eldes®

ESIM452

GSM CONTROL SYSTEM

SAFETY INSTRUCTIONS

Please read and follow these safety guidelines to safeguard yourself and others:

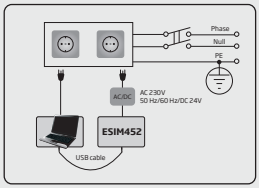
• GSM controll system ESIM452 (later referred to as "the system" or " the device") contains a built-in radio transceiver operating in 900/1800MHz 2G; 700/800/900/1800/2100/2600MHz 4G bands respectively.

- DO NOT use the system where it can cause potential danger and interfere with other devices – such as medical devices.
- DO NOT use the system in hazardous environment.
- DO NOT expose the system to high humidity, chemical environment or mechanical impact.
- NEVER install or carry out maintenance during stormy weather.
- DO NOT attempt to repair the system yourself – any repairs must be carried out by fully qualified personnel only.

Disconnect the mains power before installing. Never install or carry out maintenance during stormy weather. The electric socket that powers the system must be easily accessible.

Please use 10-28VAC 50Hz/60 Hz ~500mA or 10-39VDC 500mA max power supply unit that meets the EN 60950- 1 standard. Any additional device you connect to the system, such as a computer, must also be powered by an EN 60950-1 approved supply. When connecting the power supply to the system, switching the polarity terminal places does not have any affect.

External power supply can be connected to AC mains only inside installation room with automatic 2-pole circuit breaker capable of disconnecting circuit in the event of short circuit or over-current condition. Open circuit breaker must have a gap between connections of more than 3mm (0.12in) and the disconnection current 5A.



To switch the system off, unplug the external electric power supply from or any other linked device that the system is powered from.

A blown fuse cannot be replaced by the user. The replacement fuse has to be of the kind indicated by the manufacturer (fuse F1 model – MINISMDC050F 0.5A).

If you use a computer for the device configuration, it must be earthed.

The WEEE (Waste Electrical and Electronic Equipment) marking on this product (see left) or its documentation indicates that the product must not be disposed of together with household waste. To prevent possible harm to human health and/or the environment, the product must be disposed of in an approved and environmentally safe recycling process. For further information on how to dispose of this product correctly, contact the system supplier, or the local authority responsible for waste disposal in your area.

CONTENTS

TERMS OF USE

The following terms and conditions govern use of the GSM controll system device and contains important information on limitations regarding the product's use and function, as well as information on the limitations of the manufacturer's liability. Please carefully read these terms and conditions. For more information on your product, please visit eldesalarms.com

TECHNICAL SUPPORT

In order to ensure continuous and proper operation of the ELDES GSM controll system device and uninterrupted service, it is the responsibility of the User to make sure that: (I) the product is properly installed, and (II) there is constant electrical supply. If you experience difficulty during the installation or subsequent use of the system, you may contact "E ALARMS, UAB" distributor or dealer in your country/region. For more information, visit eldesalarms.com

WARRANTY PROCEDURES

Warranty and out of warranty service should be obtained by contacting the system integrator/dealer/retailer/e-tailer or distributor where the customer purchased the product. When requesting for service, the proof of purchase and the product serial number must be provided. The return of the defective product should be strictly through the original route of purchase, and the customers shall pack the product appropriately to prevent the returned product from suffering in the transportation.

MANUFACTURER WARRANTY

"E ALARMS, UAB" provides a limited warranty for its products only to the person or entity that originally purchased the product from "E ALARMS, UAB" or its authorized distributor or retailer and materials under normal use of the system for a period of twenty four (24) months from the date of shipment by the "E ALARMS, UAB" (Warranty Period). Warranty obligations do not cover expandable materials (power elements and/or batteries), holders and enclosures. The warranty remains valid only if the system is used as intended, following all guidelines outlined in this manual and in accordance with the operating conditions specified. The warranty is void if the system has been exposed to mechanical impact, chemicals, high humidity, fluids, corrosive and hazardous environments or force majeure factors. If a hardware defect arises and a valid claim is received within the Warranty Period, at its own discretion, "E ALARMS, UAB" will either (a) repair a hardware defect at no charge, using new or refurbished replacement parts, or (b) exchange the product with a product that is new or which has been manufactured from new or serviceable used parts and is at least functionally equivalent to the original product, or (c) refund the purchase price of the product.

LIMITED LIABILITY

The buyer must agree that the system will reduce the risk theft, burglary or other dangers but does not provide guarantee against such events. "E ALARMS, UAB" will not assume any responsibility regarding personal or property, or revenue loss while using the system. "E ALARMS, UAB" shall also assume no liability due to direct or indirect damage or loss, as well as unreceived income when using the system, including cases, when the damages arise due to the above mentioned risks, when due to breakdown or malfunction the user is not informed in a timely manner about a risk which has arisen. In any case, the liability of "E ALARMS, UAB", as much as it is allowed by the laws in force, shall not exceed the price of acquisition of the product.

CONSUMER PROTECTION LAWS

FOR CONSUMERS WHO ARE COVERED BY CONSUMER PROTECTION LAWS OR REGULATIONS IN THEIR COUNTRY OF PURCHASE OR, IF DIFFERENT, THEIR COUNTRY OF RESIDENCE, THE BENEFITS CONFERRED BY THIS WARRANTY ARE IN ADDITION TO ALL RIGHTS AND REMEDIES CONVEYED BY SUCH CONSUMER PROTECTION LAWS AND REGULATIONS. This warranty grants upon you specific legal rights, and you may also have other rights that vary by country, state or province.

Dear Customer,

Thank you for choosing to purchase ELDES GSM CONTROLL SYSTEM ESIM452. Your thoughtful decision will ensure reliable solution for many years as all ELDES products are manufactured to meet the highest standards.

We are confident that you will be completely satisfied with your product. However, in the unlikely event that you do experience a problem, please contact the dealer from whom you made your purchase.

E ALARMS, UAB
eldesalarms.com

Contents of Pack

Item	Quantity
1. ESIM452	1
2. User manual	1
3. Antenna	1

Not included:

- SIM card – we recommend you get a contract SIM, not Pay As You Go.
- USB-C cable - You can use any standard USB-C cable, but it must be a data cable, not a charge-only cable.

1. GENERAL INFORMATION

ESIM452 is a micro-controller based device intended to receive alarm/restore events by SMS text message or phone call and control an electrical appliance via the GSM 2G or 4G

Examples of using the system:

- Access control.
- Gate control of private houses.
- Notification of system events, such as arming/disarming, alarm/restore from non-GSM alarm system.
- Non-GSM alarm system arming/disarming by SMS text message.
- Any electrical appliance control: lighting, watering, heating etc.
- Remote reboot of the "frozen" systems, such as computer network or a server.

Main features:

- 5 inputs with customizable alarm/restore texts.
- Up to 5 user phone numbers for system configuration by SMS text messages, acceptance of input alarm/restore SMS text messages and phone calls, output control by SMS text message and free of charge phone call.
- 2 relay outputs for electrical appliance control or non-GSM alarm system arming/disarming (key-switch).
- Manual output control by free of charge phone call.
- Automatic output control in accordance with the scheduled time.
- Up to 10 audio messages for input alarm/restore notification.
- Event log of 500 events.
- Periodic self-test notification by SMS text message to user phone number.

2. TECHNICAL SPECIFICATIONS

2.1. Electrical and Mechanical Characteristics

Supply voltage.....10-28VAC ~ 500mA / 10-39VDC 500mA max

Current used in idle state.....up to 50mA

Modem frequency.....2G 900/1800MHz; 4G 700/800/900/1800/2100/2600MHz

Modem RF power 2G 35/32dBm; 4G 25dBm

Number of outputs.....4

Output type.....Relay; NO (normally-open) or NC (normally-closed) - configurable

Maximum commuting output values.....125VAC ~0,5A / 24VDC 1A

Number of low-level (negative) inputs 2

Number of high-level (positive) inputs 1

Low-level (negative) input value range .....0... 16V ⎓ -0.8... -0.4mA

High-level (positive) input value range.....5... 50V ⎓ 0.17 .... 1.7mA

Default inputs connection type .....NO (normally-open)

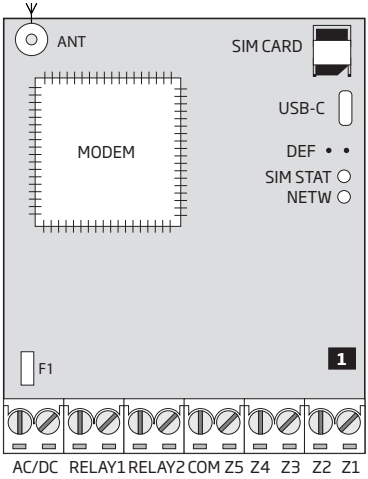
Degree of protection.....Complies with IP 20

Dimensions 87x107x29mm (3.43x4.21x1.14in)

Operating temperature range .....-20...+55 °C (-4... +131°F)

Humidity.....0-90% RH @ 0... +40°C (0-90% RH @ +32... +104°F) (non-condensing)

2.2. Main Unit, LED Indicator and Connector Functionality



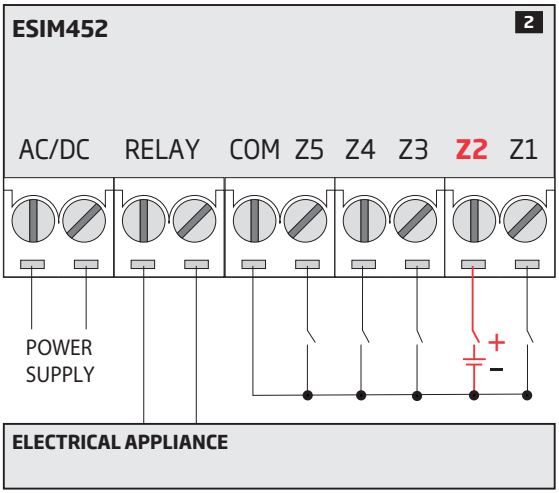
Main Unit Functionality	
ANT	Antenna SMA type connector
USB	USB-C port
SIM CARD	Nano SIM card slot
MODEM	900/1800MHz 2G; 700/800/900/1800/2100/2600MHz 4G
SIM STAT	Red LED, indicating SIM card status
NETW	Green LED, indicating signal strength
DEF	Pins for restoring default settings
F1	0.5A fuse

Connector Functionality	
AC/DC	Power supply terminals
RELAY1	Output C1 terminal
RELAY2	Output C2 terminal
COM	Common terminal
Z5	Low-level (negative) input terminal
Z4	Low-level (negative) input terminal
Z3	Low-level (negative) input terminal
Z2	High-level (positive) input terminal
Z1	Low-level (negative) input terminal

LED Indicator Functionality	
SIM STAT indication	**SIM card status**
OFF	No mains power / Successfully connected to GSM 2G/4G network
Solid ON	SIM card is attempting to connect to the GSM 2G/4G network / SIM card is not present / PIN code enabled

NETW indication	Signal strength
OFF	No GSM 2G/4G signal
Flashing every 1 sec.	Poor
Flashing several times per sec.	Medium
Solid ON	Excellent

2.3. Wiring Diagram

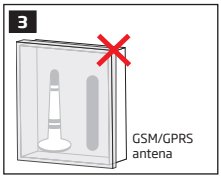


NOTE: Inputs Z1, Z3, Z4, Z5 are negative-triggered (react to COM/GND connection). Input Z2 is positive-triggered and reacts only to positive voltage (+5...50VDC)

3. INSTALLATION

- The system should be installed indoors, in stationary environment ONLY.
- For the connection of input/output terminals, use 0.50 mm² (0.02in²) thread unshielded cable of up to 100m (328.08ft) length.

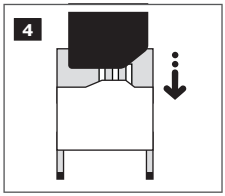
1. Wire up the system in accordance with the wiring diagrams (see **2.3 Wiring Diagrams** for more details).
2. Connect the 2G/4G antenna. Based on the type of the 2G/4G antenna supplied with ESIM452 unit, follow the recommendations for the antenna installation:

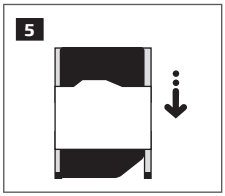


Never install in the following locations:

- inside the metal cabinet
- closer than 20cm (7.87in) from the metal surface and/or power lines

3. Disable the PIN code request of the SIM card by inserting it into a mobile phone and following the proper menu steps.
4. Once the PIN code is disabled, insert the SIM card into the SIM card slot / holder of ESIM452 system.





5. Ower up the system and wait until indicator SIM STAT lights up indicating SIM card status.
6. Once the indicator SIM STAT lights OFF, the illuminated indicator NETW lights up indicating that the system has successfully connected to the GSM 2G/4G network. To find the strongest GSM signal, position the 2G/4G antenna and follow the indications provided by NETW indicator (see **2.2. Main Unit, LED Indicator & Connector Functionality** for more details).
7. Change the system language if necessary (see **6. SYSTEM LANGUAGE** for more details).
8. Change the default SMS password (see **7. SMS PASSWORD** for more details).
9. Set the phone number for User 1 (see **8. USER PHONE NUMBERS** for more details).
10. Set system date and time (see **9. DATE AND TIME** for more details).
11. Once the system is fully configured, it is ready for use. However, if you fail to receive a reply by SMS text message from the system, please check the SMSC (Short Message Service Center) phone number. For more details regarding the SMS center phone number, please refer to **15.1. SMSC (Short Message Service Center) Phone Number**.

ATTENTION: We also recommend you to disable call forwarding, voice mail/text message reports on missed/busy calls and similar services that might cause incorrect system operation. Please contact your operator for more details on these services and how to disable them.

NOTE: For maximum system reliability we recommend you do NOT use a Pay As You Go SIM card. Otherwise, in the event of insufficient credit balance on the SIM card, the system would fail to make a phone call or send SMS text messages.

NOTE: We advise you to choose the same SIM provider for your system as for your mobile phone. This will ensure the fastest, most reliable SMS text message delivery service and phone call connection.

NOTE: Even though the installation process of ESIM452 is not too complicated, we still recommend to perform it by a person with basic knowledge in electrical engineering and electronics to avoid any system damage.

4. GENERAL OPERATIONAL DESCRIPTION

GSM control system ESIM452 uses the GSM 2G/4G network for event transmission by SMS text message. When one of the 5 available listed numbers dials the system, it answers the call and the user can listen to a pre-recorded audio message. The system will ignore SMS requests and phone calls coming from non-listed phone numbers.

The system has 5 digital inputs (normally closed or normally open) for alarm system's PGM output or detection device connection, such as magnetic door contact. By connecting the input to the non-GSM alarm system's PGM output, the user will be able to receive an SMS text message or phone call regarding system alarm/restore, arming/disarming and other events depending on the alarm system configuration. In addition to being informed by SMS text message or phone call regarding alarm and restore events of the inputs, the users can control one electrical appliance by connecting it to the relay outputs. For example, users can turn ON or OFF the heating, lighting, lift the gates, blinds etc. The output can also be used for arming/disarming by connecting it to one of the alarm system zones configured as a key-switch.

5. CONFIGURATION METHODS

5.1. SMS Text Messages

In this user manual the underscore character "_" represents one space character. Every underscore character must be replaced by a single space character. There must be no spaces or other unnecessary characters at the beginning and at the end of the SMS text message.

SMS

In order to configure and control the system by SMS text message, send the text command to the ESIM452 system phone number from one of the listed user phone numbers. The structure of SMS text message consists of 4-digit SMS password (the default SMS password is 0000 – four zeros), the parameter and value. For some parameters the value does not apply e. g. STATUS. The variables are indicated in lower-case letters, while a valid parameter value range is indicated in brackets.

5.2. ELDES Utility Tool Software

Software *ELDES Utility Tool* is intended for ESIM452 GSM control system configuration locally via USB port or remotely via GSM 2G/4G network connection. This software simplifies system configuration process by allowing to use a personal computer in the process. Before starting to use *ELDES Utility Tool* software, please read the user guide provided in the software's HELP section.
ELDES Utility Tool is freeware and can be downloaded from at: eldesalarms.com

NOTE: *ELDES Utility Tool* software is secured with SMS password. The default SMS password is **0000** (see **7. SMS PASSWORD**).

5.2.1. Remote Connection

ELDES Utility Tool software provides remote system configuration ability via Internet using one of the following methods:

- ELDES proxy server (recommended). The connection can be established on the system via GSM 2G/4G network.
- Running TCP/IP server on *ELDES Utility Tool* (advanced). The connection can be established on the system via GSM 2G/4G network.

In order to start using the remote configuration feature, please run the step-by-step wizard and follow the steps provided in the start page of *ELDES Utility Tool* software. Please, note that it will be necessary to send an SMS text message to the system's phone number in order to initiate the remote connection. By following the steps you will be instructed on what text must be sent to the system's phone number in such case.

Start the connection with server

SMS text message content:
ssss_STCONFIG
Value: *ssss* – 4-digit SMS password.
Example: *1111_STCONFIG*

5.2.2. Ending the Remote Connection Session

After the system configuration is complete, use one of the following methods to end the configuration process:

- Click **Disconnect** or **Stop** button and close *ELDES Utility Tool* software;
- The session will automatically expire in 20 minutes. Before the last 5 minutes, the software will offer the user to extend the session for another 20 minutes.
- Alternatively, the connection with the server can be terminated at any time by sending an SMS text message.

Terminate the connection with server

SMS text message content:
ssss_ENDCONFIG
Value: *ssss* – 4-digit SMS password.
Example: *1111_ENDCONFIG*

Once the session is expired or terminated, the system will reply with an SMS text message confirming the end of the session.

6. SYSTEM LANGUAGE

The system comes equipped with a multiple languages for communication with the user by SMS text messages. The default system language depends on the firmware, which is based on the customer's location.

List of currently available system languages:

- English
- Lithuanian

Set system language

SMS

SMS text message content:
LN
Value: *LN* – language index; range – [*EN* – English, *LT* – Lithuanian].
Example: *LT*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

NOTE: To change the language once the system has already been configured, you need to reset the device to the default configuration. For more details on how to do this, please refer to **21.2. Restoring Default Parameters**.

7. SMS PASSWORD

For security reasons, the system uses the following type of password:

SMS password – 4-digit password used for system configuration and control from user phone number by SMS text messages and logging in to *ELDES Utility Tool* software. By default, SMS password is **0000**, which MUST be changed!

Set SMS password

SMS

SMS text message content:
wwww_PSW_ssss
Value: *wwww* – 4-digit default SMS password; *ssss* – 4-digit new SMS password; range – [0001... 9999].
Example: *0000_PSW_1111*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

NOTE: The system rejects the SMS text messages containing wrong SMS password even from a listed user phone number.

8.USER PHONE NUMBERS

The system supports up to 5 user phone numbers identified as User 1 through 5. When the phone number is set, the user will be able to configure and control the system by SMS text messages as well as by free of charge phone call and receive the input alarm/restore SMS text messages and/or phone calls from the system (see **11. ALARM/RESTORE NOTIFICATIONS**).

By default, the system ignores any incoming calls and SMS text messages from a non-listed phone number as well as it rejects the SMS text messages containing wrong SMS password even from a listed user phone number. For more details on how to enable output control from a non-listed phone number, please refer to **8.1. System Control from any Phone Number**.

To set User 1 phone number is mandatory, while the other 4 are optional. The supported phone number format is the following:

- **International (w/o plus)** – The phone numbers must be entered starting with an international country code in the following format: [international code][area code][local number], example for UK: *441709xxxxxxx*.

Set user phone number

SMS

SMS text message content:
ssss_NRu:ttteeellnnuumm
Value: *ssss* – 4-digit SMS password; *u* – user phone number slot, range – [1... 5]; *ttteeellnnuumm* – up to 15 digits administrator phone number.
Example: *1111_NR1:441709xxxxxxx*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

View user phone number

SMS

SMS text message content:
ssss_HELPNR
Value: *ssss* – 4-digit SMS password.
Example: *1111_HELPNR*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Delete user phone number

SMS

SMS text message content:
ssss_NRu:DEL
Value: *ssss* – 4-digit SMS password; *u* – user phone number slot, range – [1... 5].
Example: *1111_NR2:DEL*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

ATTENTION: The system rejects the SMS text messages containing wrong SMS password even from a listed user phone number.

ATTENTION: Once User 1 phone number is set, the system will restrict only to modify it

ATTENTION: Multiple user phone numbers can be set by a single SMS text message, **Example:** *1111_NR1:441709xxxxxx1_ NR5:441709xxxxxx2_NR2:441709xxxxxx3_NR3: 441709xxxxxx4*

NOTE: Multiple user phone numbers can be deleted by a single SMS text message, **Example:** *1111_NR2:DEL_NR4:DEL_ NR3:DEL*

8.1. System Control from any Phone Number

By default, the system ignores any incoming calls and SMS text messages from a non-listed phone number as well as it rejects the SMS text messages containing wrong SMS password even from a listed user phone number. To permit/deny incoming phone calls and SMS text messages that contain a valid SMS password from any phone number, please refer to the following configuration methods.

Enable system control from any phone number

SMS

SMS text message content:
ssss_STR:ON
Value: *ssss* – 4-digit SMS password.
Example: *1111_STR:ON*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable system control from any phone number

SMS

SMS text message content:
ssss_STR:OFF
Value: *ssss* – 4-digit SMS password.
Example: *1111_STR:OFF*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

9. DATE AND TIME

The system comes equipped with internal real-time clock (RTC) that keeps track of the current date and time. Once the system is up and running, the user must set the correct date and time, otherwise the system will not operate properly. By default, after shutting down and starting up the system, the date and time must be set again.

Set date and time

SMS

SMS text message content:
ssss_yyyy.mt.dd_hr:mn
Value: *ssss* – 4-digit SMS password; *yyyy* – year; *mt* – month, range – [01... 12]; *dd* – day, range – [01... 31]; *hr* – hours, range – [00... 23]; *mn* – minutes, range – [00... 59].
Example: *1111_2014.03.16_14:33*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

NOTE: When the system is connected to the monitoring station via GPRS network connection (see **19. MONITORING STATION**), the date and time will be automatically synchronized with the monitoring station or Smart Security server upon the system startup.

10. INPUTS

The system comes equipped with 5 inputs identified as Z1 through Z5. Normally, the inputs are used for PGM output connection of non-GSM alarm system, motion detectors, door contacts and other passive or active digital level sensors. Once a detection device is triggered, the system will send a notification to the user phone number. For more details, please refer to **11. ALARM/RESTORE NOTIFICATIONS**.

Each input's sensitivity level can be customized by a delay time (by default – 600 milliseconds). If an input is left triggered until the delay time expires, the input is considered violated.

Set input delay

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:DVin-delay
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *in-delay* – input delay, range – [100... 10000] milliseconds.
Example: *1111_SMSEXTRA:Z3:DV800*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

By default, all system inputs are set as NO (normally-open). To change the input connection type to NC (normally closed)/NO (normally open), please refer to the following configuration methods.

Set input as NC (normally closed)

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:LI1
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5].
Example: *1111_SMSEXTRA:Z4:LI1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set input as NO (normally open)

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:LI0
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5].
Example: *1111_SMSEXTRA:Z2:LI0*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

The system allows to view the current input state by the following configuration method.

View input state

SMS

SMS text message content:
ssss_INFO
Value: *ssss* – 4-digit SMS password.
Example: *1111_INFO*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

10.1. Pulse Counter

The system comes equipped with input pulse counter feature. The feature determines the number of input violation events, known as pulses, that result in input alarm SMS text message delivery and/or phone call to the listed user phone number once the number of the set up pulses is achieved. The time-frame between the pulses is unlimited.

By default, the pulse counter feature is disabled and the number of pulses is not set. To enable/disable it and set the number of pulses, please refer to the following configuration methods:

Enable pulse counter

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:IE1
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5].
Example: *1111_SMSEXTRA:Z2:IE1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set number of pulses

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:ICnum-pulse
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *num-pulse* – number of pulses, range - [0... 4294967295].
Example: *1111_SMSEXTRA:Z5:IC562*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable pulse counter

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:IE0
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5].
Example: *1111_SMSEXTRA:Z1:IE0*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

NOTE: Once the pulse counter feature is in use, the input restore notifications regarding a certain input will no longer be delivered to the listed user phone number, even if enabled.

10.2. Disabling and Enabling Inputs

By default, all inputs are enabled. Once disabled, input alarm/restore event will no longer be followed by an SMS text message and/or phone call. To disable/enable an individual input, please refer to the following configuration methods.

Disable input

SMS

SMS text message content:
ssss_Zn:OFF
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5].
Example: *1111_Z1:OFF*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable input	**SMS**	**SMS text message content:** ssss_Zn:ON **Value:** *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]. **Example:** *1111_Z5:ON*
	Utility Tool	This operation may be carried out from the PC using the *ELDES Utility Tool* software.
View input status	**SMS**	**SMS text message content:** ssss_STATUS **Value:** *ssss* – 4-digit SMS password. **Example:** *1111_STATUS*
	Utility Tool	This operation may be carried out from the PC using the *ELDES Utility Tool* software.

NOTE: Multiple inputs can be managed by a single SMS text message, **Example:** *1111_Z1:OFF ;Z3:ON;Z5:OFF;*

11. ALARM/RESTORE NOTIFICATIONS

In the event of input alarm or restore, the system can notify the listed user phone number by the following methods that can be used individually or simultaneously:

- SMS text message.
- Phone call.

SMS

By default, in the event of input alarm, the system will follow this pattern:

a) The system attempts to send an SMS text message containing input alarm text to the first listed user phone number only.

b) The system will continue sending the SMS text message to the next listed user phone numbers in the priority order until one is available.

By default, input restore notification by SMS text message is disabled. Once enabled, the system will follow the SMS text message delivery pattern identically as for input alarm event.

To manage input alarm and restore SMS text messages, please refer to the following configuration methods

Disable input alarm notification by SMS

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:SCu
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:Z4:SC4*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable input alarm notification by SMS

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:SSu
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:Z3:SS1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set input alarm text

SMS

SMS text message content:
ssss_Zn:in-alarm-text
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; in-alarm-text – up to 24 characters input alarm text.
Example: *1111_Z2:Alarm Input2*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable input restore notification by SMS

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:SEu
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:Z1:SE5*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable input restore notification by SMS

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:SDu
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:Z2:SD1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set input restore text

SMS

SMS text message content:
ssss_ZRn:in-restore-text
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; in-restore-text – up to 24 characters input alarm text.
Example: *1111_ZR3:Restore Input3*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

ATTENTION: Colon and semicolon characters are NOT allowed in the input alarm/restore notification texts.

NOTE: Multiple alarm/restore texts can be managed by a single SMS text message, **Example:** *1111_Z2:Alarm In2;ZR4:Restore In4;*

NOTE: Multiple users can be managed by a single SMS text message; **Example:** *1111_SMSEXTRA:Z2:SE135*

The system comes equipped with ringing the listed user phone number (by default – disabled) in the event of input alarm/restore. By default, in the event of input alarm, the system will follow this pattern:

a) The system attempts to ring the first listed user phone number.

b) When the call is answered, the system will play the audio file that can be listened to on the user's mobile phone. This feature will be available only if an audio file is recorded and assigned to the input alarm event (see **12. AUDIO FILES**).

c) The system will dial the next listed user phone number if the previous user was unavailable due to the following reasons:

- mobile phone has been switched off.
- mobile phone has been out of GSM signal coverage.
- has provided "busy" signal.
- user did not answer the call after several rings, predetermined by the GSM operator.

d) The system will continue dialing the next listed user phone numbers in the priority order until one is available.

e) The system will dial the first user phone number again if the last one was unavailable thus carrying out the cycle 3 times in total. The system will not dial the next listed user phone number if the previous one was available, but rejected the phone call (to change this algorithm, please refer to **11.1. Enabling and Disabling Alarm/Restore Notification Delivery to All Listed Users**).

By default, input restore notification by phone call is disabled. Once enabled, the system will follow the phone call delivery pattern identically as for input alarm event.

To manage input alarm and restore phone calls, please refer to the following configuration methods

Disable input alarm notification by call

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:CCu
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:Z2:CC4*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable input alarm notification by call

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:CSu
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:Z2:CS1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable input restore notification by call

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:CEu
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:Z5:CE1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable input restore notification by call

SMS

SMS text message content:
ssss_SMSEXTRA:Zn:CDu
Value: *ssss* – 4-digit SMS password; *n* – input number, range – [1... 5]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:Z1:CD3*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

By default, the system dials the first available user in case of alarm. If the user did not answer the call or was unavailable, the system will attempt to dial the next listed user phone number. However, if the phone call was answered or rejected by the user, the system will not dial the next listed user phone number. To change the alarm/restore phone call algorithm, user can enable/disable the following parameter for alarm/restore events:

NOTE: Multiple users can be managed by a single SMS text message; **Example:** *1111_SMSEXTRA:Z3:CD25*

- **Confirmation required when calling in case of alarm/restore** – This parameter determines whether the answered call requires a DTMF signal confirmation by pressing the [#] key on the mobile phone keypad or not. Once enabled, the system will dial every listed user phone number that is enabled to receive an alarm/restore event from the system by phone call regardless of the fact that user was unavailable, did not answer the call, rejected the call or answered the call, but did not confirm it by pressing the [#] key.

Enable/disable confirmation request for calls in case of alarm/restore

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

NOTE: *Confirmation required when calling in case of alarm/restore* feature is supported by product s/n: 0010742 and up.

11.1. Enabling and Disabling Alarm/Restore Calling to All Listed Users

By default, the system dials the first available user in case of alarm. If the user did not answer the call or was unavailable, the system will attempt to dial the next listed user phone number. However, if the phone call was answered or rejected by the user, the system will not dial the next listed user phone number. To change the alarm/restore phone call algorithm, user can enable/disable the following parameter for alarm/restore events:

- **Call to all users simultaneously in case of alarm/restore** – This parameter determines whether to ignore the answered or rejected calls by the previous user in case of alarm/restore or not. Once enabled, the system will attempt to dial every listed user phone number that is enabled to receive an alarm/restore event from the system by phone call.

Enable alarm/restore phone call to all listed users

SMS

SMS text message content:
ssss_CALLALL:ON
Value: *ssss* – 4-digit SMS password.
Example: *1111_CALLALL:ON*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable alarm/restore phone call to all listed users

SMS

SMS text message content:
ssss_CALLALL:OFF
Value: *ssss* – 4-digit SMS password.
Example: *1111_CALLALL:OFF*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

12. AUDIO FILES

The system comes equipped with a feature allowing to record up to 5 audio files of up to 15 seconds length using the microphone of the PC. The recorded file can be assigned to the input alarm and/or restore event and be played when the alarm/restore is caused by input with an audio file assigned. This feature will be available only if the system is pre-configured to dial a user phone number in the event of an input alarm and/or restore and if the user answers the call. The supported audio file format is as follows:

- Max. number of audio files: up to 10 (5 for input alarm event and 5 for input restore event)
- Max. audio length: up to 15 seconds
- File format: .wav
- Specifications: 8,000 kHz; 8 Bit; Mono

Record and manage the audio files

Utility Tool This operation may be carried out from the PC using the *ELDES Utility Tool* software.

NOTE: It is highly recommended to use *ELDES Utility Tool* software's built-in sound recorder to record an audio file.

13. OUTPUTS

ESIM452 comes equipped with 2 built-in outputs for electrical appliance or non-GSM alarm panel's zone connection. Normally, the output can be used to open/close garage doors, activate lights, heating, watering as well as a key-switch for non-GSM alarm system arming/disarming. When the output turns ON, the system triggers any device or relay connected to it.

The system supports the following output control methods:

- Free of charge phone call from the user phone number (see **13.2. Output Control by Free of Charge Phone Call**).
- SMS text message from the user phone number (see **13.3. Output Control by SMS Text Message**).
- Automatically in accordance with the scheduled time (see **13.4. Automatic Output Control**).

View output state

SMS **SMS text message content:**
ssss_STATUS
Value: *ssss* – 4-digit SMS password.
Example: *1111_STATUS*

Utility Tool This operation may be carried out from the PC using the *ELDES Utility Tool* software.

13.1. Output Names

The outputs have a name that can be customized. Typically, the name specifies a device type connected to a determined output, for example: Pump. The name can be used instead of output number when controlling the output by SMS text message. In addition, the output name is always included in output control confirmation SMS text message (if enabled).

By default, the output names are as follows: C1 – *Output1*, C2 – *Output2*.

Set output name

SMS **SMS text message content:**
ssss_Co:out-name
Value: *ssss* – 4-digit SMS password; *o* – output number, range [*1* – output C1; *2* – output C2]; *out-name* – up to 11 characters output name.
Example: *1111_C2:Boiler*

Utility Tool This operation may be carried out from the PC using the *ELDES Utility Tool* software.

View output name

SMS

SMS text message content:
ssss_STATUS
Value: *ssss* – 4-digit SMS password.
Example: *1111_STATUS*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

ATTENTION: Space, colon, semi-colon characters, parameter names and/or values, such as PSW, STATUS, ON, OFF etc. are NOT allowed in output names.

13.2. Output Control by Free of Charge Phone Call

Once enabled, the specified user can control the electrical appliance connected to the system's output by dialling the system's phone number from any available user phone number (see **8. USER PHONE NUMBERS** for phone number management). The phone call is free charge as the system rejects it and turns ON/OFF the output (-s) resulting in the electrical appliance turning ON or OFF, depending on the current output state. The output can also be used for a key switch feature allowing to arm/disarm a non-GSM alarm panel. If there is more than one preset caller dialing to the system at the same time, the system will accept the incoming call from the caller who was the first to dial while other caller (-s) will be ignored.

The system supports the following output control actions upon free of charge phone call:

- **Turn ON** – Turns ON the output and keeps it in this state for a set up period of time.
- **Turn OFF** – Turns OFF the output and keeps it in this state for a set up period of time.
- **Toggle** – Turns ON the output and keeps it in this state until the phone call reoccurs. The set up period of time has no effect on this action.

Enable output control by free of charge phone call for a certain user

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:CEu
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:COC1:CE5*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable output control by free of charge phone call for a certain user

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:CDu
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:COC2:CD2*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set output action as Turn ON

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:MSu1
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:COC2:MS41*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set output action as Turn OFF

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:MSu0
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:COC1:MS20*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set output control duration for Turn ON/ Turn OFF action

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:MSuThr.mn.sc
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5]; *hr* – hours, range – [00... 23]; *mn* – minutes, range – [00... 59]; *sc* – seconds, range – [00... 59].
Example: *1111_SMSEXTRA:COC2:MS5T05.12.30*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set output action as Toggle

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:MSu2
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:COC1:MS42*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

NOTE: Multiple users can be managed by a single SMS text message **Example:** *1111_SMSEXTRA:COC2:CE245*

13.2.1. Confirmation for Output Control via Call

After turning the output ON or OFF, the system can send a confirmation reply by an SMS text message, containing the output name (see **13.1. Output Names**), to the user phone number that has initiated the output control action by free of charge phone call. In addition, the system can make a phone call confirming that the output control action has been successfully carried out. Once enabled, output ON action will be followed by a 2-second (by default) ring, while the OFF action will be indicated by a 8-second (by default) ring to the user phone number that has initiated the output control action by call.

By default, the output control confirmations are disabled. To manage the output control via call confirmations, please refer to the following configuration methods.

Enable output control via call confirmation by SMS

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:SSu
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:COC2:SS2*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable output control via call confirmation by SMS

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:SCu
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:COC2:SC4*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable output control via call confirmation by call back

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:CSu
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:COC1:CS3*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable output control via call confirmation by call back

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:CCu
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5].
Example: *1111_SMSEXTRA:COC1:CC5*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set call back duration for output ON action

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:CTu1cd
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5]; *cd* – call back duration, range – [0... 60] seconds.
Example: 1111_SMSEXTRA:COC:CT4120

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set call back duration for output OFF action

SMS

SMS text message content:
ssss_SMSEXTRA:COCo:CTu0cd
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range – [1... 5]; *cd* – call back duration, range – [0... 60] seconds.
Example: *1111_SMSEXTRA:COC:CT2025*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

13.3. Control by SMS Text Message

SMS

To turn ON or turn OFF the output (-s), send the SMS text message from any of 5 available user phone numbers (see **8. USER PHONE NUMBERS** for phone number management). To instantly turn ON/OFF the output and set its state to ON/OFF when the system starts-up, please refer to the following configuration methods.

Turn ON output/Set output start-up state as ON

SMS

SMS text message content:
ssss_Co:ON or ssss_out-name:ON
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *out-name* – up to 11 characters output name.
Example: *1111_Lamp:ON*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Turn OFF output/Set output start-up state as OFF

SMS

SMS text message content:
ssss_Co:OFF or ssss_out-name:OFF
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *out-name* – up to 11 characters output name.
Example: *1111_C2:OFF*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

To turn ON/OFF the output (-s) for a determined time period (pulse), please refer to the following configuration methods.

Turn ON output for time period

SMS

SMS text message content:
ssss_Co:ON:hr.mn.sc or ssss_out-name:ON:hr.mn.sc
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *hr* – hours, range – [00... 23]; *mn* – minutes, range – [00... 59]; *sc* – seconds, range – [00... 59]; *out-name* – up to 11 characters output name.
Example: *1111_C2:ON:00.00.09*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Turn OFF output for time period

SMS

SMS text message content:
ssss_Co:OFF:hr.mn.sc or ssss_out-name:OFF:hr.mn.sc
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *hr* – hours, range – [00... 23]; *mn* – minutes, range – [00... 59]; *sc* – seconds, range – [00... 59]; *out-name* – up to 11 characters output name.
Example: *1111_C1:OFF:00.11.49*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

13.3.1. Confirmation for Output Control via SMS

By default, after turning the output ON or OFF, the system will send a confirmation reply by an SMS text message, containing the output name (see **13.1. Output Names**), to the user phone number that has initiated the output control action by SMS text message.

In addition, the system can make a phone call confirming that the output control action has been successfully carried out. Once enabled, output ON action will be followed by a 2-second (by default) ring, while the OFF action will be indicated by a 8-second (by default) ring to the user phone number that has initiated the output control action by SMS text message.

To manage the output control via SMS confirmations, please refer to the following configuration methods.

Disable output control via SMS confirmation by SMS

SMS

SMS text message content:
ssss_SMSEXTRA:OCSo:SB0
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCS2:SB0*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable output control via SMS confirmation by SMS

SMS

SMS text message content:
ssss_SMSEXTRA:OCSo:SB1
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCS1:SB1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable output control via SMS confirmation by call back

SMS

SMS text message content:
ssss_SMSEXTRA:OCSo:CB1
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCS2:CB1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable output control via SMS confirmation by call back

SMS

SMS text message content:
ssss_SMSEXTRA:OCSo:CB0
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCS2:CB0*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set call back duration for output ON action

SMS

SMS text message content:
ssss_SMSEXTRA:OCSo:CT1cd
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *cd* – call back duration, range – [0... 60] seconds.
Example: *1111_SMSEXTRA:OCS2:CT15*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set call back duration for output OFF action

SMS

SMS text message content:
ssss_SMSEXTRA:OCSo:CT0cd
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *cd* – call back duration, range – [0... 60] seconds.
Example: *1111_SMSEXTRA:OCS1:CT020*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

13.4. Automatic Output Control

ATTENTION: System date and time must be set, otherwise the system will NOT be able to control the output (-s) automatically. For more details on how to set date and time, please refer to **9. DATE AND TIME**.

The system comes equipped with an automatic output control in accordance with the scheduled time. When the scheduler is set up, the output will automatically turn ON/OFF on based on the specified time set for a certain duration. Once set up, the scheduler will operate once per day.

By default, the scheduler is not set up. To set up the scheduler and manage the output state, please refer to the following configuration methods.

Set scheduler start time

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:WThr.mn
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *hr* – hours, range – [00... 23]; *mn* – minutes, range – [00... 59].
Example: *1111_SMSEXTRA:OCTE2:WT14.16*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set scheduler duration

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:PThr.mn
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *hr* – hours, range – [00... 23]; *mn* – minutes, range – [00... 59].
Example: *1111_SMSEXTRA:OCTE1:PT00.15.10*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set output state to ON

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:ST1
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE1:ST1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set output state to OFF

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:ST0
Value: *ssss* – 4-digit SMS password; o – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE2:ST0*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

13.4.1. Confirmation for Output Control using Scheduler

After turning the output ON or OFF, the system can send a confirmation reply by an SMS text message, containing the output name (see **13.1. Output Names**), to the user phone number that is specified to receive it upon execution of the output control action by scheduled time. In addition, the system can make a phone call confirming that the output control action has been successfully carried out. Once enabled, output ON action will be followed by a 2-second (by default) ring, while the OFF action will be indicated by a 8-second (by default) ring to the user phone number that is specified to receive it upon execution of the output control action by scheduled time.

By default, the output control using scheduler confirmations are disabled. To manage the output control using scheduler confirmations, please refer to the following configuration methods.

Select user phone number for output control confirmation acceptance

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:UCu
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *u* – user phone number slot, range - [1... 5].
Example: *1111_SMSEXTRA:OCTE1:UC2*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable output control confirmation by SMS text message for scheduler start

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:SS0
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE2:SS0*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable output control confirmation by SMS text message for scheduler start

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:SS1
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE1:SS1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable output control confirmation by SMS text message for scheduler end

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:SE0
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE1:SE0*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable output control confirmation by SMS text message for scheduler end

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:SE1
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE2:SE1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable output control confirmation by call back for scheduler start

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:CS1
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE2:CS1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable output control confirmation by call back for scheduler start

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:CS0
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE1:CS0*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Enable output control confirmation by call back for scheduler end

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:CE1
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE1:CE1*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable output control confirmation by call back for scheduler end

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:CE0
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2].
Example: *1111_SMSEXTRA:OCTE2:CE0*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set call back duration for output ON action

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:CT1cd
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *cd* – call back duration, range – [0... 60] seconds.
Example: *1111_SMSEXTRA:OCTE2:CT15*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Set call back duration for output OFF action

SMS

SMS text message content:
ssss_SMSEXTRA:OCTEo:CT0cd
Value: *ssss* – 4-digit SMS password; *o* – output number, range - [1... 2]; *cd* – call back duration, range – [0... 60] seconds.
Example: *1111_SMSEXTRA:OCTE1:CT020*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

14. SYSTEM INFORMATION. INFO SMS

The system supports an informational SMS text message identified as the Info SMS, which can be delivered upon request. Once requested, the system will reply with Info SMS that provides the following:

- System date & time.
- GSM signal strength.
- State of inputs (OK/alarm).

Request system information

SMS

SMS text message content:
ssss_INFO
Value: *ssss* – 4-digit SMS password.
Example: *1111_INFO*

14.1. Periodic Info SMS

By default, the system sends Info SMS to user phone number periodically once a day at 11:00 (frequency – 1 day; time – 11). The minimum period is every 1 hour (frequency – 0 days; time – 1). Typically, this feature is used to verify the power supply and online status of the system.

To set a different frequency and time or disable periodic Info SMS, please refer to the following configuration methods.

Set periodic Info SMS frequency and time

SMS

SMS text message content:
ssss_INFO:fff.it
Value: *ssss* – 4-digit SMS password; *fff* – frequency, range – [00... 99] days; *it* – time, range – [01... 23].
Example: *1111_INFO:3.15*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

Disable periodic Info SMS

SMS

SMS text message content:
ssss_INFO:00.00
Example: *1111_INFO:00.00*

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

ATTENTION: System date and time must be set, otherwise periodic Info SMS will be delivered incorrectly. For more details on how to set date and time, please refer to **9. DATE AND TIME.**

15. SYSTEM NOTIFICATIONS

Seq. No.	Event	Description
1	System Startup	SMS text message sent to the user on system startup. For more details on how to manage this notification, please refer to the configuration methods below.
2	Input Alarm	SMS text message sent to the user in case input is violated. For more details on how to manage this notification, please refer to **11. ALARM/RESTORE NOTIFICATIONS.**
3	Input Restore	SMS text message sent to the user in case input is restored. For more details on how to manage this notification, please refer to **11. ALARM/RESTORE NOTIFICATIONS.**
4	Periodic Info	Status SMS text message sent to the user periodically by the set up hours. For more details on how to manage this notification, please refer to **14. SYSTEM INFORMATION. INFO SMS.**

By default, System Startup notification is enable. To disable/enable it , please refer to the following configuration method.

Manage System Startup notification

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

15.1. SMSC (Short Message Service Center) Phone Number

An SMS center (SMSC) is a GSM network element, which routes SMS text messages to the destination recipient and stores the SMS text message if the recipient is unavailable. Typically, the phone number of the SMS center is already stored in the SIM card provided by the GSM operator. If the user fails to receive replies from the system, the SMS center phone number, provided by the GSM operator, must be set manually.

Set SMSC phone number

SMS

SMS text message content:
ssss_SMS_+ttteeellnnuumm

Value: *ssss* – 4-digit SMS password; *ttteeellnnuumm* – up to 15 digits SMSC phone number.
Example: *1111_SMS_+44170311111111*

16. SMS TEXT MESSAGE DELIVERY RESTRICTIONS

By default, the system is restricted to send out up to 25 SMS text messages daily and up to 400 SMS text messages monthly. The send out message quantity is counted not only by delivered once, but also by number of attempts to send a message. To change the limits or disable SMS text message delivery restrictions, please refer to to the following configuration method.

Manage SMS text message delivery limits

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

When the daily or monthly SMS text message delivery limit is exceeded, the system will notify the administrator by SMS text message, stating that "Day SMS sending limit exceeded"/ "Month SMS sending limit exceeded" respectively. The limit counter will automatically reset once the 30 days (default) period expires. That will happen ONLY if you have set date and time values. You can reset the limits by referring to the following configuration method.

Reset SMS text message delivery limit counter

SMS

SMS text message content:
ssss_REMOVEBAN
Value: *ssss* – 4-digit SMS password.
Example: *1111_REMOVEBAN*

16.1. SMS forwarding

ESIM452 comes up with a feature, called SMS forward. The system allows user to forward any received message from device's SIM card to the administrator's mobile phone number. Using *ELDES Utility Tool* software, open **System** section, where you'll be able to configure and choose further options. There are 4 basic SMS forwarding options:

- **Forward All received SMS** - if this option is enabled, then every single message, coming to devices' SIM card, will be forwarded to the administrator's phone number.
- **Forward All received SMS from unknown users** - allows user to receive only those messages, coming from unlisted phone numbers.
- **Forward All received SMS from registered users with wrong syntax or wrong password** - user will receive only those messages from listed phone numbers, containing "wrong syntax" or "wrong password" notification.
- **Forward All received SMS from specified Phone Number** - allows you to enter one specified phone number and exploit every single message that comes from it to your device's SIM card.

By default, SMS forward feature is disabled. To enable/disable this feature, please refer to the following configuration method.

Enable/disable SMS forward

Utility Tool

This operation may be carried out from the PC using the *ELDES Utility Tool* software.

ATTENTION: If a single forwarded SMS message size exceeds 160 characters, it won't be transmitted properly.

ATTENTION: User is able to add the administrator phone number as a specified phone number (by enabling the option *Forward All received SMS from specified Phone Number*), but none of SMS messages will be forwarded to administrator himself in any case!

17. EVENT LOG

This feature allows to chronologically register up to 500 timestamped records regarding the following system events:

- Input alarm and restore events
- Output control by free of charge phone call and SMS text message events
- Automatic output control based on scheduler beginning.
- Automatic output control based on scheduler ending.
- Periodic info event

The event log is of LIFO (last in, first out) type that allows the system to automatically replace the oldest records with the latest ones.
By default, event log is disabled. To enable/disable this feature, please refer to the following configuration methods.

Enable/disable event log

Utility Tool — This operation may be carried out from the PC using the *ELDES Utility Tool* software.

To export the event log to .log file or clear it, please refer to the following configuration methods.

Export/clear event log

Utility Tool — This operation may be carried out from the PC using the *ELDES Utility Tool* software.

18. GSM 2G/4G NETWORK SETTINGS

The GPRS network settings are used for device communication with the remote configuration server via GPRS network connection. To set the GPRS network settings, please refer to the following configuration methods.

Set APN

SMS

SMS text message content:
ssss_SETGPRS:APN:acc-point-name
Value: *ssss* – 4-digit SMS password; *acc-point-name* – up to 31 character APN (Access Point Name) provided by the GSM operator.
Example: *1111_SETGPRS:APN:internet*

Set user name

SMS

SMS text message content:
ssss_SETGPRS:USER:usr-name
Value: *ssss* – 4-digit SMS password; usr-name – up to 31 character user name provided by the GSM operator.
Example: *1111_SETGPRS:USER:mobileusr*

Set password

SMS

SMS text message content:
ssss_SETGPRS:PSW:password
Value: *ssss* – 4-digit SMS password; password – up to 31 character password provided by the GSM operator.
Example: *1111_SETGPRS:PSW:mobilepsw*

View GPRS settings

SMS

SMS text message content:
ssss_SETGPRS?
Value: *ssss* – 4-digit SMS password.
Example: *1111_SETGPRS?*

NOTE: Multiple parameters can be set by single SMS text message, **Example:** *1111_SETGPRS:APN:internet;USER:mobileusr;PSW:mobilepsw*

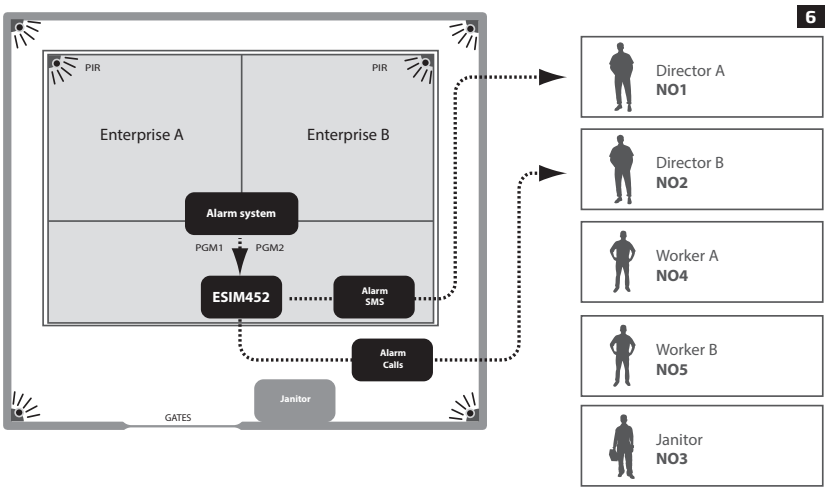
19. PROJECT EXAMPLES AND CONFIGURATION

19.1. Using in Enterprises

The user wants to connect ESIM452 system to an existing alarm system in a building where enterprise A and and enterprise B are based at. Both enterprises use the same alarm system that features two zones. The alarm system has 5 PGM outputs.

Task NO1:

Configuring the system in the way so that the director of a particular enterprise would be informed regarding system arming depending on which enterprise worker has carried out the system arming process. The director of enterprise A (NO1) wants to receive an SMS text message only and does not wish to receive any calls, while the director of enterprise B (NO2) wants to receive a call and does not wish to receive any SMS text messages.



By default, SMS text message sending feature in the case of alarm is enabled for all users until the first successful delivery of the SMS text message, therefore it is necessary to remove the users that should not receive any alarm SMS text messages. In addition, by default, calls in case of alarm are also enabled for all users, therefore this feature must be disabled for all users, except user NO2.

a) First of all the alarm system unit must be configured in the way so that arming the system in enterprise A, would result in PGM1 being turned ON, while when the system is disarmed in enterprise B, PGM2 would result in being turned OFF.

b) PGM1 has to be connected to ESIM452 input Z1, while PGM2 must be connected to ESIM452 input Z2. (PGM2 must be of "high level")

c) The following SMS text messages must be sent to ESIM452 system:

ssss_SMSEXTRA:Z1:SC2345,CC12345

SC2345 = alarm SMS text message sending to users NO2-NO5 is disabled if Z1 input is violated.

CC12345 = alarm calls are disabled for all users NO1-NO5 if Z1 input is violated.

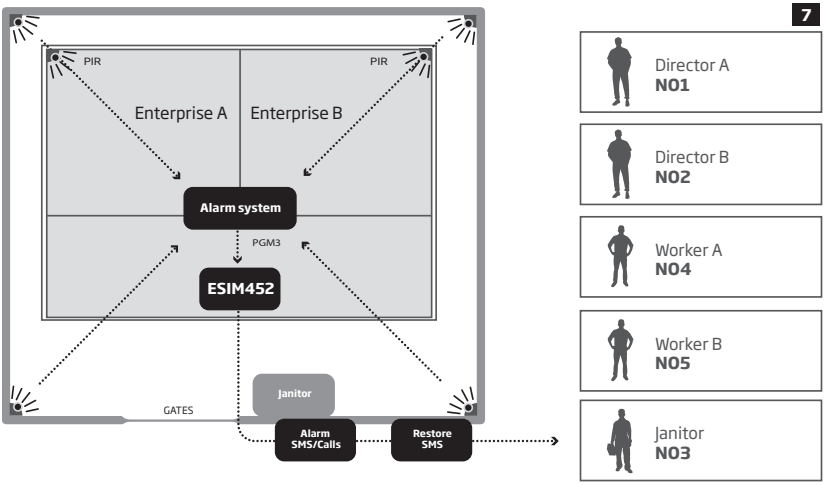
ssss_SMSEXTRA:Z2:SC12345,CC1345

SC12345 = alarm SMS text message sending is disabled for all users NO1-NO5 if Z2 input is violated.

CC1345 = all alarm calls are disabled for users NO1, NO3-NO5 if Z2 input is violated.

Task NO2:

Configuring the system in the way so that the janitor (NO3) would be informed regarding the triggered PIR sensor in the secured area by SMS text message and a phone call; when the sensor is restored, the janitor receives the SMS text message only.



By default, SMS text message sending feature in the case of alarm is enabled for all users until the first successful delivery of the SMS text message, therefore it is necessary to remove the users that should not receive any alarm messages. In addition, by default, calls in case of alarm are also enabled for all users, therefore this feature must be disabled for all users, except user NO3. SMS text message sending feature must also be enabled for user NO3 when input Z3 is restored.

a) First of all alarm system unit must be configured in the way so that triggering PIR sensor would result in PGM3 being turned ON.

b) PGM3 has to be connected to ESIM452 input Z3

c) The following SMS text message must be sent to ESIM452 system:

ssss_SMSEXTRA:Z3:SC1245,CC1245,SE3

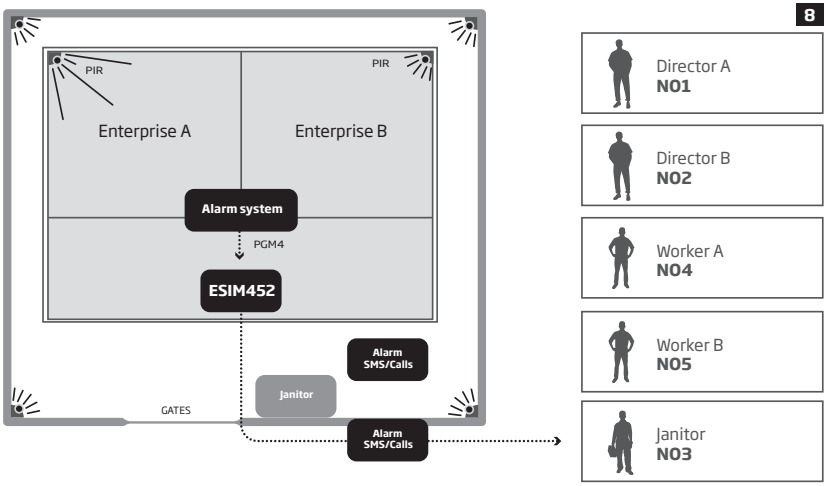
SC1245 = alarm SMS text message sending to users NO1, NO2, NO4 and NO5 is disabled after Z3 is violated.

CC1245 = alarm call feature is disabled for users NO1, NO2, NO4 and NO5 after input Z3 is violated.

SE3 = SMS text message sending feature is enabled for user NO3 after Z3 input is violated.

Task NO3:

Configuring the system in the way so that the intrusion to enterprise A premises would be reported to the janitor (NO3) and enterprise A worker (NO4) by SMS text messages and calls. Enterprise A worker (NO4) wishes to receive a call only if the janitor (NO3) has not answered the call, his mobile phone is out of GSM signal coverage or in case it provides a "busy" tone.



By default, SMS text message sending feature in the case of alarm is enabled for all users until the first successful delivery of the SMS text message, therefore it is necessary to enable mandatory SMS text message delivery and to remove the users who should not receive alarm messages. In addition, by default, calls in case of alarm are also enabled for all users, therefore this feature must be disabled for all users, except users NO3 and NO4. By default, in the case of alarm the system rings until the first answered call, therefore in this case nothing should be configured.

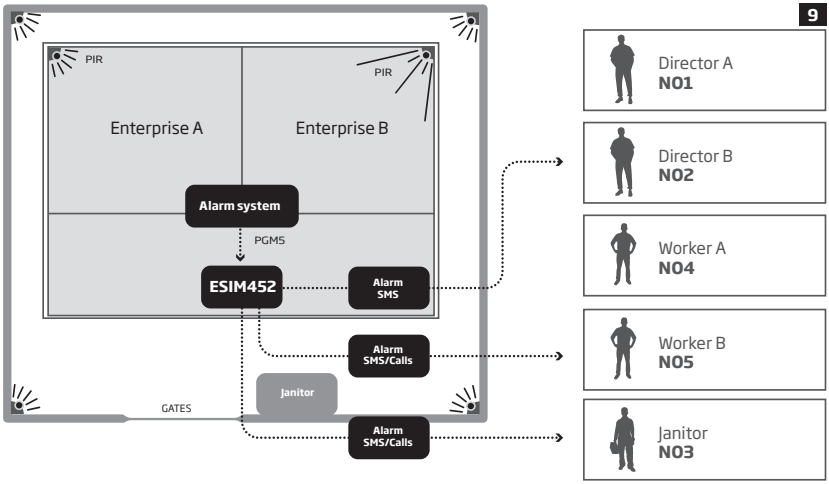
a) First of all alarm system unit must be configured in the way so that triggering a PIR sensor of enterprise A would result in PGM4 being turned ON.
b) PGM4 has to be connected to ESIM452 input Z4
c) The following SMS text messages must be sent to ESIM452 system:
ssss_SMSEXTRA:Z4:SC125,CC12

SC125 = alarm SMS text message delivery feature is disabled for users NO1, NO2 and NO5 if Z4 input is violated.

CC125 = alarm calls are disabled for users NO1, NO2 and NO5 if Z4 input is violated.

Task NO4:

Configuring the system in the way so that the intrusion to enterprise B premises would be reported to the janitor (NO3) and enterprise B worker (NO5) by SMS text messages and calls, and the director of enterprise B (NO2) by SMS text message only. Enterprise B worker (NO5) must receive a phone call even if the janitor (NR3) has answered the call.



By default, SMS text message sending feature in the case of alarm is enabled for all users until the first successful delivery of the SMS text message, therefore it is necessary to enable mandatory SMS text message delivery and to remove the users who should not receive alarm messages. In addition, by default, calls in case of alarm are also enabled for all users, therefore this feature must be disabled for users NO1, NO2 and NO4, and left enabled for users NO3 and NO5. Also, it is necessary to enable mandatory calling feature for all listed users.

a) First of all alarm system unit must be configured in the way so that triggering a PIR sensor of enterprise A would result in PGM5 being turned ON.

b) PGM has to be connected to ESIM452 input Z5

C) The following SMS text messages must be sent to ESIM452 system:

ssss_CALLALL:ON

CALLALL = enables mandatory calling feature for all users.

ssss_SMSEXTRA:Z5:SC14,CC124

SC14 = alarm SMS text message sending feature is disabled for users NO1 and NO4 if Z5 input is violated.

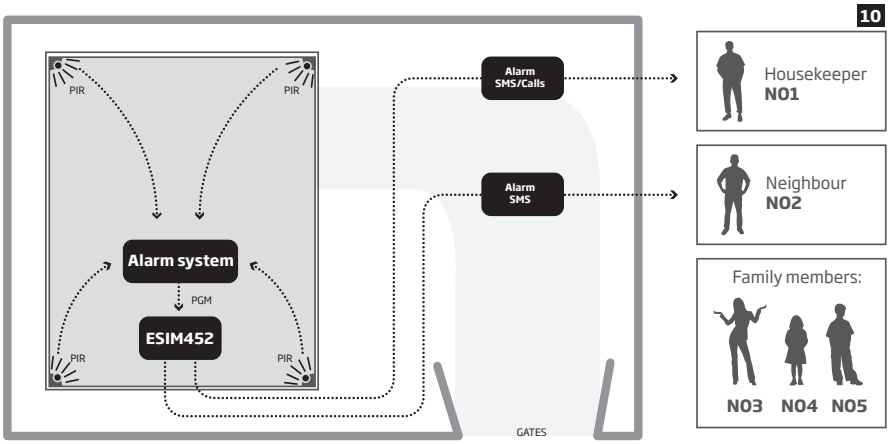
CC124 = alarm calls are disabled for users NO1, NO2 and NO4 if Z5 input is violated.

19.2. Using in a Private House

The user wants to connect ESIM452 system to the PGM outputs of an existing alarm system. House area is accessible through electrically controlled gates. There are 5 users in total. NO1 is the housekeeper, NO2 is a neighbour, while NO3-NO5 are the family members.

Task NO1:

Configuring the system in the way so that the alarm activation in house would be reported to the housekeeper (NO1) by SMS text message and a call as well as to the neighbour (NO2) by SMS text message only.



By default, SMS text message sending feature in the case of alarm is enabled for all users until the first successful delivery of the SMS text message, it is necessary to enable mandatory SMS text message delivery and to remove the users who should not receive alarm messages. In addition, by default, calls in case of alarm are also enabled for all users, therefore this feature must be disabled for users NO2-NO5 and left enabled for NO1 only.

a) First of all alarm system unit must be configured in the way so that triggering a PIR sensor in a house would result in PGM being turned ON.
b) PGM has to be connected to ESIM452 input Z1
c) The following SMS text messages must be sent to ESIM452 system:

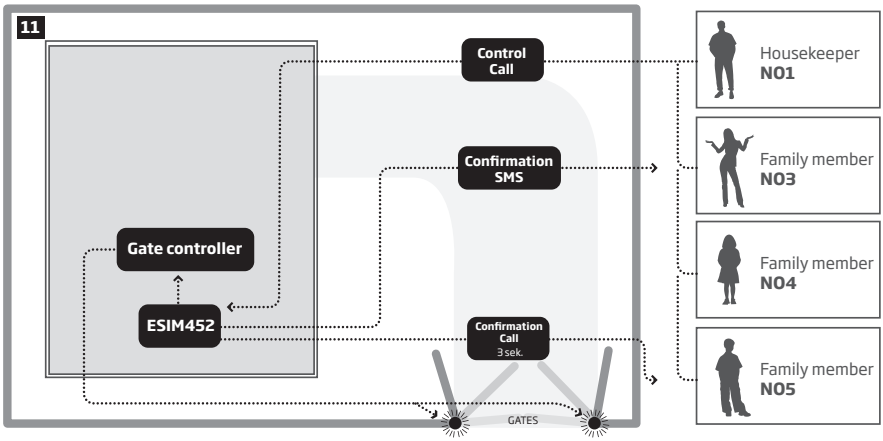
ssss_SMSEXTRA:Z1:SC345,CC2345

SC345 = alarm SMS text message sending is disabled for users NO3, NO4 and NO5 if Z1 input is violated.

CC2345 = alarm calls are disabled for all users exept NO1 after Z1 input is violated.

Task NO2:

Configuring the system in the way so that house gates could be opened via free of charge calls by the housekeeper (NO1) and his family members (NO3), (NO4) and (NO5). After every successful gate opening the user NO5 wishes to receive a confirmation call (CALLBACK) lasting for 3 seconds, while user NO3 wishes to receive a confirmation by SMS text message.



By default, C1 output control via calls is disabled for all users, therefore it is necessary to enable this feature and to set the users who will be able to control the output. In addition, it is also necessary to set the output state for every user when he/she dials the system phone number. In this case the output must be turned ON for 1 second; once this period expires, the output will return to the previous state. Confirmation call feature must be enabled for user NO5 and it is necessary to set the duration parameters for that call. Also, confirmation by SMS text messages have to be enabled for user NO3.

a) First of all ESIM452 output has to be connected to the gate automation equipment.

b) The following SMS text message must be sent to ESIM452 system:

ssss_SMSEXTRA:COC:CE1345,CS5,CT513,SS3,MS10,MS30,MS40,MS50,MS1T0.0.1,MS3T0.0.1,MS4T0.0.1,MS5T0.0.1

CE1345 = C1 relay control via call is enabled for users NO1, NO3-NO5.

CS5 = confirmation call feature is enabled for user NO5 after C1 relay status changes.

CT513 = user NO5 will receive a confirmation call when the relay gets activated and call duration is 3 seconds.

SS3 = user NO3 will be informed about C1 relay status change by SMS text message.

MS10 = output is turned ON when user NO1 calls the system.

MS30 = output is turned ON when user NO3 calls the system.

MS40 = output is turned ON when user NO4 calls the system.

MS50 = output is turned ON when user NO5 calls the system.

MS1T0.0.1 = output state is changed for 1 second when user NO1 calls the system.

MS3T0.0.1 = output state is changed for 1 second when user NO3 calls the system.

MS4T0.0.1 = output state is changed for 1 second when user NO4 calls the system.

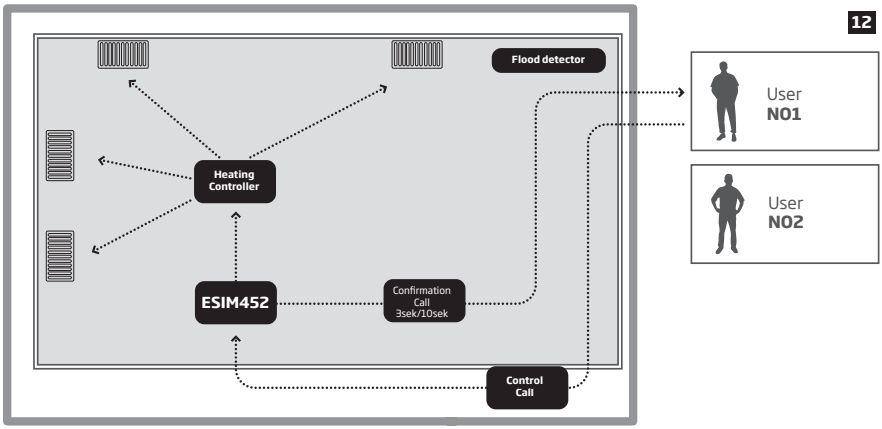
MS5T0.0.1 = output state is changed for 1 second when user NO5 calls the system.

19.3. Using with Heating System and Flood Detector

The user wants to connect ESIM452 system to the heating system of the house.

Task No1:

Configuring the system in the way so that house heating system is turned ON and turned OFF by the user (NO1) using a free of charge phone call. This user should also receive a free of charge confirmation regarding successful turning ON or turning OFF of the heating system.



By default, C1 output control via call is disabled for all users, therefore it is necessary to enable this feature and set the users who will be able to control the output – in this case it is user NO1. In addition, it is also necessary to set the output state for user NO1 when he/she dials the system phone number. In this case it is necessary toset the system so that the output is turned OFF after one call and turned OFF after another one (Toggle) and so on. User NO1 needs to enable confirmation call feature and set the duration parameters for that call. To identify whether the output has been turned ON, the confirmation call will last for 3 seconds, while when the output has been turned OFF, the confirmation call will last for 10 seconds

a) First of all ESIM452 output C1 has to be connected to the heating system control unit.

b) The following SMS text message must be sent to ESIM452 system:

ssss_SMSEXTRA:COC:CE1,CS1,CT113,CT1010,MS12

CE1 = C1 output control via call is enabled for users NO1.

CS1 = confirmation call feature is enabled for user NO1 if C1 output state changes.

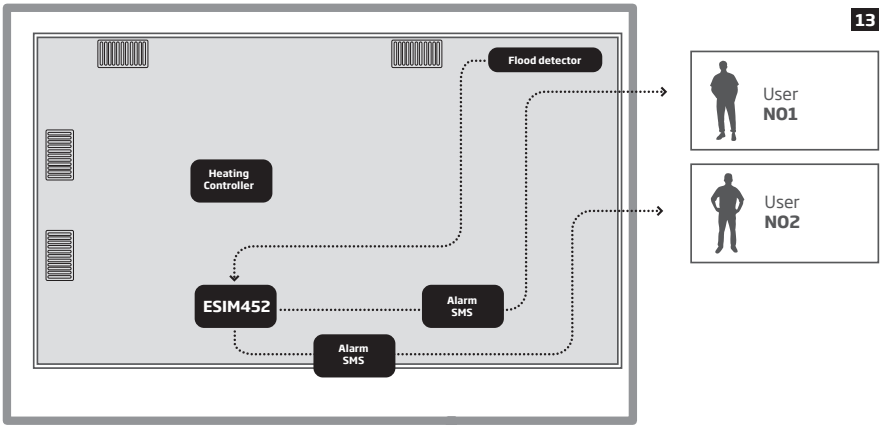
CT113 = user NO1 will receive a confirmation call when the output is turned ON and call duration is 3 seconds.

CT1010 = user NO1 will receive a confirmation call when the output is turned OFF and call duration is 10 seconds.

MS12 = Toggle mode is enabled for user NO1, which means that the output state is changed with every call.

Task No2:

Configuring the system in the way so that users (NO1) and (NO2) receive an SMS text message regarding a burst of a water pipe (flood) at home. SMS text messages must be delivered to both users.



By default, SMS text message sending feature in tcase of alarm is enabled for all users until the first successful delivery of the SMS text message and calling in the case of alarm is enabled for all users until the first answered call, therefore the calls in case of alarm must be disabled for users NO1 and NO2. Mandatory SMS delivery to all users must be enabled.

a) First of all a flood sensor has to be connected to ESIM452 input Z1.

b) The following configuration SMS text messages must be sent to ESIM452 system:

ssss_SMSEXTRA:Z1:CC12

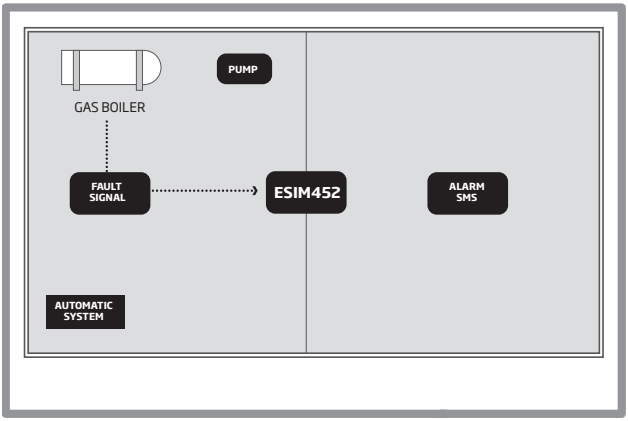
CC12 = alarm call feature is disabled for users NO1, NO2 if Z1 input is violated. We make an assumption that users NO3-NO5 are not listed in the system at all.

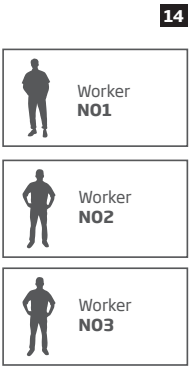
19.4. Using for Breakdown Reports

The company taking care of automatic systems needs to be informed regarding some critical breakdowns of mechanisms and has to quickly respond in order to eliminate the breakdown. There are three members of the operating personnel (NO1), (NO2) and (NO3).

Task No1:

Configuring the system in the way so that operating personnel member (NO1) receives SMS text message regarding the breakdown of gas boiler. While the gas boiler is operating normally it transmits a signal; when it breaks down the signal is no longer transmitted.





By default, SMS text message sending feature in the case of alarm is enabled for all users until the first successful delivery of the SMS text message, therefore it is necessary to remove users NO2 and NO3 and disable alarm calls for all users. It is also necessary to invert ESIM452 input from NO to NC mode so that alarm is given only if the signal disappears.

a) First of all signal wires (fault output) indicating gas boiler breakdown is connected to ESIM452 input Z1.

b) The following SMS text message must be sent to ESIM452 system:

ssss_SMSEXTRA:Z1:SC23,CC123,LI1

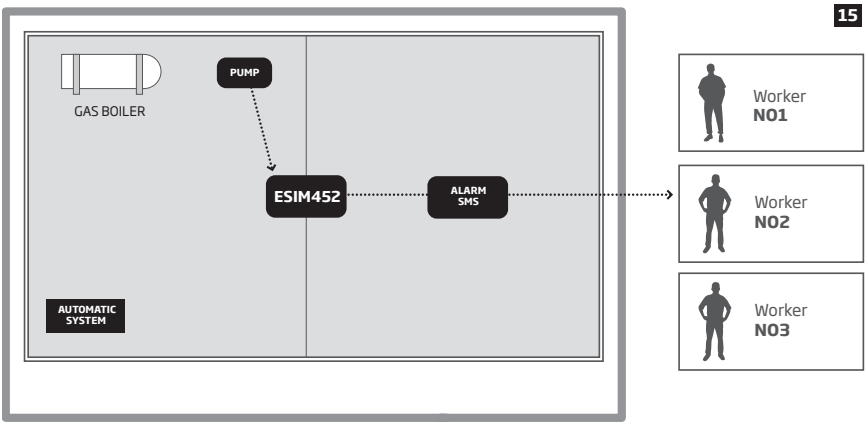
SC23 = alarm SMS text message sending is disabled for users NO2, NO3 if Z1 input is violated.

CC123 = alarm calls are disabled for users NO1, NO2 and NO3 after Z1 input is activated. We make an assumption that users NO4-NO5 are not listed in the system at all.

LI1 = NC - "normally closed" input connection type is enabled for the input.

Task No2:

Configuring the system in the way so that the operating personnel member (NO2) receives SMS text message if the pump has been triggered for 10 times.



By default, SMS text message sending feature in case of alarm is enabled for all users until the first successful delivery of the SMS text message, therefore it is necessary to remove users NO1 and NO3 and disable alarm calls for all users. It is also necessary to enable pulse counting feature for ESIM452 input Z3 and set the number of expected pulses.

a) First of all signal wires (fault output) indicating the pump triggering has to be connected to ESIM452 input Z3.

b) The following SMS text message must be sent to ESIM452 system:

ssss_SMSEXTRA:Z3:SC13,CC123,IE1,IC10

SC13 = alarm SMS text message sending is disabled for users NO1, NO3 if Z3 input is violated.

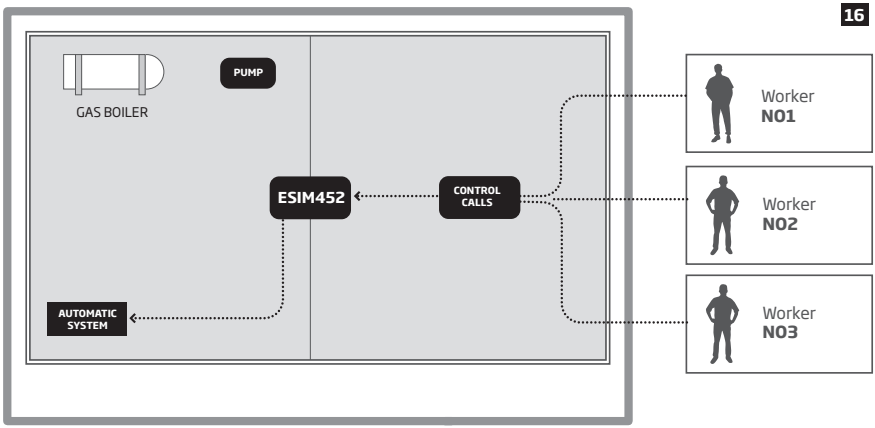
CC123 = alarm calls are disabled for users NO1, NO2 and NO3 if Z3 input is violated. We make an assumption that users NO4-NO5 are not listed in the system at all.

IE1 = enables pulse counting feature for input Z3.

IC10 = alarm is given by Z3 input after 10 pulses are achieved.

Task No3:

Configuring the system in the way so that operating personnel members (NO1), (NO2) and (NO3) can remotely reboot the "frozen" automatic control system by a free of charge phone call without visiting the installation location.



By default, C1 output control via calls is disabled for all users, therefore it is necessary to enable this feature and to set the users who will be able to control the output. In addition, it is also necessary to set output state for every user when he/she dials the system phone number. In this case the output must be turned ON for 2 seconds; once this period expires, the output will return to the previous state.

a) First of all ESIM452 output has to be connected to the automatic system control unit.

b) The following SMS text message must be sent to ESIM452 system:

ssss_SMSEXTRA:COC:CE123,MS10,MS20,MS30,MS1T0.0.2,MS2T0.0.2,MS3T0.0.2

CE123 = C1 output control via call is enabled for users NO1-NO3.

MS10 = output is turned ON when user NO1 calls the system.

MS20 = output is turned ON when user NO2 calls the system.

MS30 = output is turned ON when user NO3 calls the system.

MS1T0.0.2 = output state is changed for 2 seconds when user NO1 calls the system.

MS2T0.0.2 = output state is changed for 2 seconds when user NO2 calls the system.

MS3T0.0.2 = output state is changed for 2 seconds when user NO3 calls the system.

20. TECHNICAL SUPPORT

20.1. Troubleshooting

Indication	Possible reason
Indicators SIM STAT and NETW are OFF	• No mains power • Wrong wiring • Blown fuse • Disconnected antenna • Micro-controller could not start due to electrical mains noise or static discharge • GSM connection fault
Indicator SIM STAT is ON	• Missing SIM card • PIN code is enabled • SIM card is inactive
Unable to receive any SMS text messages to the user phone number or control the output	• Insufficient SIM card credit balance • Caller's phone number is set up as withheld (hidden) • No GSM network signal • Wrong user phone number • User phone number is not set • SIM card was replaced before disconnecting mains power • Incorrect SMS center phone number
Unable to connect to the device remotely via GPRS connection	• GPRS settings (APN, user name, password) not set • Insufficient SIM card credit balance • Mobile internet service (GPRS) not activated on the SIM card
Received SMS text message "Wrong syntax"	• Incorrect SMS text message structure • Unnecessary space character might have been typed in SMS text message

For product warranty repair service please , contact your local retail store where this product was purchased.

If your problem could not be fixed by the self-guide above, please contact your local distributor. More up to date information about your device and other products can be found at the manufacturer's website eldesalarms.com

20.2. Restoring Default Parameters

1. Power down the device.
2. Short-circuit (connect) the DEF pins.
3. Power up the device for 7 seconds.
4. Power down the device.
5. Remove the short-circuit from DEF pins.
6. Parameters restored to default.

20.3. Firmware updates

1. Automatically: Each night, the device checks for updates and installs them if needed.
It must be Cloude Servises enabled via ELDES Utility!

2. Manually: You can force an immediate update by sending an SMS text message.

3. FW Update via USB cable:

1. Power down the device.
2. Short-circuit (connect) the DEF pins.
3. Connect the device via USB cable to the PC.
4. Power up the device.
5. The new window must pop-up where you will find the .bin file. Otherwise open My Computer and look for Boot Disk drive.
6. Delete the .bin file found in the drive.

7. Copy the new firmware .bin file to the very same window.
8. Power down the device.
9. Unplug the USB cable.
10. Remove the short-circuit from DEF pins.
11. Power up the device.
12. Firmware updated.

4. FW update via ELDES Utility Tool

Once you connect the device to USB and open the Eldes Utility Tool, a firmware update prompt will appear. Simply accept it.

21. RELATED PRODUCTS

Power supply

IP66 - plastic enclosure

PK051 DIN Rail

Made in Lithuania (EU)
eldesalarms.com