

ZEUS4

***(ZEUS4-MC, ZEUS4-MC LITE)
(ZEUS4-VD, ZEUS4-VD LITE)***

VOICE & SMS GSM ALARM COMMUNICATOR



USER MANUAL

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1 FOR YOUR SAFETY

SWITCH ON SAFELY

Do not switch the unit on when use of wireless phone is prohibited or when it may cause interference or danger.

INTERFERENCE

All wireless phones and units may be susceptible to interference, which could affect performance.

SWITCH OFF IN HOSPITALS

Follow any restrictions. Switch the unit off near medical equipment.

SWITCH OFF IN AIRCRAFT

Follow any restrictions. Wireless devices can cause interference in aircraft.

SWITCH OFF WHEN REFUELING

Do not use the unit at a refueling point. Do not use near fuel or chemicals.

SWITCH OFF NEAR BLASTING

Follow any restrictions. Do not use the unit where blasting is in progress.

USE SENSIBLY

Use only in the normal position as explained in the product documentation. Do not touch the antenna unnecessarily.

2 INTRODUCTION

ZEUS4 family of devices are a simple GSM alarm gateway system designed to ensure low-cost, simple to install/use, reliable and single box solution for alarm gateway application. It is designed for unlimited range, wire free alarm application.

ZEUS4-VD and it's ZEUS4-VD LITE derivative is designed for standalone applications and it can be used as a simple alarm system.

ZEUS4-MC and it's ZEUS4-MC LITE derivative is designed as replacement for old telephone line for alarm centrals. It allows the costumer to continue to use there old alarm centrals with the NEW IP alarm centrals.

Optional ZEUS4 supports alarm detection, stay-alive messages, credit detection etc...

NOTE

Some functions are only supported on particular model in the ZEUS4 family line up.

3 ZEUS4-VD FEATURES AND APPLICATIONS

Features:

- ⇒ Built-in GSM (LTE) module
- ⇒ Up-to 10 Alarm notification numbers
- ⇒ Caller ID numbers control (up-to 10 caller ID numbers)
- ⇒ Build in IP alarm reporting
- ⇒ 4 x Alarm Inputs
- ⇒ 4 x Outputs
- ⇒ POTS line simulation

- ⇒ Programming by WEB server
- ⇒ Programming by Android and IOS apps

Applications:

- ⇒ Single box, wire free alarm system
- ⇒ Remote gate opener – Caller ID number recognition

4 START UP

ZEUS4 unit accepts a standard GSM SIM card from any network.

**VERY
IMPORTANT**

USE A MICRO SIM CARD



WARNING

DO NOT Insert or remove the SIM card while the unit is powered ON!!

IMPORTANT

Before inserting SIM card to unit make sure the PIN code is removed!!

- ⇒ Insert SIM card in ZEUS4 unit.
- ⇒ Connect power cable to ZEUS4 unit. Use power supply 13.8V – 15.0V DC!
- ⇒ Power up the unit.
- ⇒ Wait until LED1 (Blue) starts flashing. This is set in around 30 – 45 seconds.
- ⇒ ZEUS4 unit is now ready to operate.

5 LED INDICATION

Blue LED (LED1)

- Indicates the level of the GSM signal from 1 to 5 LED flashes (1 is weak signal, 5 is excellent signal)

Red LED (LED2)

- When LED 2 is ON the unit has a problem with a GSM network connection or the GSM part of the unit is out of order. In this case immediately call the service!

Red LED (LED2) – alarm state

- During an alarm event the red LED indicates on which input alarm has been triggered. For example if alarm was triggered on the first input there is 1 LED flash, on second input 2 LED flashes, etc.

Green LED (LED3)

- When the alarm inputs on the unit are in active state (SYS=1) then the green LED is ON. With alarm inputs disabled the green LED goes OFF (SYS=0).

Yellow LED (LED4)

- Short flashing indicates that the GSM module is ON, but it is not yet connected on the GSM network. After connection, yellow led is flashing with short pulse ON and a long pulse OFF.

6 CONNECTION DIAGRAM

Before connection the ZEUS4 please take a look at connection diagram for particular module.

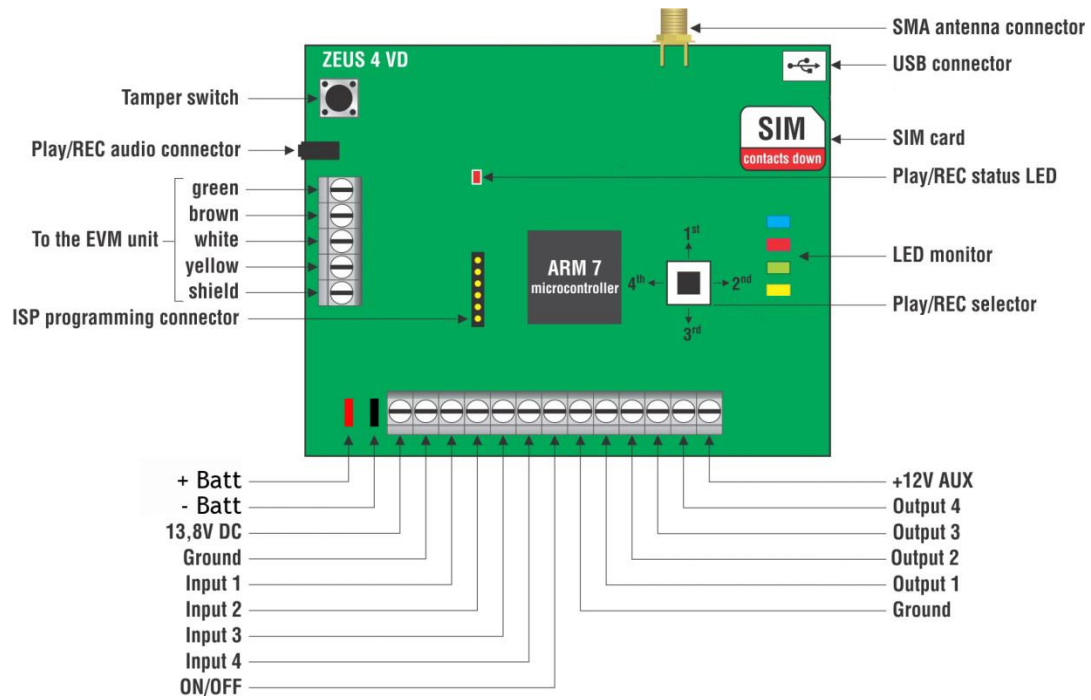


Figure 1: ZEUS4: ZEUS4-VD Connection diagram

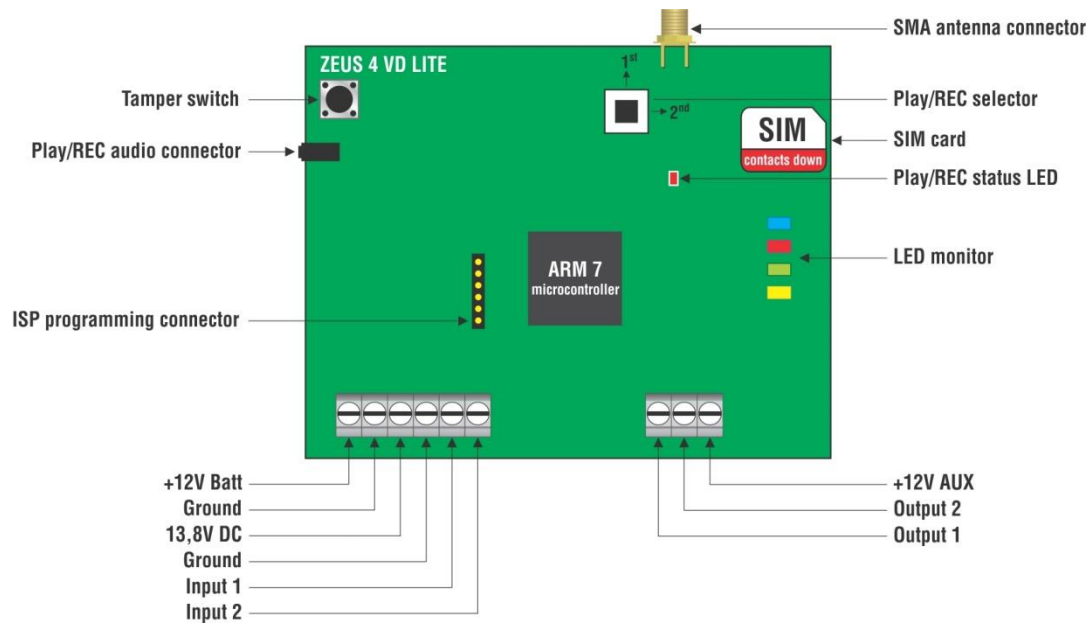


Figure 2: ZEUS4: ZEUS4-VD LITE Connection diagram

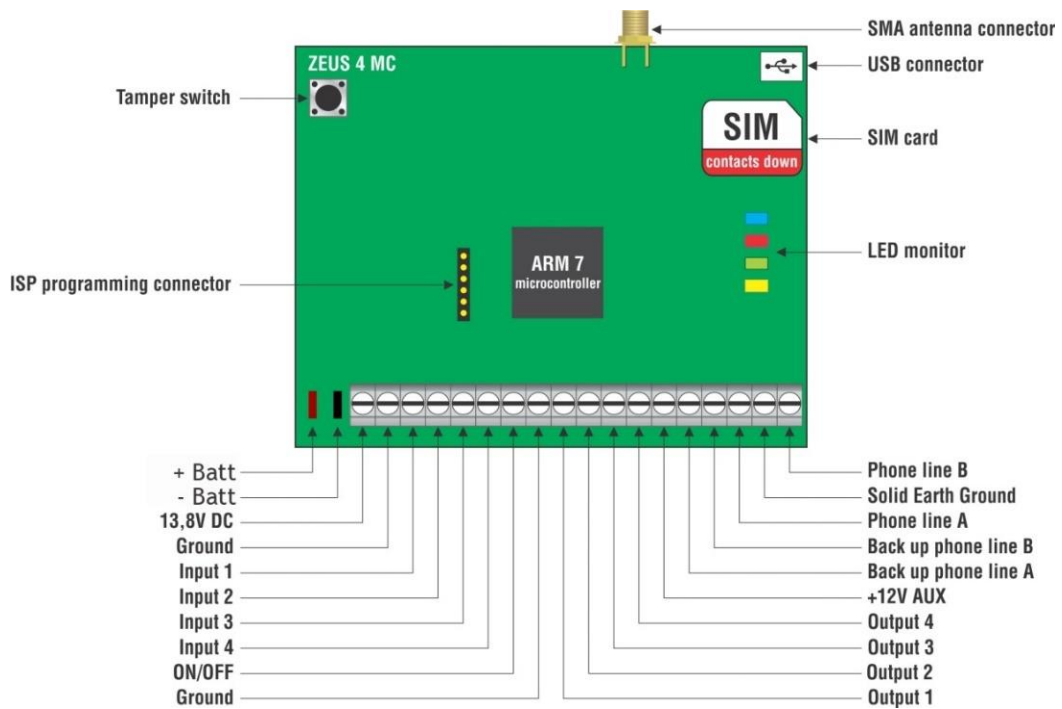


Figure 3: ZEUS4: ZEUS4-MC Connection diagram

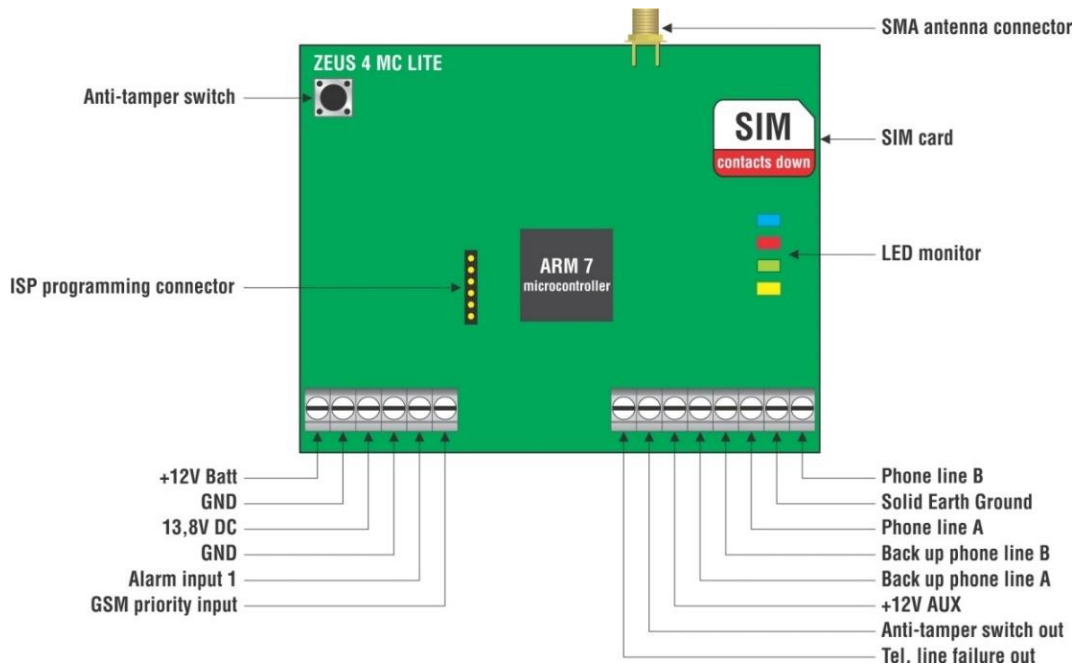


Figure 4: ZEUS4: ZEUS4-MC LITE Connection diagram

IMPORTANT

DO NOT USE Power out (12V AUX) for electric lock driving!

Use separate power source for door electric lock!

7 ZEUS4 UNIT MANAGEMENT

Unit supports different types of management (programming):

- ⇒ Unit can be programmed remotely by using WEB server access
- ⇒ Unit can be programmed remotely by using Smartphone apps (Android and IOS).
- ⇒ Unit can be programmed remotely by SMS commands (Optional).

8 ZEUS4 FUNCTIONS WITH PROGRAMMING INSTRUCTIONS

As mentioned in previous chapters ZEUS4 unit can be programmed in various ways, this document will focus on most common programming way: WEB programming.

IMPORTANT

SIM card in the ZEUS4 unit MUST have DATA PLAN to be able to use WEB programming!

8.1 WEB SERVER - LOG IN

The web server can be found under the address: <https://www.easyset.eu/>.



Figure 5: WEB Server-Sign In page

User must first use the Sign IN section to create working profile on the server. The profile can be created by using social login like Facebook, Google account or Twitter. If user lacks any of the social profile it can proceed to Sign UP page use standard user name and password entry.

NOTE

Server support Firefox, Google Chrome, Safari.

8.2 WEB SERVER – ADDING UNITS TO USER PROFILE

After login the user will be diverted to WEB server main window. This page is used to add/remove/search for ZEUS4 units from the user's profile.

Select “+” sign to select ADD ZEUS4 units to user's profile.

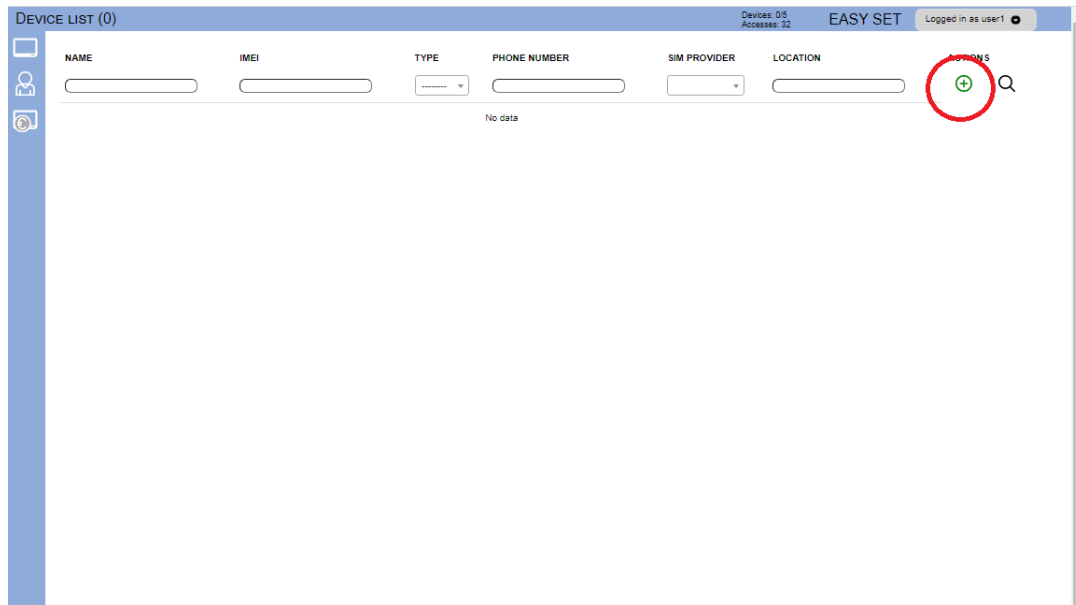


Figure 6: WEB Server-Main page select ADD mode

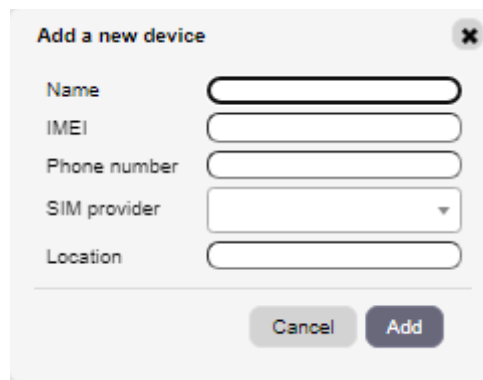
The screenshot shows a dialog box titled 'Add a new device'. It contains several input fields: 'Name', 'IMEI', 'Phone number', 'SIM provider' (a dropdown menu), and 'Location'. At the bottom of the dialog, there are two buttons: 'Cancel' and 'Add'.

Figure 7: WEB Server-Main page adding ZEUS4 units

User than provides required data:

- **Name:** Name for the added unit - mandatory information.
- **IMEI:** Identification number of the unit can be found in the enclosure of the unit - mandatory information. The IMEI is located on the cellular chip and also should be on the card board box of the ZEUS4.
- **Phone Number:** The telephone number of the SIM card in the ZEUS4 unit - mandatory data.
- **SIM provider:** Information needed to enable data connection between the server and the unit. Selectable from the drop-down menu - mandatory data.
- **Location:** Notification field, used by the user to provide extra data for its own information - optional data.

First building of the unit data-base may take a few minutes.

8.3 WEB SERVER-UNIT MANAGEMENT

After the ZEUS4 unit is added to user database, the user can change the configuration of the specific unit.

All changes made by the user are listed in the **Change Log** window. **By clicking Send to device button ALL changes are sending to the unit.**

The screenshot displays the 'Device' management interface for a ZEUS4 unit. The top section, titled 'Device', contains fields for Name (Zevs4vd), Type (ZEUS4 VD), Imei (352984082921932), Phone number, Location, Apn (Telekom SI), and Always on (On demand). It also features 'Device maintenance' buttons for Export and Import, and a 'Device reported values' section showing Firmware (4.6.0-OTA (IP X) 2018-01-04), Signal (4(-81dBm)), Network ID (29341), Uptime (1 days 1 hours), and Last update (09.01.2019 20:34:37). A 'Change log' window is open, showing a list of changes with 'General / General settings' selected, and buttons for 'Send to device' and 'Revert all'. The bottom section, 'Active settings tabs', includes 'Alarm IP configuration', 'General', 'System management', and 'Communications log'. The 'Alarm configuration' section shows 'Alarm reporting over IP' set to 'Disabled', 'Alarm reporting protocol' set to 'Mars custom protocol 1', and 'Max resends on failure' set to 3. The 'Alarm server' section includes fields for 'Server IP address (primary)', 'Server IP address (secondary)', and 'Server port number'.

Figure 8: WEB Server-Unit management window

8.4 CALLER ID ACCESS

Caller ID access is a very simple way to control relay output defined in **Caller ID output** setting.

User will by calling in the ZEUS4 unit trigger defined output.

Settings for this function are found in the **Caller id #** tab.

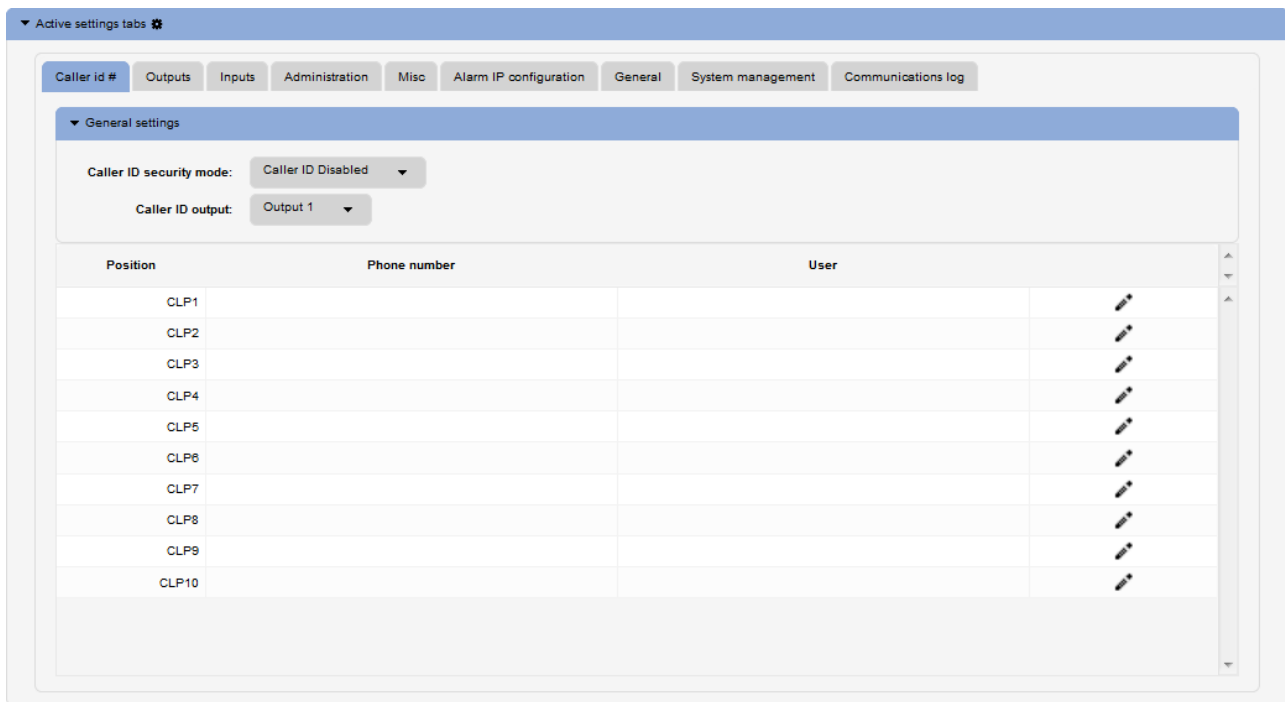


Figure 9: WEB Server-Caller ID Access

General settings:

- **Caller ID security mode:** User can select between 3 options:
Caller ID Disabled deactivates caller ID function – all numbers are restricted.
Caller ID for specific users will limit the caller ID function only to the numbers on the list.
Caller ID always ON will allow all users that know the number of the unit to open defined output. In last option the user doesn't need to be on the list to trigger the output.
- **Caller ID output:** Selecting the output that will be triggered in Caller ID function.

NOTE

Selection *Caller ID always ON* will allow anybody with the knowledge of the unit number to trigger the output by calling the unit. Use this setting with caution.

8.5 OUTPUTS SETTINGS

The behaviors on the outputs are defined in the **Outputs tab**.

Figure 10: WEB Server-Output setting

Output 1 - Settings for output 1:

- **Output mode:** User can select between 3 options
Disable-Output is disabled.
Latching-Output is in latching mode. First Caller ID or PIN entry will activate the output, second Caller ID or PIN entry will deactivate the output.
Time Pulse-Output is time pulse mode. After output is triggered it will be activated for the time defined in **Output pulse duration**, after that time output will be restored.
- **Output pulse duration:** ON time for output in case of output mode *Timer pulse*.

The settings are the same for the other 3 outputs.

Additional output settings - Setting are used to link onboard actions with the outputs if needed:

- **Input 1 activate output:** Alarm input event on the input will activate output defined under this section.
- **Input 2 activate output:** Alarm input event on the input will activate output defined under this section.
- **Input 3 activate output:** Alarm input event on the input will activate output defined under this section.
- **Input 4 activate output:** Alarm input event on the input will activate output defined under this section.
- **GSM network error:** Trouble with GSM module or lack of GSM network coverage will activate output defined under this section.
- **System tamper:** Tamper activation will activate output defined under this section.
- **System ARM/DISARM:** Activation/deactivation of ARM/DISARM input will activate /deactivate output defined under this section.
- **Unauthorized call or SMS received:** If unauthorized call or SMS is received on the unit this event will activate output defined under this section.
- **Listen in indication:** When listen in function is active output defined under this section gets activated.
- **CID error indication:** When CID function is errored, output defined under this section gets activated.

NOTE

Do to limitation of the outputs use additional outputs settings with care.

NOTE

ZEUS4-VD LITE and ZEUS4-MC LITE has only 2 outputs.

8.6 INPUTS SETTINGS

The behaviors on the inputs are defined in the **Inputs tab**.

Figure 11: WEB Server-Input setting

- **Caller ID enabled by input:** Defined input will be used as a precondition for Caller ID function.

Input 1 - Settings for Input 1:

- **Mode:** User can select between different modes of input operation.
- **Minimum pulse length to trigger input:** Minimum time required to trigger alarm input (in seconds).
- **Delay before sending alarm:** Defined delay (in seconds) before the alarm event is sending out.

Input alarm filter definition parameters:

- **Input timer interval:** Input filter time window definition (in seconds)
- **Maximum allowed number of events:** Maximum number of event in input filter time window.

- **System input block time:** Input filter BLOCK time, which is used if the maximum allowed number of events is reached in defined time window.

The Inputs settings are the same for all 4 inputs.

System ARM/DISARM – Settings for arm/disarm input

- **Mode:** User can select between different modes of ARM/DISARM input configuration
- **Minimum pulse length to trigger input:** Minimum time required to trigger ARM/DISARM input (in seconds).
- **Delay before sending alarm:** Defined delay (in seconds) before the ARM/DISARM event is sending out.

NOTE

ZEUS4-VD LITE and ZEUS4-MC LITE have only 2 inputs.

8.7 ADMINISTRATION

Administration tab allows user to enable advanced settings: notification of unauthorized access, periodic test messages, lock down of the unit...

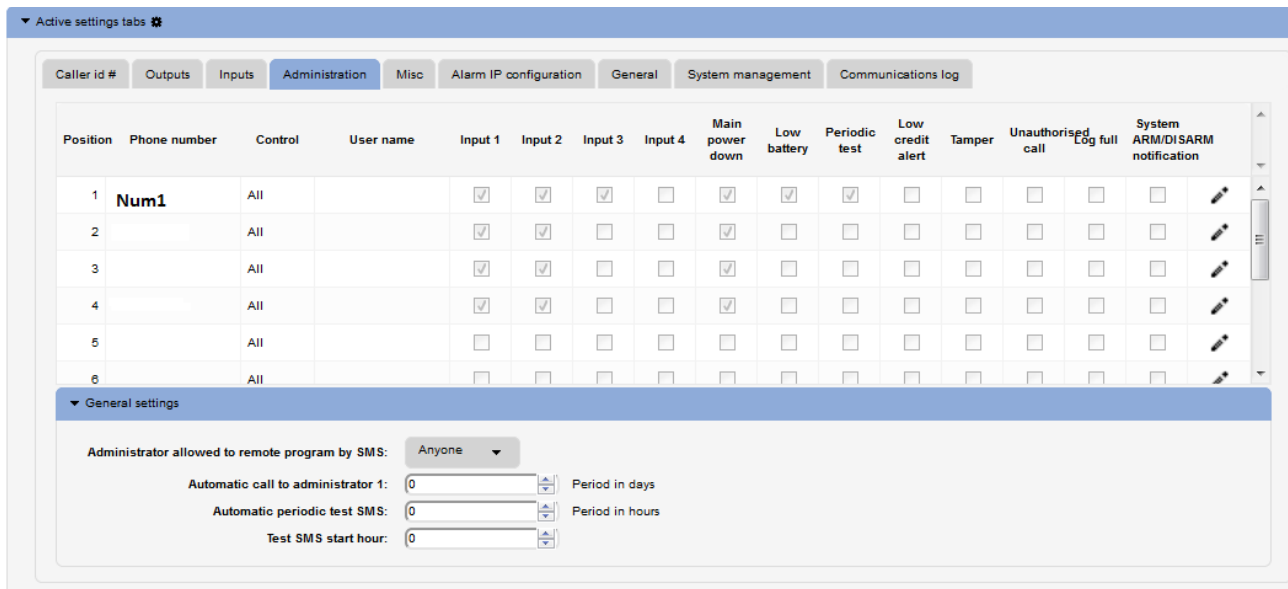


Figure 12: WEB Server-Notification numbers

- **Phone number, User name:** Phone number and user name of the user that will be receiving notification messages.
- **Input1, Input2, Input3, Input4:** If alarm condition is met, users with check boxes will receive alarm notification SMS.
- **Main power down:** If main power of the unit is lost, users with check boxes will receive alarm notification SMS.
- **Low battery:** When voltage level on the battery is decreasing, users with check boxes will receive alarm notification SMS.
- **Periodic test:** User can receive periodic (keep-alive) text message - SMS, tick the check box for the appropriate user. Timer period is defined under parameter **Automatic periodic test SMS**, it is definable in hours.
- **Low credit alert:** In case of prepaid SIM card the unit can notify the user if the credit on the SIM card is low. To enable notification SMS tick the check box in corresponding position. Note that additional input in the **Misc** tab is needed to fully enable credit checking function.

- **Tamper:** In case of system tamper event, users with check boxes will receive alarm notification SMS.
- **Unauthorized call:** In case of unauthorized call the unit can notify user. To enable notification SMS tick the check box in corresponding position.
- **Log full:** Administrator can receive a SMS when LOG event buffer gets at a critical full level.
- **System ARM/DISARM Notification:** When user enable/disable, users with check boxes will receive alarm notification SMS.
- **Administration allowed to remote program by SMS:** By selection this option the user can “Lock down” the ZEUS4 unit, preventing any unauthorized user to change any configuration on the unit.
- **Automatic call to administrator 1:** To prevent SIM card provider to lock out the SIM card from the network, user can define a periodic call out to telephone number under position 1. Parameter is defined in days (It is not mandatory to set this parameter).
- **Automatic periodic test SMS:** Definition of Time Out for periodic SMS sending.
- **Test SMS start hour:** Periodic SMS, first send-out hour.

NOTE

ZEUS4-VD LITE and ZEUS4-MC LITE have only 2 inputs and 2 outputs

8.8 MISCELLANEOUS

This tab is split into 2 sections.

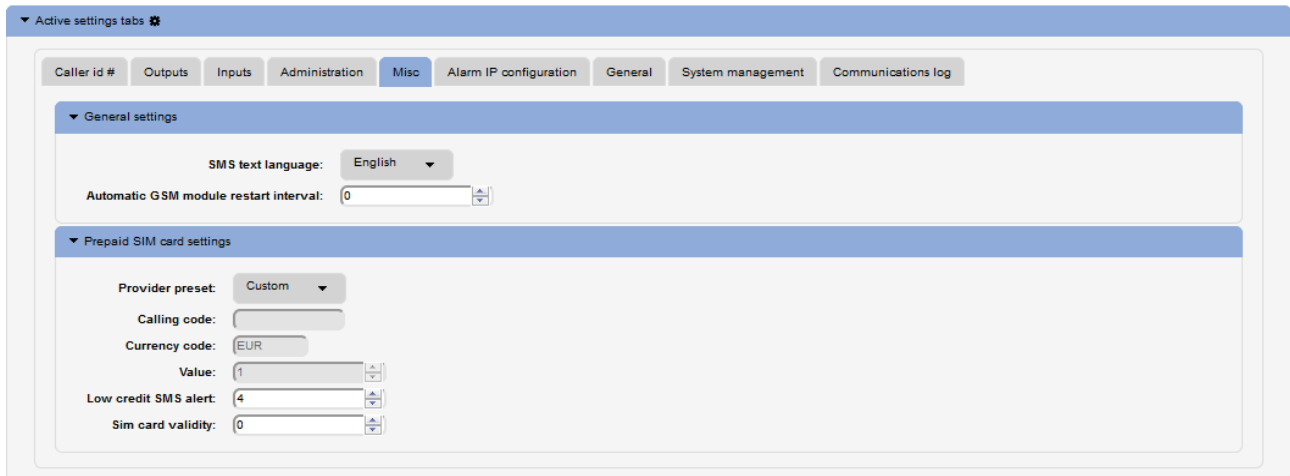


Figure 13: WEB Server-Misc

General settings can be found:

- **SMS text Language:** define the language of the SMS information sending out. User can select appropriate language in drop-down menu.
- **Automatic GSM module restart interval:** User can select GSM module restart interval (hours) if needed (Not advisable to use this parameter if not advised otherwise).

Prepaid SIM card setting is used to enable credit checking/parsing in case if prepaid SIM card is used. User can select the proper setting by selecting used SIM card provider in the drop down menu in **Provider preset**.

8.9 ALARM IP CONFIGURATION

This tab is used to configure parameters for alarm DATA connection.

Active settings tabs

Caller id # Outputs Inputs Administration Misc Alarm IP configuration General System management Communications log

Alarm configuration

Alarm reporting over IP: Disabled

Alarm reporting protocol: Mars custom protocol 1

Max resends on failure: 3

Alarm server

Server IP address (primary):

Server IP address (secondary):

Server port number:

Figure 14: WEB Server-Alarm IP configuration

- **Alarm reporting over IP:** Enable/Disable alarm reporting over DATA connection (GPRS connection).
- **Alarm reporting protocol:** Selection of alarm reporting protocol.
- **Max resend on failure:** Number of retransmission in case of failure at sending events over DATA connection.
- **Server IP address (primary):** IP address of primary IP alarm receiver.
- **Server IP address (secondary):** IP address of secondary IP alarm receiver.
- **Server port number:** IP port of IP alarm receiver (same for primary and secondary receiver).

8.10 GENERAL SETTINGS

This tab is used to define different parameters for alarm reporting.

Figure 15: WEB Server - ZEUS4-VD General configuration

Figure 16: WEB Server - ZEUS4-MC General configuration

General settings:

- **Line open time (off hook):** Max allowed time (in seconds) allowed for voice connection time.
- **Microphone level:** Increasing the level will increase the sensitivity of the unit microphone decreasing will decrease the sensitivity.
- **Speaker level:** Increasing the level will increase the volume of the unit speaker, decreasing will decrease the level of the speaker.

- **Manual network fixation:** User can request fixation to a selected network (MNC MCC combination).
- **Alarm reporting mode:** User can select between different modes of alarm reporting.

Alarm identification:

- **Location identification ENTRY:** User can select between 2 different entries: decimal or hexadecimal
- **Location identification:** Object ID code, text and number.
- **Input 1 identification:** Object ID code, text and number.
- **Input 2 identification:** Object ID code, text and number.
- **Input 3 identification:** Object ID code, text and number.
- **Input 4 identification:** Object ID code, text and number.

Power notification SMS:

- **Main power failure (sec):** Minimum time required to trigger power failure event.
- **Battery power failure (sec):** Minimum time required to trigger battery failure event.

Extra settings in ZEUS4-MC:

- **Local area network:** Local area number.
- **Outgoing prefix:** Outgoing prefix.
- **Enable DTMF control:** Enable/Disable of DTMF control.
- **GSM priority:** Input used to enable GSM by

NOTE

ZEUS4-VD LITE and ZEUS4-MC LITE has only 2 inputs and 2 outputs

9 CONTACTS

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