operation mode must be configured as well with the *EasyTerm* application.

The inputs can be configured separately - to operate as a voltage or contact mode for the related input. These settings can be installed by the closing the related jumper pairs, besides the input terminal block – according to the input line nr. titles.





Jumperable input modes (with the JP1, JP2 jumpers):

- **Contact mode**

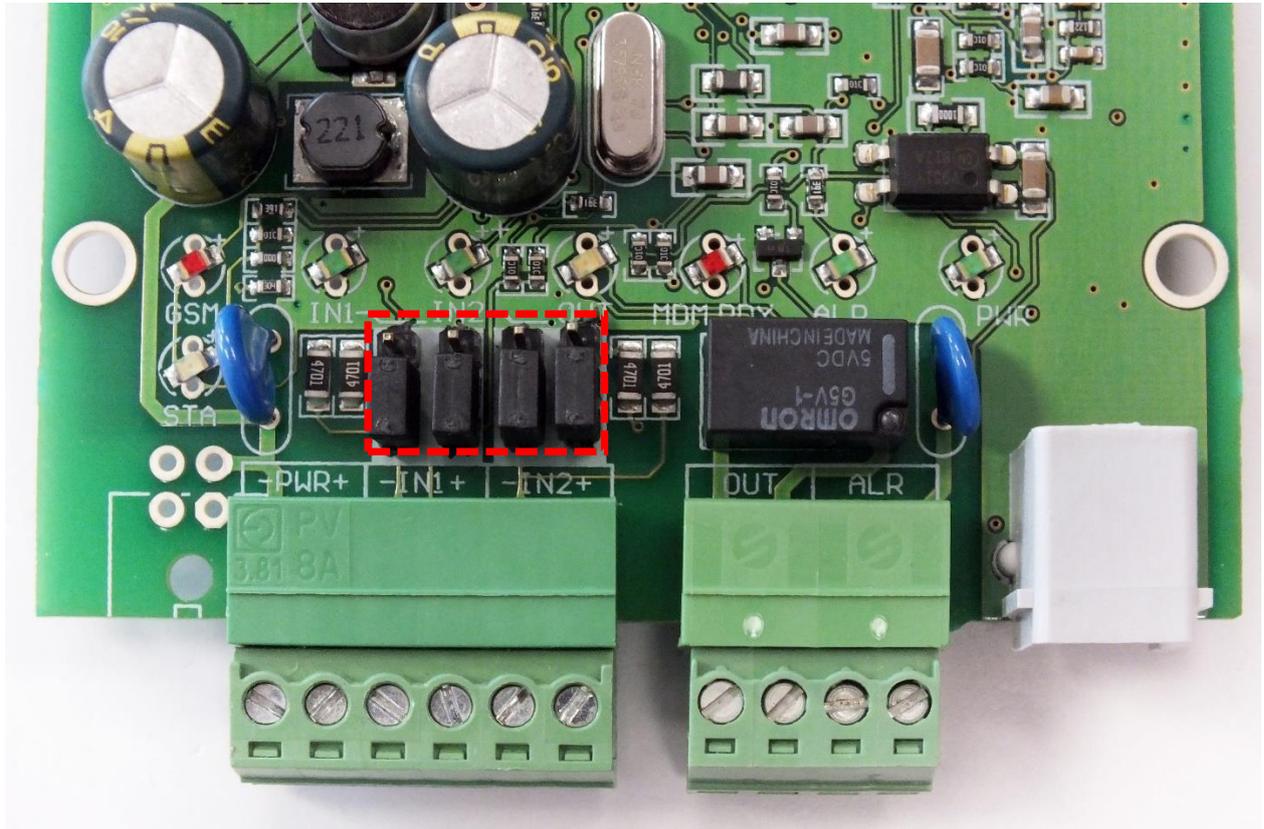
- The input line jumper pairs - approach from the connector side (lower two pins must be closed)
- The ground point of the input lines (-) are common
- The wiring of input lines has independent polarity

- **Voltage mode**

- The input line jumper pairs – approach from the LED's side (upper two jumper pins must be closed)
- Galvanically divided and independent input lines
- Make attention to the polarity when wiring!

Signal levels:

- Input high signal level: 2-24V
- Input low signal level: 0-1V
- Current in active status (for the *Easy2S* inputs): 0.33mA
- Current in active status (for the further IO-expansion board inputs): 1-12mA



The device on the photo is configured to contact input mode (e.g. for safety sensors) (the jumpers are closed by pairs at lower 2-pins position)

| Mode | Contact | Voltage |
|---------------------|--|--|
| Not inverted | <ul style="list-style-type: none"> • NO (Normal Open) • Inactive mode: contact opened • Active mode: contact closed | <ul style="list-style-type: none"> • High active • Inactive mode: 0...1V • Active mode: 2...24V |
| Inverted | <ul style="list-style-type: none"> • NC (Normal Closed) • Inactive mode: contact closed • Active mode: contact opened | <ul style="list-style-type: none"> • Low active • Inactive mode: 2...24V • Active mode: 0...1V |

When the input were activated (IN1, IN2) the **INx** titled LEDs are signing the active (closed) status during the operation, with the proper light and colour. See *LED signals* part.

In case of using the *IO*-expander board, further 6 pcs of inputs are available (IN3..IN8), which have the same operation and configuration possibility as listed here above.

In case of using the *Easy2 IO*-expander board, further 6pcs inputs are available (IN3..IN8). Their operation and configuration are the same as we described for the main board. The *IO*-expander inputs can be activated with 2-32V voltage.

■ Connecting the relay output

One switchable output device can be connected to the relay output (**OUT**) of the mainboard), according to the next figure. Connect the blanked cable wire pair to the **OUT** title output line's terminal block (by sliding the companion piece and inserting the stripped wire pair, then fixing the screws).

Through the relay output a 2A - 120VAC or 1A - 24VDC voltage can be switched. When activating the output line (**OUT**), the **OUT** LED – beside the output - indicates the active (closed) position with the appropriate color/light - during the operation.



Attention!

Always switch off power supply before the wiring!

Check that the metal parts of the connected wires are not touch to each other!

The *Easy2 IO-expander* provides further 3 outputs (OUT2..OUT4). Their operation and configuration is the same as we described.

■ EOL resistor

For the detection of wire cut, you have use and connect a 10k Ω resistor by parallel to the sensor contact.

■ Connecting the alarm line (ALARM line)

The alarm system can be connected to the **ALR** input through a wire pair, thus it will be able to forward its alarm signals – in Contact ID format – to the remote dispatcher centre.

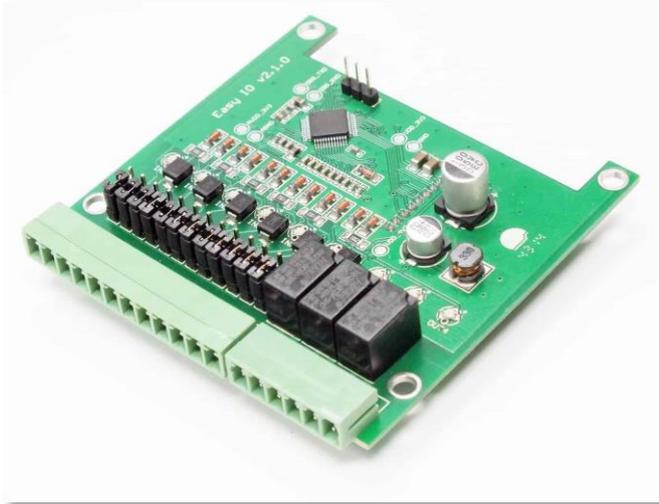
Connect the cable wire pair to the **ALR** title Alarm line's terminal block (by sliding the companion piece and inserting the stripped wire pair, then fixing the screws).



When activating the output, the **ALR LED** – beside the output - indicates the active (closed) position with the appropriate color/light - during the operation.

■ Installing the IO-expansion board (optional)

The *Easy2S*[®] firmware can handle the *IO-expander* board also (extension for 6pcs plus of inputs, and 3pcs outputs). Therefore for the IO-board further parameters are available in the device firmware and they are also configurable by the *EasyTerm*[®] configuration tool.



■ Connecting the configuraton cable (RJ11-RS232)

The cable with RJ11 connector must be connected to the **PROG** port. Due to this the device can be configured with a PC, the parameters of the device can be set. An RS232-USB converter cable is also required for the end of the RJ11-RS232 cable, DSUB9 connector.

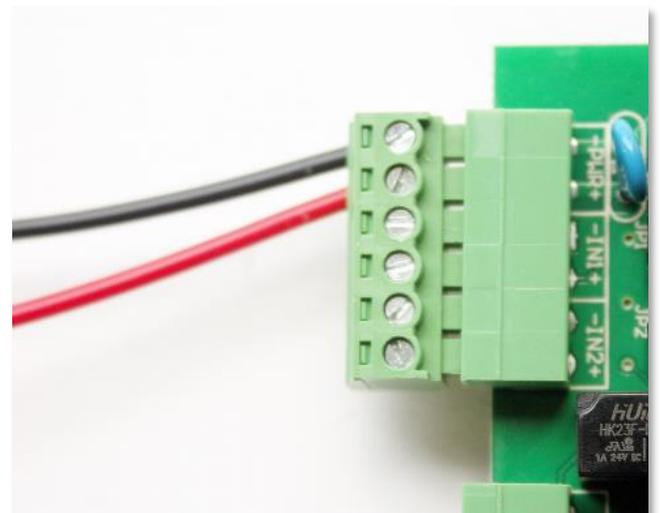


■ Connecting the power supply

The 8-24V power-supply voltage (typically 12V power adapter, or 24V DC power supply) can be connected to the **PWR** input. When connecting the power cables, the device will be immediately started to operating, when the **PWR LED** will indicate it with the appropriate color/light.

Attention! Don't forget to insert the SIM-card previously – see Chapter nr. 2.

Pay close attention to polarity of cables! The right side of the PWR connector is the positive (+), the left side is the negative (-)!



1.3 Operation LED signals

The status LEDs are helping to understand the current operation of the device.

| LED | Function | Description | LED | Behaviour |
|----------------|--------------------------------------|--|---------------|---------------------------|
| STA | Modem status | In case of normal operation it signs the 2G / 3G cellular network communication and its status See the detailed description of STA LED part below. | yellow | flashing /lighting |
| GSM | GSM receiving signal strenght | Signing the available signal strenght – more flashes = better signal strength | red | flashing |
| IN1 | Input #1 signal | Signs the status of the #1 input line (I1INV or IDELAY parameters are applied) lights if the input wires are closed (active) | green | lighting |
| IN2 | Input #2 signal | Signs the status of the #2 input line (I2INV or IDELAY parameters are applied) lights if the input wires are closed (active) | green | lighting |
| OUT | Output relay | Lighting when the relay is closed Not lighting when the relay is opened | yellow | lighting |
| MDM RDY | Modem operation | Modem status. Flashes intermittenly if the modem operates and accessible. | red | flashing |
| ALR | Alarm center connection | Status of the alarm center line (Tip-Ring), signs: speaker on, not lights: speaker off or no alarm center presented | green | flashing |
| PWR | Operation | Signs the presence of the processor power supply (3.3V) | green | lighting |

GSM: GSM/GPRS status LED - red

The **GSM LED** is lighting when the device tries to build the cellular network connection, and it is lighting of flashing until the TCP/IP connection is active on the network.

The understanding of the **GSM LED** flashing numbers are listed here below:

| RSSI value (AT+CSQ) | GSM receiving signal strength | LED flashing (GSM) |
|---------------------|-------------------------------|--------------------|
| 99 | unknown, faulty value | 0 – Bad |
| 0..7 | -113 dBm.. -99 dBm | 1 – Weak |
| 8..11 | -97... -91 dBm | 2 – Average |
| 12..15 | -89... -83 dBm | 3 – Average |
| 16..19 | -81... -75 dBm | 4 – Good |
| 20..23 | -73... -67 dBm | 5 – Good |
| 24..27 | -65... -59 dBm | 6 – Perfect |
| 28..31 | -57... -51 dBm | 7 – Perfect |

The numbers of the **LED** flashing sequence signs the current signal strength (RSSI) of the wireless network (more flashing means better signal).

10 seconds spends between every signal flashing sequence. One flashing takes a very short (ca. 50 msec), then half second breaking continues.

STA: Status LED - yellow

The **STA LED** assures information about the current operation. It twill be active only if the GPRS signal transmission permitted. In this case from the beginning of the signal transmission the LED starts to flashing.

It has 3 operation modes:

- lighting continuously: the last GPRS signaling was succesful
- with 3 second of breaks * number of flashing (the light interval period is half a seconds), failure code (see later)
- Turned off: GSM operation mode, no error

Failure codes – for signing the device opreation troubles – in case of a failure, read the Chapter nr. 9!

- **0 flashing – in case of using the GSM operation mode**
- **1 flashing - Module failure**

The serial connection is not operating properly between the module and the *Easy2S[®]* board. After 1 minute, the device automatically tries to restart the module.

- **2 flashing - SIM card failure**

Possible reasons:

- no SIM card inserted
- SIM card pinpad contact error

The device in this status will not continues its initialization, the receiving of serial port commands is still active (for doing the parameter settings). After 1 minute, the device automatically tries to restart the module.

- **3 flashing - PIN authentication failure**

Possible reasons:

- wrong PIN code
- PUK code (security code) is necessary to give in

The device in this status will not continue its initialization, the receiving of serial port commands is still active (for parametrizing). After 5 minutes, the device automatically tries to restart the module.

- **4 flashing – The device cannot login to the cellular network**

Error during the network registration. After 5 minutes the device restarts the modem and retries.

- **5 flashing – the GPRS is allowed (GPRSEN=1), but the device cannot login to the 2G/3G network**

Possible reasons:

- wrong APN settings
- the GPRS service is inactive for the SIM card
- low signal strength
- the RADIUS server is out of operation
- maintenance/service tasks by the M.O.

- **6 flashings – the device is registered to the cellular network, it has an IP address, but cannot login to the server**

Possible reason: the primary and the secondary server is not available/accessable

Visible symptoms:

- the opening of the TCP/UDP port was not successful (e.g. wrong server settings applied),
- unsuccessful data sending
- timeout when tries to receive data or wrong answer

The signal will be active, until the device will be successfully signaling to a server.

IN1, IN2: Input #1, #2 is active - green

When the input is active (if the 2 pair wire closed; or in case of voltage the power voltage is 5-24VDC) then the **INx LED** will light according to the related input.

OUT: Output is active – yellow

The output active indicator **OUT LED** shows the status of the primer-side of the relay. When the output is active (the relay pair of wires are closed), then the output **OUT LED** will light.

MDM RDY: Modem stand-by – red

During the initialization the **MDM LED** blinks quickly (approx. twice per seconds). When the modem is already accessible and operating and has an active communication on the GSM network, then it will flashing with less frequency.

Main important lights:

- **not lights:** the module was turned off
- **longer periodic flashing:** 600 msec filling in / 600 msec filling out: the module not registered to the network (possible causes: no SIM card, PIN authorization failure, network search is in progress, login is in progress, etc.)
- **periodic short flashing:** 75 msec filling in / 3 sec filling out: normal operation, connected to the GSM network
- **continuously lights:** voice call active (e.g. during GSM signal transmitting)

ALR: Alarm center active - green

When the device connected to the alarm center it shows the status of the the alarm line (Tip-Ring). Lights: speaker pulled on, not lights: speaker put down or alarm center not presented.

PWR: Power voltage active - green

Signs when the *Easy2S* is under power and voltage and operating. When it is not lighting, the device is powered off and has no active power source.

1.4 Operation requirements

■ **General conditions**

- Using a 8-24V power supply with adapter (12V DC 1A), or using the 12V/24V output of the alarm center and connected to the **PWR** input of the device.
- In case of substituting the phone line: activated SIM card
- In case of TCP/IP based (cellular network) signal transmitting - via the 2G/3G network – data SIM card (with private APN access)
- *There can be differences between the Mobile Operator conditions at APN service charges and data traffic unit fees (depend on available rates). Ask for more Info at Your MO.*
- Cellular network coverage with enough signal strength.

■ **Configuration requirements**

- USB data cable connected to the micro-USB port (USB 2.0 Micro type.B) of the device and the USB port (USB 2.0 type.A) of your PC
- A computer, installed Microsoft Windows® 7/8/10 operation system and .Net 4.0 framework.
- *EasyTerm*® configurator application – download from our website
https://www.m2mserver.com/m2m-downloads/EasyTerm_v1_3_5_EN.zip
- *M2M Easy2s Security Communicator*® firmware v2.1 R09 E05 (system software – uploaded to the device by factory default) – if it is needed the related .BIN extension firmware file can be downloaded from here:
https://www.m2mserver.com/m2m-downloads/EASY2S_V21R09E05RC08.bin

■ **Software installation and configuration options**

| | | |
|--|--------------------------------|---|
| Software and parameter upload options | Local software refresh | <ul style="list-style-type: none"> • with <i>EasyTerm</i> software (on serial port - via RJ11 input) |
| | Remote software refresh | <ul style="list-style-type: none"> • FTP server (<i>EasyTerm</i>) |
| | Local configuration | <ul style="list-style-type: none"> • with <i>EasyTerm</i> software (configuration file, parameter values) |
| | Remote configuration | <ul style="list-style-type: none"> • with SMS text message commands • with <i>EasyTerm</i> software (via TCP/IP connection) |

Chapter 2. Installation of the device

To install the *Easy2s*[®] device, follow the next steps.

When the device was already installed, jump to the Installation part and check the current firmware version of the device (**SWVER** value in the *EasyTerm* application). The version should be **V2.1 R08C1** or newer. If it is older, then IMMEDIATELY refresh the firmware!

2.1 Installation on site

It is a logical step to place and install the device to a protected position - as usual placed into a safety alarm center's box or other protected area.

IMPORTANT! Take care that the device IS NOT under power voltage, so this must be turned off and the LEDs lights are should not lighting or flashing before continue the following steps!

1. Mount a 2G/3G antenna (according to the module) as it can be seen in the picture to the **SMA** connector (2), until it sleeves.

In case of wired antenna place the magnetic antenna to fixed position – i fit is possible in vertical direction (and polarisation) – and then connect the antenna cable to the device.

2. The SIM card must be inserted or removed only in turned off status of the Easy 2 device!

3. For inserting the SIM, slide the 2G, 3G compatible SIM card (which is provided by the Mobile Operator) into the aluminum SIM tray of the device. The SIM chip must look down, the MO logo looks upside, the card's cutted edge looks to the PCB (as it is shown on the picture). Push the card until it seize - while the a click noise will be heard (then it will be fixed).

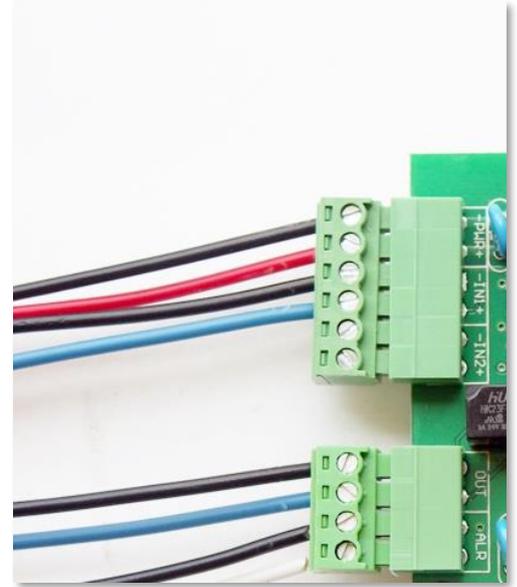
(If it's needed you can remove the card by pushing the SIM – **but only after you've turned off the device!**)



4. Wire the required inputs – e.g. use them for connecting sensors – by wiring the cables pairs to the input terminal block (4) (**IN1, IN2**) as it was already described before.

It is possible to monitoring the devices safety by using the sabotage protection feature: connect the cables of the magnetic switch of the safety box's cover (detection of opening) to the input line of the *Easy2S*.

5. Wire the cable pair of the switchable external device to the **OUT** titled input terminal block (7) connector. You can connect a siren or gate opening circuit or key switch to the output line.
6. If you would like to use the device as an alarm center signal transmitter (as it is operating by default), then connect the alarm center to the alarm input line (**ALR** titled) (no. 8).
7. You can setup the operation of the input lines by its jumpers (5) behind the input lines (**IN1, IN2**). The operation mode of the input line can be contact or voltage.
8. Connect the 12V/24V DC power by the power chord of the alarm center (or by a power adapter (12V DC 1A) to the power plug's terminal block (no. 3. - **PWR** titled).



Then the device will be under voltage, turned on and operating. The LEDs (6) are flashing according the current operation – as listed in chapter 2.2.

By default the device is operating as a GSM/2G-3G alarm center signal transmitter. (You can reconfigure the device for different operation mode).

2.2 Turning on the device (step sequence)

After starting the *Easy2S*[®], ca. 40-50 seconds are required from to the operate on the cellular network, which will be signed by the status LEDs according to the following sequence.

- When the power voltage added, the devices turns on. The **PWR LED** continuously lighting by **green**.
- If the input(s) are wired then the **IN1, IN2 LEDs** are continuously lighting by **green**.
- Then later the **MDM RDY LED** blinks a several times by **red**, that the GSM modem is started.
- Soon the **STA LED** will be lightning intermittently a few times – by **yellow** colour - (3-times in a second with some breaking between the light-sequences). Then the device loads and initializes the system firmware.
- Then the **GSM LED** blinks by **red** a few times intermittently, which means that the GSM modem network registration has started.
- The **yellow** lighting of the **STA LED** signs that the network registration was succesful and the first life signal of the device were already transmitted.

- Then the device is operating related to the configuration parameter settings and it sends data through and life signals through the network periodically.
- For the further LED status signals see the *LED signals* table.

When you will notice any different operation of the device, check the Problem troubleshooting part of the Chapter nr. 9!

Warning!

When your device was already installed, check the current firmware version of the device (SWVER value in the *EasyTerm* application). When the version is not V2.1 R08C02 or newer then IMMEDIATELY change it for the firmware!

If you need to turn off the device:

The device can be powered off by removing the power input cables (unplugging the cables from the **PWR** power input (3) or disconnecting the connected power supply).

Wait 10 seconds between disconnecting and reconnecting the power supply, and switching on the device again.

Chapter 3. Connecting the device to a computer

Download the following files from our website:

➤ **EasyTerm® configuration program (Win7/Win8/Win10 version) and a configuration template file (with .CFG extension):** https://www.m2mserver.com/m2m-downloads/EasyTerm_v1_3_5_EN.zip

Uncompress the .zip file!

The file contains:

- **EasyTerm software – for software updates, parameter configuration:**
Terminal- and configurator tool, which can be used for firmware refresh and programming the device.
Execute the file: *EasyTerm_1_3_5.exe*
- **Configuration file**
Pre-defined template configuration file with default settings for the *Easy2S®*.
Load the file, modify the configuration file by the *EasyTerm®* and upload to the device.
File: EASY2_V21R08F_CFG_EN.cfg

➤ **M2M Easy2s Security Communicator® Firmware - Easy2S v2.1 R08 C02:**

https://www.m2mserver.com/m2m-downloads/EASY2S_V21R09E05RC08.bin

The file contains:

- **The Easy2 system firmware (.BIN)**
The operating system, which can be refreshed to the device by the *EasyTerm®* software.
File: EASY2S_V21R09E05RC08.bin

Firmware update steps:

1. Connect the RJ11-RS232 cable to the RJ11 port of Easy2S® and the other end of the serial cable to the PC with an RS232-USB converter.
2. Then switch on the appliance and start EasyTerm.
3. Within approximately 1 minute, the device connects to the serial (RJ11) port and communicates with the Easy2S® device.

Chapter 4. Usage of the EasyTerm software

The device is shipped with an uploaded firmware and pre-defined factory configuration settings.

By default – without any configuration changes – the device is operating as a GSM transmitter (therefore, it will forward the incoming signals of the Tip-Ring connected alarm system through the GSM network - with CID codes – to the dispatcher center).

In addition, the device can be set up for relay the signals through the cellular network, with an alternative route, and to act as a stand-alone alarm system (without connecting an external alarm center).

The configuration of the necessary parameters is possible by the *EasyTerm*[®] software.

Over the basic configuration, the device can be programmed for the following modes and tasks:

1. **Safety alarm GSM transmitter** (pre-configured by default): the alarm system is connected to the TIP-RING input, the device forwards the received Contact ID codes on the GSM network and signaling them to the remote dispatching/monitoring center.
2. **Cellular network alarm transmitter** (signaling to an Enigma IP Receiver device or into the SIMS Cloud[®] software of the dispatching/monitoring center): the alarm system is connected to the TIP-RING input, the device transmits the received Contact ID codes on the enclosed/private APN of the mobile network (as TCP/IP data) by the Enigma protocol, to an Enigma device or to SIMS Cloud[®] software.
3. **Stand-alone alarm system with GSM transmitting and SMS notification** (without using an external alarm system / individual usage without dispatcher center signaling): sensors / sabotage detection on the inputs, alarm / input change signaling on the GSM network to the given phone number in an SMS message or as a voice call / ring.
4. **Output for control, gate opening**: sensors / sabotage detection are connected to the voltage/contact inputs (2 inputs, max. 8 with the additional IO expansion). Short circuit / open circuit detection of the input line is possible. The relay output(s) can be controlled remotely (gate opening on output 1, devices can be connected on the 3 further outputs). In this mode, you use the public APN of the cellular network for remote control and the GSM network for SMS messages and calls/ringing. The signaling can be still forwarded on the mobile network to an IP address.

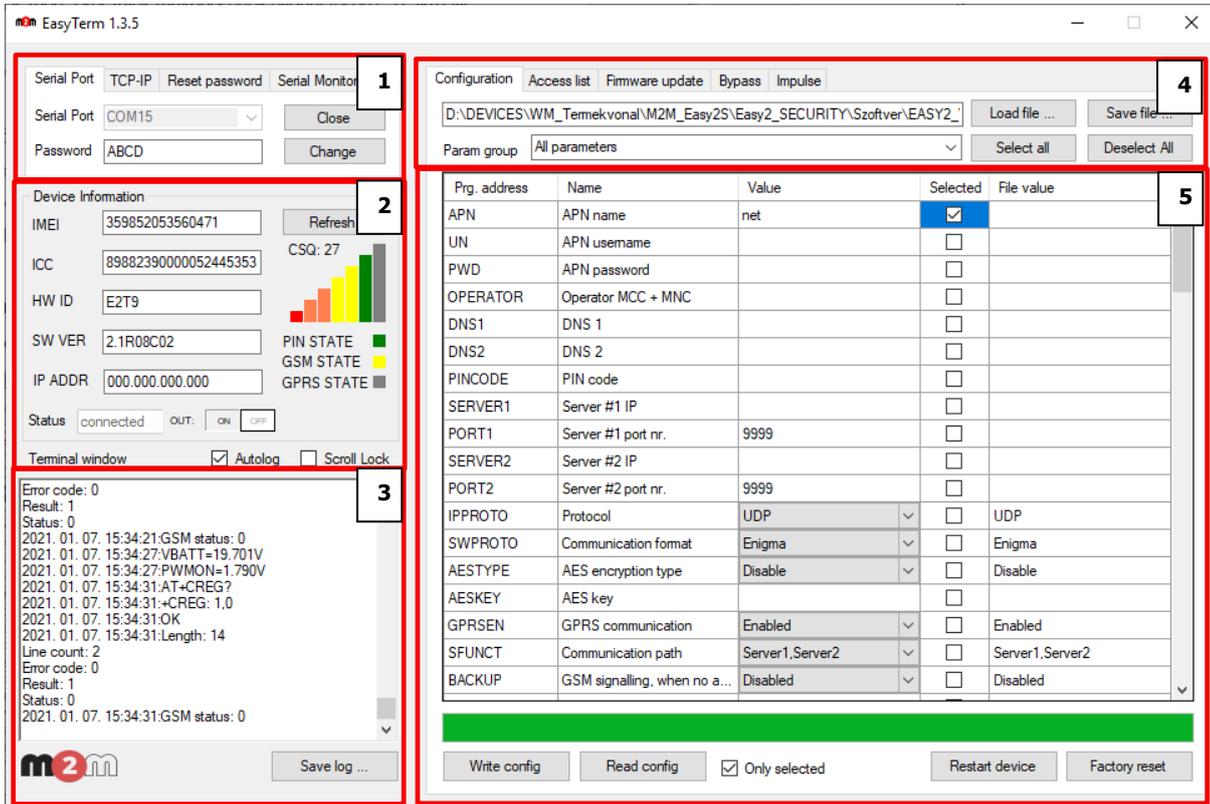
The *EasyTerm*[®] utility is also suitable for checking the operation of the device, updating the firmware, manually controlling the outputs (eg opening the door) and arming / disarming the device when operating as a stand-alone alarm system.

To configure the parameters, there is a predefined configuration file in the downloaded ZIP file of the program, which can be loaded on the device as a minimum configuration, then modified and sent to the

device. Changes made on *Easy2S*[®] can also be saved to a configuration file on a PC - for later or group configuration.

4.1 Introducing the EasyTerm tool

The program starts with the following opening screen.



Application screens:

- 1 – Connection settings
- 2 – Status window
- 3 – Terminal window (device messages)
- 4 – File handling (Funcion selection and Configuration load/save)
- 5 – Parameter configuration

4.2 Connecting to the device

a.) Serial data connection

In the **Connection settings** window (1), at the **Serial Port** tab choose the proper and available COM port for the **Serial port** field.

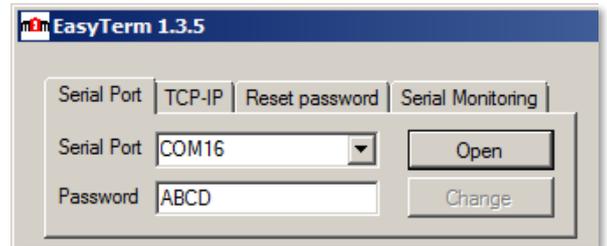
You can remotely access the device through cellular network at the **TCP-IP** tab. You also can **Reset Password**, and monitorize the serial port through the terminal at **Serial Monitoring** tab.

Attention!

The device by factory is configured for transmitting the incoming alarm signals of the connected alarm system through GSM connection. If you'd like to use it as a TCP/IP transmitter via the mobile network or as a standalone alarm system, then take consider the value *Address* and *Port number* when configure and connect to the device.

When the device can be seen on the serial port in the *Connection window*(1), at the *Serial Port* the application will offer the option to choose from the available COM ports.

The *Password* must be filled (by default the password is „ABCD“, which will be filled automatically). If you won't change it, then just leave it as it is – or fill the value password then push the **Open** for connecting.



Then the port opening messages will appear at the *Terminal window*(3), then soon the device and modem, SIM identifiers in the *Status part*(2).

Attention!

If you cannot connect to the device, then check the serial port, the USB-converter Windows driver installation or the computer which cannot handle properly the serial port connection.

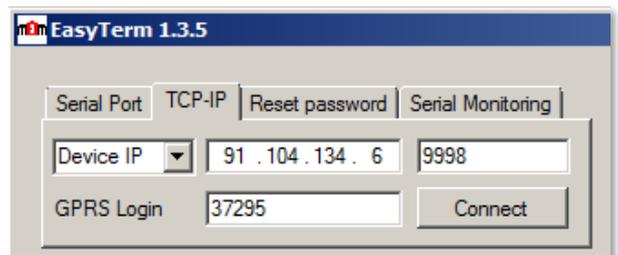
b.) Connecting through TCP IP (remotely)

In the *Connection window*(1) at the **TCP-IP** tab you will found the necessary IP settings for the GPRS connection.

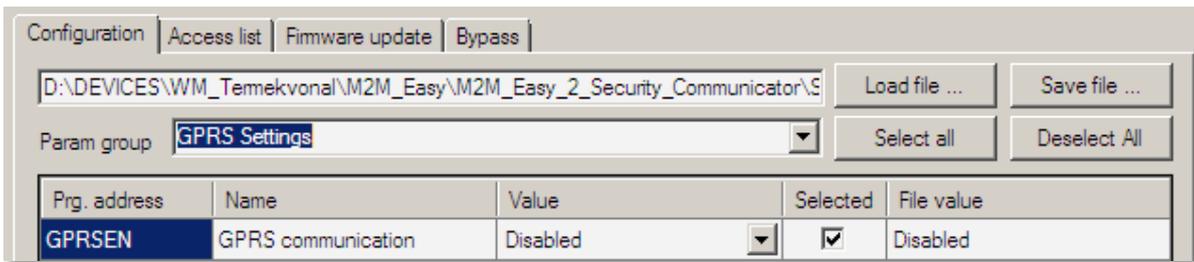
Fill the SIM card IP address to the *Device IP* (get the information from your mobile service provider).

Fill the port number what you want to the field right from the *Device IP*. (The port number is **9998** by default). To the *GPRS Login* you have to fill the device IMEI **last 5 character** (you can read/copy it from the left side at the IMEI column).

Note, that you can also choose *GDSP IP* instead of Device IP in case of GDSP SIM.



Attention! You can connect on the cellular network (3G or 2G) when the **GPRSEN** parameter was enabled at the **GPRS Settings** parameter group!



Push the **Connect** button for the GPRS connection. (The button is active only if the serial connection is currently inactive (**Close** status)).

(For login the necessary device IMEI and IP address can be requested by the **INFDEV** or **DEVSTAT** SMS text commands.)

Hint: Before connecting on serial port, it is useful to check the **Serial Port** tab according to the description **a.)** shortly when the device will readout the value IMEI, IP data. Afterall you can split the connection with the **Close**, then at the **TCP-IP** tab you can connect with the readout data filling to the **Device IP** and **GPRS Login** fields.

After the successful connection...

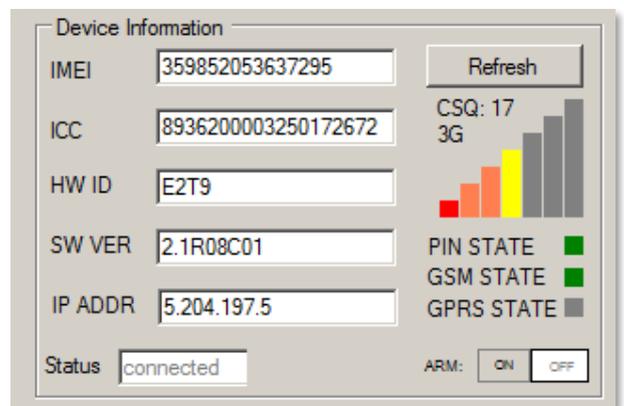
When connecting, the signal strength diagram and status piktograms will be grey for a short time. This means that currently there are no available status and signal strength values.

Later the *PIN/GSM/GPRS status* and *signal (CSQ)* values will be visible by colours.

During this time, the device transmits the life signals and signal strength values frequently, according to the settings. The currently used cellular network connection is also listed (e.g. as 3G).

When connecting to the GSM network or the mobile network, the device checks the entered PIN code and indicates that it was accepter – and the entered password, if was any. (In case of a SIM PIN error, the device will restart the module.)

In case of an error, see Chapter 9.



Attention! In case of using TCP connect, the program automatically disconnects the device after 15 minutes of inactivity.

4.3 Status info and device data

In the **Status window** (2) displays device identification information such as **IMEI** (GSM modem ID), **ICC** (SIM card

ID), **HW ID** (unique hardware identifier of the device), **SW VER** (firmware version), **IP ADDR.** (modem IP address on the network).

On the right side of the window, below the CSQ (field strength value and graphical status), three more statuses are displayed:

- **PIN STATE** - SIM PIN status (**gray** if no data; **green** if the PIN has been accepted by the device)
- **GSM STATE** - GSM connection status (**gray** if no data; yellow during connection; **green** if the device is connected to the network; **red** if the connection is rejected)
- **GPRS STATE** - Mobile network (e.g. GPRS or 3G connection status (**gray** if no data; **yellow** during connection; **green** if the device is connected to the network; **red** if the connection is rejected))

The **GSM state** (GSM network status) or **GPRS state** (mobile network status) clearly indicates the protocol that the device is currently connected to the network.

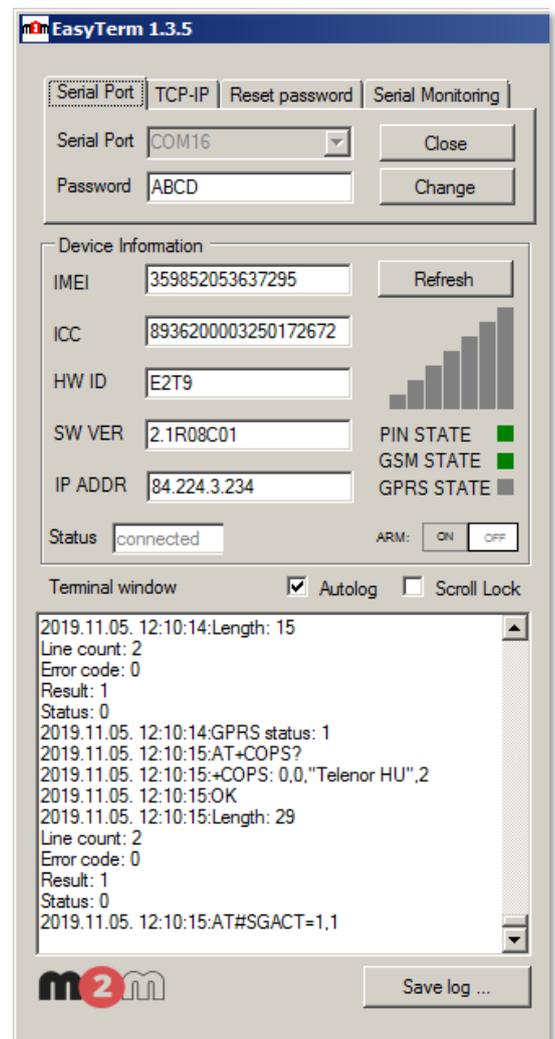
You can also see the **Status** of the device here. Use the **Refresh** button to update the vital sign of the device anytime.

If the "**connected**" status appears at the **Status** field, it indicates that the connection to the device was successful.

The "**disconnected**" indicates that the device is disconnected and unavailable (in which case press the **Open** button to reconnect, or if it still fails to disconnect, disconnect and reconnect the USB cable and the device. Or restart disconnect and reconnect the cable and press the button again.) - if the cable is connected, press the **Connect** button.

In this case - if the device is not connected - the **Login Failed** message will appear in the **Terminal window** (3) – it can be caused, for example, by an incorrectly entered password. Then enter the correct serial port password or the TCP-IP connection password (at **GPRS Login**) and try the connection again.

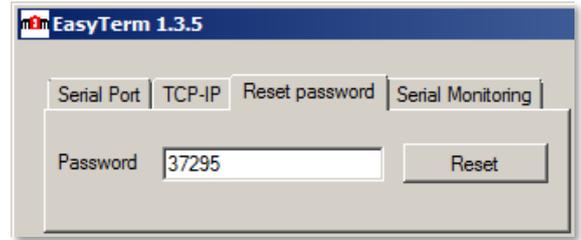
If you no longer need the *EasyTerm* or you want to disconnect, you can close the serial connection in the **Connection window** (1) with the **Close** button (with the Disconnect button for a TCP / IP connection).



Password reset:

On the **Reset password** tab, at the *Password* field, fill or copy the IMEI's **middle 5 characters**, then push the **Reset** button.

Then the *Easy 2* password will be restored and recovered to the *ABCD* default value.



Monitoring the serial port messages:

At the 4th tab, at the **Serial Monitoring**, you can **Open** it, and connect to the device in surveillance (read only) mode, when only the left side of the window is active with the signal strength data and terminal window messages.

This feature is provided for monitoring, checking the *Easy 2* current operation without any intervention or configuration change. Further details on the Chapter **4.4**.

When you are attempted to **Close** the monitoring, after all you should click to the **Serial Port** tab, for connecting the device for parameter configuration.

4.4 Terminal window, communication messages

In the **Terminal window** (3) the device and modem communication messages, data and values are continuously incoming.

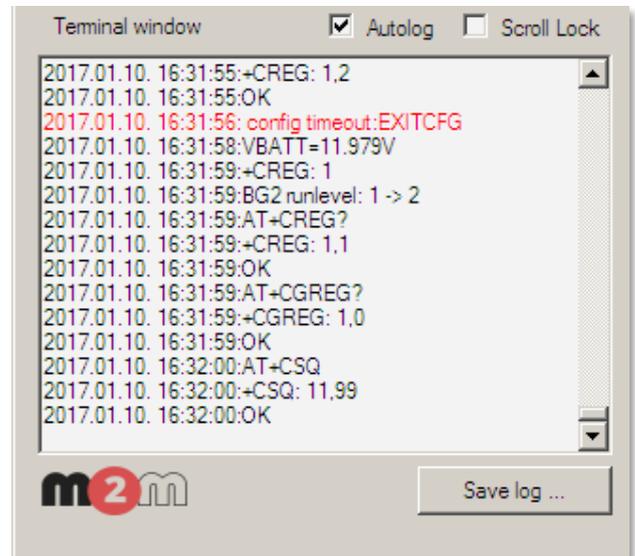
Here you can check the modem information messages, the executed AT-commands (**black**) and the modem answers and *EasyTerm* messages (**blue**) as the failure messages (**red**).

There you can track the exact operation of the *Easy2s*.

In case of necessary, you can **Save log** and all of the *Terminal* messages into a text file – just add the path and filename and push on the **Save**.

The **Autolog** feature is enabled by default, which means that the *EasyTerm* is generating and writing a log file into the directory where the program was started. You can disable this feature when it is not necessary to use.

The messages will be scrolled down – to the last message - automatically. If the scrolling is too fast (e.g. at initialization, when loading a file or read out or restart the device), and when you would like to check the previous messages, then turn on the **Scroll lock** feature - which will stop the scrolling. Then you are allowed to page up. (The new messages will be inserted to the end of the list as usual, but the message list will not be scrolled down).

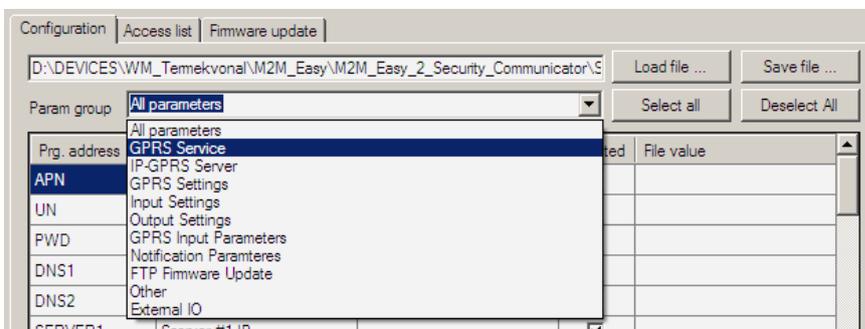


4.5 Load / save a configuration

In the **File handling window** (4) you can **Open** or **Save** a configuration file (**Configuration** tab). **Browse** a .CFG file (use a CFG with „_EN” tag in the filename) from the *EasyTerm* directory.

Then the program will load all parameters and their values from the configuration file (at the **Param group**. **All parameters**).

You can filter the listed parameters with the **Param. group**. Therefore you can list and modify only the related parameters.



The configuration of the device is configured for factory settings by general (but many fields are still empty as APN, or the GPRSEN - which is disabled by default). Therefore the device won't operating properly without doing the necessary settings.

At first configuration of the device you should open the configuration file and modify the APN and GRPSEN parameters according to the SIM card data and send all default parameters to the device by using the **Write config button.**

Further parameter's configuration should be necessary to make after the first parameter write (and the reboot of the device which will be automatically initiated).

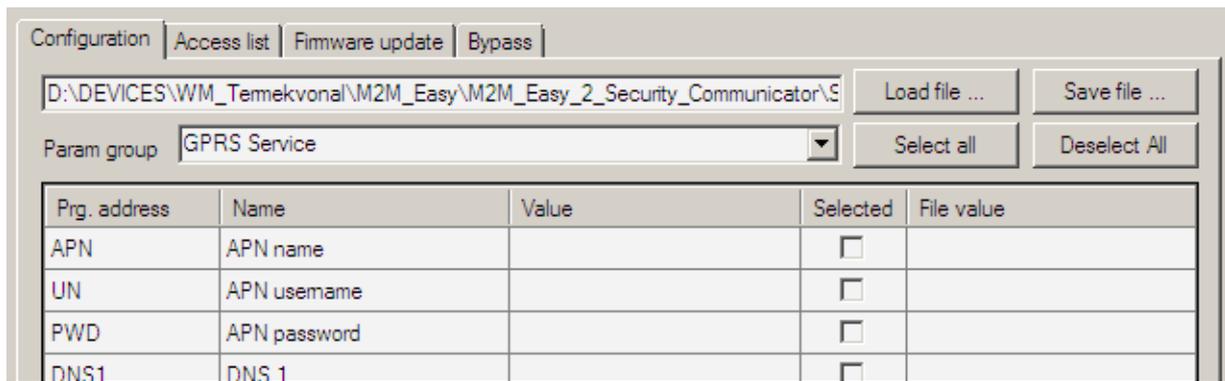
In the list, at the following columns appearing: **Prg. Address**, parameter **Name**, parameter **Value**. The **Value** shows the currently configured value for the parameter (5). The **File value** shows the default value (of the configuration file).

| Prg. address | Name | Value | Selected | File value |
|--|--------------|----------------|-------------------------------------|------------|
| APN | APN name | | <input checked="" type="checkbox"/> | |
| UN | APN username | | <input checked="" type="checkbox"/> | |
| PWD | APN password | | <input checked="" type="checkbox"/> | |
| DNS1 | DNS 1 | | <input checked="" type="checkbox"/> | |
| DNS2 | DNS 2 | 2.2.2.2 | <input type="checkbox"/> | |
| Domain Name Service secondary server IP address (optional) | | | | |

By the **Select all** button you can choose (mark) all parameters or **Deselect All** (unmark). This will help you later to write/read the marked parameters to the device.

When you'll modify a parameter **Value**, the program will be assigning the change by **bold** highlight.

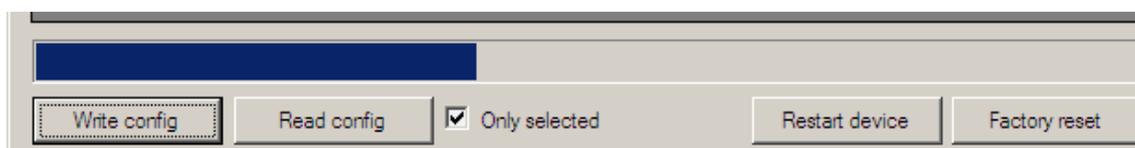
If you click on a parameter name, the hints of the current parameter will be displayed in a small sub-window below the current line - as a help for the better understanding and configuration. (When you click again to the window, the small window will disappear).



Attention! If you've modified a parameter value, the device will not know this change, until you will not send the parameter to the device!

Therefore, you have to mark the required parameter - in the **Selected** column. The *Only selected* option at the bottom of the window assigns that only the selected and marked parameters will be sent – when the checkbox is unmarked, then all displayed and listed parameters will be sent.

For sending the parameter(s) to the device push the **Write config** button at the bottom of the screen. The selected values will be sent to the *Easy2*. The progress indicator signs the current status of the method. After the successful parameter upload, the device will be restarted.



If you chose the **Select All** before you push the **Write config** then all listed parameters were sent. (The further – not listed - parameter group will be not sent.)

If you wouldn't like to send all listed parameter to the device then push to the **Deselect all** and mark only the required parameters on the parameter groups which you are attempt to send. Then push the **Write config** button. Only the selected parameters will be sent.

Further detailed parameter description can be found in the Chapter nr. 5.

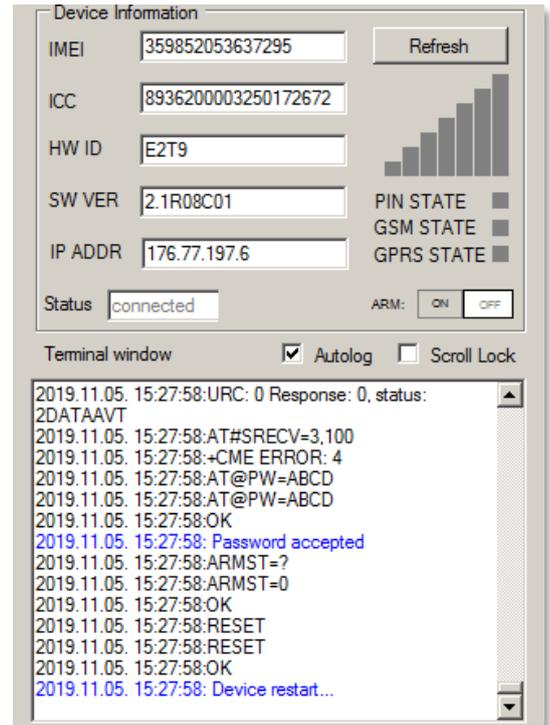
4.6 Restarting the device

To restart Easy2S, click the **Restart device** button at the bottom right of the screen.

The device will then issue the **RESET** command - which you can also see in the Terminal window (3) - and the field strength and status values will be grayed out and the message **Restart device** will be displayed.

The device restarts and then reconnects to the port used at the end of the process.

As soon as it becomes available, the status and field strength values are updated - the LED states change to color again.



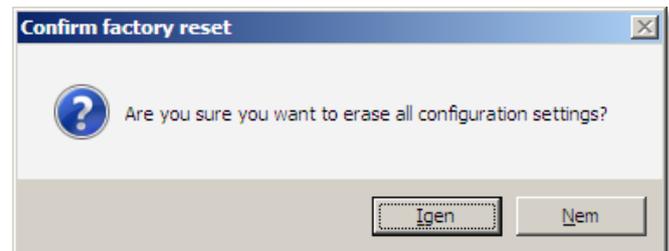
4.7 Reload of factory settings

If you have to clear (reset) the device, click the **Factory reset** button at the bottom right of the screen, and then click **Yes** to confirm.

The device will then run for approx. it restarts after half a minute, which will be indicated by the **ERASECONF** message then the **^SHUTDOWN** message in the terminal window, and the **Status** and field strength values are also grayed out.

Important!

The device restarts with factory configuration and no custom settings!



Therefore, open a configuration file and send it to the machine as described above, and then set the desired parameters according to Chapter 5.

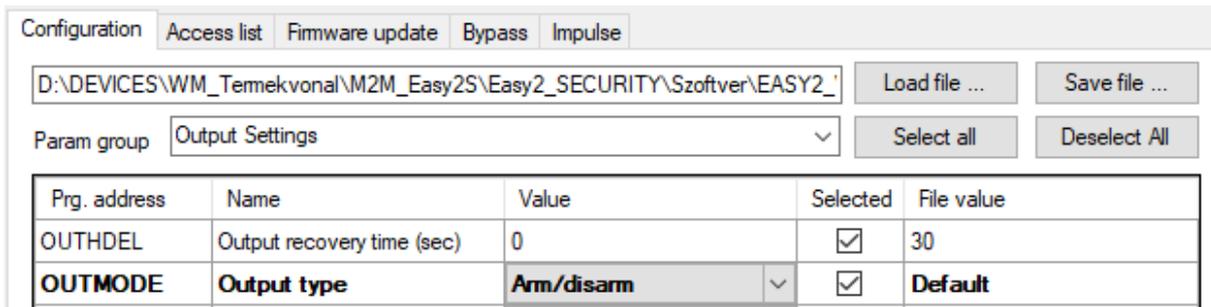
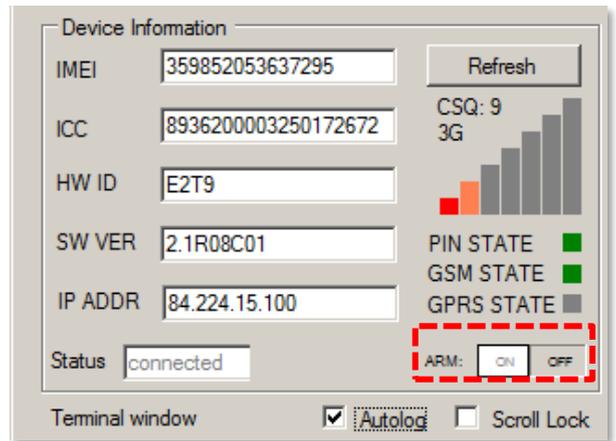
4.8 Set manual arming

The alarm status of the device can also be controlled manually by the *EasyTerm* software.

One-button alarm control:

In stand-alone alarm mode, you can manually switch the alarm status of the device with the **ON / OFF** buttons next to **ARM!**

The precondition for the stand-alone alarm mode (without remote monitoring signal) is that the value of the **OUTMODE** parameter must be **Alarm**.



At the **Status** you can see whether the alarm status is **ON** or **OFF** (ie whether the alarm status of the device is armed).

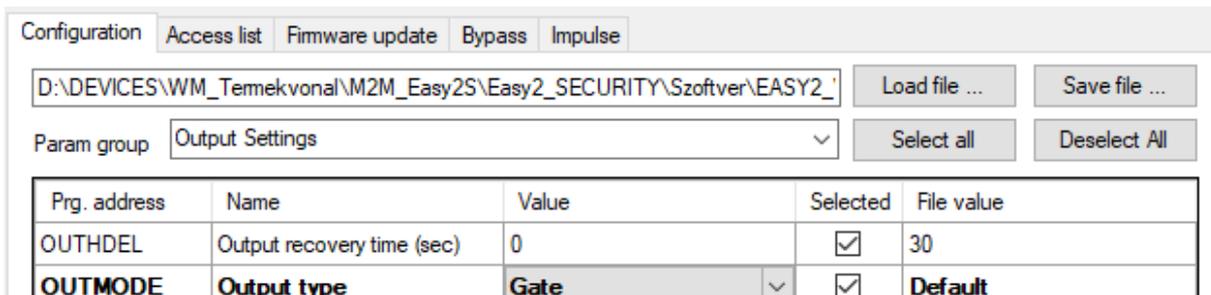
You can use these buttons next to **ARM** to arm (**OFF**), disarm (**ON**) the alarm mode.



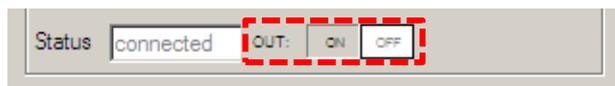
Important! In addition to manual control, you can also control these functions remotely, via SMS messages and calls.

4.9 Output relay control

The outputs of the device can also be controlled manually from the *EasyTerm* software. Output no. 1 (**OUT** marked on the panel) can also be used for door opening - when switching to door opening mode - if the output (**OUTMODE**) is set to **Gate**. (Note that the outputs of the IO expander cannot be used for gate opening.)



In this case, you can see the status of the gate opening at the **OUT** title and you can manually control the relay output by the **ON / OFF** buttons, which also indicates the status of the output line.



In addition to the output / gate opening settings, customers can be added to the **Access list** – where you can limit who can open / close the gate by registering their phone number.

For more information on gate opening (gate opener / barrier output control), see **Gate Opening** part.

Important! In addition to manual control, you can also control these functions remotely, via SMS messages and calls.

4.10 Bypass zones

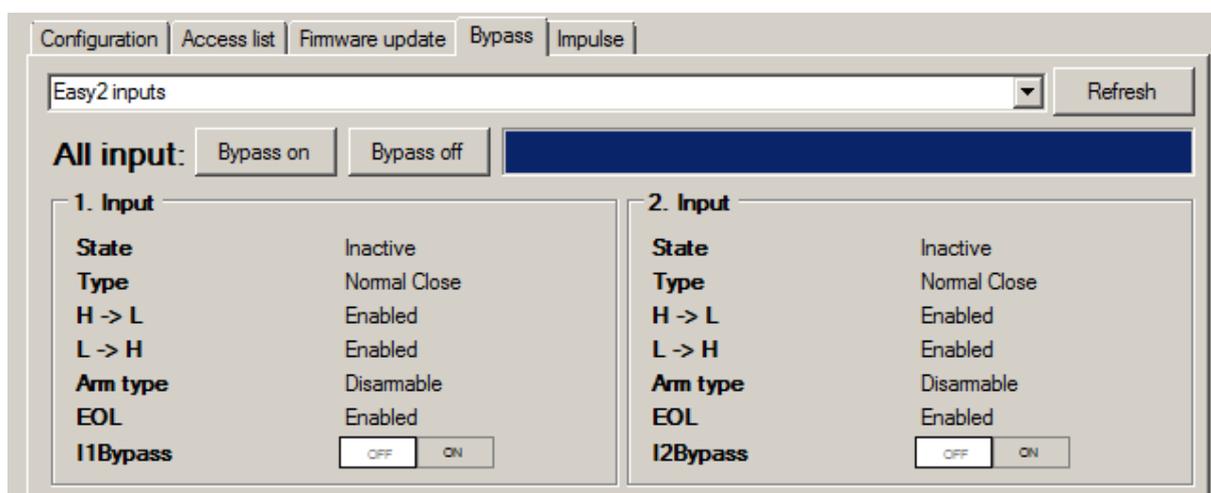
Open the **Bypass** window at the top right of the screen, scroll down the list and select **Easy2 inputs** parameter group from the list.

As a result, the program reads the set parameters for the zones and the number of detected inputs - valid for the inputs - from the device.

The reading of the parameters is indicated by a process indicator after the list is selected.

After reading, you can view the input statuses (**State**) and the settings applied to the inputs (such as **Type, H → L** (high to low: decreasing edge) **and L → H** (low to high: increasing edge), the *Arm type*, (type of alarm), *EOL*, and the armed / disarmed status of the zones (**IxBypass**).

In addition, you can bypass the zone valid for all inputs (by pressing the **Bypass ON** button) or enable it (**Bypass OFF** button) - that is, you can turn on the alarm for the inputs.



In the case of a bypassed zone, zone events are not alarmed or feedback, the device only transmits them as a general event. (This can be a useful function for eg SMS notification).

You can also specify this zone bypass for the inputs individually, **I1Bypass** can be set to 1. input, **I2Bypass** is the 2nd input. means input. The **ON** switch next to it turns it off, **OFF** turns on its alarm status for that zone. (Bypassing and enabling the zone is also possible via SMS, according to the SMS commands described later.)

In the case of an IO expansion panel, the zone bypass for the additional inputs (No. 3-8) can be specified in the same way by selecting and listing the **IO board inputs** drop-down parameter group, as a result of which the additional inputs are displayed.

Chapter 5. Configuring the Easy 2S

The device is capable for using and operating for the following type of tasks. Then you will find the main important configuration options for the listed operation modes, using the *Easy2* as:

- As a monitoring GSM relay (pre-configured by default)
- As a mobile network relay (entry in remote monitoring software, Enigma IP receiver or entry in SIMS Cloud®)
- Acting as a stand-alone alarm with mobile network signaling (without remote monitoring signal)
- Acting as a standalone alarm with SMS notification
- Input for monitoring, output for control / gate opening

Getting started the programming!

1. Load the factory sample configuration .CFG file (*EASY2_V21R08F_CFG_EN.cfg* file in the *EasyTerm* package) and browse with the **Browse** button.
2. Then send the open configuration to *Easy2S*® using the **Write config** button.
3. Wait for uploading of the default configuration then the device will be restarted.
4. Then make the additional settings according to the selected operating mode and one of the following purpose/operation mode.

5.1 GSM transmitter settings

The device has pre-configured by default for performing in GSM-transmitter operation mode. The default configuration parameters shall be checked before using and modify if you need.

GSM transmitter settings

Load the factory default .CFG extension template by the **Browse** button.

Choose the **GPRS Settings** parameter group at the *Device Type*. Then the program will load the related parameters.

Check that the **GPRSEN** value is *Disabled*, which means that the device operating as a GSM transmitter. The **SYS1** value equals the phone number of the dispatcher centre.

You can modify the **ACCOUNT** parameter value if you are attempted to signaling an own customer ID for the identification.

The **LFGSMFREQ** is the life signal sending frequency on GSM channel, which is setup to 60 seconds by general. Check that it is fine or not.

Configuration | Access list | Firmware update | Bypass | Impulse

D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szoftver\EASY2_ | Load file ... | Save file ...

Param group: GPRS Settings | Select all | Deselect All

| Prg. address | Name | Value | Selected | File value |
|---------------|----------------------------------|----------------------|-------------------------------------|-----------------|
| GPRSEN | GPRS communication | Disabled | <input checked="" type="checkbox"/> | Disabled |
| SFUNCT | Communication path | Server1,Server2 | <input checked="" type="checkbox"/> | Server1,Server2 |
| BACKUP | GSM signalling, when no av... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| SYS1 | Unit call ID | +442031234567 | <input checked="" type="checkbox"/> | |
| ACCOUNT | Customer ID | BCDE | <input checked="" type="checkbox"/> | BCDE |
| LFFREQ | GPRS life signal sending int... | 300 | <input checked="" type="checkbox"/> | 300 |
| LFGSMFREQ | GSM life signal sending inter... | 60 | <input checked="" type="checkbox"/> | 60 |
| LFPRES | Visible GPRS life signal | Enabled | <input checked="" type="checkbox"/> | Enabled |
| LFUNIT | GPRS life signal interval am... | Seconds | <input checked="" type="checkbox"/> | Seconds |

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Configuration | Access list | Firmware update | Bypass | Impulse

D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szoftver\EASY2_ | Load file ... | Save file ...

Param group: Other | Select all | Deselect All

| Prg. address | Name | Value | Selected | File value |
|-----------------|-----------------------------------|----------------|-------------------------------------|-----------------|
| ARMSMS | SMS text message sending i... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| ARMON | Am (close) response - SMS ... | | <input checked="" type="checkbox"/> | |
| ARMOFF | Disam (open) response - S... | | <input checked="" type="checkbox"/> | |
| ARMFAL | Unsuccesful Am (close) - S... | | <input checked="" type="checkbox"/> | |
| ARMBLOCK | Blocking the Am (close) wh... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| DTMFTIME | DTMF pause | 80 | <input checked="" type="checkbox"/> | 80 |
| ROAMING | Roaming | Disabled | <input checked="" type="checkbox"/> | Disabled |
| CIDUNCACK | Automatic CID ACK for the ... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| REBOOTDAY | Daily reboot | Enabled | <input checked="" type="checkbox"/> | Disabled |
| OBJ_ID | Alarm System Custome... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| DOALLDIAL | Ringing all phone numbers | Disabled | <input checked="" type="checkbox"/> | Disabled |
| CALLBARTIME1 | Call or ring interval between ... | 300 | <input checked="" type="checkbox"/> | 300 |
| CALLBARTIME2 | Interval between calls (sec) | 300 | <input checked="" type="checkbox"/> | 300 |
| CALLTOKENS | Number of calls | 2 | <input checked="" type="checkbox"/> | 2 |
| STARTUPCID | Startup notification CID | Enabled | <input checked="" type="checkbox"/> | Disabled |

Then, open the **Other** parameter group and the program will load the related parameters.

Check that the **DTMFTIME** 80 seconds value is proper for applying a pause between the TIP-RING Contact ID signals.

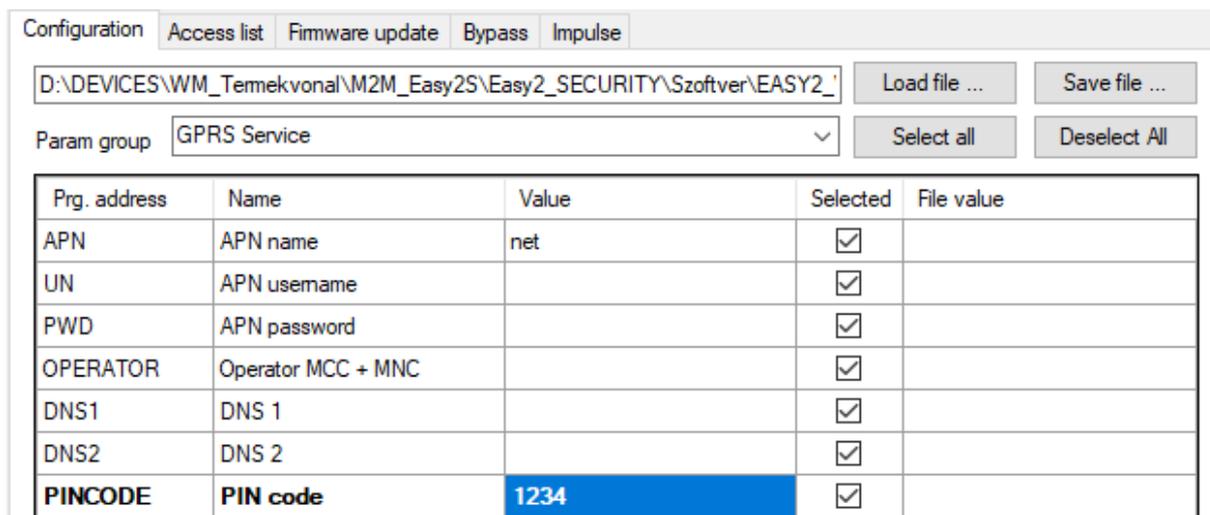
By *enabling* the **OBJ_ID** parameter, you can request that the *Easy 2* overwrite the incoming event's Contact ID code – incoming on TIP-RING line from the alarm system - Customer ID by its own (**ACCOUNT** parameter). If you'll enable it, then this will be transmitted to the center by this identifier.

If you've changed some of the parameter values, the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen.

At the end of the parameter sending, the device is restarting by using the new settings.

If you need to add the SIM PIN, then open the **GPRS Service** parameter group and modify the **PINCODE** parameter setting.

If it is necessary, you can save the configuration to your computer by the **Save file** button at the right upper side of the screen.



For further settings, please check the chapter 5.7.

5.2 Setup signaling to Enigma IP-Receiver / SIMS Cloud® software

When you want to make the device to transmit the incoming signals through cellular network to the remote dispatcher center's IP address, the following settings must be checked. If that is necessary, you can change them.

In addition, the device is similarly able to signal into the SIMS Cloud management software.

GPRS transmitter settings

Load the factory default .CFG file by the **Browse** button.

Choose the **GPRS Settings** parameter group at the **Device Type**. Then the program will load the related parameters.

Change the **GPRSEN** value to *Enable* status for the transmitting via the cellular network.

At the **SFUNCT** parameter you can define that the primary or secondary server IP address will be the first in the signaling sequence.

The **BACKUP** parameter allows a GSM voice signaling to the centre - in case of cellular network fall/outage.

The GSM-relevant parameters must be also configured – e.g. **SYS1**.

(This should only be used in mobile network relay mode - not in GSM relay mode!)

| Prg. address | Name | Value | Selected | File value |
|---------------|----------------------------------|----------------------|-------------------------------------|-----------------|
| GPRSEN | GPRS communication | Enabled | <input checked="" type="checkbox"/> | Disabled |
| SFUNCT | Communication path | Server1,Server2 | <input checked="" type="checkbox"/> | Server1,Server2 |
| BACKUP | GSM signalling, when ... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| SYS1 | Unit call ID | +442301234567 | <input checked="" type="checkbox"/> | |
| ACCOUNT | Customer ID | BCDE | <input checked="" type="checkbox"/> | BCDE |
| LFFREQ | GPRS life signal sending int... | 300 | <input checked="" type="checkbox"/> | 300 |
| LFGSMFREQ | GSM life signal sending inter... | 60 | <input checked="" type="checkbox"/> | 60 |
| LFPRES | Visible GPRS life signal | Enabled | <input checked="" type="checkbox"/> | Enabled |
| LFUNIT | GPRS life signal interval am... | Seconds | <input checked="" type="checkbox"/> | Seconds |

You can modify the **ACCOUNT** parameter value if you are attempted to signaling an own customer ID for the identification. If it is not used, the BCDE code will be signaled.

The **LFFREQ** is the life signal sending frequency on GPRS channel, which is setup to 300 seconds by general. Check that it is fine or not. The **LFUNIT** value is the amount for the **LFFREQ** in seconds or minutes.

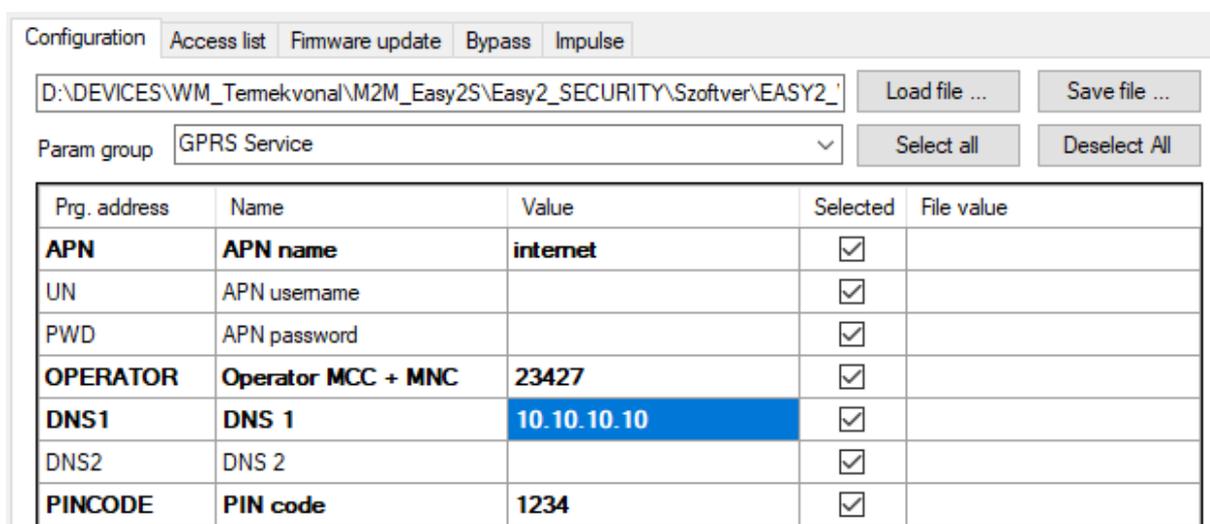
By *disabling* the **LFPRES** value you can send hidden life signals (P603) to the dispatcher center/IP-receiver (if it is supported). By *enabling* it, the normal GPS value will be sent.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen.

The program will indicate the configuration progress by the progress bar at the bottom of the screen and at the **Terminal window** (3). At the end of the parameter sending, the device is restarting by using the new settings.

Cellular network access and APN settings

Then, let's open the **GPRS Service** parameter group at the **Device Type** for the *APN settings*. Then the program will load the related parameters.



At the **APN** value, you have to define the APN name for the SIM-card related GPRS data package service.

When using a username or password are needed for the access – e.g. in case of chap authentication – then define the **UN** and **PWD** values based on the information proven by your mobile service provider.

In the same case, the numbers MCC (Mobile Country Code) and MNC (Mobile Network Code) must be entered for the **OPERATOR** parameter. For the international MCC, MNC numbers here you will get more information: <https://mcc-mnc-list.com/list>

This is useful if you do not want your device to use another network when roaming - or only use the network of the specified (in our case, home) mobile service provider near a country border.

When you would like to use a DNS or DDNS server, you can allow it by the **DNS1**, **DNS2** parameters in the next format – e.g. **wmsupport.dyndns.org**

Then open the **IP-GPRS Service** parameter group at the **Device Type**. Then the program will load the related parameters.

The screenshot shows a configuration window with the following elements:

- Configuration tabs: Access list, Firmware update, Bypass, Impulse
- File path: D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szoftver\EASY2_
- Buttons: Load file ..., Save file ...
- Param group: IP-GPRS Server
- Buttons: Select all, Deselect All
- Table with columns: Prg. address, Name, Value, Selected, File value

| Prg. address | Name | Value | Selected | File value |
|----------------|----------------------|--------------------|-------------------------------------|------------|
| SERVER1 | Server #1 IP | 20.20.20.20 | <input checked="" type="checkbox"/> | |
| PORT1 | Server #1 port nr. | 9999 | <input checked="" type="checkbox"/> | 9999 |
| SERVER2 | Server #2 IP | | <input checked="" type="checkbox"/> | |
| PORT2 | Server #2 port nr. | 9999 | <input checked="" type="checkbox"/> | 9999 |
| IPPROTO | Protocol | UDP | <input checked="" type="checkbox"/> | UDP |
| SWPROTO | Communication format | Enigma | <input checked="" type="checkbox"/> | Enigma |
| AESTYPE | AES encryption type | Disable | <input checked="" type="checkbox"/> | Disable |
| AESKEY | AES key | | <input checked="" type="checkbox"/> | |

At the **SERVER1** parameter fill the IP address of the IP-receiver and the **PORT1** value for the port number.

Change the **IPPROTO** protocol's format to **UDP** and the **SWPROTO** communication format to **Enigma** which means a standard Contact ID protocol. (The *M2M* format means the modified Contact ID (CID) protocol, which can only be used with the following IP receivers (as Enigma II[®], Enigma IP2[®] receivers) remote dispatcher software (as Alarmsys[®] and SIMS[®] software)).

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

For the roaming settings, open the **Others** parameter group.

Where you can *Enable* the **ROAMING** function for the operation of mobile network roaming. It is also necessary to enable the service on the mobile operator's side. If you will use it, you need to enter phone number prefixes in valid international format (with + and country code, network code).

| Prg. address | Name | Value | Selected | File value |
|-----------------|-----------------------------------|----------------|-------------------------------------|-----------------|
| ARMSMS | SMS text message sending i... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| ARMON | Arm (close) response - SMS ... | | <input checked="" type="checkbox"/> | |
| ARMOFF | Disarm (open) response - S... | | <input checked="" type="checkbox"/> | |
| ARMFALL | Unsuccessful Arm (close) - S... | | <input checked="" type="checkbox"/> | |
| ARMBLOCK | Blocking the Arm (close) wh... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| DTMFTIME | DTMF pause | 80 | <input checked="" type="checkbox"/> | 80 |
| ROAMING | Roaming | Enabled | <input checked="" type="checkbox"/> | Disabled |
| CIDUNCAK | Automatic CID ACK for the ... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| REBOOTDAY | Daily reboot | Enabled | <input checked="" type="checkbox"/> | Disabled |
| OBJ_ID | Alarm System Custome... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| DOALLDIAL | Ringing all phone numbers | Disabled | <input checked="" type="checkbox"/> | Disabled |
| CALLBARTIME1 | Call or ring interval between ... | 300 | <input checked="" type="checkbox"/> | 300 |
| CALLBARTIME2 | Interval between calls (sec) | 300 | <input checked="" type="checkbox"/> | 300 |
| CALLTOKENS | Number of calls | 2 | <input checked="" type="checkbox"/> | 2 |
| STARTUPCID | Startup notification CID | Enabled | <input checked="" type="checkbox"/> | Disabled |

Input line's Contact ID settings

For *configuring the input line's event transmitting* let's open the **GPRS Input Parameters** parameter group and the program will load the related parameters.

All detected and received signals and events of the device's input lines are stored in a puffer with their timestamps, where 32 events can be stored temporary by the system. These will be transmitted/forwarded by the device through GPRS network to the defined address, then by the handshake communication reply message the buffered event will be deleted after its transmission. When the puffer is full, the next event will be ignored.

First, the device tries to sending the incoming events on mobile network connection to the primary IP address. In case of unsuccessful sending (e.g. outage or fall of the IP-receiver or a network trouble), then after some delay it retries to send.

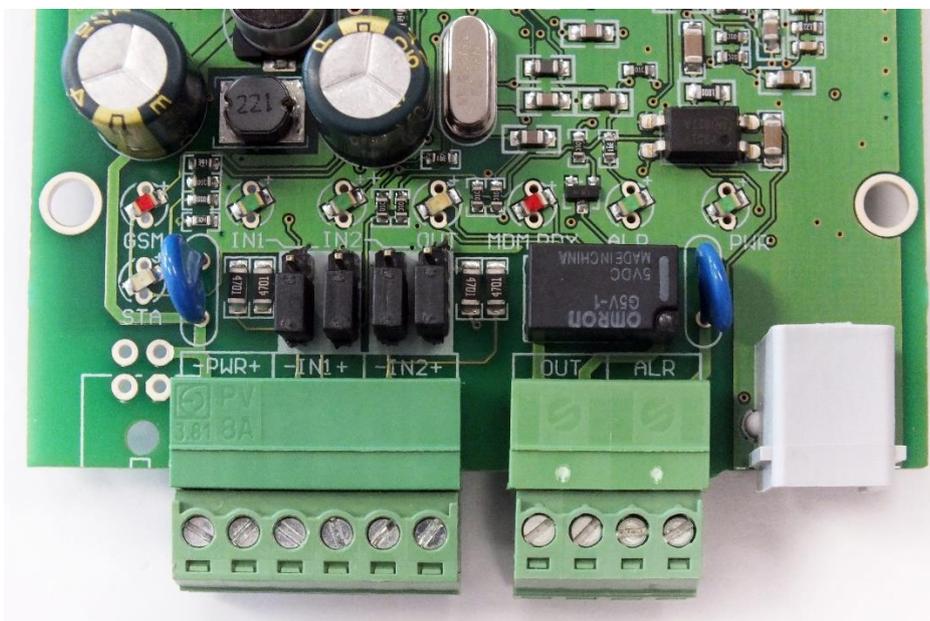
You have to *enable* the **IOGPRS** parameter for transmitting the input line's event and status changes.

| Prg. address | Name | Value | Selected | File value |
|---------------|----------------------------------|----------------|-------------------------------------|-----------------|
| IOGPRS | GPRS Status report of ... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| I1EVENT | Input #1 CID event | 110 | <input checked="" type="checkbox"/> | 110 |
| I1PART | Input #1 CID partition | 01 | <input checked="" type="checkbox"/> | 01 |
| I1ZONE | Input #1 CID zone | 001 | <input checked="" type="checkbox"/> | 001 |
| I2EVENT | Input #2 CID event | 300 | <input checked="" type="checkbox"/> | 300 |
| I2PART | Input #2 CID partition | 02 | <input checked="" type="checkbox"/> | 02 |
| I2ZONE | Input #2 CID zone | 002 | <input checked="" type="checkbox"/> | 002 |

Push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Settings for security sensors:

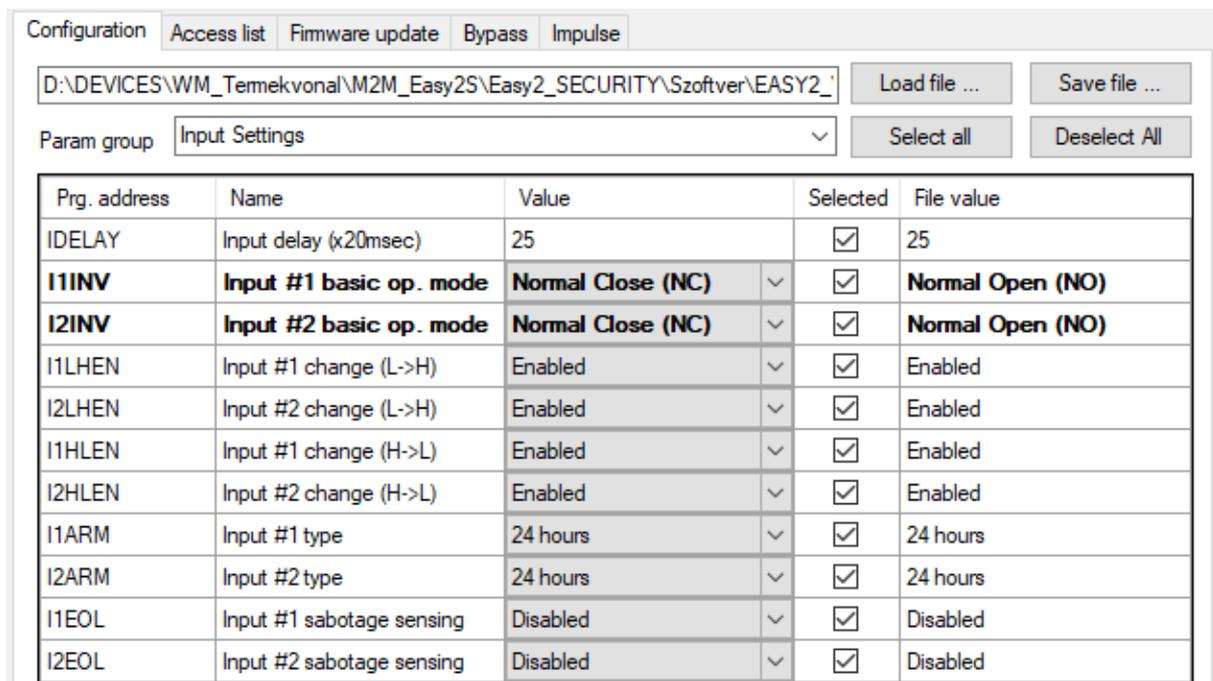
Both the *PIR* sensor (motion detection) and the *door opening* sensor must be connected in contact mode (the NC and C pins of the sensor must be connected to the Easy2S® input - / + poles and the + 12V, GND must be supplied from the device). It is also important that the **I1INV** or **I2INV** parameter must be set to Normal Closed (NC) mode!



The picture shows the input jumpers, configured to contact mode (for property safety sensors), where the jumpers are closed on the lower pin pairs.

The inputs can also be armed, so that the parameters **I1ARM** and **I2ARM** are used to be set for to doors in the case of the Alarm state, in which case the input can be armed. In this case, input changes are only detected and signaled when armed.

Selecting the *24-hour* mode is useful for sensors or applications where the customer wants to know about any changes in input status - regardless of whether the alarm status is active. Thus, in the non-armed mode - 24 hours - all input changes are detected and signaled.



For sabotage event detection (sensor tamper protection) the **IxEOL** parameter can be used for the given input, EOL (*end of line*) resistor can be configured for open detection (tamper detection function). This will always generate an alarm if it is *Enabled!*

In case of wiring tamper or sensor sabotage, the T2 point of the sensor must be connected to the "-" terminal of the *Easy2S*[®] input, the T1 terminal of the sensor to the NC wire, and the C wire to the positive (+) wire terminal of the device's input.

If it is necessary, you can save the configuration to your computer by the **Save file** button at the right upper side of the screen. For further settings, please check the chapter 5.7.

5.3 Cellular network transmitting settings

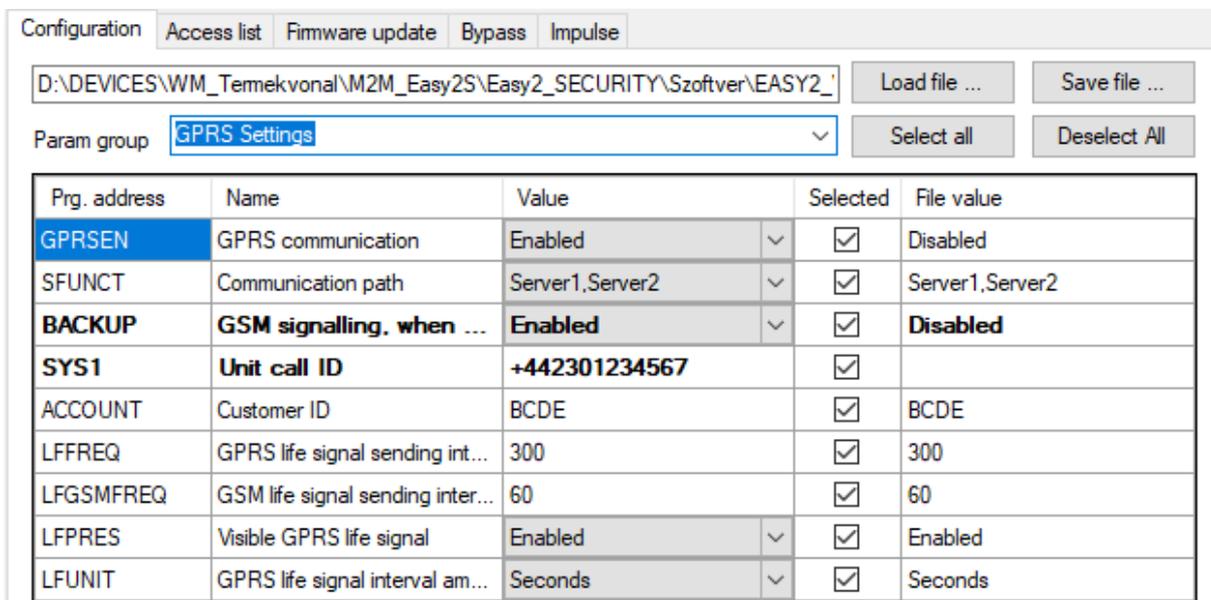
In this operation mode the *Easy2S*[®] is transmitting to the dispatcher center's IP address or to the remot dispatching software - through cellular network. The further settings are recommended to check or modify in case of necessary.

Load the template .CFG file by the **Browse** button.

GPRS transmitting settings

For the *GPRS settings* choose the **GPRS Settings** parameter group at the **Device Type**.

Then the program will load the related parameters.



The screenshot shows a configuration window with several tabs: Configuration, Access list, Firmware update, Bypass, and Impulse. The 'Configuration' tab is active. At the top, there is a file path: D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szofrtver\EASY2_'. To the right of the path are buttons for 'Load file ...' and 'Save file ...'. Below the path is a dropdown menu for 'Param group' set to 'GPRS Settings', with 'Select all' and 'Deselect All' buttons to its right. The main area contains a table of parameters:

| Prg. address | Name | Value | Selected | File value |
|---------------|----------------------------------|----------------------|-------------------------------------|-----------------|
| GPRSEN | GPRS communication | Enabled | <input checked="" type="checkbox"/> | Disabled |
| SFUNCT | Communication path | Server1,Server2 | <input checked="" type="checkbox"/> | Server1,Server2 |
| BACKUP | GSM signalling, when ... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| SYS1 | Unit call ID | +442301234567 | <input checked="" type="checkbox"/> | |
| ACCOUNT | Customer ID | BCDE | <input checked="" type="checkbox"/> | BCDE |
| LFFREQ | GPRS life signal sending int... | 300 | <input checked="" type="checkbox"/> | 300 |
| LFGSMFREQ | GSM life signal sending inter... | 60 | <input checked="" type="checkbox"/> | 60 |
| LFPRES | Visible GPRS life signal | Enabled | <input checked="" type="checkbox"/> | Enabled |
| LFUNIT | GPRS life signal interval am... | Seconds | <input checked="" type="checkbox"/> | Seconds |

Change the **GPRSEN** value to *Enable*, to operate the device as a cellular network transmitter.

At the **SFUNCT** parameter you can define that the primary or secondary server IP address will be the first in the signaling sequence.

The **BACKUP** parameter allows a backup signaling to the centre through GSM voice - in case of mobile network fall/outage.

The GSM-relevant parameters must be also configured – e.g. **SYS1**. (This should only be used in mobile network relay mode!)

You can modify the **ACCOUNT** parameter value if you are attempted to signaling an own customer ID for the identification. If it is not used, the BCDE code will be signaled.

The **LFFREQ** is the life signal sending frequency on GPRS channel, which is setup to 300 seconds by general.

Check that it is fine or not. The **LFUNIT** value is the amount for the **LFFREQ** in seconds or minutes.

By *disabling* the **LFPRES** value you can send hidden life signals (P603) to the dispatcher center/IP-receiver (if it is supported). By *enabling* it, the normal GPS value will be sent.

For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. The program will indicate the configuration progress by the progress bar at the bottom of the screen and at the **Terminal window** (3). At the end of the parameter sending, the device is restarting by using the new settings.

Cellular network and APN settings

Then, let's open the **GPRS Service** parameter group for the *APN settings*. Then the program will load the related parameters.

At the **APN** value, you have to define the APN name for the SIM-card related GPRS data package service.

When using a username or password are needed for the access – e.g. in case of chap authentication – then define the **UN** and **PWD** values based on the information proven by your mobile service provider.

When you would like to use a DNS or DDNS server, you can allow it by the **DNS1**, **DNS2** parameters in the next format – e.g. **wmsupport.dyndns.org**

The screenshot shows a software configuration window with several tabs: Configuration, Access list, Firmware update, Bypass, and Impulse. The 'Configuration' tab is active. At the top, there is a file path field containing 'D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szoftver\EASY2_'. To the right of this field are 'Load file ...' and 'Save file ...' buttons. Below the file path is a 'Param group' dropdown menu set to 'GPRS Service', with 'Select all' and 'Deselect All' buttons to its right. The main part of the window is a table with the following data:

| Prg. address | Name | Value | Selected | File value |
|-----------------|---------------------------|--------------------|-------------------------------------|------------|
| APN | APN name | internet | <input checked="" type="checkbox"/> | |
| UN | APN username | | <input checked="" type="checkbox"/> | |
| PWD | APN password | | <input checked="" type="checkbox"/> | |
| OPERATOR | Operator MCC + MNC | 23427 | <input checked="" type="checkbox"/> | |
| DNS1 | DNS 1 | 10.10.10.10 | <input checked="" type="checkbox"/> | |
| DNS2 | DNS 2 | | <input checked="" type="checkbox"/> | |
| PINCODE | PIN code | 1234 | <input checked="" type="checkbox"/> | |

Then open the **IP-GPRS Service** parameter group and the program will load the related parameters.

| Prg. address | Name | Value | Selected | File value |
|----------------|----------------------|--------------------|-------------------------------------|------------|
| SERVER1 | Server #1 IP | 20.20.20.20 | <input checked="" type="checkbox"/> | |
| PORT1 | Server #1 port nr. | 9999 | <input checked="" type="checkbox"/> | 9999 |
| SERVER2 | Server #2 IP | 30.30.30.30 | <input checked="" type="checkbox"/> | |
| PORT2 | Server #2 port nr. | 9999 | <input checked="" type="checkbox"/> | 9999 |
| IPPROTO | Protocol | TCP | <input checked="" type="checkbox"/> | UDP |
| SWPROTO | Communication format | Enigma | <input checked="" type="checkbox"/> | Enigma |
| AESTYPE | AES encryption type | Disable | <input checked="" type="checkbox"/> | Disable |
| AESKEY | AES key | | <input checked="" type="checkbox"/> | |

At the **SERVER1** parameter fill the primary IP address of the IP-receiver and the **PORT1** value for the port number. Setup the secondary IP address to the **SERVER2** and its port to the **PORT2** (if it is also necessary).

Change the **IPPROTO** protocol's format to **TCP** and the **SWPROTO** communication format to **Enigma (E2)**, which means a standard Contact ID protocol. (The *M2M* format means the modified Contact ID (CID) protocol, which can only be used with the following IP receivers (as Enigma II®, Enigma IP2® receivers) remote dispatcher software (as Alarmsys® and SIMS® software)).

For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Input line's Contact ID settings

For configuring the input line's event transmitting let's open the **GPRS Input Parameters** parameter group, and the program will load the related parameters.

You have to *enable* the **IOGPRS** parameter for transmitting the input line's event and status changes.

When it is necessary to define the current input line's CID event code (**IxEVENT**), or the partition number (**IxPART**), zone (**IxZONE**) for monitoring sensors or a sabotage switch, these parameters must be defined (**x** means the number of the input line in the name of the parameter).

Configuration | Access list | Firmware update | Bypass | Impulse

D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szoftver\EASY2_ | Load file ... | Save file ...

Param group: **GPRS Input Parameters** | Select all | Deselect All

| Prg. address | Name | Value | Selected | File value |
|---------------|----------------------------------|----------------|-------------------------------------|-----------------|
| IOGPRS | GPRS Status report of ... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| I1EVENT | Input #1 CID event | 110 | <input checked="" type="checkbox"/> | 110 |
| I1PART | Input #1 CID partition | 01 | <input checked="" type="checkbox"/> | 01 |
| I1ZONE | Input #1 CID zone | 001 | <input checked="" type="checkbox"/> | 001 |
| I2EVENT | Input #2 CID event | 300 | <input checked="" type="checkbox"/> | 300 |
| I2PART | Input #2 CID partition | 02 | <input checked="" type="checkbox"/> | 02 |
| I2ZONE | Input #2 CID zone | 002 | <input checked="" type="checkbox"/> | 002 |

For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Input settings

For *configuring the input lines operation* open the **Input Settings** parameter group and the program will load the related parameters.

The device on its input lines it is capable of generating Contact ID codes and transmitting them through wireless network/SMS notification in case of change (when ascending the signal level (L→H)) or in case of recovery (descending (H→L) level).

The length of this timeframe can be configured by **IDELAY** parameter, which can be modded by 20msec steps. (By default it is *enabled* for inputs with 25msec value, which means 500msec (half a second) delay.

In case of an occurred input status change the detection of can be *enabled/disabled* by the **IxLHEN** (low-to-high signal, ascending level) and **IxHLEN** (high-to-low signal, descending level) parameters for the input lines. Enable these for voltage and wire cut detection of wiring type. (This is not relevant for the contact inputs.)

The signals are filtered through time frame (inputs must be sustained for a defined interval with its current status and signal level to be detected).

Configuration Access list Firmware update Bypass Impulse

D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szoftver\EASY2_ Load file ... Save file ...

Param group Input Settings Select all Deselect All

| Prg. address | Name | Value | Selected | File value |
|--------------|---------------------------|--------------------|-------------------------------------|------------------|
| IDELAY | Input delay (x20msec) | 25 | <input checked="" type="checkbox"/> | 25 |
| I1INV | Input #1 basic op. mode | Normal Open (NO) ▾ | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I2INV | Input #2 basic op. mode | Normal Open (NO) ▾ | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I1LHEN | Input #1 change (L->H) | Enabled ▾ | <input checked="" type="checkbox"/> | Enabled |
| I2LHEN | Input #2 change (L->H) | Enabled ▾ | <input checked="" type="checkbox"/> | Enabled |
| I1HLEN | Input #1 change (H->L) | Enabled ▾ | <input checked="" type="checkbox"/> | Enabled |
| I2HLEN | Input #2 change (H->L) | Enabled ▾ | <input checked="" type="checkbox"/> | Enabled |
| I1ARM | Input #1 type | 24 hours ▾ | <input checked="" type="checkbox"/> | 24 hours |
| I2ARM | Input #2 type | 24 hours ▾ | <input checked="" type="checkbox"/> | 24 hours |
| I1EOL | Input #1 sabotage sensing | Disabled ▾ | <input checked="" type="checkbox"/> | Disabled |
| I2EOL | Input #2 sabotage sensing | Disabled ▾ | <input checked="" type="checkbox"/> | Disabled |

The **IxARM** parameter is for granting that the current input line can transmit signal only in *Armed* status (value is **Armed**), or whether it is useful to transmit every status changes – even in *Disarmed* status (value is **24 hours**). The *armed* value is used for window & door detectors/sensors by classic, the *24 hours* arming is capable of protecting the secured zones – as protecting the front door in *night mode*.

The *end of line resistor* can be configured by the **IxEOL** parameter for the current input, to detect cable wiring cut (sabotage detection feature). It generates alarm at every case.

If you've changed one of the listed parameter values, then the program will highlight the changed value lines by **bold**. For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Notification sending settings

For the *alarm notification and messaging settings* open the **Notification Parameters** parameter group and the program will load the related parameters.

TELx – notification (Phone, SMS) can be setup for max. 4 phone numbers. Configure at least one number (e.g. TEL1 for SMS notification). The phone nr. syntax must be added in `+ccpp1234567` format (where a positive prefix and the cc=country code and pp=mobile provider code, and the phone number must be added).

| Prg. address | Name | Value | Selected | File value |
|--------------|----------------------------------|-----------------|-------------------------------------|------------|
| TEL1 | Phone nr #1 | +442031234567 | <input checked="" type="checkbox"/> | |
| TEL2 | Phone nr #2 | +442041234567 | <input checked="" type="checkbox"/> | |
| TEL3 | Phone nr #3 | | <input checked="" type="checkbox"/> | |
| TEL4 | Phone nr #4 | | <input checked="" type="checkbox"/> | |
| I1S | Input #1 SMS Phone nr | 1 - 1 | <input checked="" type="checkbox"/> | 0 - |
| I2S | Input #2 SMS Phone nr | 2 - 2 | <input checked="" type="checkbox"/> | 0 - |
| I1V | Input #1 ringing Phone nr | 0 - | <input checked="" type="checkbox"/> | 0 - |
| I2V | Input #2 ringing Phone nr | 0 - | <input checked="" type="checkbox"/> | 0 - |
| IVSMS | In case of unsuccessful ringi... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| I1ON | Input #1 - active - SMS text ... | | <input checked="" type="checkbox"/> | |
| I1OFF | Input #1 - inactive - SMS te... | | <input checked="" type="checkbox"/> | |
| I2ON | Input #2 - active - SMS text ... | | <input checked="" type="checkbox"/> | |
| I2OFF | Input #2 - inactive - SMS te... | | <input checked="" type="checkbox"/> | |
| SMSFWD | SMS message forwardi... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| ISABEVENT | Sabotage CID code | 331 | <input checked="" type="checkbox"/> | 331 |
| ISABON | Sabotage event SMS t... | SABOTAGE.ON | <input checked="" type="checkbox"/> | |
| ISABOFF | Sabotage recovery SM... | SABOTAG.RELEASE | <input checked="" type="checkbox"/> | |

It can be defined by the **IxS** parameter that in case of input status changes for which phone numbers must the device sending SMS text message notification. Choose one from the possible notification sequence combinations.

The **IxV** is operating quite similar, but it is useful for ring notification. You can configure that which phone numbers must the device ringin gin case of input line changes.

IVSMS – in case of unsuccessful calling/ringing the SMS notification sending can be enabled When the call/ring notification is not configured, it MUST BE enabled for the SMS notification!

The **IxON** parameter is used for SMS messaging for the changed input status (in case of level change) It will be active, when the signal level is ascending (from low→high) or occuring (in case of contact or wire cut). So define the status change / alarm event SMS text here.

While the **IxOFF** is active when the level is descending value from high→low (when the alarm event will be ended (when the event will be recovered)). Define the status recovery / disarmed state SMS text here.

SMSFWD – forwarding only messages in SMS text messages to the phone number #1 (the mobile provider SMS notifications and SMS commands will be not forwarded).

ISABEVENT – in case of a sabotage event or wire cut the forwarded CID code can be defined.

In case of a sabotage, wire cut, the SMS message can also be configured by the **ISABON** parameter. The recovery message by the **ISABOFF** definition.

For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Output / Siren operation settings:

For *configuring the siren/bark and output operation*, open the **Output Settings** parameter group and the program will load the related parameters.

The output control is deactivated in this mode by default, then setup the **OUTMODE** value to **Arm/Disarm** value.

If you are attempted to use and switch the siren then allow the input line alarm event to the siren by the **SIRENOUT** parameter (in case of alerting, the siren will be turned on). The **SIRENDEL** defines the recovery time for the output (the siren will be turned off (muted) after this defined interval).

For alarm system *arming or disarming* applying the „bark“ sound can *enabled* by the **SIRENBARK** parameter.

| Prg. address | Name | Value | Selected | File value |
|-----------------|-----------------------------------|-------------------|-------------------------------------|---------------------------------|
| OUTHDEL | Output recovery time (sec) | 0 | <input checked="" type="checkbox"/> | 0 |
| OUTMODE | Output type | Arm/disarm | <input checked="" type="checkbox"/> | Default |
| GATESMS | SMS text message notificati... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| GATEON | Gate ON - SMS text message | | <input checked="" type="checkbox"/> | |
| GATEOFF | Gate OUT - SMS text mess... | | <input checked="" type="checkbox"/> | |
| SIRENOUT | Activating the Output i... | OUT1 | <input checked="" type="checkbox"/> | None - OUT1 toggle in... |
| SIRENBARK | Sound when Open/Close (f... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| SIRENDEL | Output recovery time (sec) i... | 30 sec | <input checked="" type="checkbox"/> | 30 sec |

The output has two operation mode: a mono-stable and a bi-stable. The mode can be configured by the **OUTHDELx** parameter. It holds on the output until the configured interval, then it switches off.

When its value is:

- 0 or not defined: it is in bi-stable mode
- 1-86400 (seconds): it's in mono-stable mode.

In mono-stable mode the output will be in standby (the relay contacts are opened) until a trigger event will be occurred. In case of a trigger the output relay will close (shortened), then after a pre-defined delay interval automatically recovers to stand-by position.

During the delay interval when a trigger comes then the timing will be restarted (e.g. for restartable mono-stable multivibrator).

In case of parameter value '0' the output operates in normal mode, then it will not switch back.

In Bi-stable mode there is no delay. From the opened or closed standing positions the relay can be switched or changed its position in case affect of the appropriate trigger.

The trigger event can be also for mono-stable and bi-stable modes the **OUTON** and **OUTOFF** command value or ringing (e.g. gate opening).

For sending the listed parameter values for the device (regarding the *Selected* coloumn) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

IO-expansion settings (for input lines nr. #3-8, and output lines nr. #2-4)

For configuring the parameters of the *IO-expansion* open the **External IO** parameter group and the program will load the related parameters.

The listed input parameters starting by the **character „I”** are value for the **input** numbers from #3 to #8 - according the requirements.

The '**x**' assigns the number of the current input/output line.

The listed output parameters starting by the **character „O”** are value for the **output** numbers from #2 to #4.

Configuration Access list Firmware update Bypass Impulse

D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szofrtver\EASY2_ Load file ... Save file ...

Param group External IO Select all Deselect All

| Prg. address | Name | Value | Selected | File value |
|--------------|--------------------------|-------------------|-------------------------------------|------------------|
| I3INV | Input #3 basic op. mo... | Normal Open (NO) | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I4INV | Input #4 basic op. mo... | Normal Open (NO) | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I5INV | Input #5 basic op. mo... | Normal Close (NC) | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I6INV | Input #6 basic op. mo... | Normal Close (NC) | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I7INV | Input #7 basic op. mo... | Normal Open (NO) | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I8INV | Input #8 basic op. mo... | Normal Open (NO) | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I3LHEN | Input #3 change (L->H) | Enabled | <input checked="" type="checkbox"/> | Enabled |
| I4LHEN | Input #4 change (L->H) | Enabled | <input checked="" type="checkbox"/> | Enabled |
| I5LHEN | Input #5 change (L->H) | Enabled | <input checked="" type="checkbox"/> | Enabled |
| I6LHEN | Input #6 change (L->H) | Enabled | <input checked="" type="checkbox"/> | Enabled |
| I7LHEN | Input #7 change (L->H) | Enabled | <input checked="" type="checkbox"/> | Enabled |
| I8LHEN | Input #8 change (L->H) | Enabled | <input checked="" type="checkbox"/> | Enabled |

In case of necessary you can save the configuration to your computer by the **Save file** button. Please, also check the Chapter 5.7

For sending the listed parameter values for the device (regarding the *Selected* coloumn) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

5.4 Standalone Alarming mode (SMS notification)

In this operation mode the *Easy 2* is operating as a standalone alarm system, when it is transmitting alarms/events/signal or status changes to a remote IP address - through GPRS. The further settings are recommended to check or modify in case of necessary.

Load the template .CFG file by the **Browse** button.

For the standalone alarm system modem there are some safety settings as the **IxARM** parameter, which is capable of granting that the current input line can transmit signal only in *Armed* status (value is **Armed**), or whether it is useful to transmit every status changes – even in *Disarmed* status (value is **24 hours**).

The *armed* value is used for window & door detectors/sensors by classic, the *24 hours* arming is capable of protecting the secured zones – as protecting the front door in *night mode*.

Configuration Access list Firmware update Bypass Impulse

D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szofrtver\EASY2_ Load file ... Save file ...

Param group Input Settings Select all Deselect All

| Prg. address | Name | Value | Selected | File value |
|--------------|---------------------------------|---------------------|-------------------------------------|------------------|
| IDELAY | Input delay (x20msec) | 25 | <input checked="" type="checkbox"/> | 25 |
| I1INV | Input #1 basic op. mode | Normal Open (NO) ▾ | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I2INV | Input #2 basic op. mode | Normal Open (NO) ▾ | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I1LHEN | Input #1 change (L->H) | Enabled ▾ | <input checked="" type="checkbox"/> | Enabled |
| I2LHEN | Input #2 change (L->H) | Enabled ▾ | <input checked="" type="checkbox"/> | Enabled |
| I1HLEN | Input #1 change (H->L) | Enabled ▾ | <input checked="" type="checkbox"/> | Enabled |
| I2HLEN | Input #2 change (H->L) | Enabled ▾ | <input checked="" type="checkbox"/> | Enabled |
| I1ARM | Input #1 type | Disarmable ▾ | <input checked="" type="checkbox"/> | 24 hours |
| I2ARM | Input #2 type | Disarmable ▾ | <input checked="" type="checkbox"/> | 24 hours |
| I1EOL | Input #1 sabotage sen... | Enabled ▾ | <input checked="" type="checkbox"/> | Disabled |
| I2EOL | Input #2 sabotage sen... | Enabled ▾ | <input checked="" type="checkbox"/> | Disabled |

If you want to be notified about sensor sabotage events (as cable cut, etc.) then configure the **I1EOL** for the input nr. 1 and the **I2EOL** parameter for the input nr. 2 to *Enabled* value.

Configuration Access list Firmware update Bypass Impulse

D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szofrtver\EASY2_ Load file ... Save file ...

Param group Other Select all Deselect All

| Prg. address | Name | Value | Selected | File value |
|------------------|-----------------------------------|-----------------------|-------------------------------------|-----------------|
| ARMSMS | SMS text message sen... | Enabled ▾ | <input checked="" type="checkbox"/> | Disabled |
| ARMON | Arm (close) response - ... | ALARM.ACTIVE | <input checked="" type="checkbox"/> | |
| ARMOFF | Disarm (open) respons... | ALARM.INACTIVE | <input checked="" type="checkbox"/> | |
| ARMFAIL | Unsuccessful Arm (clos... | ARMING.FAILED | <input checked="" type="checkbox"/> | |
| ARMBLOCK | Blocking the Arm (clos... | Enabled ▾ | <input checked="" type="checkbox"/> | Disabled |
| DTMFTIME | DTMF pause | 120 | <input checked="" type="checkbox"/> | 80 |
| ROAMING | Roaming | Enabled ▾ | <input checked="" type="checkbox"/> | Disabled |
| CIDUNCACK | Automatic CID ACK for the ... | Disabled ▾ | <input checked="" type="checkbox"/> | Disabled |
| REBOOTDAY | Daily reboot | Enabled ▾ | <input checked="" type="checkbox"/> | Disabled |
| OBJ_ID | Alarm System Customer ID c... | Disabled ▾ | <input checked="" type="checkbox"/> | Disabled |
| DOALLDIAL | Ringng all phone num... | Enabled ▾ | <input checked="" type="checkbox"/> | Disabled |
| CALLBARTIME1 | Call or ring interval between ... | 300 | <input checked="" type="checkbox"/> | 300 |
| CALLBARTIME2 | Interval between calls (sec) | 300 | <input checked="" type="checkbox"/> | 300 |
| CALLTOKENS | Number of calls | 2 | <input checked="" type="checkbox"/> | 2 |
| STARTUPCID | Startup notification CID | Enabled ▾ | <input checked="" type="checkbox"/> | Disabled |

You can *enable* the **ARMSMS** parameter, which notifies about the remote *arm/disarm* events.

The **ARMON** and **ARMOFF** parameters are for defining the SMS notification messages for the *arming on* and *arming off* events. The **ARMFAIL** equals with the unsuccessful arming/disarming event SMS notification message.

By the **ARMBLOCK** parameter, you can *enable* that only the arming will be allowed only for the closed zones (and for the sensors with closed status) – which can be reasonable by safety needs.

When there is an opened zone during performing an ARM event (arm pushed), then the **ARMFAIL** message will be notifies the persons with the opened zone number and partition nr.

The **DOALLDIAL** parameter is for *enabling* that in case of an incoming event signal call the pre-defined phone number(s). It is working together with the **CALLBARTIME1**, and **CALLBARTIME2**, and **CALLTOKENS** parameters regarding its values.

For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

GSM communication settings:

Choose the **GPRS Settings** parameter group.

| Prg. address | Name | Value | Selected | File value |
|---------------|----------------------------------|-----------------|-------------------------------------|-----------------|
| GPRSEN | GPRS communication | Disabled | <input checked="" type="checkbox"/> | Disabled |
| SFUNCT | Communication path | Server1,Server2 | <input checked="" type="checkbox"/> | Server1,Server2 |
| BACKUP | GSM signalling, when no av... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| SYS1 | Unit call ID | | <input checked="" type="checkbox"/> | |
| ACCOUNT | Customer ID | BCDE | <input checked="" type="checkbox"/> | BCDE |
| LFFREQ | GPRS life signal sending int... | 300 | <input checked="" type="checkbox"/> | 300 |
| LFGSMFREQ | GSM life signal sending inter... | 60 | <input checked="" type="checkbox"/> | 60 |
| LFPRES | Visible GPRS life signal | Enabled | <input checked="" type="checkbox"/> | Enabled |
| LFUNIT | GPRS life signal interval am... | Seconds | <input checked="" type="checkbox"/> | Seconds |

Configure the **GPRSEN** parameter to *Disabled* value, to operate the device as a GSM transmitter.

Configure the a **BACKUP** parameter to *Disabled* value, because there is no backup signaling option here.

The **LFGSMFREQ** value should be configured with the **LFUNIT** parameter to a shorter time– e.g. 60 or 10 value.

Notification sending settings

For the *alarm notification and messaging settings* open the **Notification Parameters** parameter group and the program will load the related parameters.

Here you can define values only for the input line nr. #1 and #2. The IO-expansion settings will be listed later, at the External IO parameter group.

| Prg. address | Name | Value | Selected | File value |
|--------------|----------------------------------|-----------------|-------------------------------------|------------|
| TEL1 | Phone nr #1 | +442031234567 | <input checked="" type="checkbox"/> | |
| TEL2 | Phone nr #2 | +442041234567 | <input checked="" type="checkbox"/> | |
| TEL3 | Phone nr #3 | | <input checked="" type="checkbox"/> | |
| TEL4 | Phone nr #4 | | <input checked="" type="checkbox"/> | |
| I1S | Input #1 SMS Phone nr | 1 - 1 | <input checked="" type="checkbox"/> | 0 - |
| I2S | Input #2 SMS Phone nr | 2 - 2 | <input checked="" type="checkbox"/> | 0 - |
| I1V | Input #1 ringing Phone nr | 0 - | <input checked="" type="checkbox"/> | 0 - |
| I2V | Input #2 ringing Phone nr | 0 - | <input checked="" type="checkbox"/> | 0 - |
| IVSMS | In case of unsuccessful ringi... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| I1ON | Input #1 - active - SM... | INPUT.ERROR | <input checked="" type="checkbox"/> | |
| I1OFF | Input #1 - inactive - SMS te... | | <input checked="" type="checkbox"/> | |
| I2ON | Input #2 - active - SMS text ... | | <input checked="" type="checkbox"/> | |
| I2OFF | Input #2 - inactive - SMS te... | | <input checked="" type="checkbox"/> | |
| SMSFWD | SMS message forwardi... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| ISABEVENT | Sabotage CID code | 331 | <input checked="" type="checkbox"/> | 331 |
| ISABON | Sabotage event SMS t... | SABOTAGE.ON | <input checked="" type="checkbox"/> | |
| ISABOFF | Sabotage recovery SM... | SABOTAG.RELEASE | <input checked="" type="checkbox"/> | |

TELx – notification (Phone, SMS) can be setup for max. 4 phone numbers. Configure at least one number (e.g. TEL1 for SMS notification). The phone nr. syntax must be added in international format (with prefix and country code, mobile network code, and the phone number must be added).

If you want to be notified about the input changes on SMS text messages, then do not configure the **SYS1** phone number! (This is for GSM voice (ringing) notification).

It can be defined by the **IxS** parameter that in case of input status changes for which phone numbers must the device sending SMS text message notification. Choose one from the possible notification sequence combinations.

The **IxV** is operating quite similar, but it is useful for ring notification. You can configure that which phone numbers must the device ring in case of input line changes. E.g. **1 – 1** (Input nr. 1 to the Phone nr. 1, etc.)

IVSMS – in case of unsuccessful calling/ringing the SMS notification sending can be enabled. When the call/ring notification is not configured, it MUST BE enabled for the SMS notification!

The **IxON** parameter is used for SMS messaging for the changed input status (in case of level change) It will be active, when the signal level is ascending (from low→high) or occurring (in case of contact or wire cut). So define the status change / alarm event SMS text here.

While the **IxOFF** is active when the level is descending value from high→low (when the alarm event will be ended (when the event will be recovered)). Define the status recovery / disarmed state SMS text here.

SMSFWD – forwarding only messages in SMS text messages to the phone number #1 (the mobile provider SMS notifications and SMS commands will be not forwarded).

For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Output / Alarm siren operation settings:

For *configuring the siren/bark and output operation*, open the **Output Settings** parameter group and the program will load the related parameters.

The output control is deactivated in this mode by default, then setup the **OUTMODE** value to **Arm/Disarm** value.

If you are attempted to use and switch the siren then allow the input line alarm event to the siren by the **SIRENOUT** parameter (in case of alerting, the siren will be turned on). The **SIRENDEL** defines the recovery time for the output (the siren will be turned off (muted) after this defined interval).

For alarm system *arming or disarming* applying the „bark“ sound can *enabled* by the **SIRENBARK** parameter.

The screenshot shows a configuration window with the following parameters table:

| Prg. address | Name | Value | Selected | File value |
|-----------------|-----------------------------------|-------------------|-------------------------------------|---------------------------------|
| OUTHDEL | Output recovery time (sec) | 0 | <input checked="" type="checkbox"/> | 0 |
| OUTMODE | Output type | Arm/disarm | <input checked="" type="checkbox"/> | Default |
| GATESMS | SMS text message notificati... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| GATEON | Gate ON - SMS text message | | <input checked="" type="checkbox"/> | |
| GATEOFF | Gate OUT - SMS text mess... | | <input checked="" type="checkbox"/> | |
| SIRENOUT | Activating the Output i... | OUT1 | <input checked="" type="checkbox"/> | None - OUT1 toggle in... |
| SIRENBARK | Sound when Open/Close f... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| SIRENDEL | Output recovery time (sec) i... | 30 sec | <input checked="" type="checkbox"/> | 30 sec |

The output has two operation mode: a mono-stable and a bi-stable. The mode can be configured by the **OUTHDELx** parameter. It holds on the output until the configured interval, then it switches off.

When its value is:

- 0 or not defined: it is in bi-stable mode
- 1-86400 (seconds): it's in mono-stable mode.

In mono-stable mode the output will be in standby (the relay contacts are opened) until a trigger event will be occurred. In case of a trigger the output relay will close (shortened), then after a pre-defined delay interval automatically recovers to stand-by position.

During the delay interval when a trigger comes then the timing will be restarted (e.g. for restartable mono-stable multivibrator).

In case of parameter value '0' the output operates in normal mode, then it will not switch back.

In Bi-stable mode there is no delay. From the opened or closed standing positions the relay can be switched or changed its position in case affect of the appropriate trigger.

The trigger event can be also for mono-stable and bi-stable modes the **OUTON** and **OUTOFF** command value or ringing (e.g. gate opening).

For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Settings for safety sensors:

The *PIR* (movement detection) sensor and *door opening* sensor must be wired in contact mode (the *NC* and *C* pins of the sensor must be wired to the device’s input - / + pole. The +12V DC power and GND must be connected from the device). It is important to configure the *Normal Closed (NC)* mode at the **I1INV** or **I2INV** parameters.

The inputs can also be armed, so that the parameters **I1ARM** and **I2ARM** are used to be set for to doors in the case of the Alarm state, in which case the input can be armed. In this case, input changes are only detected and signaled when armed.

| Prg. address | Name | Value | Selected | File value |
|--------------|---------------------------------|--------------------------|-------------------------------------|-------------------------|
| IDELAY | Input delay (x20msec) | 25 | <input checked="" type="checkbox"/> | 25 |
| I1INV | Input #1 basic op. mode | Normal Close (NC) | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I2INV | Input #2 basic op. mode | Normal Close (NC) | <input checked="" type="checkbox"/> | Normal Open (NO) |
| I1LHEN | Input #1 change (L->H) | Enabled | <input checked="" type="checkbox"/> | Enabled |
| I2LHEN | Input #2 change (L->H) | Enabled | <input checked="" type="checkbox"/> | Enabled |
| I1HLEN | Input #1 change (H->L) | Enabled | <input checked="" type="checkbox"/> | Enabled |
| I2HLEN | Input #2 change (H->L) | Enabled | <input checked="" type="checkbox"/> | Enabled |
| I1ARM | Input #1 type | 24 hours | <input checked="" type="checkbox"/> | 24 hours |
| I2ARM | Input #2 type | Disarmable | <input checked="" type="checkbox"/> | 24 hours |
| I1EOL | Input #1 sabotage sen... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| I2EOL | Input #2 sabotage sen... | Enabled | <input checked="" type="checkbox"/> | Disabled |

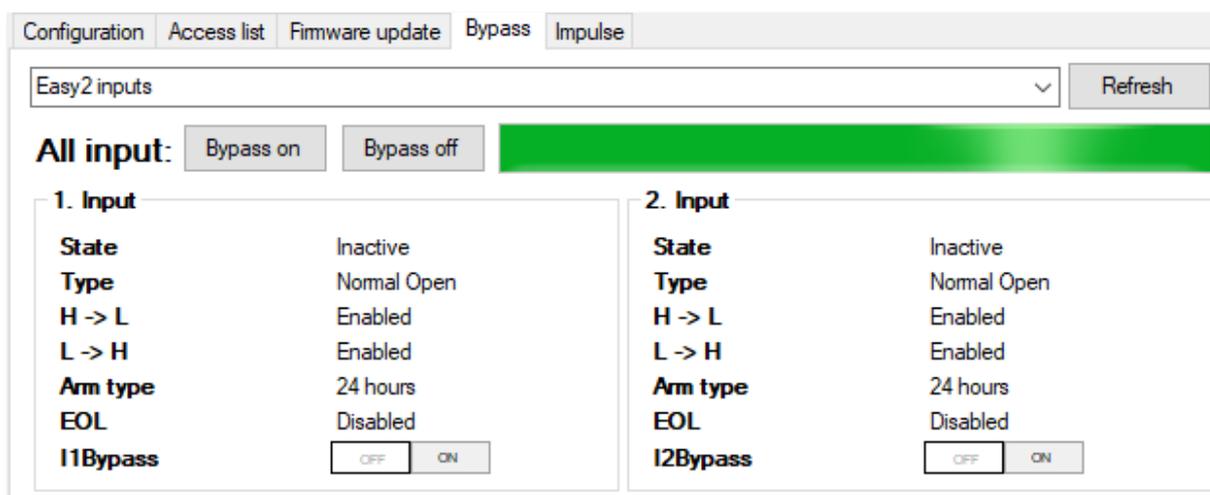
By selecting the *24-hour* mode is useful for sensors or applications where the customer wants to know about any changes in input status - regardless of whether the alarm status is active. Thus, in the non-armed mode - 24 hours - all input changes are detected and signaled.

For sabotage detection (sensor tamper protection) the **IxEOL** parameter can be used for the given input, EOL (*end of line*) resistor can be configured for open detection (tamper detection function). This will always generate an alarm if it is *Enabled!*

In case of wiring tamper or sensor sabotage, the T2 point of the sensor must be connected to the “-” terminal of the *Easy2S*[®] input, the T1 terminal of the sensor to the NC wire, and the C wire to the positive (+) wire terminal of the device’s input.

Important! It is highly important to turn off the **Bypass** feature for the inputs, that the events can be signaled by the system.

Choose the Bypass tab on the top of the screen at right then choose the „Easy 2 inputs” option. Then the application loads the current inputs status and settings for each input. Push the **OFF** button for each input’s **IxBypass** value.



(This **IxBypass** parameter / value is not visible in the *EasyTerm*, therefore you can setup here or by SMS command messages with the IxBYPASS=0 command for the inputs (where 'x' is the nr. of the input)).

5.5 Output control and gate opening settings

In this operation mode the *device* is operating very similar to the mode which have been described at the Chapter 5.3, but the signaling is not performed to the dispatcher centre. In this mode, the cellular network is used for remote control of the output lines, and the GSM network is utilized for messaging, for calling. The further settings can be important to check or to modify in case of necessary.

Attention! The gate opening is possible through the Input nr. 1 only. It is not possible through the IO-Expansion inputs.

For *gate opening, controlling the output line* – to remotely switch by SMS text message or a voice call/ringing – change the **OUTMODE** value to **Gate**.

The output has two operation mode: a mono-stable and a bi-stable. The mode can be configured by the **OUTHDELx** parameter. It holds on the output until the configured interval, then it switches off.

The screenshot shows a configuration window with a tabbed interface. The active tab is 'Configuration'. Below the tabs, there is a file path field containing 'D:\DEVICES\WM_Temekvonal\M2M_Easy2S\Easy2_SECURITY\Szoftver\EASY2_'. To the right of the file path are buttons for 'Load file ...' and 'Save file ...'. Below the file path is a 'Param group' dropdown menu set to 'Output Settings', with 'Select all' and 'Deselect All' buttons to its right. The main part of the window is a table with the following data:

| Prg. address | Name | Value | Selected | File value |
|--------------|---------------------------------|---------------------------|-------------------------------------|------------------------------|
| OUTHDEL | Output recovery time (...) | 30 | <input checked="" type="checkbox"/> | 0 |
| OUTMODE | Output type | Gate | <input checked="" type="checkbox"/> | Default |
| GATESMS | SMS text message noti... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| GATEON | Gate ON - SMS text m... | GATE.OPENING | <input checked="" type="checkbox"/> | |
| GATEOFF | Gate OUT - SMS text ... | GATE.CLOSING | <input checked="" type="checkbox"/> | |
| SIRENOUT | Activating the Output in cas... | None - OUT1 toggle in ... | <input checked="" type="checkbox"/> | None - OUT1 toggle in am/... |
| SIRENBARK | Sound when Open/Close (f... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| SIRENDEL | Output recovery time (sec) i... | 30 sec | <input checked="" type="checkbox"/> | 30 sec |

When its value is:

- 0 or not defined: it is in bi-stable mode
- 1-86400 (seconds): it's in mono-stable mode.
- for the defined interval, it will hold the output on, then it will switch it off.

In mono-stable mode the output will be in standby (the relay contacts are opened) until a trigger event will be occurred. In case of a trigger the output relay will close (shortened), then after a pre-defined delay interval automatically recovers to stand-by position.

During the delay interval when a trigger comes then the timing will be restarted (e.g. for restartable mono-stable multivibrator).

In case of parameter value '0' the output operates in normal mode, then it will not switch back.

In Bi-stable mode there is no delay. From the opened or closed standing positions the relay can be switched or changed its position in case affect of the appropriate trigger.

The trigger event can be also for mono-stable and bi-stable modes the **OUTON** and **OUTOFF** command value or ringing (e.g. gate opening).

By the **GATESMS** parameter you can *enable* that the gate opening events will be notified to the phone number where the remote control were initiated from. The **GATEON** defines the message for the gate opening event, and the **GATEOFF** it the gate closing event message.

For sending the listed parameter values for the device (regarding the *Selected* coloumn) – check the proper selection – push the **Write config** button at the bottom of the screen. At the end of the parameter sending, the device is restarting by using the new settings.

Handling the contact list for output control and gate opening

The output and gate control settings can be found in the **Configuration file window** (4), at the **Access List** tab.

You can define phone call numbers– max. 125 – which are allowed to remotely control the output line – or the connected device or gate opening system. The device will be control its output line only due to the received command SMS text messages – or ringings - of the listed numbers!

The screenshot shows a software interface for configuring an access list. At the top, there are tabs: 'Configuration', 'Access list', 'Firmware update', 'Bypass', and 'Impulse'. Below the tabs is an 'Instructions' box with the text: 'Output has two mode: gate and arm/disarm. Gate and arm/disarm functionality allow only authorized person. Please add phone numbers.' Below the instructions is a 'Quick add / remove contact' section with a text input field, an 'Add' button, a 'Remove' button, a 'Load file ..' button, a 'Save file ...' button, a 'Select all' button, and a 'Deselect all' button. At the bottom is a table with three columns: 'Idx.', 'Phone nr.', and 'Select'.

| Idx. | Phone nr. | Select |
|------|---------------|-------------------------------------|
| 1 | +44203123467 | <input checked="" type="checkbox"/> |
| 2 | +442041234567 | <input checked="" type="checkbox"/> |
| | | <input type="checkbox"/> |

This feature is very useful for hotels parking houses, companies, condominiums. The control type can be: alarm status change (arming/disarming the alarm system), gate openin/closing (enginge control).

First of all, readout the stored numbers from the device by the **Read contacts** button. The read out numbers will be listed. Wait while the process will be finished.

When you are attempted to define and send a new number to the device, then fill the phone number at the **Add** button – in value format (e.g. +492031234567 or 00442031234567) – then push the **Add** button to record the number to the device's contact list.

Adding multiply numbers to the list, you can repeat the sequence with the **Add** button as it is described.

You can modify the registeret numbers in the **Phone nr.** coloumn when click on the phone number. The program signs the modification with **bold** highlight. **The performed modification is still not sent to the device!**

The configured or modified phone numbers can be sended by checking in the **Select** mark and pushing the **Write contacts** button. You can send multiply numbers to the device.

You can **Save file** with .ACL file extension to your computer. The **Load file** restores the saved list from your computer to the *EasyTerm*.

Attention!

The *Only selected* feature is attempted to perform operations only for the selected phone numbers. When you will not check this box, the operation is valid for the complete list - be careful!

When you already had multiple phone numbers in your contact list, then you are attempted to modify them and **Save** to the list and record to the device by the **Write** button.

Deletion of some phone numbers can be performed by the **Select** mark selection and pushing **Delete contacts** button. The *EasyTerm* will **delete all the marked position from the device directly! Check the Select mark before usong the Delete contacts button!**

When you are attempted to delete only one number from the contact list, but you wouldn't like to search the number from the list, then just fill the number in the empty field and just push the **Remove** button. This will delete the written phone number from the device directly.

Over the recorded phone numbers, now you can manually control the output lines – even the gate opening – from this feature at here. You can check the current status of the output(s) at the left side of the screen and you can control by the buttons, manually.

When the gate opening parameter is enabled (**Configuration: Output settings, OUTMODE: Gate**), then at the left side of the screen you can close the gate by the **OUT** title with the **ON**



button, and open by the **OFF** (when the *Easy2* sends the control command to the gate opening system).

When the alarm feature was activated (**Configuration: Output settings, OUTMODE: Alarm**) then the armin status can be checked with the **ARM ON/OFF** status and here you can arm the alarm system by the **ON** button or disarm by the **OFF** button.



Important! Over the manual control, these features can be remotely controlled via SMS text messages and initiating a voice call (ringing).

Attention!

You cannot use the outputs of the IO-expander (OUT2, OUT3, OUT4) for gate opening. These outputs can be used for remote switching of external devices.

5.6 Advanced safety settings

In the **Other** parameter group you will find further general safety and alarm feature's settings which is used in case of the security and safety aimed tasks.

| Prg. address | Name | Value | Selected | File value |
|------------------|-----------------------------------|----------------|-------------------------------------|-----------------|
| ARMSMS | SMS text message sending i... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| ARMON | Arm (close) response - SMS ... | | <input checked="" type="checkbox"/> | |
| ARMOFF | Disarm (open) response - S... | | <input checked="" type="checkbox"/> | |
| ARMFAIL | Unsuccessful Arm (close) - S... | | <input checked="" type="checkbox"/> | |
| ARMBLOCK | Blocking the Arm (close) wh... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| DTMFTIME | DTMF pause | 80 | <input checked="" type="checkbox"/> | 80 |
| ROAMING | Roaming | Enabled | <input checked="" type="checkbox"/> | Disabled |
| CIDUNCACK | Automatic CID ACK for... | Enabled | <input checked="" type="checkbox"/> | Disabled |
| REBOOTDAY | Daily reboot | Enabled | <input checked="" type="checkbox"/> | Disabled |
| OBJ_ID | Alarm System Customer ID c... | Disabled | <input checked="" type="checkbox"/> | Disabled |
| DOALLDIAL | Ringing all phone numbers | Disabled | <input checked="" type="checkbox"/> | Disabled |
| CALLBARTIME1 | Call or ring interval between ... | 300 | <input checked="" type="checkbox"/> | 300 |
| CALLBARTIME2 | Interval between calls (sec) | 300 | <input checked="" type="checkbox"/> | 300 |
| CALLTOKENS | Number of calls | 2 | <input checked="" type="checkbox"/> | 2 |
| STARTUPCID | Startup notification CID | Enabled | <input checked="" type="checkbox"/> | Disabled |

By the **CIDUNCACK** parameter you can *enable* that the *Easy 2* will send immediate and automatic acknowledge to the alarm center – independently that the signaling to the centre was sent successfully or not. This could be an important feature for some alarm centers, where the handshake for alarm signaling is not available. If the surveillance centre is not able to send a response acknowledge to an incoming alarm event, this can be helpful to use. **You can use this feature, but for your own risk!**

The **STARTUPCID** parameter allows the immediate status sending and signaling when the device starting up. When it is *enabled*, then in case of a restart or turning off the *Easy2* will automatically sends the restart status (e.g. CID code: E901 – Restart (by software), or CID code: E900 – Turning on (by hardware)).

By the **REBOOTDAY** parameter you can *enable* the industrial- and safety standard daily once device restart event.

The communication can be encrypted by AES-security with the az **AESTYPE** and **AESKEY** fields.

For sending the listed parameter values for the device (regarding the *Selected* column) – check the proper selection – push the **Write config** button at the bottom of the screen.

At the end of the parameter sending, the device is restarting by using the new settings.

In case of necessary you can save the configuration to your computer by the **Save file** button.

5.7 Firmware update/refresh (via serial port, TCP port)

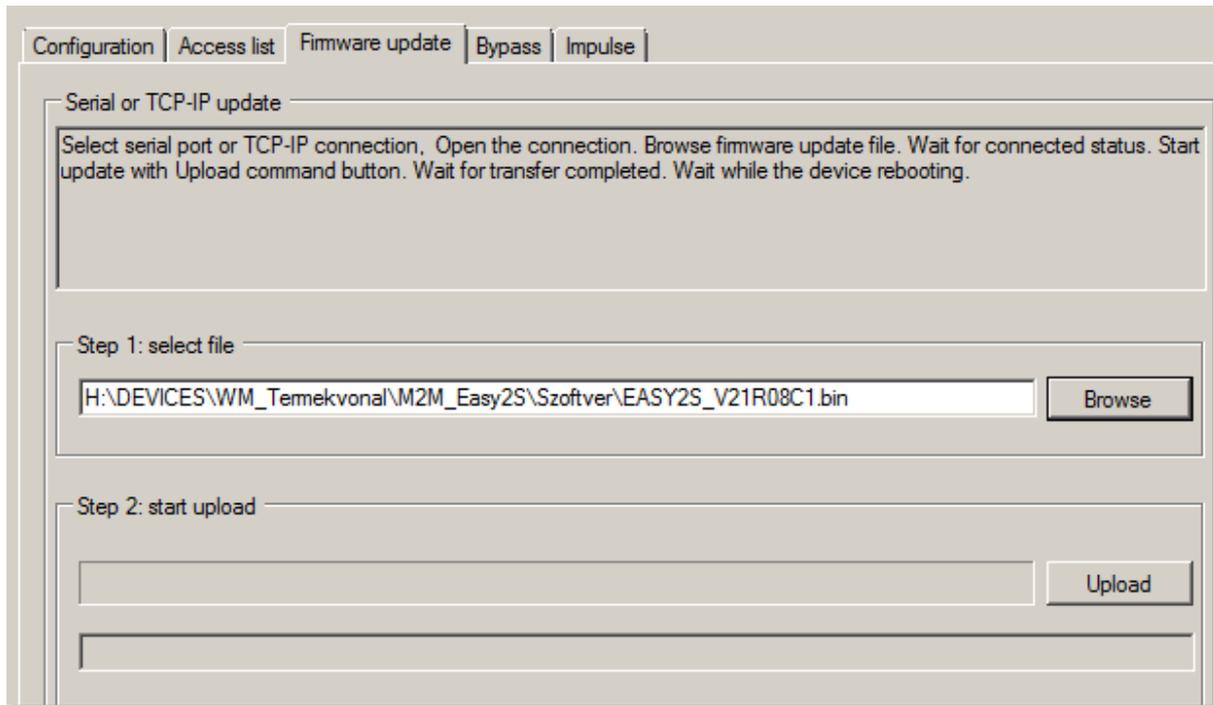
To download newer software to *Easy2S* and upgrade to the new version, select the **Firmware update** tab from the **Configuration Load** window (4).

Before uploading, make sure that the **SW VER** (software version) in the *Identifier* window (2) is older than the version of the file you want to upload.

It is possible to upload the firmware via a serial port (if connected via **Serial Port**) or TCP IP (if connected via **TCP-IP (GPRS)**). This is handled automatically by the program.

The system sends CID codes about the program update process over TCP / IP (such as: Update started, update completed, update error).

When uploading from a serial port, use the **Browse** button to browse to the desired firmware (the file name always contains the ID of the software version - eg EASY2_V21R08C02.bin - ie for a version 2.1 product, R08 = version 8, C02 = version C, 2nd edition).



After selection, press the **Upload** button to change the *Easy2S*[®] firmware.

Then the machine will receive the firmware file on the serial port (or on a slower TCP connection if you are connected via TCP) and will start updating the program to the machine.

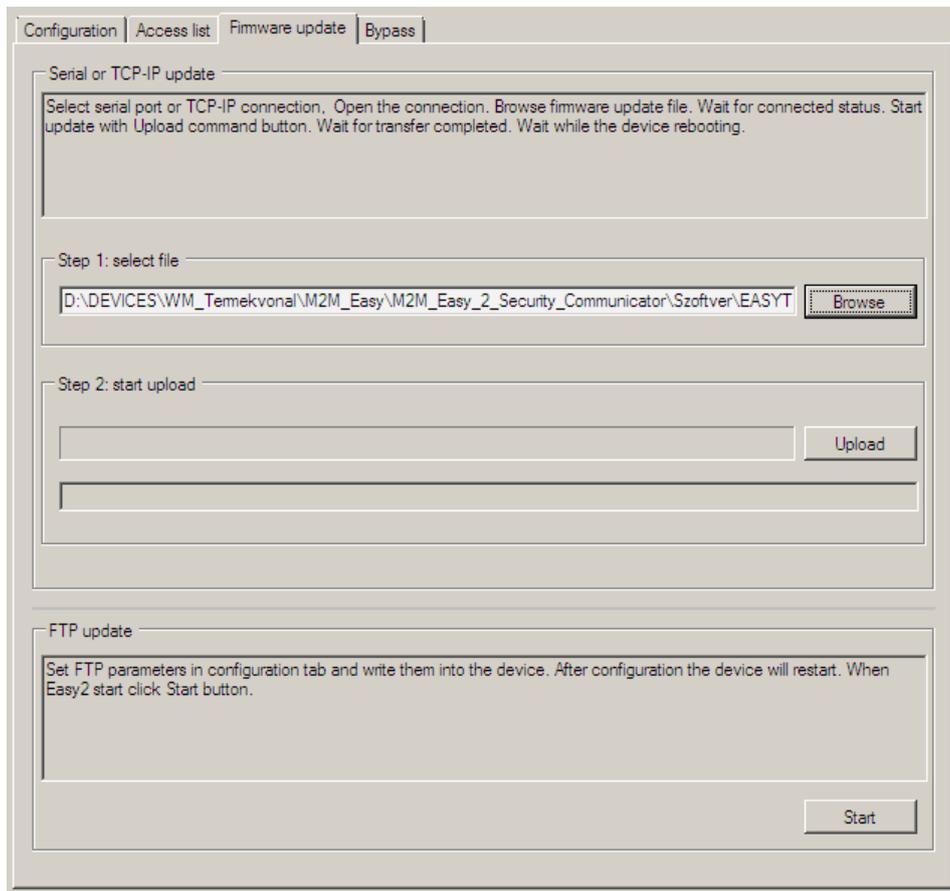
You can also monitor the progress of the installation with the progress indicator during start upload and status messages.

When the download starts, the message *Wait for bootloader* will appear, followed by *Sending file, please wait...* message.

The installation takes approximately 2-3 minutes to load.

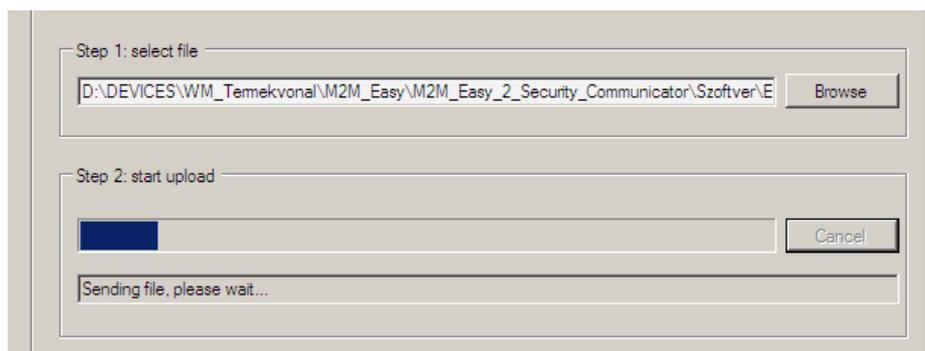
PLEASE, DO NOT STOP the operation of the device during the firmware update!

DO NOT DISCONNECT THE POWER TO THE DEVICE during the installation process, as this may cause device malfunction!

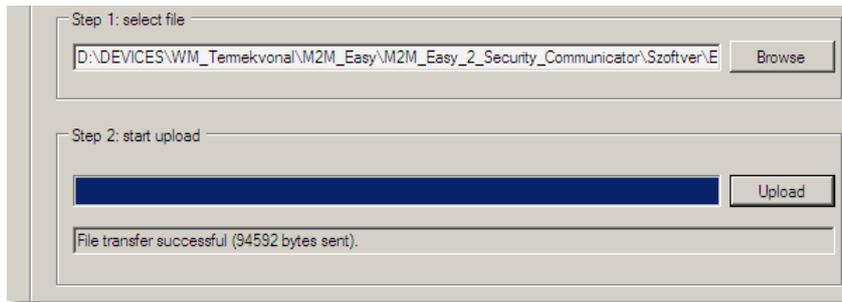


This *EasyTerm* window does not respond to other inputs during full loading, so do not switch away from the window!

During the update, the device has only limited functionality: it does not receive alarm signals, does not signal incoming events to its input, does not send a life signal, and does not process incoming SMS!

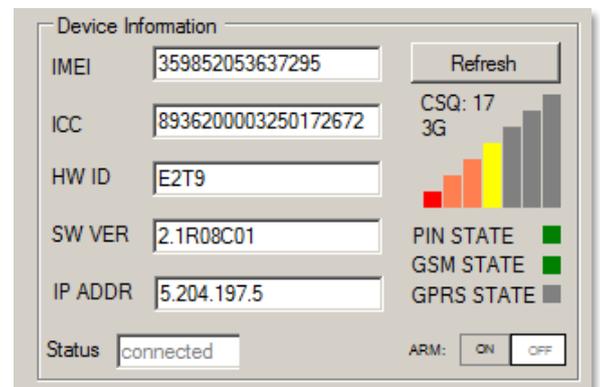


The message "Sending file .. please wait" is displayed during installation. **Wait for the upload and installation to complete.**

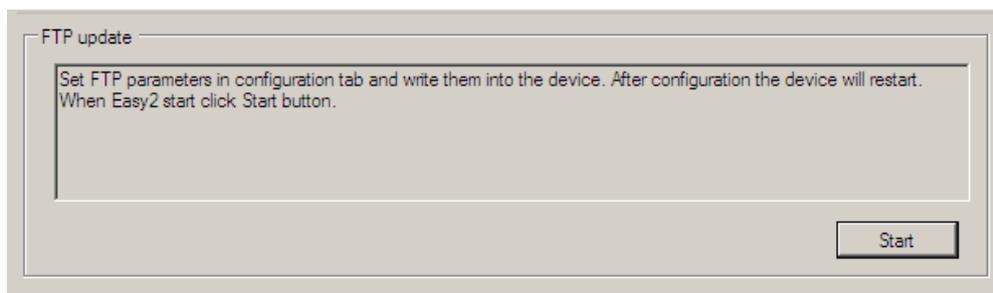


At the end of the installation, the message "File transfer successful" will appear, then Easy2 will restart, the device will be disconnected from the serial connection and the port will no longer be open!

To connect, open the **Open** button under the **Serial Port** tab in window 1, wait for it to connect to the device and check the software version (for **SW VER**). The device will continue to operate with the new firmware and standard communication messages will be displayed. This completes the firmware update process.



If you are installing from an ftp server... In the **Firmware update** window on the right side of the screen, at the bottom of the **FTP update** section, you can accept and start (central) firmware installations from the ftp server.



For this you still need to specify the ftp parameters. If you have started the installation with the **Start** button and the ftp server is also available, the first step of the installation - the download - will start, which is indicated by the message "*Download started...*".

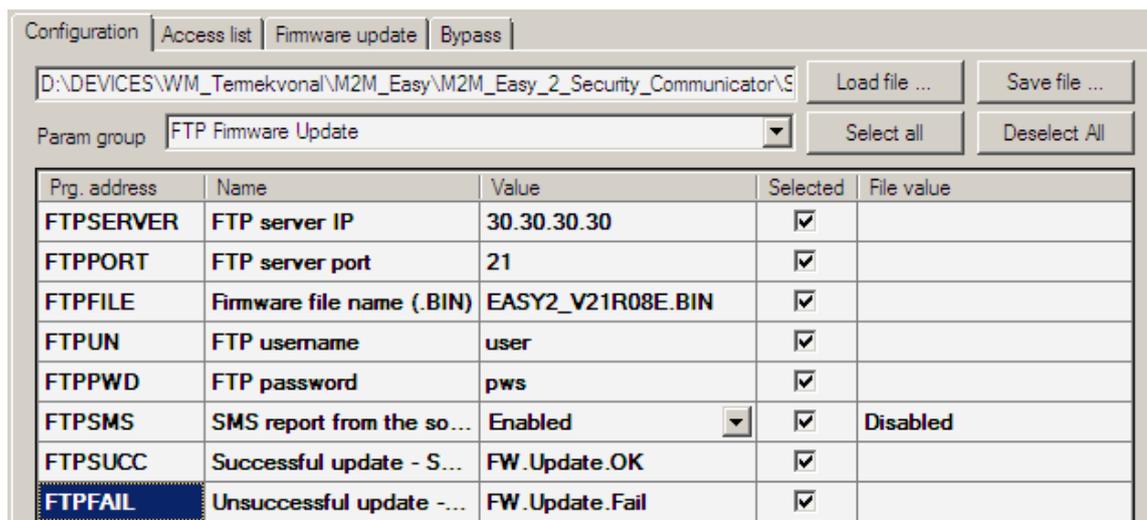
Later, "*Installation in progress*" and "*Installation complete.*" appears, restarts at the end, and the device disconnects.

5.8 Firmware update/refresh via FTP server

The saved configuration can be distributed for one or multiply devices. The ftp server usage prerequisite is for the device to access the ftp server IP address through the mobile network.

By the **FTPSERVER** parameter you can define the ftp server IP address. Where the **FTPPORT** means the server port number (by default it is equal to port 21).

You have to add the .BIN firmware file path and filename to the **FTPFILE** parameter.



The screenshot shows a configuration window with tabs for 'Configuration', 'Access list', 'Firmware update', and 'Bypass'. The 'Firmware update' tab is active. At the top, there is a file path field containing 'D:\DEVICES\WM_Temekvonal\M2M_Easy\M2M_Easy_2_Security_Communicator\...', a 'Load file ...' button, and a 'Save file ...' button. Below this is a 'Param group' dropdown menu set to 'FTP Firmware Update', with 'Select all' and 'Deselect All' buttons. The main area contains a table with the following data:

| Prg. address | Name | Value | Selected | File value |
|--------------|---------------------------|----------------------------------|-------------------------------------|------------|
| FTPSERVER | FTP server IP | 30.30.30.30 | <input checked="" type="checkbox"/> | |
| FTPPORT | FTP server port | 21 | <input checked="" type="checkbox"/> | |
| FTPFILE | Firmware file name (.BIN) | EASY2_V21R08E.BIN | <input checked="" type="checkbox"/> | |
| FTPUN | FTP username | user | <input checked="" type="checkbox"/> | |
| FTPPWD | FTP password | pws | <input checked="" type="checkbox"/> | |
| FTPSMS | SMS report from the so... | Enabled <input type="checkbox"/> | <input checked="" type="checkbox"/> | Disabled |
| FTPSUCC | Successful update - S... | FW.Update.OK | <input checked="" type="checkbox"/> | |
| FTPFAIL | Unsuccessful update -... | FW.Update.Fail | <input checked="" type="checkbox"/> | |

The **FTPUN** is the username and the **FTPPWD** is the related password for accessing the ftp server by the device.

You can define and *enable* the firmware refresh progress status SMS notification (in case of installation from an ftp server) by the **FTPSMS** parameter.

You can setup the success text message for case of successful installation (by **FTPSUCC** parameter) and for case of failure (**FTPFAIL** parameter).

Chapter 6. Further information about the Easy2S operation

6.1 Primary and secondary communication channel

The *Easy2S*[®] is capable of signaling the incoming events to two communication channels to the remote dispatcher centre, via cellular network and by a GSM voice call.

The two channels can be enabled or disabled independently from each other. When all the two channel is enabled, then the cellular signaling has priority and the voice call is activated only in case of cellular communication and transmission failure. If both channels are disabled, signaling and life sending are inactive.

6.2 Using the secondary channel

Two server can be configured for transmitting the signals, but only for one server will be transmitted the data. The other server will be used as backup. The order of the primary and secondary server operation can be defined by the **SFUNCT** parameter. The device switches from the primary to the secondary server when the primary server cannot transmit data. If the secondary server will successfully receiving the data, then the data will be still sent for more 5 seconds to this server. Every signal transmitting will reset the counter of this time limit. When the timeout spent it will switch back to the primary server.

The sending is successful, when a handshake reply is received back from the server within 6 seconds after the device sent.

Transmitting options in case of defining multiply IP addresses:

Signaling to 2 IP addresses (e.g. Server1: remote dispatcher centre which replies ACK response; Server2: server, no ACK response).

Use cases:

- It will sending only for the primary server (**GPRSEN** *enabled*, **SERVER1** configured, **PORT1** configured)
- It will sending to the secondary server (backup/spare) when the primary is not available (**GPRSEN** *enabled*, **SERVER1** configured, **PORT1** configured, **SERVER2** configured, **PORT2** configured, **SFUNCT** value is *Server1, Server2*)

6.3 Signaling through GSM voice call

When the device is communicating with the alarm system, after the inclusion of the shell, the alarm will gets the dial tone only, when there is no active call n progress.

In this mode the device has not active communication, only allows calls the alarm system dialed phone number and after finishing the call it disconnects the connection.

The calls are limited, as it can ring the same number only once in every 5 minutes.

In case of voice call notification (ringing), the system sends an SMS text message notification: "*Easy 2 call failed*".

The device stores the last dialed phone number in the **SYSL** parameter.

When the **SYS1** parameter is not configured, then the *Easy 2* will dial the last called number (which were called by the alarm system) and reads the number from this **SYSL** parameter.

When either the **SYS1**, nor the **SYSL** parameters are not defined, then the device is unable to signaling!

6.4 Receiving the signaling of events

The device can receive events from two sources: from the alarm system (TIP-RING port or its input line) or through the input lines. There is an important difference between these, while the incoming events from alarm system needs immediate response and signaling, then the incoming events from the input lines will be handled one-by-one by buffer and will be waiting for processing which will be performed by the events time sequence.

Independently from the operation mode, the event types can be signaled through GPRS or GSM voice call. Furthermore, the input line events are able to generate SMS text message or voice call notification.

6.5 Life signals

In case of thicker heartbeats/life signals the device will traffic more data through the network, which is unnecessary in some cases. You can easily exceed the allowed data limit of the SIM card. It is recommended to configure the default *300sec* or greater (more rare) interval for life signal sending frequency.

Meaning of the hidden vital sign: the device only sends information about vital sign failures to the dispatcher software. If the vital sign is visible, the vital signs sent by the device are displayed in the dispatcher software. Status report can be required by *Enabling* the **IOGPRS** parameter.

6.6 Voice call notification (ringing)

For an input *trigger* event the assigned phone numbers will be activated (related to the input lines). The ringing of the active phone numbers will be performed by index number sequence, regardless of which input has been activated for a specific number.

A call notification can be set with the **IxV** parameter, and with **IVSMS** a call notification that takes effect in the event of a failed SMS notification.

If the ring is successful, the additional phone numbers for the input will not be dialed.

The ringing is successful if the called party answers or rejects the call within 20 seconds. If this does not happen, the device will continue to ring the next phone number (if any).

When you receive a call, the device hangs up without delay.

The device software does not differentiate between a busy signal and a call rejection. It also interprets voicemail login as a received call, so no notification will be made in this case.

Likewise, the notification will fail if the phone number to be notified is busy at the time of the notification and call waiting is not enabled.

Chapter 7. Configuration by SMS messages

In this chapter you will find the executable commands and their descriptions which are possible to send through SMS text messages.

Requirements for SMS commands:

- Maximum 158 characters can be used in one SMS message.
- In one SMS message you can send more commands.
- The commands must contain only English capital alphabetical letters only (without special characters) or numbers.
- You are allowed to use the following special signs: ! " # \$ % & ' () * + , - . / : ; < = > ? @
- The order and divide of the commands is possible with comma sign without a space character.
- The parameter value (after the = character) can be empty.
- You cannot use any of the commands or responses – as „OK“ or „NO“ or „ERROR“ – for parameter values.

Query commands:

- You can send several query commands in the same SMS text message, but cannot mixed with further value-added commands!
- You will receive a response SMS text notification with the queried parameter values for answering the sent query SMS commands.
- The question mark („?“) after the parameter means the query of the current parameter.

The execution order of the sent commands will be performed by the same sequence as it is in the SMS text message.

The customer will receive a notification SMS message from the successful processing of the SMS command that he sent (where the following are reported: number of sent commands, process success/failure). For answering the sent SMS commands, an acknowledge response SMS message will be received (e.g. „OK“ or the queried values).

General hints:

- In every parametrizing SMS command (!) you have to use the password command (**PW**) at the first position - as **PW=ABCD,.....,RESET**

- You have to use the **RESET** command in the last parameter message command, at last the position!
- The new configuration values become active only after reboot
- After sending the last parametring message a couple of minutes later you will receive a response from the device that how many parameters were processed

7.1 Authentication command

In every SMS message (!) you have to define the password at the first command position! E.g. „**PW**=...”

| Command | Description |
|---------|--|
| PW | Connection / authentication password |
| PWNEW | Password change, adding the new password for connection authentication |

The default password is **ABCD**, which can be changed (**PWNEW**). It can be max. 16 chars.

7.2 Query commands

You can send several query commands in the same SMS text message, but cannot mixed with further value-added commands!

You will receive a response SMS text notification with the queried values for answering the sent SMS command message.

In each (!) SMS message, the password command and the password must be entered in the first place. Eg „**PW**=...”

| Command | Response content |
|-------------------------|---|
| INFDEV or DEVSTAT | It will response a SMS report with the current status of the <i>Easy 2</i> : account nr. (customer ID), signal strength, software version, hardware identifier, device IMEI identifier, SIM card ICC identifier, battery status, IP address. Contains: ACCOUNT, SQ, SWVER, HWID, IMEI, SIMICC, VBATT, IP |
| INFIO | Current status of the input lines and the output line. Containing parameters: ACCOUNT, SQ, current status of the inputs/output |
| INFTEL | Configured voice/SMS notification settings, phone numbers and notification (SMS text message) order sequence, voice call (ringing) order sequence will be responded. Containing parameters: ACCOUNT, SQ, TEL1, TEL2, TEL3, TEL4, I1S, I2S, I1V, I2V |
| INFSMS | Input SMS notification settings. Containing params: ACCOUNT, SQ, I1ON, I1OFF, I2ON, I2OFF |

| | |
|-------|---|
| INFIP | Server connection settings. Containing parameters: ACCOUNT, SQ, IMEI, IP, SERVER1, PORT1, SWPROTO |
|-------|---|

7.3 Configuration by SMS messages (list of commands)

Here we collected all SMS command parameters which are NOT handled by the *EasyTerm*.

You can use all further listed commands (exact *EasyTerm* parameter names and value).

When parametrizing you always have to use password authentication (**PW**) in every message first position, and once the **RESET** command in the last position of the **last SMS message!**

Therefore, you will ask the device to perform a reboot after the successful configuration of the new parameter settings!

Device restart, restore of factory defaults, password

| Command | Description |
|-----------|--|
| RESET | Restarts the device (manual restart which is needed to use after every parametrizing SMS command) |
| ERASECONF | Deletion of every the stored parameters and settings from the device memory (whole configuration delete) |

Firmware refresh from the server – started by SMS command message

| Command | Description |
|---------|---|
| FWLOAD | Starting the Ftp firmware updates, with the already configured ftp parameter settings |

Important to define the necessary Ftp connection parameters to the successful ftp firmware update – as port, IP address, ftp username and password, etc.

Bypass – disabling a zone – specific commands

The **BYPASS** parameters can be only executed via SMS commands – and also possible to control from the *EasyTerm* (**Bypass** tab).

Due to these, there is possible to disabling the alarm of the zones. By the **ARMBLOCK** parameter, when the **BYPASS** is *enabled* for the current zone, the device can be *armed* as well (as an alarm system) - whether an opened zone.

In case of activated BYPASS for a zone, the events of the current zone will be not signaled as alarms.

| Command | Description |
|-------------|--|
| IxBYPASSON | Disabling the alarming for the nr. x input/zone |
| IxBYPASSOFF | Enabling the alarming for the nr. x input/zone |
| BYPASSON | Turning off the the alarming for all inputs/zones |
| BYPASSOFF | Turning on the the alarming for all inputs/zones |

Gate opening, remote output control specific commands

| Command | Description |
|----------------------------------|--|
| GATE or CONT or CTRL | For affection of the command the added new phone number will be recorded to the contact list into the argumented position. Values: <n> position in the contact list (1 – 125). In case of '0' the current number will be deleted. The <i>phone number</i> value can be added at here. <phonenumber> - the <i>phone number</i> value can be added here. When it is already exists or the memory is full, then there is no affection. |
| GATERM | For its affection the given number of phone nr. in sequence will be deleted from the contact list. Value: <phone_nr> sequence number of the phone number in the contact list (1-125) When executing this command the given phone number will be deleted from the contact list. |
| OUTON | Gate opening in Bi-stable mode: Relay contact will be closed (shortened) in Mono-stable mode: Starts the timing |
| OUTOF or OUTOFF | Gate closing in Bi-stable mode: Relay contact will be opened in Mono-stable mode: Stops the timing |

Standalone alarm system specific commands – Arming/Disarming

| Command | Description |
|---------|---|
| ARM | Arming the alarm status of the <i>Easy 2</i> (activates the arming) |
| DISARM | Disarming the alarm status of the <i>Easy 2</i> |
| GATERM | As a result, the specified number will be deleted from the list. Value: <phone number> in the contact list, the number corresponding to the phone number (1-125) |
| OUTON | Gate opening |

| | |
|-------------------------|--|
| | If set to bistable mode: Relay contact closes When set to monostable mode: Starts the timer |
| OUTOF vagy OUTOFF | Gate closing If set to bistable mode: Relay contact opens When set to monostable mode: Stops the timer |

7.4 Examples for SMS command parameters

According to the SMS text message format standard, in one SMS message command you can use max. 158 characters in once SMS command.

When the required parameters are not able to fit in one message, you can start a new SMS commad message by using the **PW=** password authentication at first, then you can continue it with the next parameter or command.

During the parametring you have to use password authentication in every message first position, and the **RESET** command in the last message's last position (once only).

The command messages can be sent one after, then the device will get these and processing them in a time order sequence.

Take consider that the device will be restarted when receiving the **RESET** command. the parameter receiving and restarting the device cuold require minutes until the configuration will be finished. Always wait while the device is be ready for the usage and signaling of the incoming events.

The parametrisation can be performed due to the parameter names and values which have been described in the Chapter 5 and Chapter 6.

You can found some **examples for some parametring SMS messages** for each operation mode of the device – which can be seen in the following:

1. **GSM signaling/transmitting (pre-configured for this operation mode by general)**

The alarm system is connected to the TIP-RING input port, the received Contact ID codes are forwarded through the GSM network and signaling to the remote dispatcher centre.

```
PW=ABCD, GPRSEN=0, SYS1=1, ACCOUNT=1130, LFGSMFREQ=60, DTMFTIME=60, RESET
```

2. Signaling and transmitting to an Enigma IP-receiver / SIMS Cloud®

The alarm system is connected to the TIP-RING input port, the received Contact ID codes are forwarded through the cellular network by the Enigma protocol and signaling to an Enigma IP receiver or to the SIMS software.

```
PW=ABCD, GPRSEN=1, SFUNCT=1, BACKUP=1, SYS1=1, ACCOUNT=1130, LFFREQ=300, LFPRES=1, APN=NET, SERVER1=89.133.189.139, PORT1=9999, IPPROTO=UDP, IOGPRS=1, RESET
```

3. GPRS transmitting to the dispatcher centre

The alarm system is connected to the TIP-RING input, sabotage monitoring is connected to the input line, the incoming received signals are converted to Contact ID codes and they are transmitted through the cellular network for the remote dispatcher centre IP address.

```
PW=ABCD, GPRSEN=1, SFUNCT=1, BACKUP=1, LFFREQ=300, LFPRES=1, APN=NET, SERVER1=89.133.189.139, PORT1=9999, SERVER2=10.197.251.10, PORT2=8010, IPPROTO=TCP, SWPROTO=2
```

```
PW=ABCD, IOGPRS=1, I1EVENT=110, I1PART=01, I1ZONE=001, IDELAY=25, I1LHEN=1, I1INV=0, I1ARM=0, TEL1=+442031234567, I1S=1, I1V=1, IVSMS=1, I1ON=ERROR, I1OFF=GOOD, SMSFWD=1
```

```
PW=ABCD, ISABEVENT=331, ISABON=SABOTAGE.PM, OUTMODE=0, SIRENOUT=1, SIRENDEL=30, RESET
```

4. Standalone alarm system operation mode – with SMS notification only

There are sensors connected to the inputs, sending signals via GSM network (SMS message)

```
PW=ABCD, GPRSEN=0, LFGSMFREQ=300, LFFUNIT=1, LFPRES=1, IOGPRS=1, IDELAY=25, I1LHEN=1, I1INV=0, I2INV=0, I1ARM=0, I2ARM=0, TEL1=+442031234567, I1S=1, I2S=1, IVSMS=1, SMSFWD=1
```

```
PW=ABCD, ARMSMS=1, SYS1=0, BACKUP=0, OUTMODE=2, DOALLDIAL=0, I1BYPASS=0, I2BYPASS=0, I1ON=DOOR.OPENING, I1OFF=DOOR.CLOSING, I2ON=MOTION.ON, I2OFF=MOTION.OFF
```

```
PW=ABCD, ARMSMS=1, ARMON=ARMED, ARMOFF=DISARMED, ARMFAIL=ARMING.ERROR, ARMBLOCK=1, RESET
```

5. Output for control, gate opening

The relay output(s) can be controlled remotely (gate opening can be initiated on output nr. 1, further devices can be connected / controlled remotely on output nr.2, nr.3 and nr.4 (in case of presence of the IO-expansion)).

In this mode you use the mobile network for remote control, the GSM network for SMS messages and calls.

```
PW=ABCD, GPRSEN=1, IDELAY=25, I1ARM=1, TEL1=+442031234567, OUTMODE=1, GATESMS=1, GATEON=GATE.ON, GATEOFF=GATE.OFF, RESET
```

7.5 Examples of output control with SMS messages

According to the SMS format, max. You can use 158 characters in a control message.

If the parameters to be set do not fit in a single SMS message, start a new one, with the usual **PW=** password entry in the first place of each message, and then continue with the additional parameters.

Each message can be sent one after the other, and the device will process it in chronological order.

Parameterization is performed with the parameter names and values described in Chapter 5 and Chapter 6.

The following are examples of SMS command messages that correspond to **each mode of output control**.

1. Output Control - Alarm Arming

To do this, it must be set in advance: In the **Access List**, the phone number from which *Easy2s®* can receive an output control SMS command must be added.

OUTMODE must be set to *Disarmed* value, any SMS text must be set for the **GATEON** and **GATEOFF** parameters, **GATESMS** must be set to *Enabled* and **SIRENOUT** must be set to *None*.

Then send an SMS from your phone to the following control SMS to the phone number of the SIM card:

```
PW=ABCD, ARM
```

This sends the *alarm arming* (output control) command to the device, to which the "SMS success!" you will receive a reply message via SMS, followed by the text entered earlier than **GATEON** - eg "ARMED".

If you did not enter a control number in the **Access List**, "SMS aborted! Permission required! " You will receive an SMS message back.

2. Output Control – Disarming an alarm

To do this, it must be set in advance: In the **Access List**, the phone number from which *Easy2s®* can receive an output control SMS command must be added.

OUTMODE must be configured to *Disarmed* value, any SMS text must be set for the **GATEON** and **GATEOFF** parameters, **GATESMS** must be set to *Enabled* and **SIRENOUT** must be set to *None*.

Then send an SMS from your phone to the following control SMS to the phone number of the SIM card in Easy:

```
PW=ABCD, DISARM
```

This sends the *alarm disarm* (output control) command to the device, to which the "SMS success!" you will receive a reply message via SMS, followed by the text entered earlier than **GATEON** - eg "DISARMED".

3. Output control - Gate opening

To do this, it must be set in advance: In the **Access List**, the phone number from which *Easy2s*[®] can receive an output control SMS command must be added.

OUTMODE must be a *Gate*, **GATEON** and **GATEOFF** must be set to any SMS text, **GATESMS** must be set to *Enabled* and **SIRENOUT** must be set to *OUT1*.

If you want to define the output reset value (how many seconds later after switching the output it switches the output back), enter that **OUTHDEL** value for the desired second value - this is how much time the gate will close after switching!

Then send an SMS from your phone to the following control SMS to the phone number of the SIM card:

```
PW=ABCD, OUTON
```

This sends the *gate opening* (output control) command to the device, to which the "**SMS success!**" you will receive a reply message via SMS.

If you did not enter a control number in the **Access List**, "**SMS aborted! Permission required!**" You will receive an SMS message back.

4. Output control - Gate closing

To do this, it must be set in advance: In the **Access List**, the phone number from which *Easy2s*[®] can receive an output control SMS command must be added.

OUTMODE must be a *Gate*, **GATEON** and **GATEOFF** must be set to any SMS text, **GATESMS** must be set to *Enabled* and **SIRENOUT** must be set to *OUT1*.

Then send an SMS from your phone to the following control SMS to the phone number of the SIM card:

```
PW=ABCD, OUTOFF
```

This sends the command required to *gate close* (output control) to the device, to which the "**SMS success!**" you will receive a reply message via SMS.

If you did not enter a control number in the **Access List**, "**SMS aborted! Permission required!**" You will receive an SMS message back.

The method of connecting external devices via SMS is the same as described in points 3 and 4 above, except that the value of **SIRENOUT** can be *OUT2*, *OUT3*, or *OUT4* according to the desired output number.

7.6 Examples for output control with GSM call (ringing)

1. Output control - Gate opening

To do this, it must be set in advance: In the **Access List**, the telephone number from which *Easy2s*[®] can receive an output control call (GSM) must be added.

OUTMODE must be a *Gate*, **GATEON** and **GATEOFF** must be set to any SMS text, **GATESMS** SMS must be set to *Enabled* and **SIRENOUT** must be set to *OUT1*.

If you want to define the output reset value (how many seconds later after switching the output it switches the output back), enter that **OUTHDEL** value for the desired second value - this is how much time the gate will close after switching!

Then ring (call) the phone number of the SIM card in Easy from your phone:

This sends an *output control* command to open the gate to the device, to which the "**SMS success!**" you will receive a reply message via SMS and then before **GATEON** entered text - Eg "**GATE OPEN**"

If you did not enter a control number in the **Access List**, "**SMS aborted! Permission required!**" You will receive an SMS message back.

2. Output control - Gate opening

To do this, it must be set in advance: In the **Access List**, the telephone number from which *Easy2s*[®] can receive an output control call (GSM) must be added.

OUTMODE must be a *Gate*, **GATEON** and **GATEOFF** must be set to any SMS text, **GATESMS** must be set to *Enabled* and **SIRENOUT** must be set to *OUT1*.

If you want to define the output reset value (how many seconds later after switching the output it switches the output back), enter that **OUTHDEL** value for the desired second value - this is how much time the gate will close after switching!

Then ring (call) the phone number of the SIM card in Easy from your phone:

This sends an *output control* command to close the gate to the device, to which the "**SMS success!**" you will receive a reply message via SMS and then the text entered earlier than **GATEON** - Eg "**GATE CLOSE**".

If you did not enter a control number in the Access List, **"SMS aborted! Permission required!"** You will receive an SMS message back.

3. Output control - Switching / controlling external devices

The method of connecting external devices from SMS is the same as described in the above point, except that the value of **SIRENOUT** can be *OUT2*, *OUT3* or *OUT4* according to the desired output number.

Chapter 8. Contact ID codes (table)

We've collected the *Easy 2S* special Contact ID codes here into the following tables.

| Event | CID code |
|---|----------|
| Alarm by an event - recovery | 1407 |
| Alarm by an event | 3407 |
| Alarm failure by an event | 3454 |
| Login tried by wrong password (2) | 1461 |
| Login (3) | 1627 |
| Logout (4) | 1628 |
| Device startup (1) – by hardware | 1900 |
| Device restart (1) – by software | 1901 |
| Sabotage detection on the input line | 1141 |
| Sabotage - recovery | 3141 |
| Ftp firmware update started | 1991 |
| Ftp firmware update successfully finished | 1992 |
| Ftp firmware update in progress | 1993 |

(1) Device start: in case of hw startup / restart by software

| Parameter | Description |
|------------|---|
| STARTUPCID | When the parameter is <i>enabled</i> , then in case of restart or hw-startup the <i>Easy2</i> will sending the reason of the start by automatically. CID code: E901 – Restart CID code: E900 – HW startup |

(2) Attempting to login with wrong password

| Parameter | Description |
|-----------|---|
| - | The zone value informs about the interface source where the login where tried to attempted. CID code: E461 Partition: 99 Zone: <ul style="list-style-type: none">• SMS – 0x10• TCP – 0x20• Serial – 0x30 |

(3) Login to Programming mode (for dispatcher centre)

| Parameter | Description |
|-----------|---|
| - | <p>In the <i>Easyterm</i> in case of password authentication after login, the following event generates, when the <i>Easyterm</i> sends the LOGIN command to the device. The CID code generates with the zone value, which shows the interface where the login were attempted.</p> <p>CID code: E627 Partition: 99 Zone:</p> <ul style="list-style-type: none">• TCP – 0x20• Serial – 0x30 |

(4) Logout from Programming mode (for dispatcher centre)

| Parameter | Description |
|-----------|--|
| - | <p>In the <i>Easyterm</i> in case of <i>the</i> LOGOFF command will be sent before the EXIT or EXITCFG commands, the <i>it</i> generates a CID code. There, the zone value shows the interface where the logout from the programming mode were attempted.</p> <p>CID code: E628 Partition: 99 Zone:</p> <ul style="list-style-type: none">• TCP – 0x20• Serial – 0x30 |

(5) Contact ID message sending after successful / unsuccessful configuration

| Description |
|---|
| <p>Easyterm sends the CONFIG = X command from the device before configuration. After configuring the parameters, it generates and signals a special CID message - the corresponding CID code, whether the configuration was successful or failed.</p> <p>This is a security feature designed to let the monitoring station know that the device has been reconfigured or attempted to be reconfigured. The scan is active for both a configuration command sent over a local serial port, a TCP connection, or an SMS message.</p> <p>Successful config. CID code (fixed): 3222 Config failed. CID code (fixed): 3333 Partition: 99 Zone: Interface</p> <p>Interface:</p> <ul style="list-style-type: none">• SMS – 0x10• TCP – 0x20• Serial – 0x30 |

(6) Contact ID message sending in case of connecting trial with a bad password

| Description |
|--|
| <p>The password required to connect and configure the device is monitored by the device (this is also true for the local serial port (EasyTerm), TCP connection, and SMS for the configuration command or message sent in the command).</p> <p>If an incorrect password is entered, the device generates a special CID message and transmits the corresponding fixed CID code.</p> <p>This is a security feature designed to let the monitoring station know that an attempt has been made to connect to the device with an incorrect password.</p> <p>Enter wrong password CID code (fixed): 1461 Partition: 99 Zone: Interface</p> <p>Interface:</p> <ul style="list-style-type: none">• SMS – 0x10• TCP – 0x20• Serial – 0x30 |

Chapter 9. Troubleshooting

9.1 A failure codes signed by LEDs

Attention!

In case of not proper wiring of the input or output lines the LED flashes of the IOs will not signs the wrong wiring. The IN1, IN2 input LEDs and OUT output LED and the ALR alarm LED lights only when the wiring was successful.

1. The STA (yellow) and GSM (red) LEDs are flashing simultaneously - SIM card failure

Please, check that you've inserted the SIM card properly into the device, ensure about the active status and APN/data traffic availability of the SIM-card at your mobile operator.

2. The MDM RDY (red) LED is lighting continuously or flashing slowly – the SIM card is not inserted properly.

Kérjük, hogy ellenőrizze a SIM kártya behelyezését, vagy helyezze be újra a foglalatba.

Remove the SIM card then insert it again. Please, check that you've inserted the SIM card properly into the device.

3. The STA LED is flashing continuously - APN failure or wrong APN name or unavailable IP address. The GSM network connection was not performed successfully.

Please, ensure about the APN name or IP address and check the configuration of the device. Reconfigure the settings and wait while the device will be started by the new settings and operating properly.

4. Operation failure

Check the *Easy 2* firmware version (by the **SWVER** value at the *EasyTerm* status). When it is not V2.1 R08F10 or newer then refresh the firmware to a newer version immediately.

9.2 Signing the status and signal strength problems

In the *EasyTerm*, at the **Status window** (2) the „**disconnected**” status signs that the device was disconnected from the serial port and it is not accessible (then reconnect the wire and the device or restart the *Easy2*). The successful connection will be notified by the „**connected**” status.

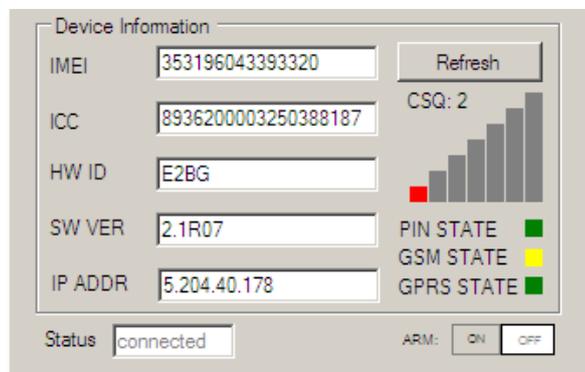
When the device was restarted or you've removed the power supply, close the *EasyTerm* application.

When you will add the power adapter for the device or you've restarted it, and the operation of the *Easy 2* was prepared, then close the connection in the **Connection window** (1), by the **Close** button and remove the serial connection from the computer side. Then reconnect the cable and push on the **Open** button.

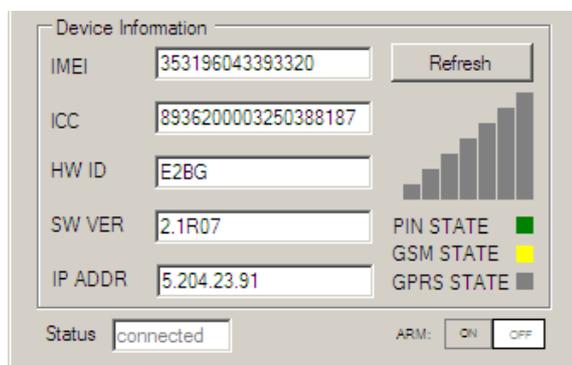
If you've received the *Login Failed* message in the **Terminal window**(3) several times, then repeat these all above.

In the next possible failure status cases you can found some examples about the operation malfunction and failure status. The figures will help you to identify about the proper situation.

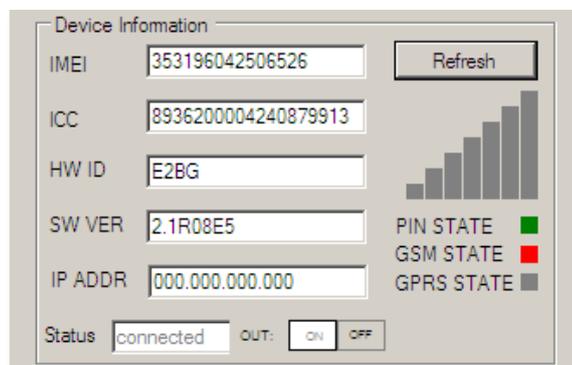
Low signal strenght: move the antenna to a different position, wait for 30 seconds and recheck the status by the **Refresh** button.



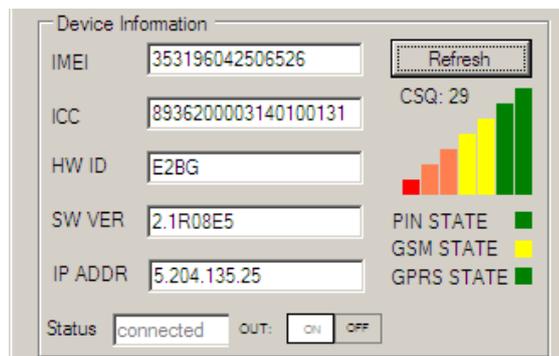
No available signal strenght/no antenna fitted: recheck that the antenna was mounted and fitted to the device SMA antenna port and wait for 30 seconds and recheck the status by the **Refresh** button.



Inactive SIM card or SIM failure: Check that the SIM card was inserted properly. Contact with your mobile operator that the SIM is active and available.



Mobil network service failure: If you are sure about the mobile network outage or providing trouble, and the *GSM state* is not available, wait for a couple of minutes and push on the **Restart device** button for the device restart. Then, please check the network connection and status again.



GSM module failure: When there is no available *IMEI* identifier, and you will receive the null values, and the *Status* is „**connected**“, then the module has been malfunctioned, recheck the operation and call our support line.

Device Information

| | | |
|---------|--------------------|---|
| IMEI | 0000000000000000 | Refresh |
| ICC | 000000000000000000 | |
| HW ID | E2BG | PIN STATE <input type="checkbox"/> |
| SW VER | 2.1R08E5 | GSM STATE <input type="checkbox"/> |
| IP ADDR | 000.000.000.000 | GPRS STATE <input type="checkbox"/> |
| Status | connected | OUT: <input type="checkbox"/> ON <input type="checkbox"/> OFF |

No SIM card presented or wrong SIM: When there is no available *SIM ICC* identifier. Turn off the device, and check the proper SIM card insertion, and start the device. Reconnect and check the settings.

Device Information

| | | |
|---------|--------------------|---|
| IMEI | 353196042506526 | Refresh |
| ICC | 000000000000000000 | |
| HW ID | E2BG | PIN STATE <input type="checkbox"/> |
| SW VER | 2.1R08E5 | GSM STATE <input type="checkbox"/> |
| IP ADDR | 000.000.000.000 | GPRS STATE <input type="checkbox"/> |
| Status | connected | OUT: <input type="checkbox"/> ON <input type="checkbox"/> OFF |

Chapter 10. Support availability

Should you have any questions regarding the usage of the device, you can contact us in the following ways:

Email: support@m2mserver.com

Telephone: +36 20 333 1111

10.1 Product support

Product documentation and software can be downloaded from the product website by following this link:

<https://m2mserver.com/en/product/wireless-safety-transmitter/>

Online product support can be requested here:

<https://m2mserver.com/en/support/>

10.2 Warranty conditions

- The device must be installed in accordance with the instructions in the user manual!
- It is forbidden to repair or modify the device without the permission of the manufacturer!
- Touch protection is only effective if used as intended!
- An error occurring during the software update process may result in a malfunction of the unit. In this case, contact our Support.
- Use the sticker affixed to the product to identify the device, which provides important information for support. **Losing the product sticker means losing the warranty!**
- If the problem persists, contact our Support. To report an error, please enter the device ID (IMEI) that can be read from *EasyTerm*, the ICC number of the SIM card, the firmware version (SWVER) of the device and the software version of *EasyTerm* (from the top left of the window).

Chapter 11. Legal notice

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Warning

Any errors occurring during the program update process may result in failure of the device.