TOPKODAS GTalarm3

Installation & Programming Manual



Security and automation system

Multifunctional device: access control + security + home automation

This manual includes steps to install, set up and use your system

DESCRIPTION

Introducing GTalarm3, a powerful and flexible hybrid GSM smart home alarm system and automation solution, designed to secure and monitor various types of properties, including private boats, houses, cottages, village houses, garages, warehouses, and other buildings. GTalarm3 employs IoT Cloud GSM technology, allowing for remote monitoring and control of temperature and humidity, making it suitable for a wide range of applications.

FEATURES

- Reporting:
 - 8 cellular numbers through SMS
 - 8 cellular numbers Alarm calls
 - Android / iOS SERANOVA app push notifications.
 - Reporting system events to a central monitoring station using Internet Protocol Event Reporting with event type Contact ID. IP communication data is sent using the SIA IP DC09 standard protocol, which supports Ping supervision, AES128 Encoding, TCP/IP or UDP/IP via GSM GPRS. The supported versions of SIA DC09 standards:
 - ANSI/SIA DC-09-2007
 - ANSI/SIA DC-09-2012
 - ANSI/SIA DC-09-2013.
- Support for up to 32 wired zones for various security applications.
- Compatibility with 2-Wire or 4-Wire sensors for fire alarm systems.
- Built-in access control features. Access control for gates, doors, barriers, and more.
- Multiple methods for remote control and monitoring:
- Android / iOS / WEB-based SERANOVA APP allowing control system from any OS device from anywhere
- SMS-based communication for system control
- CALL for easy device management
- Web app compatible with standard web browsers for increased accessibility
- Six ways to control PGM outputs and ARM/DISARM security system: Call, App, SMS, RFID, iButton, or Code.
- Up to 8 users can receive information about the protected object via SMS or DIAL short call.
- Remote configuration and monitoring via cloud service.
- 4 PGM outputs 24V/1000mA. Open Drain.
- 3 Input/Output Configurable. Analog inputs 0-30V / 4-20mA
- Up to 32 precision temperature and relative humidity sensors.
- Support for up to 32 sensor monitoring and control points with multi-point thermostat functionality
- Thermostat and automation support for up to 32 digital sensors, ideal for various temperature-sensitive environments.
- Controls heating or cooling equipment as well as humidifiers or dehumidifiers.
- Adjustable temperature set levels, relative humidity levels, and the differential between high and low set points.
- Ability to calibrate sensors.
- Custom units for sensor values.
- Sensors keep constant track of temperature and humidity levels.
- Programmable sensor hysteresis, control, alarm, restore values, and time delay.
- Remote configuration and control via GPRS connection, USB with SERA2 software, or the free SERANOVA app
- In-field firmware upgrade via USB and SERA2 software.
- Built-in access control features.
- Events log buffer. 3072 events.
- Built-in real-time clock backup battery.

GTalarm3 can be programmed remotely via GPRS connection or via USB using SERA2 upload/download software or the free app SERANOVA. This system is designed for ease of use and offers installers labor-saving features such as the ability to save configurations and transfer them to other modules when needed.

The GTalarm3 system is a comprehensive solution for installers looking to address security, access control, and home automation needs.

APPLICATIONS

The GTalarm3 system offers a wide range of applications across various sectors, ensuring the security, comfort, and efficient management of different environments. Here are some key applications:

- **Residential Security**: GTalarm3 can be used to secure homes, apartments, cottages, and village houses. It provides a comprehensive security solution with up to 32 wired zones, access control, and remote monitoring through the SERANOVA app.
- Boat Security: GTalarm3 can be adapted to secure private boats, yachts, and other marine vessels, providing protection against theft, fire, and unauthorized access.
- Commercial Security: GTalarm3 is suitable for securing commercial spaces such as offices, retail stores, and warehouses. Its access control features can help manage employee access and track entry/exit events.
- Temperature and Humidity Control: GTalarm3 can be used for managing the temperature and humidity in various environments, including greenhouses, server rooms, and storage facilities for temperature-sensitive goods like food, medicines, and agricultural crops.
- Fire Alarm Systems: GTalarm3 supports 2-Wire or 4-Wire sensors, making it an ideal choice for fire alarm systems in both residential and commercial settings.
- Access Control: GTalarm3 can be used for managing access to gates, doors, and barriers in residential, commercial, and industrial environments, ensuring only authorized individuals can enter.
- HVAC Management: The system's thermostat and automation capabilities make it suitable for managing heating, ventilation, and air conditioning (HVAC) systems in homes, small offices, and holiday houses.
- Cold Storage Monitoring: GTalarm3 can be used to monitor and control temperature and humidity in cold storage facilities for food, meat, medicines, and vaccines, ensuring optimal conditions are maintained.
- Agricultural Applications: The system is ideal for monitoring and controlling temperature and humidity levels in various agricultural settings, such as greenhouses, crop storage facilities, and growing tents.
- Remote Control and Monitoring: GTalarm3 allows users to remotely control and monitor various devices through its app, SMS, DIAL, and web internet capabilities, providing convenience and peace of mind.

These are just a few of the many possible applications of the GTalarm3 system. Its flexibility and adaptability make it a valuable solution for a wide range of security, access control, and environmental monitoring needs.

DOWNLOAD SERANOVA APP by Scanning the QR Code











The meaning of icons in the manual:





Security system's part



Important

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Contents

1	General information about the module GTalarm3		
	1.1 Specifications		.5
	 Used definitions and terms Package content 		
	1.4 General view of the module		
	1.5 Meaning of LEDs and contacts		9
2	QUICK START: Initial Steps for GTalarm3 and SERA2 Software Preparation	.10)
	2.1 Preparation		
	2.2 Control with free short call	1	10
	2.3 Configuration methods		
	2.3.1 SERA2 software		
	2.3.1.1 SERA2 Software Installation:		
	2.3.1.2 Configuration using SERA2 software 2.4 SERA2/SERANOVA APP Remote connection to module via internet using [SERA could service]		
	 2.4 SERA2/SERANOVA APP Remote connection to module via internet using [SERA could service] 2.5 Control with SERANOVA (Android/iOS) app 		
	2.5.1 Steps to get started with SERANOVA.	1 1	13
	2.6 Control with SMS messages.		
3	System Access: Codes, Passwords, and Permissions		
	3.1 Default Codes/Passwords and Explanations		
	3.2 User codes for access control via keypad and SERANOVA app	1	6
	3.3 Access control. Arming/Disarming methods	1	6
	3.4 Users & Access Control programming details	1	8
	3.5 Wiegand Keypad & RFID Card Reader, iButton Probe Wiring	2	20
4	3.6 Add iButton keys, RFID cards, Phone numbers to the memory of the module WIRING & INSTALLATION	2 20	11 ₹
4	4.1 Power supply, Battery Wiring	.23))2
	4.2 Inputs		
	4.3 Sensors. Security		
	4.3.1 Burglar Alarm sensor zones wiring EOL NO NC		
	4.3.2 Fire alarm and Smoke sensors	2	27
	4.3.2.1 Guidelines for Locating Smoke Detectors and CO Detectors		
	4.3.2.2 [4-Wire] Smoke detector Wiring	2	27
	4.3.2.3 [2-Wire] Smoke Detector Wiring to I/O Inputs		
	4.4 Outputs		
	 4.4.1 Output PGM wiring. Bell, Relay, Led Wiring 4.4.2 Access control output with logging 		
	4.5 Sensors. Automation.		32
	4.5.1 Humidity sensors AM2302/DHT22/AM2305/AM2306/AM2320/AM2321	3	32
	4.5.2 Analog inputs 0-30V, 0-20mA, 4-20mA	3	33
	4.5.3 Temperature sensors Dallas 1-wire DS18b20 installation & recommendations	3	35
	4.5.3.1 Wiring Dallas 1-wire DS18b20		
	4.5.3.2 Temperature sensors Dallas 1-wire DS18b20 Configuration		
	4.5.3.3 How to change temperature scale from Celsius to Fahrenheit		
5	4.5.4 Step by Step: Checking Real-time Hardware and Sensor Status, Receiving Alarms, and Locating Event Lists SERA2 configuration software		
5	5.1 General system options programming		
	5.2 Real-time clock Time Zone and Synchronization	4	11
	5.3 System Fault/ Troubles Programming		
	5.4 Digital Inputs/ Outputs programming	4	13
	5.5 GSM Communication	4	14
	5.5.1 Event Notifications via SMS & DIAL		
	5.5.2 Custom SMS Text		
	5.5.3 Network/SIM Card/GPRS/LTE programming.		
	5.5.4 Central Monitoring Station details programming. Reporting to the Central Monitoring Station (CMS)		
	5.7 Outputs. Bell & PGM programming		
	5.8 Automation & Sensors Programming		
	5.8.1 Automation/Sensors (Automation/Sensors/Analog Inputs) Programming in SERA2 Software		
	5.8.2 Recommendations for the user & installer	5	52
	5.8.3 Realtime Testing & Monitoring > Sensors/ Automation	5	53
	5.1 Event List		
	5.2 Events Log		
	5.1 Real-Time Testing & Monitoring of Hardware 5.1.1 RT Testing & Monitoring Security Alarm Panel/ Access		
6	5.1.1 RT Testing & Monitoring Security Alarm Panel/ Access SMS Commands for remote control and configuration		
U	6.1 The table of installers SMS commands		
	6.2 The table of users SMS commands		
7	System Info of device and Firmware Updates	.63	3
8	Warranty Terms and Conditions	.64	ŀ

1.1 Specifications



Parameters of built-in GSM module:

Quad-band (850/900/1800/1900 MHz) Optional 3G ,4G LTE bands Sending of SMS messages Receiving of calls and dialing Data download/upload via GPRS network

Outputs (PGM) OUT1-OUT4:

max current – (-V) 1000 mA; All outputs can be controlled via short call DIAL or via SMS message. This feature may be used for gate opening.

Output alarm parameters may be programmed; Programmable algorithms for outputs operation: CTRL/SMS/DIAL, SIREN, BUZER, ARM state, Zones OK, Light; Flash, inverting, pulse mode

IN1 - IN4 inputs:

Custom SMS text for input alarm and restore; Burglary alarm zones. Input type NC/NO/EOL/EOL+TAMPER 2.2K + 2.2K; 10K pull up resistor; Analog input 0-30V; Algorithm for zones operation: delay, interior, instant, 24 hours, silent, fire; Response time; Time of repeatable Alarm/Restore; Commutation of selected output;

Inputs/outputs I/O1, I/O2, I/O3:

Programmable input or output; Burglary alarm zones. Input type: Input type NC/NO/EOL/EOL+TAMPER 2.2K + 2.2K; Analog 0-30V/0-20mA/4-20mA; Current loop 2-wire smoke detector mode.

Digital inputs/ outputs D1-D3:

Dallas 1-Wire Bus, DS18b20, DS1990A; Aosong 1-Wire bus Humidity Sensor AM2302 DHT22 AM2305 AM2306 AM2320 AM2321; Wiegand interface DATA0/ DATA1, RFID reader, Keyboard;

The total length of the bus from 10 to 100m.

Expansion modules or programmable input/output:

Expandable inputs up to 32 Expandable outputs up to 32

Module control:

ARM/DISARM of the security system via: Free SERANOVA app (Android, IOS, web) SMS message 800 users short call DIAL 800 users Maxim-Dallas iButton key (iButton DS1990A – 64 Bit ID)) 800 users. Wiegand keypad code or RFID keycard or key fob 800 users

Automatic periodical test:

Test sending in a form of SMS message. Periodicity for communication control messages (tests) from 1 to 99 nights and days according to selected time. Or fixed periodical interval 1-99999 minutes.

Noce resistant MIC and Speaker (Optional feature)

Power supply voltage:

DC 8-30 V / 300mA max Max. Allowed ripple voltage 100mV.

Consumption current:

In standby mode less than 50 mA. In dialing or SMS/GPRS sending mode less than 300 mA.

Events Log:

Nonvolatile flash events log 3072 events

4.5V power source output for external modules: Voltage 4.5V Current limit 100mA

Environmental parameters:

Storage temperature range from -40 to +85 °C / -40 to 185 °F Operational temperature range from -30 to +75 °C / from -22 to 167 °F Max relative humidity under +40 °C / 104 °F 95%

Package weight 90g

Module weight: 43g Overall dimensions of the module: 84x66x18mm

1.2 Used definitions and terms

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Term	Description
Alarm Log	Records of active alarms or alarms that were raised and resolved, useful for problem analysis.
Arming/Disarming	The process to activate or deactivate the system's security.
Authorized user	A person with a mobile number registered in the GTalarm3 module. Multiple users with equal rights can be added.
Backup battery	The secondary power source of the system. In case of a main power failure, the backup battery will take over.
Bell squawk	Siren signals indicating arming (2 short beeps) and disarming (1 long beep). Default is off.
Bypass/Activate Zone	Allows disabling a compromised zone for arming. The zone is ignored if breached while armed and stays bypassed till disarmed.
Caller ID	The identification of the caller.
СОМ	Negative power supply terminal.
Configuration	Setting the operational parameters of an item, like phone numbers, input names, and more.
CMS	Central monitoring station
DIAL	The system makes a call to the number specified.
Diagnostic Tool	When using Configuration tool software, you may monitor system inputs/ outputs, view changes of peripheral devices, instantly configure necessary options, for example, enabling/disabling PGM outputs, etc.
Entry Delay	Countdown initiated upon violation of a Delay-type zone. If disarmed before expiry, no alarm triggers.
EOL	(End of line resistor) input type with resistor.
Event	The information that the user receives.
Event Log	Recorded system events for analysis. Logs actions, configurations, and info messages.
Exit Delay	Time after arming for users to leave the secured area.
Fault	An issue preventing normal system operations. The system can diagnose and notify of faults via SMS.
iButton key	A unique 64-bit ID code containing chip enclosed in a stainless steel tab usually implemented in a small plastic holder. The module supports up to 800 iButton keys each holding a unique identity code (ID), which is used for system arming and disarming.
Installer	a person provided with INST (installer's) password
Master/User Code	Allows to carry out system arming/ disarming as well as minor system configuration and control
Normally closed (NC)	It is a switch that passes current until actuated.
Normally open (NO)	It is a switch that must be actuated to pass current.
Periodic Test Event	Regular system updates like date, status, signal strength, and more.
Pull-up resistor	Is that it weakly "pulls" the voltage of the wire it is connected to towards +V (or whatever voltage represents a logic "high").
PGM output	A PGM output is a programmable output that toggles to its set up state when a specific event has occurred in the system or if the user has initiated the PGM output state change manually.
Ping period	Sets period of time defining how often the module sends ping data packet to the server.
CMS	Central monitoring station
Service messages	ARM/DISARM, test, resetting of the system.
SSR	Solid State Relay
SMS forward	System can re-sent all incoming SMS messages to the specified users. It is useful if the GSM operator of the inserted SIM card sends some useful information (SIM card validation or payment account status and etc.) or it is necessary to monitor all incoming SMS messages by specified user.
User	It is a person being aware USER password.
Zone	Detection devices such as motion detectors and door contacts are connected to the alarm system's zone terminals.
Zone state/status	Indicates a zone's condition: violated or restored.
+V	Positive power supply terminal.





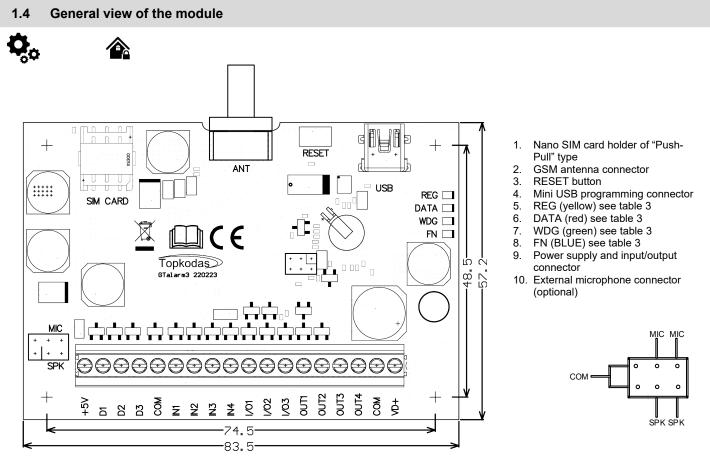
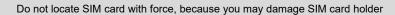


Figure 1 GTalarm3 PCB Layout

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			ication variations	Meaning					
	een) built-in		tchdog heart beat blinking, remains lit 50ms, and turns off after 1000ms.	The module is functioning.					
LED		Off		The module is out of order or no voltage					
			hts continuously	Modem has been registered to the network					
REG (yel	llow) built-in		shes, remains lit for 50ms, turns off for 0ms	Modem is being registered to the GSM network.					
LED			king fast, remains lit for 50ms turns off 50ms	PIN code of SIM card error. PIN code request should be removed					
		Off		Modem failed to register to the network.					
DATA (re	ed) built-in LED		hts continuously	The memory of the module contains unsent reports to the user or to the server.					
		Off		All reports has been send.					
FN			nction LED	The programmable FN LED indicates functions like Input/Output status or system state.					
able 4 T	erminal block	t. Con	tacts.						
Contact No	Name	Max. voltage (V)	Optional functions and Description						
	_		Positive supply contact						
1	VD+	30	Power supply voltage	DC 8-30 V / 300mA max, Max. Allowed ripple voltage 100mV.					
1			Current in standby mode	<50mA					
-			Current when sending data	<300mA					
2	СОМ		Negative supply terminal for keyboard(s)						
	OUT1			rain type. When state is ON, connects internally to COM					
3 6	OUT4	30	Max available current	1000mA					
			Max available voltage	30V					
				The zone for security system NC/NO/EOL/EOL+Tamper					
7 0		30	Programmable functions	Output 20mA					
79	I/O1-I/O3	30	Ŭ	Analog current input 0-20mA					
			Max available voltage	Analog voltage input 0-30V 30V					
				Input with 10K resistor to the VD+ (Pull UP)					
			Programmable functions						
1013	IN1 IN4	30		Zone: NC, NO , EOL=2.2kΩ , EOL+ Tamper = 2.2K+2.2K Analog input 0-30V					
			Max available voltage	30V					
14	СОМ		Negative supply terminal for keyboard(s)						
1-	00111								
				Digital output					
			Programmable functions	Digital input					
15	D3	3.3	Programmable functions	Digital input Dallas 1-Wire bus. DS18b20, DS1990A					
15	D3	3.3	Programmable functions	Digital input					
15	D3	3.3	Programmable functions Max available voltage	Digital input Dallas 1-Wire bus. DS18b20, DS1990A Aosong 1-Wire bus. Humidity Sensor AM2302, DHT22, AM2305, AM2306					
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2 QUICK START: Initial Steps for GTalarm3 and SERA2 Software Preparation



🕨 YouTube 🗆

QUICK START <u>https://youtu.be/NR35lbFdi8A</u>

2.1 Preparation

1

- Screw on the gsm antenna.
- Insert the SIM card in the SIM card holder. (Ensure that PIN request function is disabled. Ensure that mobile internet service (mobile data) is enabled if mobile app or IP connection with CMS will be used)
- Connect power supply.
- Wait for the controller to register to the GSM network

2.2 Control with free short call

The first one to call the controller will become the system administrator/owner. The controller automatically rejects the call and will be the only one who can administer and control the controller with free short call, SMS commands. When calling GTalarm3 for the first time, the phone number is stored in the module memory automatically. This means that it will be possible to control the first output OUT1 and ARM/DISARM the system with a short, free call. If this is enough, GTalarm3 can be installed without additional configuration.

CALL THE MODULE FROM YOUR MOBILE PHONE, AND YOU WILL RECEIVE AN SMS FROM THE MODULE.

2.3 Configuration methods

It is possible to configure device in following methods:

- SERA2 software via USB
- SERA2 remote connection over internet Cloud service
- SERANOVA app

SMS text commands. For more details, see: <u>6.1 The table of installers SMS commands</u>Error: Reference source not found

In order to configure and control the device by SMS text message, send the text command to the GTalarm3 SIM card from one of the listed administrator phone numbers.

2.3.1 SERA2 software

SERA2 software is intended for GTalarm3 configuration locally via USB port or remotely via 'SERA Cloud Service' internet GPRS/LTE 2G/3G/4G network. This software simplifies system configuration process. SERA2 software is free, which you can download from our website: www.topkodas.lt

RA2 Software Installation:

- 1. Visit http://topkodas.lt/ and download the SERA2 software.
- 2. Locate and open the folder containing the SERA2 software installation files. Click on "SERA2 setup exe."
- 3. If the installation directory is correct, click [Next]. To choose a different directory, click [Change], specify the desired installation directory, and then click [Next].
- 4. Verify the entered information and click [Install].
- 5. Once the SERA2 software installation is successful, click [Finish].

2.3.1.2 Configuration using SERA2 software

With SERA2 software you can change the controller's settings (if default settings are not enough)

- Download and Install and open free SERA2 configuration & Diagnostic software: https://www.topkodas.lt/Downloads/SERA2_Setup.exe
- Connect the controller to a computer using a mini USB cable.
- The program will automatically recognize the connected device and will automatically open the controller configuration window.
- [Menu > Read] will read configuration of device and show current settings of device.
- [Menu > Write] will save the settings made in the program to the device.
- [Menu > File > Save] will save the settings into a configuration file. You can upload the saved settings to other Devices later. This allows to
 quickly configure multiple devices with the same settings.
- [Menu > File > Open] will allow to choose a configuration file and open saved settings.
- If you want to revert to default settings, go to Update in the command line and update FW. Or press [Menu->File->Restore Default]

 @ SERA2 (PROGATE)

System Options SSM Communications Jsers/Access control	Zones		Keyswitch Zone Mode:	Level ~														
nputs/Burglar Alarm Zones	Setting	s																
outputs (PGM)	Zr	Zn Nam	e Zone Hardware Input	Definition	Туре	CID	Bypass	Tamper	Shutdown	Force Report	A Report F	Speed	Repeat	SMS Text on Alarm	SMS Text on Restore	Alarm Limit	OUT	R de
utomation/Sensors		1 Gate	PROGATE, IN1	24 hours (silent)	NC	150			~			300ms	300s	is fully opened		10	N/A	E
ent Summary ents Log		2 Gate	PROGATE, IN2	24 hours (silent)	NO	150			V		-	300ms	300s	is partal opened	is closed	10	N/A	Γ
tina&Monitorina		3	Zone Disabled	24 hours (safe)	NO	133	Γ					300ms	600s	Case Tamper alarm	Case tamper restore	5	N/A	Г
iware		4	Zone Disabled	AC power loss	NO	301						200ms	600s	Alarm 4 Text	Restore 4 Text	5	N/A	Γ
		5 Zone Name	5 Zone Disabled	24 hours (safe)	NO	133	V		V	V V	V	200ms	600s	Alarm 5 Text	Restore 5 Text	5	N/A	E

Figure 2SERA2> Inputs/ Burglar Alarm Zones



2.3.1.1

SE

- System Options - GSM Communications - Users/Access control	Outp	outs Scheduler Holidays																			
Inputs/Burglar Alarm Zones														Schedules							
Outputs (PGM) Automation/Sensors Event Summary Events Log Testina&Monitoring	10	Output Location in Hardware	Output Name	Out definition	No	Mode	Timer	Invert	Pulsating	ON Time	OFF Time	Count	Input	1 :	2 3	4 :	67	8	[ON] Event Text	[OFF] Event Text	E F
	1	PROGATE, RELAY	Gate	Access Control	N/A	Pulse	2s			100ms	100ms	0	N/A		П				PGM control pulse	OFF Text	V [
	2	PROGATE, IO1 (1A)	OUT2	Disable	N/A	Steady	10s			100ms	100ms	0	N/A		ПГ				ON Text	OFF Text	
	3	PROGATE, IO2 (1A)	OUT3	Disable	N/A	Steady	10s			100ms	100ms	0	N/A		ПГ				ON Text	OFF Text	
-Firmware	4	PROGATE, 1VV (10mA, Max Voltage	OUT4	Disable	N/A	Steady	10s			100ms	100ms	0	N/A		П				ON Text	OFF Text	

System Options GSM Communications Users/Access control		Control Users table	de on USER 9 2	s 🗌 Auto Call Answer	ng	🖶 Export C	SV file	🚽 🔂 Import C	SV file			
nputs/Burglar Alarm Zones	Users	Access Shedules Holidays										
Outputs (PGM) Automation/Sensors		Q							Temporary access	Date/Time window	Access schedules	Counter
Event Summary	ID	En User Name	User Tel.	iButton Code	RFID Keycard	Keyb Code	OUT	ARM/DISARM	En Start Date	Expiration Date	1 2 3 4 5 6 7 8	LCE
Events Log	001.A	🔽 Kestutis Repecka	+37068	000000000000	0000000000	999999	OUT1		2022-06-22 15:13	2022-06-22 🛗 15:13		o o 🗙 l
	0024	Zivile	+37062	000000000000	0000000000	999998	OUT1		2021-11-12 17:15	2021-11-12 🛗 17:15		o o 🗙 🛙
Testing&Monitoring								-				🖬 r
Testing&Monitoring Firmware	003A	🔲 User Name 3	+	000000000000	0000000000		NONE		2021-11-03 1 09:20	2021-11-03 🚞 09:20		U U 📈 I

Figure 4SERA2> Users/ Access control

GSM Communication > SERA Cloud Service The TCP/ IP Remote Control window let you set basic TCP IP remote control settings and enable or disable remote communication. SERA Could Service – is used for remote connection to device via internet using SERA2 or SERANOVA app. Imortant! If there is no data plan on your SIM card. [SERA Cloud service] must be deactivated. Using SERA2 or SMS command: Imortant! If there is no data plan on your SIM card. [SERA Cloud service] must be deactivated. Using SERA2 or SMS command:								
Imortant! If there is no data plan on your SIM card. [SERA Cloud service] must be deactivated. Using SERA2 or SMS command:								
,我们就是你们,我们就是你们,我们就是你们,你们就是你们,你们就是你们,你们就是你们,你们就是你们,你们就是你们,你们就是你们,你们就是你们,你们就是你们,你们不 第二章								
 What can be done remotely connecting to a module over the internet? Use SERANOVA app (Android, IOS, WEB) Use SERA2 windows software remotely via internet. Configure system parameters Full Hardware Monitoring system status, input voltages including temperature sensors, GSM network parameters level. Update the module's firmware. Read log 								
 How does it works? Connection Protocol: A GPRS/LTE-backed TCP/IP protocol. Connecting Platform: The GSM module links through GPRS/LTE to the SERA cloud server. UID (IMEI) used when connecting: the SERA2 tool establishes the connection using the unique IMEI of the module. Communication Pathways: GTalarm3 ↔ [SERA Cloud Service] ↔ SERA2 GTalarm3 ↔ [SERA Cloud Service] ↔ SERANOVA app (compatible across Android, iOS, and standard web browsers like Firefox, Chrome, etc.) SERA Cloud Server's Role: Forms a tunnel between GTalarm3 and either SERA2 or the designated app, enabling mutual communication via TCP protocol. Note: Ensure the GPRS service is activated on the SIM card used in the GSM module. Typically, this service is automatically 								

activated. If not, contact your GSM service provider to initiate it. It's recommended to use a SIM card that has a mobile data plan. On average, the module consumes between 10-50MB of mobile data monthly.

③ SERA2 [GTalarm3]

System Options

Outputs (PGM)

Event List Event Log Bus Modules

Firmware

GSM Communications

Users/Access control Inputs/Burglar Alarm Zones

Automation/Sensors

Testing&Monitoring

📄 Eile 🔌 Settings 🔒 Devices 🛽 🖲 Read (F5) 🛛 🖓 Write (F6) 🛑 Update

Event Reporting/Communication

1234

internet

SIM Card settings

SIM Card PIN:

APN:

Login:

Password:

SMS/DIAL reporting Custom SMS Text Network / SIM Card CMS Reporting

GPRS Service Specifications:

- Activation is mandatory for the GSM module's SIM card.
 - Typically, GPRS service activates by default. If not, contact the GSM service provider for activation procedures.
- Employ a SIM card with a data plan enabled.
- Data Consumption Estimation: Between 10 to 50MB monthly.
- Setting up Remote Control over the Internet: • Install SERA2 software.
 - Navigate to SERA2>GSM Communications>Network/SIM Card tab.
 - Generation Servaz-GSW Communications>Network/SIM Card tab.
 Configure APN, Login, Password (information from network provider).
 - Access SERA2>GSM Communications>SERA Cloud Service tab.
- Activate [SERA Cloud Service] with default settings. Sync the updated configuration to the module via the [Write] option.
 - Ensure the APN is accurately set. An incorrect APN may disrupt data and VoLTE services. Consult your network provider for the correct APN details.

③ SERA2 [GTalarm3]					_		×
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System Options	Event Reporting/Com	nunication					
GSM Communications	SMS/DIAL reporting	Custom SMS Text	Network / SIM Card	CMS Reporting	SERA Cloud	Service	
Users/Access control Inputs/Burglar Alarm Zones Outputs (PGM) Automation/Sensors	Enable	a as	ERA Cloud Service (D)efeult)			
Event List Event Log	IP or Domain:	cloud.topkoda:		(crucit)			
Bus Modules Testing&Monitoring 	Remote Port:	10000					
Firmware	APP Key:	123456					

Enable	Toggle to activate/deactivate remote internet control 'SERA Cloud service'.
IP or Domain	Set to either IP (xxx.xxx.xxx) or domain (default: cloud.topkodas.lt).
Remote Port	Default port is 10000; ensure no firewall interference.
Encryption Key	Server encryption key. Default value set to 123456.

Steps to connect remotely to device via internet using [SERA Could Service]::

- Insert the SIM card into the module.
 - Use the same AppKey (default: 123456) across the module and SERA2 app.
- Ways to get device IMEI (UID):
 - First call to module. The caller will receive a greeting SMS with the IMEI of the module.
 - By sending an SMS command: INST000000_100_1
 - Run SERA2 and connect device to USB. Go to: SERA2 > System Options
 > System Info.
- To connect, use the module's UID (IMEI) and AppKey (default: 123456).
- Confirm matching App Key on the device with SERA2 or SERANOVA for remote connection.
- Click the [Connect] button. Wait for a 'TCP connected' notification to appear.



③ SERA2 [PROGATE]									
📄 Eile 🔌 Settings 🔒 Devi	ices 🛛 🐺 <u>R</u> ead (F5)	🚆 <u>W</u> rite [F6]	🛑 <u>U</u> pdate	<u>()</u> elp					
System Options	Event Reporting/Comm	nunication							
- GSM Communications - Users/Access control	SMS/DIAL reporting	Custom SMS Text	Network / SIM	1 Card CMS Reporting	SERA Cloud Service				
Inputs/Burglar Alarm Zones			A						
- Outputs (PGM)			SERA2						
- Automation/Sensors	Enable	🗹 🗆 s	📄 File 🔌 S	Settings 🔒 Devices	🐺 Read [F5] 🛛 🞇 V	/rite [F6] 🛛 🛑	Update 🖏 Help		
Event List Event Log	IP or Domain:	cloud.topkoda:							
- Testing&Monitoring		10000	Progran	n Settings					
Firmware	Remote Port:	10000							
	APP Key:	•••••	Languag	je: English	~	🗹 Check 1	for Updates Automatically		
	MC • 🏖 Demo User •	Λ	Remote	e connection to the devic	e over internet				
System Profile	^		IP/Dom	ain	cloud.topkodas.lt		Use default SERA Cloud Service	vice	
System Name DEMO			Port		10001				
Enter the same APP Key as prog Cloud Service]	ramed in device [SERA					Select unique de	evice identifier UID (IMEI,MAC) fro	m the list of connect	ion history
Default APP Key:123456			Device	UID/IMEI/MAC					
Арр Кеу * 123456	0		System	n Name (Optional)					
Object Address	676		App Ke	эу	•••••				
TCPKODAS office	15 / 100						Connect		Disconnect
User Access Code									

If needed, APN/Password/Login/IP/Domain/ Port /PING time /KEY can be set by SMS commands GPRS network settings Remote control of the module over the Internet.

INST000000_008_APN#LOGIN#PSW#	INST000000_009_ADDR#PORT#PING#KEY#
008: Command code	009: Command code.
 APN: Access Point Name (31 char. max). 	• ADDR: IP address (format xxx.xxx.xxx) or domain (up to 47 characters).
LOGIN: User login (31 char. max).	PORT: TCP port number (range: 1 to 65535).
PSW: Password (31 char. max).	PING: Ping time =600
	KEY: App Key. Default is 123456).
Device UID/MEI/MAC 366259020001221	X Clear History
861785003954330	
868259020001221	

SERA2 software can remember all IMEI that was entered in the past. If needed to clean the list UID/IMEI, press "Clear History".

2.5 Control with SERANOVA (Android/iOS) app

With the **SERANOVA** app, users will be able to control gates and other devices remotely, as well as administer users, view system status and push notifications, and view a log of all events.

2.5.1 Steps to get started with SERANOVA

To use the **SERANOVA** app or the **SERA2** remote connection. The **[SERA cloud service]** needs to be activated by using the **SERA2** or SMS command e.g. **INST00000_010_1**. <u>By default **[SERA cloud service]** service is activated</u>.

Imortant! If there is no data plan on your SIM card. **[SERA Cloud service]** must be deactivated. Using **SERA2** or SMS command: **INST000000_010_0** Otherwise the module will stop working due to a lost data connection.

SMS command to set APN DATA/GPRS/LTE network settings. Some networks require exact APN name to be entered, otherwise data connection will not work. Network APN can be configured using SERA2 via USB or following SMS command:

INST00000_008_APN#LOGIN#PSW# where: APN=the name of network APN default="internet", LOGIN=login leave empty if not used; PSW =password leave empty if not used.

e.g.INST000000,008 internet### where APN='internet'; no LOGIN; no PSW

Install the app. Scan a QR code with your phone or start it on the web.



Free WEB SERANOVA app https://seranova.eu/login SERANOVA website https://www.topkodas.lt/SERANOVA-app/



SERANOVA app for iPhone iOS: https://apps.apple.com/app/SERANOVA-smart-home/id1596644632?platform=iphone Android SERANOVA app: https://apps.apple.com/store/apps/details?id=com.SERANOVA.cloud&hl=en&gl=US

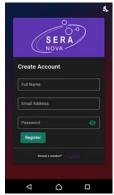
- 2. **Register** or sign in to your account.
- 3. How Get IMEI: To add a system, the device's IMEI is required. Obtain the IMEI by:
 - Making the initial call to the device. The first caller becomes the owner and administrator and receives an SMS with the IMEI from GTalarm3. Copy the IMEI, which serves as the module's UID and allows connection to the free SERANOVA app.
 - Sending an IMEI request SMS command INST000000_100_1 to the controller's SIM card number. The sender will receive an SMS response with complete device information, including the IMEI.
 - Reading the IMEI via USB using the SERA2 configuration program from System Options > System Info

4. Add new system to the app

- Enter the IMEI (UID) you copied from the SMS or SERA2 system information
- Enter App Key (default: 123456).
- Enter the User Access Code (default: 123456). Without a user access code, the system cannot operate. This code serves as both the user ID and password within the system. Each user must have a unique code, which is located in the user table. The system administrator creates and provides these codes to each user.
- Phone number of system
- Enter system name.
- Press [SAVE].
- 5. How to add a new user
 - New users must download the SERANOVA app. Create an account, login with his email and password
 - System owner or administrator goes to SERANOVA> Menu> Users> [Add new User]

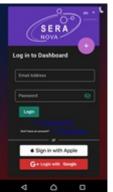


- To enable a user to log in to the system, the owner must enter the user's email and user code (with which the system will be operated. This is the user ID and password). This is enter the user email that was used to create the SERANOVA account. Enter User code (Default 1234), Phone number, Set Output for control, User privileges: admin or user
- Enter a valid email address of a user who already has a SERANOVA account. The system will be automatically added to the user's 1 account. If the user is added without a valid SERANOVA account email. The user can create a SERANOVA account later and add the system manually.



1.Install SERANOVA app 2.Create account





3.Log In

4. The first person to call the GTalarm3 SIM card number becomes the owner and administrator.



Go To SERANOVA> Menu> 8. Outputs. Edit settings

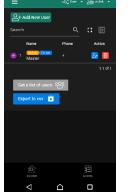
9. Select pulse or level

着 Add New Sy UID/IMEI/MAC \triangleleft 5



7. The system is now manageable GTalarm3 sends a message with the IMEI

6. Enter the IMEI and App Key (Default 123456), Enter User access code (Default 123456)



10. Go to SERANOVA> Menu> Users: Press [Add New User] Owner or administrator can add other users or administrators



11. Enter the email used to create the SERANOVA account, along with your unique user code. Please note, system control is not possible without this user code.

How to add additional system (unlimited number) to SERANOVA app: Go to SYSTEMS, Choose Add new system and enter the controller Unique ID (IMEI) number. IMPORTANT: When adding the controller to SERANOVA app:

- The [Sera Cloud Service] must be turned on. 1.
- 2. The power supply must be connected
- 3. Device must be registered in to network and have mobile data plan

Set valid APN of the network. Ask your network provider for valid APN. (default: 'internet') 4 More help how to setup device and app could be found here:

🕨 YouTube 🗆

QUICK START SERANOVA app

https://youtu.be/Benf6xKcnjM

2.6 Control with SMS messages

Control the RELAY output with this SMS command: Activate or deactivate selected output USER123456_021_N#ST 021= command code (Activate or deactivate selected output N) N = output number ST= output mode: 0 - deactivated output, 1- activated output E.g. send SMS: USER123456_021_1#1 to activate OUT1. Output pulse activation for the time interval USER123456_022_N#TIME# 022= command code,

N = output number 1-32;

TIME = 0-999999 Time interval in seconds for the output activation.

e.g. USER123456_022_2#5# Activate OUT2 for 5 seconds

3 System Access: Codes, Passwords, and Permissions

3.1 Default Codes/Passwords and Explanations

Password	Default	Location in SERA2	Explanation
Administrator password	123456	SERA2> System Options> Access	The 'Administrator password ' allows full module configuration access. The system administrator can adjust device settings, update firmware, and set permissions for the Installer , specifying which parameters they can modify. This ensures protection of sensitive data such as IP addresses, phone numbers, and other confidential information.
Installer Password	000000	SERA2> System Options> Access	The 'Installer password' allows sending SMS commands with INST identification and provides access to SERA2's programming mode. However, the Installer can only modify or see those module settings in SERA2 that the system administrator has granted permission for. Refer to section <u>6.1</u> for more details.
SMS User Password	123456	SERA2> System Options> Access	The ' SMS User Password ' permits sending SMS commands with USER identification. The user phone number must also be authorized for remote or SMS control. The default SMS user password is 123456, used for module control with USER commands. Refer to section <u>6.2</u> for more details.
Арр Кеу	123456	SERA2> GSM Communications> Sera Cloud Service	The 'APP Key ' links to the 'SERA Cloud service' , allowing remote access through the SERA2 or SERANOVA app. For a successful connection, the code must match on both the device and app. For users with multiple systems, <u>use the same</u> ' <u>App Key'</u> across <u>all systems</u> . Different App Keys on the same SERANOVA account can cause functionality issues.
User Code (APP/Keyboard)	123456	SERA2> Users/Access> Users Table[Code] column	The 'User Code' is a unique identifier for controlling the system via the SERANOVA app or Wiegand keypad. The default Master Code is 1234 or 123456, based on the format. This code must match on the device and in the SERANOVA app under Settings > System Profile > User Access Code. Without the correct code, users cannot control the system.
SIM card PIN	1234	SERA2> GSM Communications> Network/SIM Card	It is automatically ignored if pin request in SIM card is disabled

SERA2 [PROGATE]

File 🔌 Settings 🔒 Devid	System	rite (F6) 🛛 🛑 Update	(Second		
GSM Communications Users/Access control	General System Options Sy Access	/stem Fault/Troubles Sy	stem Info Access	•	
Inputs/Burglar Alarm Zones Outputs (PGM) Automation/Sensors Event Summary	Administrator password:	••••• (6	symbols)	Allow Installer to see and edit	such fields
Events Log Testing&Monitoring Firmware	Installer Password:	••••• (6	symbols)	CMS reporting	
	SMS User Password:	••••• (6	symbols)	SMS/DIAL reporting Users/Access control	
BOB	Show passwords			Events Inputs/Zones	\square
	Remember password			Outputs (PGM)	
				SERA Cloud Service	

3.2 User codes for access control via keypad and SERANOVA app

Each user requires a unique code for system control via the SERANOVA app or Wiegand keypad. The default Master Code is either 1234 or 123456, depending on the code format. To set this up:

- Choose a 6 or 4 digit user access code format in SERA2> System Options> General System Options > [User Access Code Format].
- The system administrator or installer assigns a unique code for each user in SERA2> Users/ Access control in user table [Code].
- To open the gate, control outputs, or ARM/DISARM the security system via the SERANOVA app, enter your unique code provided by the system administrator in SERANOVA > Settings > System Profile > User Access Code. Each user must have a distinct code.

							_		×
rices 🐺 Read (F5) 🛛 🔐 Write (F6) 👘	<u>J</u> pdate								
Remote Control Users table	on USER 9 2]s [] Auto Call Ansv	vering	en Ex	oport CSV fi	le 😡 I	mport CSV	file	
								Temporar	ry acce
	User Tel.		,						^
	+			1234				Links	
	+	000000000000	0000000000	4	NONE		2023-0	7-27 🛄	15
System Ons General System Options System Options Object Name: SMS/APP Text Charset User Access Code Format:	autt/Troubles System Info Object Name Latin (160 SMS symbols) 4 - Digits ~	Access	System Timers Test Time: Test Period: Entry Delay: Exit Delay:	d01	Gate Device 8618 App Ko 1234: Object. TOPP Jeer Ac 1234	System Profile Name LowelsAAC - Britintititit y - 55 Molecee CODAS office m Phone Numer SAVE	DELETE	Comp Law	
с п п	Remote Control Users table Guest mode Users Access Schedules Holidays D En User Name 001 Master 002A User Name 2 TE Devices Read [F5] Write [F6] System Options System Options Object Name: SMS/APP Text Charset User Access Code Format: APP ARM/DISARM Synchr. mode:	Remote Control Users table Guest mode on USER 9 Users Access Schedules Holidays User Access Schedules Holidays ID En User Name User Tel. OD Master + 0002A User Name 2 + E] System General System Options System Fault/Troubles System Info System Options Object Name SMS/APP Text Charset User Access Code Format: APP ARM/DISARM Synchr. mode: None None	Remote Control Users table Guest mode on USER 9 2 s Auto Call Answ Users Access Schedules Holidays Users Access Schedules Holidays ID En User Name User Tel. ID En User Name User Tel. ID En User Name + 0001 Master + 000000000000 TEI System General System Options System Fault/Troubles System Info System General System Options System Fault/Troubles System Info Access System Object Name: Object Name SystemInfo SystemInfo SMS/APP Text Charset Latin (160 SMS symbols) ~ APP ARM/DISARM Synchr. mode: None ~	Remote Control Users table Guest mode on USER 9 2 s _ Auto Call Answering Users Access Schedules Holidays ID En User Name User Tel. ID En User Name User Tel. ID En User Name User Tel. ID En User Name 0000000000 ID En User Name 2 00000000000 System Strond General System Options System Fault/Troubles System Info System Options Object Name System Timers Test Time: SMS/APP Text Charset Latin (160 SMS symbols) System Pauly Exit Delay: User Access Code Format: 4 - Digits Hole Hole APP ARM/DISARM Synchr. mode: None None Wiegan IVV (1-Wire Bus) Dallas 1-Wire Bus for iButton keys DS1990. Wiegan	Remote Control Users table	Remote Control Users table Guest mode on USER 9 2 s Auto Call Answering Export CSV fr Users Access Schedules Holidays Image: Control User Name User Tel. iButton Code RFID Keycard Code OUT ID En User Name User Tel. iButton Code RFID Keycard Code OUT ID En User Name User Tel. iButton Code RFID Keycard Code OUT ID En User Name User Name 00000000000 00000000000 1234 OUT1 ID Exponse User Name 2 + 00000000000 00000000000 NONE E1	Remote Control Users table Guest mode on USER 9 2 s _ Auto Call Answering D Export CSV file D In Users Access Schedules Holidays D En User Name User Tel. IButton Code RFID Keycard Code OUT ARMDISARM VOI Master + 00000000000 0000000000 1234 OUT ARMDISARM VOI V Master + 00000000000 0000000000 INONE INONE F1 - - - - - - INONE F2 System System Ciptions System Fault/Troubles System Info Access System Prolie System Options Object Name: Object Name State Info State Info State Info SMS/APP Text Charset Latin (160 SMS symbols) Viet IDelay: Viet IDelay: Viet IDEMACC System Trouble System Conto IV(1-VVire Bus) Dellas 1-Wire Bus for iButton keys DS1990. Viet gaard System Prone Numer System System Phone Numer System Dellas 1-Wire Bus for iButton keys DS1990. Viet gaard System <t< td=""><td>Remote Control Users table Guest mode on USER 9 2 Auto Call Answering Image: Export CSV file Image: Export CSV file Image: Export CSV file Users Access Schedules Holidays ID En User Name User Tel. IButton Code RFID Keycard Code OUT ARMDISARM En St ID En User Name User Tel. 00000000000 0000000000 III 2023-0 ID En User Name 2 000000000000 00000000000 IIII 2023-0 ID En User Name 2 000000000000 00000000000 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII</td><td>ices Bead (F5) Write (F6) Update Help Centrel Control Users table Guest mode on USER 9 2 s Auto Call Answering Export CSV Tie User Access Schedules Holidays Centrol System Name User Tel. Def Export CSV Tie Def Expor</td></t<>	Remote Control Users table Guest mode on USER 9 2 Auto Call Answering Image: Export CSV file Image: Export CSV file Image: Export CSV file Users Access Schedules Holidays ID En User Name User Tel. IButton Code RFID Keycard Code OUT ARMDISARM En St ID En User Name User Tel. 00000000000 0000000000 III 2023-0 ID En User Name 2 000000000000 00000000000 IIII 2023-0 ID En User Name 2 000000000000 00000000000 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	ices Bead (F5) Write (F6) Update Help Centrel Control Users table Guest mode on USER 9 2 s Auto Call Answering Export CSV Tie User Access Schedules Holidays Centrol System Name User Tel. Def Export CSV Tie Def Expor

Figure 5User/Access control and System Options> General System Options

3.3 Access control. Arming/Disarming methods



Arming Process:

- **Ready State**: The system will arm if there are no violated zones or tampers.
 - **Unready State**: If any zones are violated or tampers are detected, the system won't arm. Instead, it will notify the user of the infringements either through an SMS to their phone or a push notification in the SERANOVA app. To proceed:
 - Restore all violated zones and tampers.
 - Or, bypass or disable the violated zones, enable the Force attribute, and disable any tampers.

Once set, the system starts an exit delay countdown, giving the user a window to vacate the secured area.

The alarm will be caused even if a tamper is violated while the system is disarmed
 Due to security reasons it is highly recommended to restore the violated zone/tamper before arming the system.
 Voutube ^{LT} Access control: schedules, temporary access <u>https://youtu.be/W5FSvN-Uitl</u>

Access control methods is defined in Sera2> User/ Access control window

SEIVEZ												
File Settings Devices 👸	Read [F5]	🞇 Write (F6) 🛛 🔮 Up	odate About									
- System Options	Remote Com	trol Users table										
- GSM Communications											Temporary access Date	/Time window
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Burglar Alarm Zones Outputs (PGM)	▶ 17 🗖		User	+	000000000000	0000000000		NONE			2019-07-09 17:02:21	2019-07-09 17:02:21
- Automation/Sensors	18		User		000000000000	0000000000		NONE			2019-07-09 17:02:21	2019-07-09 17:02:21

Figure 6Users/ Access control window

SERA2



Arming and Disarming the System Using the SERANOVA Mobile/Web App Press on ARM, ARM (Stay), ARM (Sleep), or DISARM in the Mobile/Web App > System window.

Arm/Disarm by call

- From one of the 800 registered numbers, dial the system's number to arm/disarm or turn off the alarm.
- Unlisted numbers are ignored.
- Calls are free as the system rejects them after recognizing the number.
- Toggle arming permissions for specific numbers in the "Users & Remote Control" settings.

File Settings Devices 🐺 System Options			Write [F6] 📀 Update ntrol Users table	About			r phone number at the output for r	emote control v	ia mohile						
GSM Communications							if it is needed to			fied date	and time —	_		>Temporary access Date	/Time window
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James da Chumban, Alana, Zaman															
- Inputs/Burglar Alarm Zones - Outputs (PGM)	1	_	Master	User	+370		0A0D00037D22	0000000000	*****	OUT1	~	Г		2019-02-25 16:24:26	2019-02-25 16:24:26

Arm/Disarm via SMS

Enter user phone number in the Sera2> Users/ Access control list

The system rejects the SMS text messages containing wrong SMS password even from a listed user phone number. To arm the system by SMS text message, send the following text to the system's phone number USER 123456_030_ST

030= command code (Change security system's mode (ARM/DISARM/STAY/SLEEP)

ST = Security system mode 0-DISARM, 1-ARM ,2-STAY ,3-SLEEP

Arm/Disarm by Wiegand keypad

- Arm or disarm using the Wiegand Keypad by entering the User/Master Code.
- . To cancel arming, re-enter the code during the exit countdown.
- Disarm and turn off alarms by entering a valid user or master code.



SERA2

File Settings Devices 👸	Read (F5) 🛛 🎇 W	/rite [F6] 🛛 🧇 Update	About	🖌 1. Enter	keybutton code								
- System Options	Remote Control Users table / 2. Select the output for remote control via keybutton code.												
GSM Communications	3. Mark if it is needed to control the output via specified date and time												
Users/Access control — Inputs/Burglar Alarm Zones	ID En	User Name	Туре	User Tel.	iButton Code	RFID Keycard	Keyb Code	OUT	ARM/DISARM	MIC	Date En	Start Date	Expiration Date
- Outputs (PGM)	1 🔽 Master		User	+370	0A0D00037D22	0000000000	*****	OUT1	~			2019-02-25 16:24:26	2019-02-25 16:24:26
- Automation/Sensors	1 2 🔽 zivile		User	+370	0000000000000	0000000000		OUT2 🔻				2019-02-25 16:24:26	2019-02-25 16:24:26

Arm/Disarm by iButton key

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Touch any of the 800	iButton keys to the	e reader to arm o	r disarm the system.	
C SED A 2	-			

File Settings Devices 👸	Read [F5] 🛛 🎇 Write [F6]	🧇 Update 🛛 About	(La Da	1 Enter iB	utton code iButt	ons must be	from 0	1 family?				
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- Automation/Sensors	2 🗹 zivile	User		000000000000	0000000000		OUT2				2019-02-25 16:24:26	2019-02-25 16:24:26
								_	_			

Arm/Disarm by RFID key card, keyfob

Touch one of the 800 available RFID keycards to the Wiegand keypad to arm or disarm the system.

If you want to edit existing configuration,

You have to read it press [Read]

Edit settings Write edited configuration press [Write]



More information about how to configure Arming/ Disarming:

3.4 Users & Access Control programming details.

ystem Options SM Communications	Nemote C	Control Users tal	516		_					Temporary access Da	te/Time window	
sers/Access control	ID En	User Name	Туре	User Tel.	iButton Code	RFID Keycard	Keyb Code	OUT	ARM/DISARM Date		Expiration Da	ate
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11//	8 F		User	+	000000000000	0000000000		NONE		2019-09-17 15:42:59	23 24 25 26	27 28
	ARM/ OUT: Thus Keyb RFID In ord	The selected ir different users a <u>Code:</u> Key but <u>Keycard:</u> RFID on <u>Code:</u> iButto er to delete the	s check box is iput will be swi are able to con ton code might) Keycard code on key DS1990 code, it is nec	checked, a user w tched, if a user will trol different objec be entered manu e might be entered A - 64 Bit ID code. essary to enter 00	ally. In order to delete manually. In order to Might be entered ma 0000000000. iButton	r. Preferred input i the code, it is new delete the code, i anually or automat is must be from 01	nay be assigne essary to enter is necessary to cally registered family	r 0000000 o enter 00 I after the	00000 000000000 module enters keys a	ssociation mode.	anal code.	8 01 C52B

ID	User ID
En	User Enabled
User Name	The name of users who will be able to control the module should be entered in this column.
User Tel.	Telephone numbers of users who will be able to control the module by dialing should be entered in this column. User number should be entered with international code.
iButton Code	iButton Maxim iButton key DS1990A - 64 Bit ID code. Might be entered manually or automatically registered after the module enters keys association mode. In order to delete the code, it is necessary to enter 000000000000
RFID Keycard	RFID Keycard code might be entered manually. In order to delete the code, it is necessary to enter 00000000000
Keyb Code	Key button code might be entered manually. In order to delete the code, it is necessary to enter 00000000000
OUT	The selected input will be switched, if a user will call from this number. Preferred input may be assigned to each user's number. Thus different users are able to control different objects.
ARM/DISARM	If this check box is checked, a user will be able to ARM/DISARM the module by dialing.
MIC	If checked, by calling from the specified phone, the controller responds and you can hear what's going on in the premises
Date EN	Temporary access enable
Start Date	Temporary access start date and time
Expiration Date	Temporary access expiration date and time

The GTalarm3 module has User Access Schedules for controlling access. Inputs, outputs, readers, and cards are all set up with schedules that dictate their activation or deactivation times. For example, a user could be granted access to control a specific output from 12:00 a.m. to 6:00 a.m. daily. This time frame, from 12:00 a.m. to 6:00 a.m., Monday through Sunday, is defined as a schedule during which the user can open the Gate. These schedules tab to view User Schedules, click on the "Access Schedules" tab.

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	1												_

USB Connected PROGATE_041912262021_46_SA IMEL80639220300694336 [SN00290D2CC] Figure 8 Users/ Access Control > Users, Users Access Control> Access Schedules and Users/ Access Control> Holidays window

Set time:	RFID/iButton/Phone Programming:
 Navigate to: Sera2 > System Options > General System Options. Set your desired time zone and synchronize the clock. Press [Write]. Wiegand keypad Configuration: Navigate to: Sera2 > System Options > Digital I/O Settings. Configure the following: Digital I/O D2: Wiegand interface DATA0. Digital I/O D3: Wiegand interface DATA1. 	 Go to: Sera2 > System Options > General System Options. Press: "Start iButton/RFID/Phone programming mode." Open: Sera2 > Users/ Access control window. Touch RFID keycards or iButton keys to the reader. Call the module from your mobile. The RFID keycard, iButton codes, and phone number should appear in the list. Navigate back to: System Options > General System Options. Press "Stop programming" (or wait for automatic stop). Adjust settings as needed in the Users/ Access control window. Press [Write].
Periodic, recurring at intervals of time access: access so	chedules, holidays

Let's say need to create a Cleaning Crew schedule as follows: Monday-Friday from 5 p.m. to 1 a.m., and Saturday-Sunday from 8 a.m. to 1 p.m., excluding holidays. This results in three schedules:

- Monday-Friday, 5 p.m.-11:59 p.m.
 - Tuesday-Saturday, 12:00 a.m.-1:00 a.m.
 - Saturday-Sunday, 8:00 a.m.-1:00 p.m.

Holidays are treated as special days, superseding regular weekdays. If a Holiday is set, the controller bypasses the schedule, preventing user access during that period. Each Holiday spans a full day, from midnight to midnight.

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uts/Burglar Alarm Zones	<u> </u>	•						1			Date/Time window		Access so		Counter
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Figure 9 the example of schedule

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The module can be controlled only by these users, whose phone numbers entered in the memory of the module



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Wiegand keypad specifications:

- Wiegand Terminals: D0 / D1
- 26bit Wiegand (Default);
- Keypad Operation: 8-Bit Burst Output. Each single key press as 8-bit code

The 1-Wire interface (1W) by Maxim-Dallas is used for iButton DS1990A keys (with unique 64-bit IDs) and temperature sensors. The system can accommodate up to 800 keys. The first key, automatically registered upon contact with the reader and confirmed by two beeps, is the MASTER key with assigned control functions. The 1-Wire bus length can be up to 100 meters, depending on cable quality and environmental noise

Maxim-Dallas iButton keys (iButton DS1990A – 64 Bit ID)) can be used to ARM/DISARM security panel or control selected output.

- Up to 800 iButton keys can be assigned to the system.
 - The First iButton key could be learned (recorded) by touching it to the reader. Without the need to send any SMS. The first key is the main key (MASTER)

The system will notify about successfully recording of the key into memory by shortly beeping twice via buzzer.

The system will automatically assigns control function (ARM/DISARM).

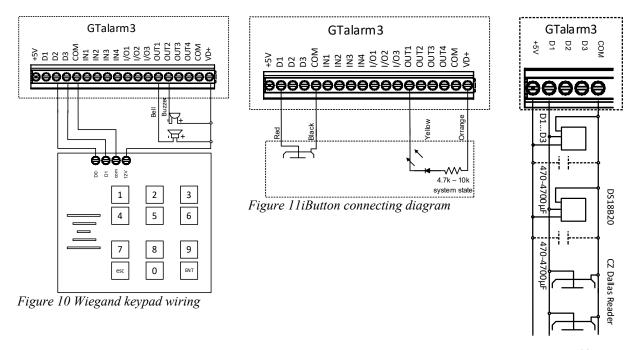


Figure 12 iButton connection diagram

The total length of the bus from 10 to 100 m. Depending of cable quality, and environment noise. If LED is without resistor. External 4.7k – 10k resistor required.

3.6 Add iButton keys, RFID cards, Phone numbers to the memory of the module

First steps:

Connect iButton or RFID reader to the module.

- Insert SIM card;
- Screw GSM antenna;
- Connect power supply;
- Connect the module to the computer.
- 🔼 YouTube 🗆 Enter iButton RFID codes to the memory 🕨 YouTube 🗆 Activate RFID learning mode remotely 🕨 YouTube 🗆 Access control: schedules, temporary access

Start automatic learning mode via mini USB cable (Sera2 software).

Go to Sea2> System Options> Digital I/O settings Set Digital I/O D2 to "Wiegand Interface DATA0"
Set Digital I/O D3 to "Wiegand Interface DATA1"
Press [Write]
Go to Sera2> System Options> General system Options.
Press "Start iButton/ RFID/ Phone programming mode.
Go to Sera2> Users/ Access control window.
Touch RFID keycards to the reader.
RFID keycard number will appear in the list.
Go to System Options> General system Options and
Press "Stop programming" or wait until it will stop automatically.
Edit setting in the Users/ Access control window.
Press "Write"
Go to RT Testing & Monitoring> Hardware.
Press "Start Monitoring"

Go to RT Testing & Monitoring> Security Alarm Panel/ Access

Start automatic learning mode via SMS command INST000000 063 1

Send SMS message: INST000000 063 1 You will receive the message: iButton/RFID/Caller ID Learning Mode is Switched ON Touch RFID keycards to the RFID reader. Sent the message: INST000000 063 0 You will receive the message: iButton/RFID/Caller ID Learning Mode Stopped

INST000000_063_S

INST = Install. Configuration of the parameters. 000000= Installer's password = Space character

063= command code (iButton keys learning/deleting mode) = Space character

S=iButton keys entering/deletion mode.

- Disable iButton keys learning mode, 0-
- Enable iButton keys learning mode, 1-
- iButton keys deleting mode, 2-

Delete these keys from memory, which will be touched to the reader

U SERAZ [GTalarm2]												
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hputs/Burgler Alerm Zones Outputs (PGM) Automation/Sensors	Digital VO D1 Dellas 1-Wire Bus DS1990A/DS18620 Digital VO D2 //Vegand interface DATA0					Protections for Alarm 2 Outputs (PON) Advention Sensors Event Summery	Lones	Otjest Name Latin (190 SMS symbols)				
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-Events Log	L	002		Zivile	+	000000000000		2611250		OUT1	V	
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Firmware	F	004		User Name 4	•	00000000000	000	0000000		NONE		1



Before activating the RFID learning mode via SMS, the module

must have the appropriate System Options> Digital I/O Settings

Users/Access control	General System Optio	ns system radio roubles bigitarina	System ino	
Inputs/Burglar Alarm Zones Outputs (PGM)	Digital I/O D1	Dallas 1-Wire Bus DS1990A/DS18b2	20	•
Automation/Sensors Event Summary	Digital I/O D2	Miegand interface DATA0		•
Events Log RT Testing&Monitoring Firmware	Digital I/O D3	Wiegand Interface DATA1		•
1 innware	BUS	Digital Output		-

Configurations methods:

-Ever

- Firm

- Start automatic learning mode via mini USB cable (Sera2 software).
- Start automatic learning mode via SMS command INST000000 063 1 •
- Enter Keycard numbers manually via mini USB cable (Sera2 software). •
 - Start automatic learning mode remotely via Sera2 software.

https://youtu.be/80yWW_j9pJk

https://youtu.be/4MnPfxH7F04

https://youtu.be/W5FSvN-Uitl

Enter Keycard numbers manually via mini USB cable (Sera2 software).

Go to Sea2> System Options> Digital I/O settings	SERA2 [GTalarm2]						
Set Digital I/O D2 to "Wiegand Interface DATA0"	File Settings Dev	System					
Set Digital I/O D3 to "Wiegand Interface DATA1"	- 36M Communications - Users/Access control - Inputs/Durglar Alarm Zones	General System Opt	ions Dystem Fault/Troubles Digital VO Settings	System Info			
Press [Write]	- Outputo (FON) - Automation/Sensors	Digital VO D1	Delles 1-Wre Bus DS1990A/DS10b20	-			
Go to Sera2> Users/ Access control.	Event Summary Events Log	Digital VO D2	Alegand interface DATA0	-			
Enter RFID keycard number	- RT Testing&Monitoring - Firmware	Digital VO D3 BUS	Digital Output				
Edit other settings			1				
Press "Write"	SERA2 (GTalarm2) File & Settings 2 De	vices 📲 Read (FS)	🎝 Write (F6) 🛑 Update 🕥 Help				- 🗆 ×
Go to RT Testing & Monitoring> Hardware	System Options GSM Communications	Reincte Control Use Users Access S	ers telole				
Press "Start Monitoring"	Users/Access control		9			Temporary access Date/Time window	Access schedules Courcer
Go to Security Alarm Panel/ Access"	Outputs (PGM) Autometion/Sensors - Event Summery	D En U	ser Nome User Tel iButton Code er + DAODC0B3EF26	RFID Keyboard Keyb Code 00000000000	OUT ARMOISARM MIC	in Start Date Expiration Date 2020-02-05 22:16 2020-02-05 22:16	1 2 3 4 5 8 7 8 L C A
Touch the keycard to the RFID keypad.	- Events Log	002 F User	Nano 2 + 00000000000	00500000		2020-02-05 22 16 2020-02-05 22 18 2020-02-05 14 02 40 0200 02 14 02 40	

Remote Activation of Automatic RFID, iButton keys Learning Mode via Sera2 Software

- Launch the Sera2 software.
 - Click [Connect remotely].
- Enter the necessary parameters: IMEI, App Key • (default: 123456).

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- Click [Connect]. Pre-activation Settings go to SERA2>System Options>Digital IO settings tab:
 - For the Wiegand keypad: Set both
 - D2: "Wiegand interface DATA 0"
 - D3: "Wiegand interface DATA 1" .
 - For the iButton probe: Select 0
 - D1: "Dallas 1-Wire Bus".
- Click [Write]. •
- Navigate to: Sera2 > System Options > General System Options.
- Click [iButton/RFID/Caller ID Learning Mode]. .
- Touch each RFID keycard to the Wiegand keypad or • touch each iButton to the reader. A beep from the buzzer will confirm each added card or key.
- To exit, click [Stop programming] or simply wait for the learning mode to conclude on its own.

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- Events Log	SIM Card PIN:	guoge English 💌	Check for Updates Automatically 🔽		
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	Start iButton/RFIDA	ne programming mode Stop	programming		
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SERA2 [PROGATE]

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- Users/Access control	F	_		0								
Inputs/Burglar Alarm Zones				-	<u> </u>							
- Outputs (PGM)		ID	En	User Name	User Tel.	iButton Code	RFID Keycard	Keyb Code	OUT	ARM/DISARM	En	
Automation/Sensors	Þ	001	V	Master	+	000000000000000000000000000000000000000	0006679809	*****	NONE	V		2020-02
Event Summary		002		User Name 2	+	000000000000000000000000000000000000000	0000000000		NONE			2020-02
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Firmware		004		User Name 4	+	000000000000	0000000000		NONE			2020-02

4 WIRING & INSTALLATION



This Installation & Programming manual provides the basic installation, wiring and programming information required to program the module GTalarm3 and connect all third party devices to the module.

- Before beginning installation, make sure that you have the necessary components:
 - USB Mini-B type cable for configuration.
 - Cable consisting of at least 4 wires for connecting the controller.
 - Flat-head 2.5 mm screwdriver.
 - External GSM antenna if reception is weak in the area.

• Activated nano-SIM card (can have turn off PIN code requests).

Order the necessary components separately from your local retailer

find wiring diagrams in the

Power supply, Battery Wiring Humidity sensors, AM2302/DHT22/AM2305/AM2306/AM2320/AM2321, Analog inputs 0-30V, 0-20mA, 4-20mA, Wiring Dallas 1-wire DS18b20, Burglar Alarm sensor zones wiring EOL NO NC, [4-Wire] Smoke detector Wiring, [2-Wire] Smoke Detector Wiring to I/O Inputs, Output PGM wiring. Bell, Relay, Led Wiring, Wiegand Keypad & RFID Card Reader Wiring, iButton keys. You can find detailed explanation about every field in SERA2 software here: Programming

4.1 Power supply, Battery Wiring



 $\equiv \equiv$

To power the security system, use a stabilized supply power rated between 10-30 V and at least 1A. Ensure the maximum current of the power supply is calculated for optimal functionality. For convenience, consider our UPS power supply, TPS12, designed for security systems. This allows for a backup lead battery connection and AC loss event detection. Users will always be notified of system AC loss.

	N F	
	~AC 90-260V	×
	Power Supply	TER
GTalarm3	TPS12	BAT ⁻
45V 11 15 15 10 10 10 10 10 10 10 10 10 10	V+ V- BATT BATT ACOK BATOK	
⊖ €€€€€€€€€€€€€€€		İ
AC loss detection		

Figure 13 TPS12 Power supply connection to GTalarm3

The example how to configure the module GTalarm3 for AC failure, restore function

Go to "Burglar Alarm Zones" window in the SERA2 software. Double click on the 4th row and enter the required parameters. Press [OK]

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	Settings		Zone Name	ACLoss
 Inputs/Eurglar Alarm Zones Outputs (PGM) 	Zn Zn Name	Zone Hardware Input	Alarm Text	Alarm 4 Text
-Automation/Sensors			7	
Event Summary	Z 1 Zone Name		Restore Text	Restore 4 Text
-Events Log	2 Zone Name 2		Zone Hardware Location	GTalann3, IN4 v
Bus Modules	3 Zone Name :			AC power loss
Testing&Monitoring	I 🧭 4 AC Loss	GTalarin3, IN4	Zone Definition	AC power loss
Firmware	🗹 5 Fire	GTalarm3, V01	Wiring Type	NC V
	🗹 6 Zone Name 6	11/	Contraction and a	If needed to eliminate short AC Grid disturbance
	Zone Name	////	Contact ID code	set min 60000ms. It means if AC loss time is
	📝 9 Tana Nama I	7 7 mon Disorbled	Zone Speed	more than 1 min, AC loss event will be detected
		bled	Event Repeat Timeout	500s To avoid repeatable AC loss event generation,
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		bled	Max Alarm Count	"Event Repeat Timeout" can be set to 600s, and
📳 🧧 Change al	arm restore eve		Zone Alarm action:	"Max alarm count" can be set to 1,
		bled		it means only one AC loss event will be
It should b	e set to "AC por	ver loss" sted	Zone Options	generated within 10 minutes.
		bled	Alarm report Enabled	
Select NC	with our applica	tion bled	Restore report Enabled	
	with our applied	aled	Tamper Enabled Dypapss Enabled	
Assigned (Contact ID code	301 bled	Shutdown if max alarm count	
/ looigned v		aled	Zone Force ARM	
		aled	Delay Restore Event	
and a start of the	21 Zone Name :		Dowy room C Lyon	
and a second	22 Zone Name 2			
*	22 Zone Name 2 23 Zone Name 2			OK
	25 Zone Name .	25 Zone Disabled	L	

Figure 14AC loss in Burglar alarm window

Double click on Zone/Input the line

[Alarm Text]/ [Restore Text] - change alarm/ restore text

[Zone Definition]- Should be set to "AC power loss"

[Wiring Type]- Select NC with our application

[Contact ID code]- Assigned Contact ID code 301 as "AC power loss"

[Zone Speed]- If needed to eliminate short AC Grid disturbance set min 60000ms. It means if AC loss time is more than 1 min, AC loss event will be detected



[Event Repeat Timeout]- To avoid repeatable AC loss event generation, Event Repeat Timeout can be set to 600s, and Max Alarm Count can be set to 1, it means only one AC loss event will be generated within 10 minutes. П x SERA2 [GTalarm3]

ins	Event Reporting/C	Communication												
nications	SMS/DIAL reporti	ing Custom SMS	Text SIM Can	d / OPRS / IP CMS F	Reporting SERA C	loud Service	e							
s control	SMS/autoDIAL P					Γ		tifications	to LISER		Auto D	AL to	USER	
r Alamn Zones wi)	Tel.1 +		D	Eve	ents		1 2 3	1		8 1				8
ensors				estore (CID 100 grou										
ary	Tel.2 +			Open/Close (CID 400		í			ГГ	ΓĒ				
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itorine	Tel.4 +		4 Sensor	1-Sensor32 Alarm/Re	estore								ПΠ	
10 HI <u>9</u>	Tel.5 +		5 Test Ev	ents (CID 600 group)		I								
	Tel.6 +		6 Other E	vents		ļ								
			7 Input/Zo	ne1 Alarm/Restore		1								
	Tel.7 +		8 Input/Zo	ne2 Alarm/Restore		I								
	Tel.8 +		9 Input/Zo	ne3 Alarm/Restore										
пт			10 Input/7c	ne4 Alarm/Restore										
lalarm3] ettings 🚑 Dev ione	System			pdate 🍈 Help	the sy that is	rket, wh ystem w s set in t	en low /ill sen	batter alarm	y level i mess	will b age to	e reac o the p	hed, hone	e num	nber
ettings 🚗 Dev	System General System	n Options System		pdate 📎 Help S Digital I/O Settings	the sy that is	stem w s set in t	en low /ill sen	batter alarm	y level i mess	will b age to	e reac o the p	hed, hone	e num	nber
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ettings 🔒 Dev ions unications ess control lar Alarm Zones 3M) /Sensors	System General System Faults/Troubles ID 1 Battery	n Options System s Troul trouble	n Fault/Troubles	Digital I/O Settings	the sy that is System Info Ac Restrict ARM	ystem w s set in t	the GS	batter d alarm M Cor	y level 1 mess nmunio bal Settin	will b age to cation	e reac o the p	hed, hone MS/ I	e num	nber
ettings 🚡 Dev ions unications ess control lar Alarm Zones 3M)	System General System Faults/Troubles ID 1 Battery 2 Clock tro	n Options System S Trouble nuble	n Fault/Troubles	Digital I/O Settings	the sy that is System Info Ac Restrict ARM	ystem w s set in t	ren low /ill sen the GS	batter d alarm M Cor oubles Glo e Event Li	y level n mess nmunio bal Settin	will b age to cation	e reac o the p s > SN	hed, hone MS/ I	e num DIAL I	nber
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ettings 2000 urications ess control lar Alarm Zones 3M) /Sensors nary	System General System Faults/Troubles ID 1 Battery 2 Clock tro 3 BUS troi 4 Tamper 5 Fire lock 6 SIM card 7 Zone an	n Options System s Trouble nuble uble trouble p trouble d trouble	n Fault/Troubles	B Digital I/O Settings	the sy that is System Info Act Restrict ARM	ystem w s set in t	Fault/Tr Trout: Reset	batter d alarm M Cor oubles Glo e Event Li Trouble E	y level n mess nmunin bal Settin nt : vent Coun	will b age to cation gs ter After ry) settin	e reac o the p s > SN	hed, hone NS/ I	e num DIAL 1	nber
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ettings 2000 urications ess control lar Alarm Zones 3M) /Sensors nary	System General System Faults/Troubles ID 1 Battery 2 Clock tro 3 BUS troi 4 Tamper 5 Fire lock 6 SIM card 7 Zone an	n Options System s Trouble nuble uble trouble p trouble d trouble ntimesking trouble	n Fault/Troubles	B Digital I/O Settings	the sy that is System Info Act Restrict ARM	ystem w s set in t	Fault/Tr Troub Reset	batter d alarm M Cor oubles Glo e Event Li Trouble E	y level n mess nmunic bal Settin nt : vent Count 	will b age to cation gs ter After ry) settin	e reac o the p s > SN 3 	hed, hone NS/ I	e num DIAL 1	nber
ettings 2 Dev ions infractions ses control lar Alarm Zones 3M) Sensors rary is nitoring	System General System Faults/Troubles D 1 Battery 2 Clock frr 3 BUS fro 4 Tamper 5 Fire loc; 6 SIM card 7 Zone an 8 GSM net	n Options System s Trouble nuble uble trouble p trouble d trouble ntimesking trouble	n Fault/Troubles	B Digital I/O Settings	the sy that is System Info Act Restrict ARM	ystem w s set in t	en low ill sen the GS Faut/Tr Trout Reset System Low 3	batter d alarm M Cor oubles Glo e Event Li Trouble E Voltage (L	y level n mess nmunic bal Settin nt : vent Count 	will b age to cation gs ter After ry) settin	e reac o the p s > SN 3 	hed, bhone MS/ [0	min	nber

Figure 15Battery trouble in System Options> System Fault/ Troubles window

If [Battery trouble] event marked, it means when low battery level will be reached, the system will send alarm message to the phone number that is set in the GSM Communications> SMS/ DIAL reporting

GSM Communication> Custom SMS Text. It is possible to edit text

Power supply TPS12 installation manual: https://topkodas.lt/Downloads/TPS12_UM_EN.pdf $\equiv \equiv$ Power supply TPS12 : https://topkodas.lt/Downloads/GTalarm3_TPS12_AN_EN.pdf

AC equipment cannot be connected directly to the module. It is necessary to use a special relays or other methods, which are in compliance with electrical safety requirements.

When controlling devices from the AC network, it is necessary to follow all electrical safety requirements.

4.2 Inputs

The module GTalarm3 has:

- 4 analog inputs (In1...In4 (0-30V)) for analog sensors connection. Or can be used as security system's zones with selectable type: NC/NO/EOL/EOL+TAMPER.
- 3 programmable selectable analog inputs (I/O1, I/O2, I/O3 (0-30V/0-20mA),2-wire fire) for analog sensors control or using as security system's zone with selectable type: NC/NO/EOL/EOL+TAMPER
 - 3 programmable digital inputs (D1...D3(Max voltage 3.3V)) used for:
 - o Dallas 1-Wire Bus. To connect temperature sensors DS18b20 or iButton key DS1990A, I/O expansion module 1WIO8
 - o Aosong 1-Wire bus Humidity Sensor AM2302, DHT22, AM2320, AM2305, AM2306,
 - Wiegand interface DATA0/ DATA1, RFID reader, Keyboard.

4.3 Sensors. Security.

4.3.1 Burglar Alarm sensor zones wiring EOL NO NC



Connector terminal Input Ports:

- In1 to In4: These can be configured as security system zones with selectable types such as NC/NO/EOL/EOL+TAMPER.
- I/O1, I/O2, & I/O3: Options for configuration include NC/NO/EOL/EOL+TAMPER/2-Wire fire.
- Zones:
 - The system comes with 7 onboard wired burglary zones.
 - These can be expanded to a total of 32 zones by using the **1WIO8 expansion module** connected via the 1-Wire bus.

Sensor Recommendations:

- Standard motion, fire, and glass break sensors are recommended.
- For powering these sensors, it's advised to use a standard 6-8 wire cable, specifically designed for security system installations. Connection & Configuration:
 - Connect the security system's sensors to the module as depicted in the subsequent connection diagrams.
 - Adjust and set the necessary parameters for your setup.
 - Finalize your configuration by pressing the [Write] icon.

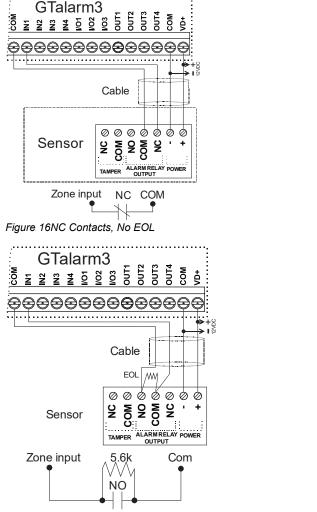
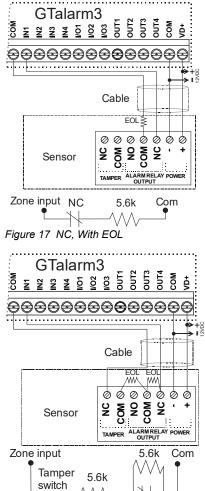


Figure 18 NO, With EOL



NC Figure 19NC With EOL Wire Fault Recognition If I/O1- I/O3 is used as security system inputs, the I/O1- I/O3 must be set as 0-30V Analog Input (Zone or sensor)

- Double click on the selected line.
- Set the required parameters.
- If zone is not used, it must be disabled.
- Press [Write]

If you want to edit existing configuration,

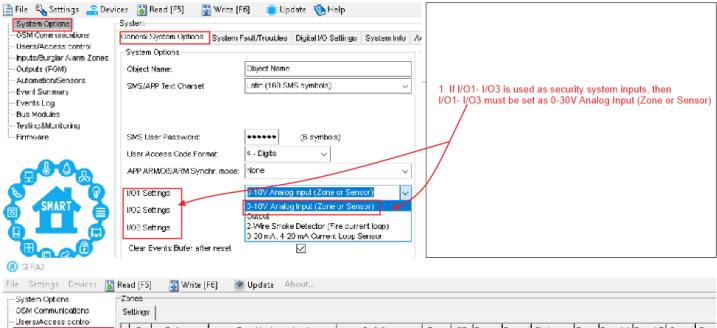
You have to read it press [Read]

Edit settings

🙆 SERA2 (GTalarm3)

Write edited configuration press [Write]

 \equiv More information about how to configure the zones:



OSM Communications	Se	ttings																	
 Users/Access control Inputs/Burglar Alarm Zones 	П	Zn	Zn Name	Zone Hardwy	ore	Input	Definition		Ty	pe ar) Byp	ass	Tomper	Shutdown	Force	Report A	Report R	Speed	Repo
- Outputs (PGM)	F	21	Zone Name 1	GTalarm v2, IN1 🤫	_		24 hours (silent)			0 150			Ē	v	ম	1	ন	200ms	· ·
- Automation/Sensors	H	2	Zone Name 2	GTalarn v2, IN2	۱r							7	-	-	-	-	-		
Event Summary	Н	_	Zone Name 3	Zone Disabled	Ħ	Zone 1 Setti	ngs												×
Events Log	Н	1 4	AC Loss	Zone Disabled	Ħ														_
 RT Testing8Monitoring 	Н		Zone Name 5	Zone Disabled	Н	Zone Nam	e	Zone I	Nar	ne 1									_
- Firmware	Н	-	Zone Name 5	Zone Disabled	Н	Alarm Text	t	Alarm	1 Te	ext									
	F	<u> </u>	Zono Hamo D		Η	Restore Te	ext	Restor	re 1	Text									_
						Zone Hard	ware Location	GTalar	rm y	2, IN1									•
				/		Zone Defir	nition	24 hou	ursi	(silent)	-	ī							_
			ck on the sel			vViring Typ	e	, NO			-	1							
🥰 🚺 🚺 3. lf :	zon	e is r		neters. — nust be disabled.	1	Contact ID	code	150		_									
• 4. Pr	ress	s "Wr	ite".			Zone Spec	ed	200ms	3	-									
						Event Rep	eat Timeout	6003		-									
						Mox Alorm	Count	5		-									
•••								N/A	_	_									
						Zone Alarr	n action:	lh∿⊷	-	-									
						_Zone Op	tions												_
A A A A A A A A A A A A A A A A A A A						· ·	port Engibled						$\overline{\mathbf{v}}$						
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4.3.2 Fire alarm and Smoke sensors

4.3.2.1 Guidelines for Locating Smoke Detectors and CO Detectors



Smoke Detectors:

Studies show that most house fires produce smoke before heat. Thus, it's advised to:

- Install smoke alarms outside sleeping areas and on every floor.
- Consider additional units in basements, bedrooms (especially where smokers sleep), dining rooms, furnace rooms, and other hallways.
- Space detectors 9.1m (30 feet) apart on smooth ceilings. Adjust spacing based on ceiling height, air flow, joists, and other factors.

Avoid:

- Installing at the top of peaked or gabled ceilings to prevent ineffective detection due to dead air spaces.
- Areas with turbulent air flow, like near doors, fans, or windows.
- Humid areas.
- Places where temperature exceeds 38°C (100oF) or drops below 5°C (41oF).
- Legal requirements often dictate smoke alarm placement. Common mandates include installation in:
 - All bedrooms and guest rooms.
 - Areas outside sleeping zones within 6.4 m (21 ft) of bedroom doors.
 - Every level, including basements.
 - All floors of a residential care facility, excluding attics and crawl spaces.
 - Living spaces of guest suites and residential care facilities.

CO Detectors:

Carbon monoxide (CO) is especially dangerous during sleep. Therefore, install CO alarms outside sleeping areas or on every home level. These alarms detect CO concentration and alert users before reaching harmful levels.

Avoid placing CO alarms:

- Where temperatures might drop below -10°C or exceed 40 °C.
- Near sources of paint thinner fumes.
- Within 1.5 meters of open-flame devices like furnaces or stoves.
- Near gas engine exhausts or chimneys.
- Close to car exhausts.

GTalarm3 Installation:

Begin by mounting additional modules inside the provided cabinet using the stand-offs. Place the cabinet in a dry, sheltered spot with access to uninterrupted AC power. Follow the installation sequence as described in the subsequent sections. Important: Don't power the system until after installation is complete.

4.3.2.2 [4-Wire] Smoke detector Wiring

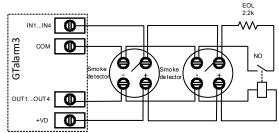


Connect the 4-wire smoke detectors and a relay as shown in the figure below.

Install the 4-wire smoke detectors with 18 gauge wire. If power is

interrupted, the relay causes the control panel to transmit the Fire Loop Trouble report. To reset (unlatch), connect the smoke detector's negative (-) to a PGM.

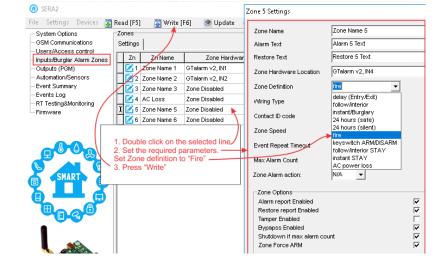
The parameters of the zone should be defined as a "Fire Zone". If a line short occurs or the smoke detector activates, whether the system is armed or disarmed, the control panel will generate an alarm. If the line is open, the "Zone Fault" report code is sent to the monitoring station or to the user, if programmed.





If you want to edit existing configuration,

- You have to read it press [Read]
- Edit settings
- Double click on the selected line
- Set the required parameters
- Set zone definition to "Fire"
- Press [Write]



2-Wire Smoke Zone Overview:

- The 2-wire Smoke zone on the module is unique, designed solely for 2-wire smoke detectors as Fire Alarm initiating devices.
- It's an end-of-line (EOL) 2.2K resistor type zone.
- It can support up to 30 compatible 2-wire smoke detectors.
- This zone is permanently set as a 2-wire smoke zone.
- It functions as a trouble-supervised zone.
- The wiring of this zone is supervised by the control panel.

Zone Parameters:

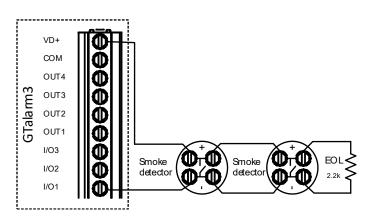
- The parameters must be specified as a "Fire Zone".
- I/O1 to I/O3 can be set as a 2-wire smoke detector input.

System Responses:

- If there's a line short or the smoke detector is triggered, the control panel will generate an alarm, regardless of the system's armed status.
- An open line prompts the "Zone Fault" report. This report can be sent to the monitoring station or the user, based on programming.

Connect 2-Wire detector:

- Connect the [2-wire] smoke detector (current sensor) to the I/O1-I/O3 inputs as in the wiring diagram.
- Connect the power supply.
- Go to SERA2>System Options> General System Options from the menu and select 2-Wire Smoke Detector (Fire current loop)
- In the Zone table set I/O1 definition to "Fire"
 If I/O1, I/O2, I/O3 is used as "Fire" zone, it must be set as "2 wire smoke detector (fire current loop)
- · Double click on the selected line
- Set the required parameters. Set zone definition to "Fire"
- Set "Fire Sensors" in the Output window
- Press [Write]



Edit existing configuration,

- You have to read it press [Read]
- Edit settings
- Write edited configuration press [Write]

More information about how to configure 2-Wire Smoke detectors:

🙆 SERA2

 $\equiv \equiv$

System Options	System		SERA2		NILLI Oleansk	
GSM Communications	General System Options System	Fault/Troubles Digital I/O Settings System Info	File Settings Devices 🕃		Update About	
- Users/Access control - Inputs/Burglar Alarm Zones - Outputs (PGM)	System Options Object Name:	GTalarm2 DEMO	System Options GSM Communications Users/Access control	Zones Settings Zone 5 S	ettings	
- Automation/Sensors - Event Summary	SMS/APP Text Charset	Latin (160 SMS symbols)	- Inputs/Burglar Alarm Zones Outputs (PGM)	Zn Zn Name Zone Zone		one Name 5
Events Log	SIM Card PIN:	****	Automation/Sensors	2 Zone Name 2 Alarm		larm 5 Text
- RT Testing&Monitoring - Firmware	Installer Password:	(6 symbols)	Event Summary Events Log	Zone Name 3 Resto	re Text	estore 5 Text
111114010	SMS User Password:	****** (6 symbols)	RT Testing&Monitoring Firmware	Zone I	Hardware Location	Talarm v2, I/O1
	User Access Code Format:	4 - Digits	rirmware		Definition fi	re
	Keyswitch Zone Mode:	Level	SERA2			
	I/O1 Settings	2-Wire Smoke Detector (Fire current loop)	File Settings Devices 🐺 R	lead (F5) 📲 Write (F6) 🧇 l	Jpdate About	
SMART	I/O2 Settings	0-10V Analog Input (Zone or Sensor) Output	System Options	Outputs		
		2-Wire Smoke Detector (Fire current loop)		ID Output Location in Hardware	e Output Label	Out definition
	Clear Events Bufer after reset	0-20 mA, 4-20 mA Current Loop Sensor	- Users/Access control - Inputs/Burglar Alarm Zones -	1 GTalarm v2, OUT4(1A)	OUT1	Bell
			Outputs (PGM)	2 GTalarm v2, OUT3(1A)	OUT2	Automation & Acce
	as "Fire" zone, it must be set	as "2-Wire Smoke detector	Automation/Sensors	3 GTalarm v2, OUT2(1A)	OUT3	Automation & Acce
(Fire current loop).	alastad lina		- Event Summary	4 GTalarm v2, OUT1(1A)	OUT4	Automation & Acce
 Double click on the s Set the required para 	ameters. Set Zone definition	to "Fire"		1 5 GTalarm v2, I/O1(20mA)	OUT5	Fire Sensor
	anotoro, oot 2016 deminion		- RT Testing&Monitoring	6 Output Disabled	OUT6	Disable
4. Set "Fire Sensors" in	the "Outputs" window		Firmware	6 Output Disabled	0016	Disable



The module GTalarm3 has:

- Up to 32 outputs can be expanded with 1WIO8 I/O expansion module
- **4 open drain (1A) outputs:** OUT1 (1A)... OUT4 (1A). The outputs can be used for siren, relay, gate or other equipment. These outputs can be controlled via short call or SMS. Output operation algorithms: Automation /CTRL, Siren, Buzzer, ARM state, Zones OK, Light Flash, inverting, pulse mode
- **3 open drain (20mA) outputs:** I/O1 (20mA)... I/O3 (20mA). These outputs can be used for solid state relays, LED, to control devices up to 20mA.
- 3 outputs: D1 (10mA, Max Voltage 3,3V) for LED, solid state relays control. ! Max voltage 3,3V
- OUT1... OUT4 max current (-V) 1000 mA.
- All outputs can be controlled via short call DIAL or via SMS message. This feature may be used for gate opening
- Output alarm parameters may be programmed.
- Programmable algorithms for outputs operation: CTRL/SMS/DIAL, SIREN, BUZER, ARM state, Zones OK, Light Flash, inverting, pulse mode

A PGM output is a programmable output that toggles to its set up state when a specific event has occurred in the system. Normally, **PGM outputs can be used to open/ close garage doors, activate lights, heating, watering and much more.** When a PGM output turns ON, the system triggers any device or relay connected to it.

4.4.1 Output PGM wiring. Bell, Relay, Led Wiring

Powering the Module:

A standard AC/DC adapter with a voltage range of 10V-14V and current >=1A is recommended.

Connecting the Output Switch:

- The output switch grounds when activated from the module.
- Connect the positive side of the device to the VD+ terminal.
- Link the negative terminal to the selected output.
- In order to control big power alternating current equipment, it is comfortable to use solid state relays.

Sound Signaling bell Recommendations:

- We advise using a siren DC 12V, up to 1500mA.
- It's optimal to connect the siren with a 2 x 0.75 sq. mm cable. Auxiliary Buzzer:
 - Ideally, install the auxiliary buzzer indoors, close to the entrance.
 - It operates in tandem with the main siren, notably during exit and entry delays.
 - A suitable buzzer would be hit point PB12N23P12Q or a similar 12V DC, 150mA max piezoelectric buzzer.

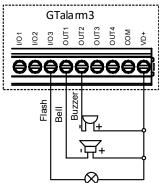


Fig. 1 OUT1-OUT4 Open drain 1000 mA connection

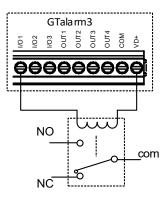


Fig. 2 Relay connection to OUT1-OUT4, I/O1, I/O2 20mA

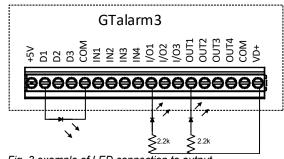


Fig. 3 example of LED connection to output

SERA2

File

Settings Device	s 🐺 Read [F5]	🞇 Write (F6)	🧇 Update	About
-----------------	----------------	--------------	----------	-------

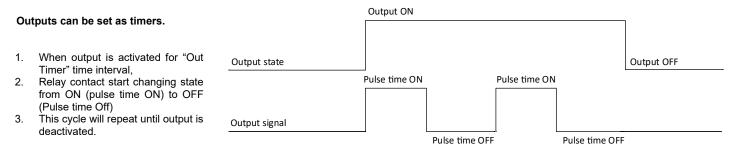
	Outp	outs									
GSM Communications		Output Location in Hardware	Output Lak	pel	Out definition	Mode	Out Timer	Invert	Pulsating	Pulse ON Time	Pulse OFF Time
- Users/Access control	1	GTalarm v2, OUT4(1A)	OUT1		Bell	Steady	10s			100ms	100ms
Inputs/Burglar Alarm Zones Outputs (PGM)	2	GTalarm v2, OUT3(1A)	OUT2		Automation & Access	Steady	10s			100ms	100ms
- Automation/Sensors	3	GTalarm v2, OUT2(1A)	ОЛТЗ Г		0 I I' 0 0		40		-	100ms	100ms
Event Summary	4	GTalarm v2, OUT1(1A)	OUT4 🔫	- The	names of outputs	could be ch	anged			100ms	100ms
- Events Log	5	GTalarm v2, I/O1(20mA)	OUTS		tput is not used, it) 100ms	100ms
RT Testing&Monitoring	6	Output Disabled	OUT6	Whe	n the required para	ameters is e	entered, p	ress "	Write"	100ms	100ms
Firmware	17	Output Disabled	OUT7							100ms	100ms

Figure 21 Outputs settings

- 1. The names of outputs could be changed
- 2. If output is not used, it must be disabled
- 3. When the required parameters is entered, press [Write]

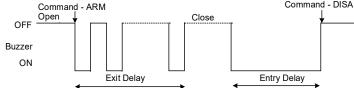
If you want to edit existing configuration,

You have to read it press [Read]

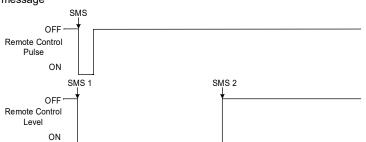


Bell: Output for connection of audible sounder (siren). After the alarm system actuation a continuous or pulse (fire) signal is generated.

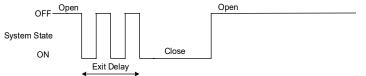
Buzzer: Output for connection of audio indicator. After the alarm system activated a pulse signal is generated within Exit Delay time, and continuous signal - within Entry Delay time or when the alarm system is disturbed. When the alarm system is turned off, operates like keyboard buzzer.



Remote Control: Output designed for connection of electrical devices which will be controlled by SMS message or phone call a) control by SMS message



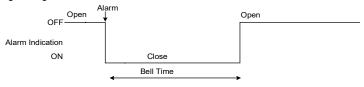
System State: Output for connection of light indicator of the alarm system status. Within Exit Delay time a pulse signal is generated, and when the alarm system activated - continuous. Signal is terminated by turning off the alarm system.



Ready: Output for connection of light indicator of input statuses. If all zones are clear (none violated), a continuous signal is generated.



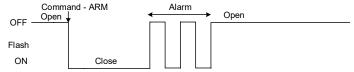
Alarm indication: Output for connection of light indicator showing alarm status of the alarm system. After the alarm system actuation a continuous signal is generated.



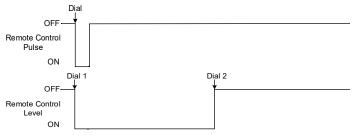
Fire Sensor Reset: Output for reset of fire sensor operation. Its status changes 5 sec. and returns to the initial one.

ARM/DISARM: Output for connection of light indicator of the alarm system status. When the alarm system is on a continuous signal is generated.

Flash: Output for connection of light indicator. When the alarm system is on, a continuous signals generated, and if the alarm system is disturbed - pulse signal. Signal is terminated by turning off the alarm system



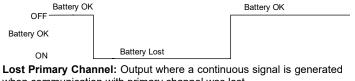
Remote Control b) control by phone call



AC OK: Output for connection of indicator about control panel supply from alternating current



Battery OK: Output for connection of indicator about control panel supply from battery



when communication with primary channel was lost. Lost Primary Channel **Restore Primary Channel**

	Ý.
011	
ost Primary Channel	
ON]

L

Lost Secondary Channel: Output where a continuous signal is generated when communication with secondary channel was lost.

Command - DISAF



Fire Se	nsor Reset	Lost Secondary Chan	nel Restore Primary Channel
OFF Fire Sensor Reset ON		OFF	×
	5 seconds		

4.4.2 Access control output with logging

Set output definition to [Access Control] or [Access Gained]. SERA2>Outputs

- The [Access Control] output definition algorithm functions as follows:
 - User activates the output (e.g., connected to a Gate) through the SERANOVA app, Call, SMS, iButton key, or Wiegand reader, the system logs a '422' CID 'Access Gained' event.
 - Additionally, if output ON/OFF events are enabled, the system can log a '780' CID event, indicating 'The output state has been changed by the user'.

The **[Access Gained]** output definition (algorithm) operates as follows:

- Users with the right to ARM/DISARM the system always have access to control this output.
- Users without the right to ARM/DISARM the system (indicated by an unmarked field near ARM/DISARM in window SERA2> User/ Access control) can only access this output when the system is disarmed.
- When a user is granted access, the event 'Access granted' (CID code 421) is logged. If access is denied, the event 'Access denied' (CID code 422) is logged (see SERA2> Events Log).
- If the output is defined as [Automation / CTRL], it can be controlled by the user in any manner, but it will not generate events CID codes 421 and 422.

Event log e.g.

	Jy e.y.		
1853	Event:1234:1:401:01:001	Time:2017-08-20 14:42:36	Note: , Open by User, User:001, Name:Master
1852	Event:1234:1:422:00:001	Time:2017-08-20 14:41:41	Note: , Access Gained by, User:001, Name:Master
1851	Event:1234:1:406:01:001	Time:2017-08-20 14:41:27	Note: , Cancel, User:001, Name:Master

Quick start outputs:

- Install SERA2 software. For more information look at Error: Reference source not found
- Connect the module to the computer via mini USB cable.
- The names of outputs could be changed
- If output is not used, it must be disabled
- Output could be controlled via: short call, iButton, RFID, Keybutton code.
- If marked, could be specified dated and time interval for output control

③ SERA2

system Options	tputs –											not used, it must be o uld be controller via:	lisabled
	D	Output Location in Hardware	Output Label	Out definition	Mode Ou	t Timer Invert Pulsat	ing Pulse ON T	me Puls	e OFF Time		ort call	uiu be controller via.	
ers/Access control	1 GTa	larm v2, OUT4(1A)	OUT1	Bell	Steady	10s 🗌 🖵	100	Ims	10005		tton cor	nde	
uts/Burglar Alarm Zones - puts (PGM)	2 GTa	larm v2, OUT3(1A)	OUT2	Automation & Access	Steady	10s 🗆 🗖	100	Ims	10005		ID keyc		
	3 GTa	larm v2, OUT2(1A)	OUT3	Automation & Access	Steady	10s 🗌 🗌	100	Ims	10005		button		
nt Summary	4 GTa	larm v2, OUT1(1A)	OUT4	Automation & Access	Steady	10s 🗌 🗌	100	Ims	100ms		put con	cloud be specified dat	e and time interva
nts Log	5 GTa	larm v2, I/O1(20mA)	QUIT5	System State	Steady	10s 🗌 🗌	100)ma	100ms	oui	put con	uoi.	
Testing&Monitoring	6 Outs	out Disabled	OUT6	Disable	Steady	10s 🗆 🦯	100	Ims	100ms				
nware 🗕	7 Outr	out Disabled	OUT7	Disable	Steady	10s 🔽 🗌	100	ms	100ms				
SERA2 Settings Devices 🐺 Re			late About										
ystem Options F	ternote (Control Users table											
						× ×	×				7	Temporary access Dat	e/Time window
		11		User Tel.	iButton Code	RFID Keycard	Keyb Code	OUT	ARM/DISARM	MIC	Date En	Start Date	Expiration Date
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ers/Access control uts/Burglar Alarm Zones		Master	User	+37068	0A0D00037D2			NONE	v			2013-02-23 10.24.20	2019-02-25 16.24
ers/Access control uts/Burglar Alarm Zones tputs (PGM)		Master				2 000000000	*****	NONE				2019-02-25 16:24:26	
ers/Access control uts/Burglar Alarm Zones tputs (PGM) tomation/Sensors	1 🔽	Master	User	+37068	0A0D00037D2	2 000000000 0 000000000	******						2019-02-25 16:24
Dutputs (PGM) Automation/Sensors	1 🔽 2 🔽	Master zivile	User User	+37068	0A0D00037D2 00000000000	2 000000000 0 000000000 0 000000000	*****	NONE				2019-02-25 16:24:26	2019-02-25 16:24: 2019-02-25 16:24: 2019-02-25 16:24: 2019-02-25 16:24:

4.5 Sensors. Automation

4.5.1 Humidity sensors AM2302/DHT22/AM2305/AM2306/AM2320/AM2321

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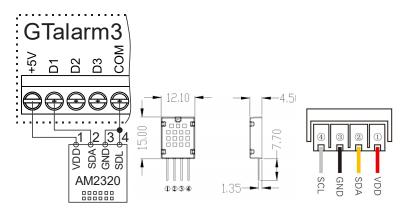
The module is compatible with the following Aosong 1-Wire bus Humidity Sensor Series AM23xx, such as: AM2302, DHT22, AM2320, AM2305, and AM2306.

Table 6 Sensors AM2302, AM2320/AM2321 specification

Manufacturers' Specification		
	AM2302	AM2320/AM2321
Operating Range	0–100	0–100
Absolute accuracy (%RH, 25°C)	±3% (10-90%) ±5% (<10, >90%)	±3% (10-90%) ±5% (<10, >90%)
Repeatability (%)	±0.3	±0.1
Long term stability (% per year)	0.5	0.5
1/e Response (sec)	5	5
Voltage supply (V)	3.3–5.5	3.1–5.5(AM2320) 2.6–5.5(AM2321)

The table lists values taken from datasheets. The Aosong data sheets do not specify maximum tolerances for most parameters, just 'typical' values. It would therefore seem that any particular device is not guaranteed to meet these specifications. For all the other devices the numbers above are the maximum tolerances and most also offer better 'typical' specifications.

Each AM23xx sensor connects on separate bus line to digital inputs (D1, D2, and D3). Total up to 3 AM23xx Aosong (Guangzhou) humidity sensors can be connected to GTalarm3



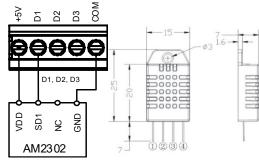


Figure 18 AM2302 connecting diagram

Figure 17 AM2320 and AM2320B connecting diagram

🙆 SERA2 [GTalarm3]

📄 File 🛛 🔌 Settings 🛛 🚑 Dev	ices 👸 Read [F5]	🎇 Write (F6) 🛛 💼 Update Help
System Options	System	
GSM Communications	General System Opti	ions System Fault/Troubles Digital I/O Settings System Info Access
- Users/Access control		Click and drag to select a new capture area
- Inputs/Burglar Alarm Zones		
- Outputs (PGM)	Digital I/O D1	Dallas 1-Wire Bus for 🛛 iButton keys DS1990A, temperature Sensors DS18b20, 🦂
- Automation/Sensors		
- Event Summary	Digital I/O D2	perature Sensor DHT22/AM2301/AM2302/AM2306/AM2306/AM2320/AM2320/ 🗸
- Events Log		Digital Input (Max. 3.3VIIII)
- Bus Modules	Digital I/O D3	Digital Output (Max. 3.3∨!!!!)
Testing&Monitoring		Dallas 1-Wire Bus for iButton keys DS1990A, temperature Sensors DS18b20, I/O expanders 1WIO8
Firmvvare		Aosong 1-Wire bus Humidity/Temperature Sensor DHT22/AM2301/AM2302/AM2305/AM2306/AM2320/AM2320B
r inniviare		Wegand interface DATA0 (D0)

Figure 22 System Options> Digital I/O Settings

Steps to start AM23xx, AM2320, AM2305 sensors:

- Connect the sensor to D1, D2, or D3 according to the connection diagram.
- Navigate to SERA2>System Options>Digital I/O Settings and set the sensor type for D1, D2, and D3 to [Aosong 1-Wire bus Humidity/Temperature Sensor].
- Press [Write].
- Power on the module.
- Wait for the sensor to be detected on the bus.
- Press [Read].
- Navigate to SERA2 > Automation/Sensors. Locate the desired registered sensor in the sensor table and double-click on its line.



- Configure the required parameters.
- Press [Write].

File 🔌 Settings 🚗 Dev System Options	System	📓 Write (F6) 🛛 🛑 Update 🧐 Help									
GSM Communications Lisers (Access control		ona System Foult/Troubles Digital I/O Settings System Info Access		 Connect the sensor to D1, D2, D3, according the connection d Select the sensor tipe 							
hputa,Eurgior Alerra Zones Dulputs (PGM) Automation(Sensors	Digital VO D1	Dalas 1-Wire Bus for LiButton keys DS1880A, temperature Sensors DS18	la20, 🗸	4. Power the r	3. Press "Write" 4. Power the module						
Event Summary	Digital UO D2	pensiure Sensor DHT22/AM230H/AM2302/AM2305/AM2306/AM2320JAM23			the sensor will be found on the bus.						
Events Log	Digital VO D3	Digital Input (Max. 3.3VIII)		6. Press "Rea	id"						
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resungarion coning Firmiyane		Absong 14/Vire bus Humidity/Temperature Sensor DHT22JAM2501/AM230.	2/AM2305/AM2306/AM2320/AM23208								
		Wegand Interface DATA0 (D0)									
SERA2					_						
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lystem Options	Automation/Sensors	Analog Inputs	Sensor Settings								
SM Communications lears/Access control	D Sensor Nom		Sensor Name:	Sensor Name 1							
unglar Alarm Zones	<u> </u>	1 GTalarm v2.jnpul D1,1-Wire,DS18B20 Temperature,SN:28FFF0E20217									
outputs (PGN)		2 GTalarm v2,Input D1,1 4/4re /DS18E20 Temperature,SN:28FFAE8E0217	Sensor type/hardware location:		820 Temperature, SN:26FFF0E20217						
utomation/Sensors		GTalarm v2,Input D2,1-Wire DHT22 MH,Humidity GTalarm v2,Input D2,1-Wire DHT22 Temperature	Sensor Unit Text	°C							
vent Summary vents Log		Graam v2,nparb2;1 wire bin 122 remperature Sensor Disabled									
T Testing&Monitoring	H	6 Setsor Disabled	High/Max Value Action Settings		TA						
rmware		7 Sensor Disabled	Max Yalue Alarm Event/SMS:	20	High Terrip Alarm SMS Alarm High Temperature						
	a Canoor Norro	8 Concor Neobled	Max Value To Activate Eutput:	20	Cooler Hysteresis						
	7 Find the	registered sensor. Double click on the line.	Max Value Hysteresis:	1	High Temp						
		equired parameters.	Max Alarm Event Delay:	10000 ms							
	9. Press _V		Max Value Output Control Delay.	1000 mz	Comfort Zone						
			Output:	NONE 👻	11111111111111111111111111111111111111						
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		14 Sensor Disabled	Alarm Event SMS Text:	Max Value	Low Temp						
		15 Sensor Disabled 16 Sensor Disabled	Alam Event/SMS	Restore Event/SMS	Heste						
WB Q W		17 Sensor Disabled			Low Temp Alarm SMS Alarm Low Temperature						
•	-	18 Sensor Disabled	Low/Min Value Action Settings								
		19 Sensor Disabled	Min Value Alarm Event/SMS:	10	Sensor Calibration						
	20 Sensor Name	2D Sensor Disabled	Min Value To Activate Output	5	× · Muliplier						
	21 Sensor Name	21 Sensor Disabled	Min Yalue Hysteresis:	1							
A A A AND	22 Sensor Name	22 Sensor Disabled	Min Alom Event Delay:	10000 ms	Y · Olfset						
and the second		23 Sensor Disabled	Min Value Dutput Control Delay:	1000 ms	Equation: Temperature-X*ADC+Y*						
A State		24 Sensor Disabled	Output:	NONE +							
A		25 Sensor Disabled	Contact ID Report Code:	159							
	-	28 Sensor Disabled	Alam Event SMS Text:	Min Value							
	-	27 Sensor Disabled 28 Sensor Disabled	Alam Event/SMS	Restore Event/SMS	OK						

Figure 23Steps to start AM2320 and AM2302 sensors:

4.5.2 Analog inputs 0-30V, 0-20mA, 4-20mA



Steps to start analog sensors:

- Connect analog voltage sensors to In1-In4 and connect analog current sensors to I/O1- I/O3 according connection diagram.
- Set the I/O1- I/O3 to analog input
- If the input is not used, it must be disabled.
- Set the required parameters.
- Sensors could be calibrated.
- Press [Write]

If you want to edit existing configuration,

You have to read it press [Read] Edit settings

Write edited configuration press [Write]

 +5	D1	D2	D3	COM	<u>N</u>	G ZNI	Та <u>Е</u>	ala <u>₹</u>	arr §	n3	ار ₀₃ 3	OUT1	OUT2	OUT3	OUT4	COM	LD+
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Figure 24Analog sensors connection diagram

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Any automation voltage analog sensors with a 0-30V range can be connected to IN1-IN4 (note: they have an internal 10K pull-up resistor).

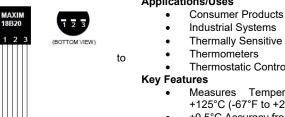
0-20mA, 4-20mA analogue sensors can be connected to I/O1...I/O3

Monitoring of sensors:

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- For real-time hardware status, navigate to: RT Testing & Monitoring > Hardware, then press "Start Monitoring."
- To access the list of alarm events with time and date stamps, go to: RT Testing & Monitoring > Event Monitoring.
- For more information, refer to:

The DS18B20 digital thermometer provides 12-bit Celsius temperature measurements. The DS18B20 communicates over a 1-Wire Each DS18B20 has a unique 64-bit serial code, which allows multiple DS18B20s to function on the same 1-Wire bus. Thus, it is simple use one to control many DS18B20s distributed over a large area. Applications that can benefit from this feature include HVAC environmental controls, temperature monitoring systems inside buildings, equipment, or machinery, and process monitoring and control systems.

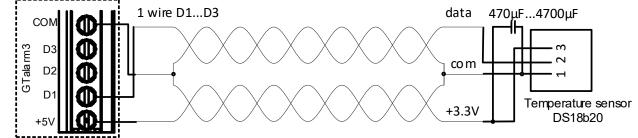


Applications/Uses

- Industrial Systems
- Thermally Sensitive Systems
- Thermostatic Controls
- Temperatures from -55°C to +125°C (-67°F to +257°F)
- ±0.5°C Accuracy from -10°C to +85°C
- Each Device Has a Unique 64-Bit code.

4.5.3.1 Wiring Dallas 1-wire DS18b20

1. Connect 1-Wire sensors DS18b20 to D1, D2, D3 according connection diagram.



DO NO

Figure 26 DS18b20 connection with long distance UTP or FTP cable

If you need to connect more sensors to the same input, connect them as a star or serial. Each line should be separate by 82-120 Ohm resistor 2

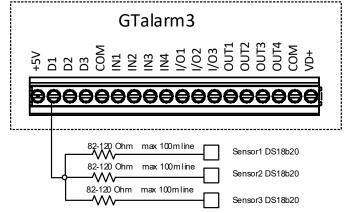


Figure 27 Star connection

- - The bus line impedance resistor must be as close as possible to the contacts of the module GTalarm3.

Cable Choice: Dallas recommends using an unshielded Cat 5 cable for the 1-Wire bus. An unshielded Cat 5 cable aids in maintaining a robust 1-Wire network, especially as you expand and add more sensors. Avoid shielded cables; the increased capacitance can disrupt the network. Wiring Considerations:

- Utilize one twisted pair from the Cat 5 cable for data and ground, such as blue/blue-white. Another wire from a different pair should be used for the 3.3-volt supply.
- Avoid doubling up wires; this won't necessarily lower resistance. Instead, it can change the network's impedance and degrade reliability.
- All unused wires within the Cat 5 cable should remain unconnected; do not ground them.

Network Design for Larger Setups:

- For optimal performance, especially with a larger 1-Wire network, adhere to a daisy chain configuration. This means connecting each sensor to a single continuous cable that loops from one sensor to the next, minimizing miss-reads from cable reflections.
- Limit the cable length connecting each sensor to the main network to 50mm (2").
- While the daisy chain method is efficient, adding more than 10-15 sensors can still cause data bus loading problems. To counteract this, integrate a 100-120Ω resistor in series with the data line of each sensor before its network connection.
- The entire length of the bus can range from 10 to 100m, depending on the quality of the cable, number of sensors on the bus, and environmental noise. However, it's possible to connect up to 32 devices in certain conditions.



Step by step to start DS18b20 sensors:

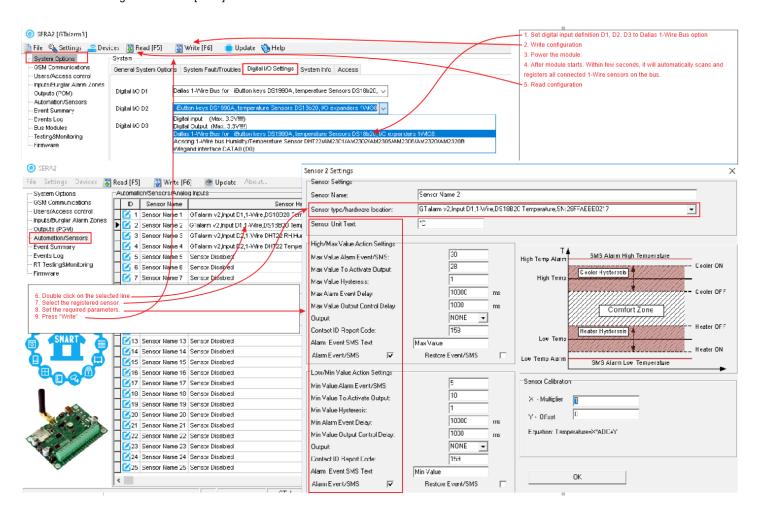
- Connect 1-Wire sensors DS18b20 to D1, D2, or D3 according to the connection diagram. If you need to connect more sensors to the same input, connect them in star or series.
- Set the digital input definitions for D1, D2, and D3 to the [Dallas 1-Wire Bus ...] option.
- Write the configuration. Press [Write].
- Power on the module.
- After the module starts, it will automatically scan and register all connected 1-Wire sensors on the bus within a few seconds.
- Read the configuration.
- Double-click on the selected line.
- Select the registered sensor.
- Set the required parameters.
- Press [Write]

Edit existing configuration:

- You have to read it press [Read]
- Edit settings
- Write edited configuration press [Write]

Real time diagnostic and monitoring:

- Real time hardware status: RT Testing & Monitoring> Hardware. Press [Start Monitoring]
- The list of alarm events with time and date stamp: RT Testing & Monitoring> Event Monitoring
- It is possible to receive alarm SMS to the mobile phone: GSM Communication> SMS/ Dial reporting
- Real time sensor values and states: RT Testing & Monitoring> Sensors/ Automation.
- Write configuration. Press [Write].





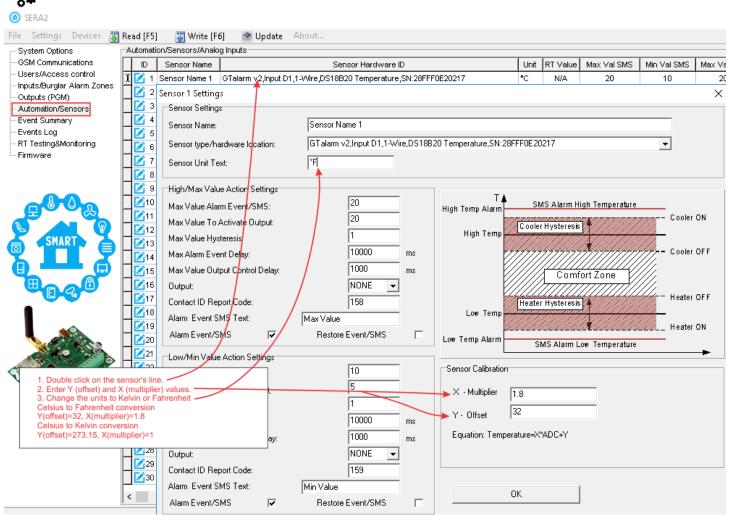


Figure 28 How to change temperature scale from Celsius to Fahrenheits and Kelvins

- 1. Double click on the sensor's line
- 2. Enter Y (offset) and X (multiplier) values
- 3. Change the units to Kelvin or Fahrenheit
- Celsius to Fahrenheit conversion:

Y (offset)=32, X (multiplier)= 1.8

Celsius to Kelvin conversion

Y (offset)= 273,15, X (multiplier)=1

If you want to edit existing configuration,

You have to read it press [Read] Edit settings Write edited configuration press [Write]

4.5.4 Step by Step: Checking Real-time Hardware and Sensor Status, Receiving Alarms, and Locating Event Lists

- Real-time hardware status: Go to RT Testing & Monitoring > Hardware, then press "Start Monitoring".
- View the list of alarm events with timestamps: Navigate to RT Testing & Monitoring > Event Monitoring.
- To receive alarm notifications via SMS to your mobile phone: Go to GSM Communication > SMS/Dial reporting.
- For real-time sensor values and states: Access RT Testing & Monitoring > Sensors/Automation.
- To save the configuration, press [Write].

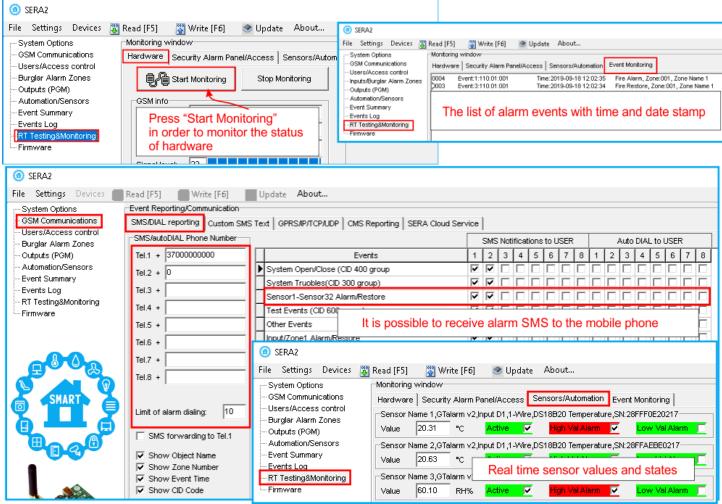


Figure 29 How to check real time hardware status, real time sensor values. How to receive alarms and where find alarm events list

5 SERA2 configuration software

The SERA2 software is a configuration tool for the GTalarm3 module, allowing local configuration via USB or remote configuration via the GPRS/LTE network. It simplifies the system configuration process by enabling use of a personal computer. We recommend programming the GTalarm3 module with SERA2 software. Here's how to install and start it:

- Open the folder containing the SERA2 software installation and click on the "SERA2 setup.exe" file.
- If the software installation directory is correct, click [Next]. If you want to install the software in a different directory, click [Change], specify the new installation directory, and then click [Next].
- Verify the entered data and click [Install].
- After successful installation of the SERA2 software, click [Finish].
- To start the SERA2 software, go to Start > All programs > SERA2, or navigate to the installation directory and click on "SERA2.exe".



Figure 30Sera2 software



The module requires a power supply of DC 10-33V or AC 12-24V, with a maximum of 0.2A. Ensure that the module has a SIM card inserted (with a topped-up account and PIN code request removed). The module should be connected to the PC via a mini USB cable.

Work with the software SERA2

If you are sure that the module is fully connected to PC and power supply, please go to Devices > GTalarm3

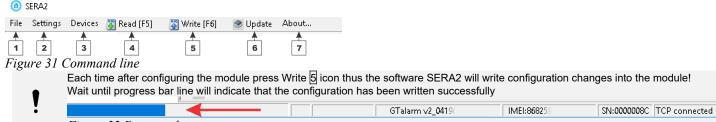


Figure 32 Progress bar

After configuring the module, you can save all settings to your PC. This saves time when using the same configuration in the future, as you won't need to set the same parameters again. To save the current module configuration:

- Press the [Read] to load the current module configuration.
- Edit the configuration
- Go to File, then select "Save As" or "Save".
- To load a saved configuration, go to File > Open. This allows you to copy the same programmed content into as many modules as required.

To receive software updates:

- Go to Settings and select "Check for Updates Automatically". The program will notify you when a new update is available.
- Start the update process when prompted.
- Connect the module to your computer using a mini USB cable.
- Write the update to the GTalarm3 module by pressing the [Update] button in the SERA2 software.
- If you want to update the module manually, press [Update]

For support with configuration software or device-related questions, follow these steps:

- Press the [Read] to read the configuration from the module.
- Go to "File > Save As" and save the configuration.
- Save the Events Log file.
 - Send these files along with your question to the seller. These steps will let better understand the problem and will reduce the time to find the solution.

Remote configuration or firmware updates via an internet cloud service may be slower than USB connections. The solution is that multiple modules can be configured on the same computer concurrently. The speed of reading and writing configurations remains unaffected as these processes run in parallel. Multiple instances of the SERA2 program can be operational simultaneously.

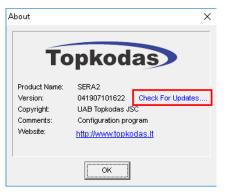




Figure 33configuration at the same time. Unlimited number of modules

5.1 General system options programming

System Options > General system Options general settings, systems timers, let you program iButton keys and reserved module	
(i) SERA2 [GTalarm3] - [) ×
📄 Eile 🔌 Settings 🔓 Devices 📓 Read [F5] 🛛 📓 Write [F6] 👘 Update 🧐 Help	
System Options System	
GSM Communications General System Options System Fault/Troubles Digital I/O Settings System Info Access	
- Inputs/Burglar Alarm Zones System Options System Timers	
- Outputs (PGM) Object Name Test Time: 13:30 hh:mm	
- Automation/Sensors SMS/APP Text Charset Latin (160 SMS symbols) V Test Period: 1 Days V	
Event Log Entry Delay 15 s	
Bus Modules Exit Delay: 20 s	
Bell/Siren Cut-off Timer: 120 s	
V I/O1 Settings 0-30V Analog Input (Zone or Sensor)	
SMART I VO2 Settings 2-Wire Smoke Detector (Fire current loop) V Daylight saving time:	
1/O3 Settings 0-20 mA, 4-20 mA Current Loop Sensor V Clock synchronization: Cloud Server V	
Clear Events Bufer after reset	
Door Chime	
Bell Squawk on ARM/DISARM	
Auto - reARM	
Start iButton/RFID/Phone programming mode Stop programming Set Module Time from PC Read Module Time	
Reset Device PC time: 2023-08-31 22:07:48,Thursday	,
Panel Time: 2023-08-31 22:07:38,Thursday	·

Object name: The name and address of the object

SMS/APP Text Charset: Text charset: Latin, Easten European, Baltic or Western European.

User Access code format: Select 4 or 6 digits user code format

Keyswitch Zone Mode: Select pulse or level. The module is arming by shortening zone to COM. Arm by output activation.

I/O1... I/O3 Settings: Set the programmable input or output to: 0-30V analog input

- •
- Output
- 2- wire smoke detector or 0-20 mA, 4-20mA current loop sensor

Clear Events Buffer after reset: The memory of unsent reports will be deleted after the reset of the module

Door Chaim: Violations of delay zones when the alarm turned off will be accompanied by keyboard audible (Buzzer) signal Bell Squack on ARM/ DISARM: Activate the bell output briefly causing the squawk to alert users that the module is being armed,

disarmed or that an Entry or Exit Delay was triggered

Auto- reARM: Arm the module if there is no activity in the area after the system disarming.

Stop iButton/ RFID programming: To finish entering iButton keys or RFID cards, click Stop programming button.

Start iButton/FRID programming mode: All added iButton keys or RFID cards will be registered in the order of sequence by clicking "Start programming".

Reset Device: Reset the module.

Test Time: Auto Test report time of day

Test Period: Auto Test report period

Entry Delay: Time to enter the armed premises and enter your code to disarm your system before the alarm is triggered.

Exit Delay: Provide with enough time to exit the protected area before the system is armed.

Bell/ Siren Cut- off Timer: Duration of audible signal 0-9999s (sirens, Bell) after the alarm system activated.

Clock Synchronization: automatically time synchronization with: GSM Modem, Cloud Server or disable it.

Set Module Time from PC: Set module time from PC, which instantly provides the exact PC time.

The system comes equipped with internal real-time clock (RTC) with battery 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. SERA2 software provides the ability to select the Time Zone and The user may also choose Set module time from PC, which instantly provides the exact PC time. When the system is connected to the monitoring station via IP connection the date and time will be automatically synchronized with the monitoring station. It is possible to select automatically time synchronization with: GSM Modem, Cloud Server or disable it.

1	If the module has been connected first time to the power supply, or power supply has been disconnected for a long time, the time of the
	module should be set again.

5.2 Real-time clock Time Zone and Synchronization	Time Zone: Daylight saving time:	(GMT: + 2) v 0 min
The SERA2 software allows setting the GTalarm3 real time clock 'Time Zone' and automatic 'Daylight Saving'. Correct settings are crucial for modules using automatic schedules, as incorrect time zones can lead to erroneous schedule activation times.	Clock synchronization:	Eloud Server v Disabled Claud Server CSM Network (Local time) GSM Network (GMT)
Users can opt to set the module time from their PC for immediate synchronization.		
GTalarm3 User manual V-2023-09-05	Set Module Time from	
		2023-08-02 21:04:09,Wednesday 2023-08-02 21:02:34,Wednesday

When connected to a monitoring station via an IP connection, the system's date and time will automatically synchronize with the monitoring station.

Available time synchronization options: GSM Modem, Cloud Server, or disabling it.

For accurate scheduling and event timing, it's essential to set the correct 'Time Zone' and choose the appropriate 'Clock Synchronization' method. Proper configuration is vital for modules that rely on automatic schedules. Inaccurate time zone settings can cause schedules to activate at the wrong times

If the module has been connected first time to the power supply, or power supply has been disconnected, the time of the module should be set again by auto synchronization or manually.

System clock can be synchronized in following ways:

- Cloud Server. Synchronize by [SERA Cloud Service]. SIM card must have mobile data and [SERA Cloud Service] must be enabled.
- 2. **GSM Network (Local time).** Select this if cellular network provides local time format.
- GSM Network (GMT). Select this if cellular network provides GMT time format.
- 4. Disabled. If you want to set time manually.



Figure 34SERA2> System Options> General System Options

If the date and time of events and SMS messages received are incorrect, you need to set correct way of the clock synchronization. Clock synchronization via GSM modem

- Go to SERA2> System Options> General System Options
- Set Clock synchronization via GSM modem
- Press "Write" in the command line

() SERA2 [PROGATE]				
File Settings Concerning Dev System Options Users/Access control Inputs/Burglar Alarm Zones Outputs (PGM) Automation/Sensors	ices Read (F5) Event Reporting/Corr SMS/DIAL reporting	Custom SMS Text		SERA Cloud Service
-Automation/Sensors Event Summary Events Log RT Testing8Monitoring Firmware	IP or Domain: Remote Part: APP Key:	cloud.topkods	is.it	

Figure 35 SERA2> GSM Communication> SERA Cloud Service

- Go to SERA2> System Options> General System Options
- Set Clock synchronization via Cloud Server
- Press [Write]

Clock synchronization via Cloud server

- Go to SERA2> GSM Communication> SERA Cloud Service
- Enable SERA Cloud Service

(I) SERA2 [PROGATE]						-	
File Settings Cov System Options OSM Communications Users/Access control	ices Read [F5] Write [System General System Options System			System Timers			
- hputs/Burgler Alern Zones - Outputs (PGM) - Automation/Sensors - Event Summary - Events Log - RT Testing&Monitoring - Firmware	Object Name: SMS/APP Text Charset SIM Card PIN: Installer Password: SMS User Password:	Ctylect Name Lutin (160 SMS symbols)	•	Test Time: Test Period: Entry Delay Exit Delay: Bell/Siren Cut-off Time:	13:30 hhumm 1 Days 15 s 20 s 120 s		•
SMART.	User Access Code Formit: Keyswitch Zone Mode: 1W (1-Wire Bus)	4 + Digits PulseEdge Dalles 1-Wire Bus DS1980A/DS18620	•	Time Zone: Daylight saving time: Clock synchronization:	(GMT: + 2)		•

Figure 36 SERA2> System Options> General System Options

5.3 System Fault/ Troubles Programming



•

System Options > System Fault/ Troubles

The System Fault/ Troubles settings let you set the communication options if the trouble occurs and let you set system voltage loss and restore options.

In this window System trouble settings could be configured The system can be armed in one of four modes DISARM, ARM, SLEEP, STAY.

By default, it is allowed to arm the system while the following system faults are present:

- Low battery.
- Battery dead or missing. •
- Battery failed.
- Date/time not set.
- GSM connection failed.
- GSM/ GPRS antenna failed.

If needed, restrict arm, when such trouble occur, check near such trouble in the System options> System Fault/Troubles window. And in case of such trouble, the arming activation will be restricted if "Restrict ARM" on specific trouble is enabled.

(i) SERA2 [GTalarm3]							_		×
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	System								
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Users/Access control	Faults/Trou		_						
- Inputs/Burglar Alarm Zones		Trouble	Enable	Restrict ARM	~	Fault/Troubles Global Settings			
- Outputs (PGM) - Automation/Sensors		ery trouble							
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- Event Log		ck trouble	<u>م</u>						
- Bus Modules		S trouble				Reset Trouble Event Counter After :	60	min	
Testing&Monitoring		iper trouble	•						_
ⁱ Firmware		loop trouble							
		card trouble							
		e antimasking trouble				System Voltage (Low Battery) settings			
	8 GSN	1 network trouble	v			Low System Voltage Alarm:	12.2	v	
								·	
SMART						System Voltage Restore:	13.7	V	
						Event Delay:	60	s	
						Event Delay.		0	
						Global Tamper Recognition:			
						Audible alarm when disarme / alarm as per	r zone whe	en armed	
						Tamper Disable	2010 1110	arried	Ť
N. 6 10 10						Trouble when disarmed / alarm as per zon	e when arr	ned	
						Trouble always		1	
Carly Carlos Martin						Audible alarm when disarme / alarm as per	r zone whe	en armed	
Trouble		This column lists potential system		S					
Enable		The system will detect a marked							
Restrict ARM		In case of such trouble, the armi							
Battery trouble		Low system voltage. Power supp	,	kup battery voltag	age is	low, needs to be recharged, or	replaced	1.	
Clock trouble		The time and date has not been		unicating with the		dulo			
BUS trouble		The expansion device is no long The zone(s) that was tampered		unicating with the		uule.			
Tamper trouble Fire loop trouble		The trouble is occurring with you	ur emoko	datactors					
SIM card trouble		Not available or impossible to re							
Zone ant masking trou	iplo	Do not available of impossible to re	au Silvi C	aiu.					
GSM network trouble	1010	SIM card is not registered with th	ne GSM r	etwork provider					
		The module has detected a low				system is running on the backup	hattery	and	
Low System Voltage A	Alarm	voltage is dropped below allowed		rino mouno indi y	,001 2		Suttory	and	
System Voltage Resto	re	The module has detected that the		voltage has beer	en res	stored.			
Event Delay	-	System low voltage trouble even							
		Setting of the allowable number			, whe	ere in case of excess of such nur	nber the	troubl	е
Trouble Shutdown		reporting will be off. The number							
Fault/Troubles Global		This setting determines the limit	for repea	ted trouble alarm	ns. Ac	dditionally, a timeout for such rep	peated a	larms	can
Settings		be set.							
		When the system or battery volta							
System Voltage (Low I	battery)	voltage returns to the normal lev			store	voltage levels can be set manua	lly. Addi	tionally	/, a
		timeout for repeated alarms can							
		Defines the control panel's response							
		Tamper Disable: The mod							
		Trouble when disarmed / Disarmed: Only trouble							
Global Tamper Recogi	nition					ends the specific report code.			
						ific Zone Alarm Type.	l or diac	rmod	
		 Irouble always: Trouble is Audible alarm when disa 				s of whether the system is armed	i or disal	mea.	
						when armed. Ile transmits the associated repo	rt code		
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Event Summary	Digital I/O D2	Digital Output (Max. 3.3V!!!!) Dallas 1-Wire Bus DS1990A/DS18b20	Digital Output (Max 3.3V) assigned to D1	
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	BUS		Dallas 1-wire Bus assigned to D2 Aosong 1-wire Bus Humidity/ Temperature Sensor assigned to D2	
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5.5 GSM Communication

5.5.1 Event Notifications via SMS & DIAL



GSM Communications > SMS DIAL Reporting

The SMS DIAL Reporting settings let you enter user's phone numbers and set events that will be reported to the user

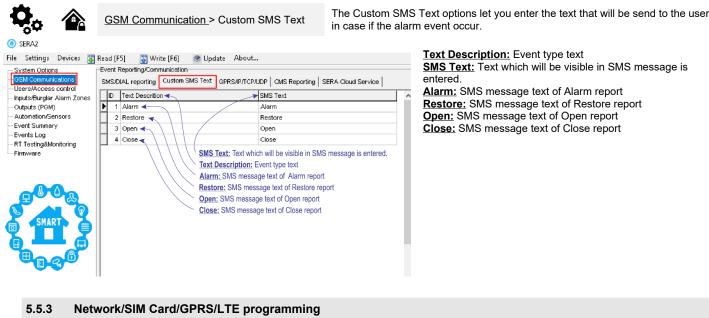
Up to 8 admin users can be set to receive SMS or DIAL notifications. These users can receive alarm phone calls and SMS text messages from the system via a GSM connection. When the gate is opened or the system is armed/disarmed, an SMS notification is sent to the user's phone number. In the SMS and DIAL Reporting settings under GSM Communications, users can input their phone numbers and select the events they wish to be notified about.

When a zone or tamper is violated, the system triggers an alarm. The alarm sequence is as follows:

- The siren/bell is activated. If the violated zone is of Fire type, the siren/bell emits a pulsating sound. Otherwise, the sound is steady.
- The system attempts to send an SMS text message, containing the violated zone's name. Each violated zone triggers a separate SMS. If the user's phone number is unavailable, the system tries the next listed number assigned to the same zone. Unavailability can be due to the mobile phone being switched off or out of GSM signal coverage. By default, the system continues to send the SMS to the next listed numbers in priority order, repeating as many times as programmed.
- If programmed, the system attempts to call the first user phone number via GSM, with each violated zone triggering a separate call. If the user is
 unavailable, the system dials the next listed number assigned to the same zone. Unavailability can be due to the mobile phone being switched off,
 out of GSM signal coverage, or busy.

Event Reporting/Communication			
	S Text GPRS/IP/TCP/UDP CMS Reporting SERA Cloud S	ervice	
SMS/autoDIAL Phone Number		SMS Notifications to USER Auto DIAL to USER	k
Tel.1 +	ID Events	1 2 3 4 5 6 7 8 1 2 3 4 5 6 7 8	
Tel.2 +	2 System Open/Close (CID 400 group		N
Tel 3 +	3 System Truobles(CID 300 group)		The index of phone number
			SMS Notifications to USER:
			SMS reporting to selected index of telephone number is enabled.
			Auto DIAL to USER: Auto DIAL to
Tel.6 +			selected index of telephone number is enabl
Tel.7 +			
Tel.8 +	10 Input/Zone4 Alarm/Restore		e.g.
			Call to Tel1 in case of Input/Zone2 Alarm/ Re
Limit of alarm dialing:			
SMS forwarding to Tel.1			and a second
🔽 Show Object Name			
Show Zone Number			TO XXX XXXX, SO CONCOMP Entered user number.
Show Event Time		insuccessful calls	
	SMS forwarding to Tel.1 SMS from the module resen	ding to the other phone number	
	Show Object Name: Object name will be displayed in	the SMS message	
	Show Zone Number: Zone number will be displayed i	n the SMS message	
		SMS message	
	Show CID Code: Report Contact ID code		
			example, a UK number +44 (0
DIAL Phone Numbe	re		
		number, select the checkboxes for the eve	nts that will trigger an SMS c
		<u> </u>	
me	Event time will be displayed i	n the SMS message	
e	Report Contact ID code		
Alarm/ Restore	Zone1- Zone32 alarm and rea	store events reporting is enabled.	
Close (CID 400	System ARM/DISARM/STAY	reporting is enabled.	
,	,		
es (CID 300 group)	System trouble reporting is e	nabled.	
	, , ,		
		1 0	
ib ood group/	Other events reporting is ena		
	The evoter allows for SMC -	porting to colocitod phone numbers (1.0) If	a aponitia avant accura in the
SER		eporting to selected phone numbers (1-8). If	a specific event occurs in the
SER	system, an SMS message wi	eporting to selected phone numbers (1-8). If I be sent to the enabled phone numbers. tic dialing to selected phone numbers (1-8).	
	SMSIautoDIAL Phone Number Tel.1 + Tel.2 + Tel.3 + Tel.4 + Tel.5 + Tel.5 + Tel.6 + Tel.7 + Tel.8 + Limit of alarm dialing: 10 SMS forwarding to Tel.1 SMS forwar	SMS/autoDIAL Phone Number Tel 2 Tel 3 Tel 3 Tel 4 Tel 3 Tel 4 Tel 5 Tel 4 Tel 5 Tel 4 Tel 5 Tel 8 Tel 8 Tel 8 Tel 7 Tel 8 Show Colect Name Show Zone Number Show Cole Code Sho	SNS/matcAuk Prove Number SNS hatticeations to USER Auto DiaL to USER Test Image: Signal Control Contro Control Control Content Control Control Control Control Content C

5.5.2 **Custom SMS Text**



SMS Text: Text which will be visible in SMS message is Alarm: SMS message text of Alarm report Restore: SMS message text of Restore report Open: SMS message text of Open report Close: SMS message text of Close report

5.5.3 Network/SI	N
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GSM Communication > Network/SIM Card

③ SERA2 [GTalarm3]								_	Х
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	Event Reporting/Com	nunication							
GSM Communications	SMS/DIAL reporting	Custom SMS Text Netv	work / SIM Card	CMS Reporting	SERA	Cloud Service			
- Users/Access control									
- Inputs/Burglar Alarm Zone:	s SIM Card settings				1 - N	letwork			
Outputs (PGM) Automation/Sensors									
- Event List	SIM Card PIN:	••••				Network	Auto	~	
- Event Log	APN:	internet							
Bus Modules	AFN.	Internet				SMS over LTE, VoLTE	\checkmark		
Testing&Monitoring	Login:								
Firmware	Deserved								
	Password:								
	TODAD Colling								
	TCP/IP Settings								
SMART									
	DNS1	8 8 4 4							
	DNS2	8 8 8 8							

APN: An Access Point Name

Login: User name of GSM operator network (if required by network operator).

Password: User password of GSM operator network where SIM card inserted in the module is operating.

DNS1: IP addresses of 1st DNS server.

DNS2: IP addresses of 2nd DNS server.

5.5.4 Central Monitoring Station details programming. Reporting to the Central Monitoring Station (CMS)



<u>GSM Communication</u> > CMS Reporting

This window allows you to configure the parameters for reporting to a central monitoring station (CMS).

The system is designed to report event notifications to the CMS by sending data messages. When CMS mode is enabled and set to GPRS, the system establishes a connection with the CMS.

In CMS mode, messages sent to the monitoring station are prioritized. Due to this prioritization, it's crucial to maintain a consistent and reliable connection with the CMS. Should the connection be interrupted, the system will try to re-establish it. If the CMS remains inaccessible for an extended period, the system will switch to a backup CMS.

Data Messages – Events

The system supports the following communication methods and protocols:

- GPRS network –SIA IP protocol (ANSI/SIA DC-09-2012; configurable as encrypted and non-encrypted).
- All events to CMS are transmitted according SIA-IP ANSI/SIA DC-09- 2013 standard message body in ADM-CID format Contact ID DC-05.

Initially, the system communicates via primary connection with the monitoring station. By default, if the initial attempt to transmit data is unsuccessful, the system will make additional attempts until the data is successfully delivered. If all attempts are unsuccessful, the system will follow this pattern:

- The system switches to the backup connection that follows in the sequence (presumably Backup 1).
- The system then attempts to transmit data by the backup connection.
- If the initial attempt is unsuccessful, the system will make additional attempts until the data is successfully delivered.
- The system ends up with all unsuccessful attempts.

If all attempts by all set connections are unsuccessful, the system will wait until the delay time (by default – 1200 seconds) expires and will attempt to transmit data to the monitoring station again starting with the primary connection.

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📄 Eile 🔌 Settings 🔒 Devi	ces 🛛 🐺 <u>R</u> ead [F5]	🚰 <u>W</u> rite [F6] 🛛 🛑 <u>U</u> p	date <u>冬H</u> e	lp				
	Event Reporting/Con	munication						
GSM Communications	SMS/DIAL reporting	Custom SMS Text Networ	rk / SIM Card	CMS Reporting	SERA Cloud Service			
Users/Access control	CMS Reporting							
Inputs/Burglar Alarm Zones	Primary			-AN:	SI/SIA IP DC-09			
Outputs (PGM)	,	GPRS 🗸						
- Automation/Sensors		0110		SLA	VIP Standard:	ANSI/SIA DC-09-2012 (2013)	\sim	
Event List	IP or Domain	192.168.1.1		Enc	cryption AES128:	\checkmark		
Event Log Bus Modules					· · · · · · · · · · · · · · · · · · ·	0123456789ABCDEF0123456789A	PODEE	
Testing&Monitoring	Port	9000		Ke'	y 32 char (Hex):	0123456769ABCDEF0123456769A		
Firmware				Ac	count Number (Hex):	12ABCDF		
	Backup 1					0		
		Disable 🗸 🗸		AC	count Prefix (Hex):			
	IP or Domain			Re	ceiver Number (Hex):	1		
	IF OF DOMAIN				pervision Message:	☑ 60 s		
	Port	0		Su	per vision message.			
SMART A				Us	e Time Stamp:	\checkmark		
	Settings							
	Transport Protoc	ol:	TCP	~				
		, I						
	Backup reporting	after:	3 Attem;	ots				
		1						
	Return To Primary	After:	30 min					
All events to CMS are tran	smitted accordin	a SIA-IP ANSI/SIA DC-	-09- 2013 s	tandard mes	sage body in ADM-(CID format Contact ID DC-05		
CMS Reporting		Primary central monito			ougo bouy in Abin (
Backup 1		· · · · · · · · · · · · · · · · · · ·		g-				
Primary		Primary central monito	oring station	settings				
GPRS or Disable		Data transmitting to the			RS network or data t	ransiting Disable		
IP or Domain		The IP address xxx.xx						
Remote Port		The IP port defined as	input port	on the receive	er station to receive	the connection requests (TC	o mode)) or
		the datagrams (UDP m	node) trans	mitted by ALI	ERT.			
Backup 1		Backup 1 central moni						
Transport Protocol		The used link protocol:	: UDP (data	agrams excha	ange without conneo	ction) or TCP (connected mod	.e).	
(TCP or UDP)								
Backup reporting after	n attempts		primary cei	ntral monitori	ng station (CMS) is	disable, switch to backup CM	S after r	n
	•	attempts						
Return To Primary Afte		Return To Primary After		the enerytic	n of manager of th	is option is anabled the open	untion k	
Encryption AES128		must be defined.	n valiuates	the encryptic	on or messages. If the	his option is enabled, the enci	урион к	ey
			Definition	of the key as	a string of respectiv	vely 32 hexadecimal characte	rs relati	velv
Key 32 char (Hex)		to the size of the selec			a string of respectiv		0, 10101	very
Account Number (Hex)		mandatory, consists of		decimal digits	S			
Account Prefix (Hex)		Consists of 6 hexadec						
Receiver Number (Hex)		Optional, consists of 6						
		Supervision NULL Mes	ssage. Opti	onally, the Pl	E and CSR may be	configured to supervise the c	onnectio	on.
Supervision Message n	seconds	Module periodically se	nd the Null	Message to	the CSR. Supervision	on interval shall be configurab	le over	
		range of 10 seconds to	o 9999 seco	onds.				
Use Time Stamp				to the messa	ages of a timestamp	in GMT time. This option is a	ways fo	orced
		for encrypted message	es.					

5.6 Zones programming



Connecting Detectors to GTalarm3:

- The GTalarm3 module has terminals for connecting detection devices such as motion detectors and door contacts.
- Once devices are connected to the module's zone terminals, you must configure the parameters for the corresponding zone.
- The module comes with 4 built-in wired zones and 2 programmable I/O inputs.
- If more connections are needed, the GTalarm3 can be expanded using an expansion module to accommodate up to 32 zones.

Zone Bypassing:

- Users have the option to "bypass" or deactivate a particular zone if it's been triggered. This allows the rest of the system to be armed without the need to reset the triggered zone.
- If a bypassed zone gets triggered during the exit/entry delay or while the system is active, it won't cause an alarm.

Stay Mode Features:

- "Stay mode" permits users to activate or deactivate the alarm system without having to exit the secured premises.
- If zones with the "Stay" feature are triggered when the system is in Stay mode, they won't set off an alarm. This is useful, for example, when you're at home and going to bed, and don't want certain zones (like inside motion detectors) to be active.
- The system will allow to enter Stay mode if:
 - A delay-type zone isn't triggered during the exit delay.
 - There's at least one zone with the Stay attribute enabled.
 - An arming method that includes an exit delay is used.

Difference between "Stay" and "Sleep" Zone Types:

- Zones with the "stay" type come with a delay zone timeout.
- · Conversely, in the "sleep" zone type, what would typically be a delay zone becomes instant, meaning it triggers immediately.

Zone Reactions:

- If zones classified as "Instant" or "Silent" types are triggered, the system will NOT activate the siren or the keypad buzzer.
 - For any zone designated as the "Delay" type:
 - When the system is in "Stay" mode, this zone behaves like an "Instant" zone, triggering immediately.
 - However, when the system is fully armed, the "Delay" zone operates with its typical delay.

Tampering:

The tamper circuit is a continuous loop; any interruption triggers an alarm, whether the system is armed or not. This alarm activates
the siren, keypad buzzer, and sends an SMS to the user. The alarm is set off by opening enclosures like the detection device, siren,
cabinet, or keypad. To receive tamper alerts, ensure the "Tamper Enabled" option is checked, enabling both tamper detection and
SMS notifications.

Programming:

Install SERA2 software.

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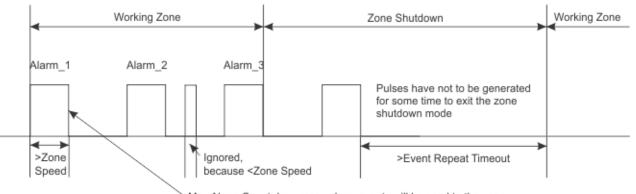
- Connect the module to the computer via mini USB cable.
- Go to Zones window in the SERA2 software
- Set the required parameters
- Write configuration by pressing [Write] icon

Note on Unused Zones: If any zone isn't in use, it must be disabled to avoid false triggers or alerts.

The system will NOT cause any tamper alarm regarding the physical tamper violation if the associated zone is disabled.

The figure below shows an example of zone operation with a 3-time alarm event limit:

- Zone alarm is generated 3 times.
- After 3 alarm events the zone is blocked (bypassed) till Event Repeat Timeout will end.
- After Event Repeat Timeout zone will activated again.



Max Alarm Count- how many alarm events will be send to the user

SERA2

SLIVA2								
File Settings Devices 蹼	Read (F5) 🛛 🞇 Write (F6) 🛛 🧇 Update 🗋	Zone 1 Settings	Double click on the selected sensor's line					
	Zones	Zone I Settings						
	Settings Write configuration to the module		Alarm Text: It is possible to customize alarm text					
Users/Access control	counigo	Zone Name Z	Restore Text: It is possible to customize restore text					
Inputs/Burglar Alarm Zones	Zn Zn Name Zone Hardv	Alarm Text 🗲	Zone Hardware Location: Select the zone hardware input					
Outputs (PGM)	▶ 1 Zone Name 1 ▲ GTalarm v2, IN1		EOL End of line resistor. Input type with resistor.					
- Automation/Sensors	Z Zone Name 2 GTalarm v2, IN2	Restore Text 🖌 🛛 🖊 F	Wiring Type: NC The alarm will be send when the circuit between input and ground (-V) will be broken.					
Event Summary	3 Zone Name 3 GTalarm v2, IN3	Zone Hardware Location 🖌 😡	NO The alarm will be send when the input will be connected with ground (-V)					
- Events Log	4 AC Loss GTalarm v2, IN4	//	Context ID each. The module will extend to all constants the reporting event when transmitting to the CMC					
RT Testing&Monitoring		– Zone Definition 🛛 🖉	Contact ID code: The module will automatically generate the reporting event when transmitting to the CMS.					
Firmware	5 Zone Name 5 GIalarm v2, 1/01		Zone Speed: Defines how quickly the module responds to an open zone detected on any hardwired					
	🚺 🗹 6 Zone Name 6 GTalarm v2, I/O2	_ Wiring Type 🖌 🖉	input terminal (does not apply to addressable motion detectors and door contacts).					
Delau When arread any idea a	where delay subsets similariand. Decomposition de d	Contact ID code	Event Repeat Timeout: Insensitive time to recurrent zone events					
for door sensors.	entry delay when violated. Recommended		/ Max Alarm Count: When the particular number of zone events set has occurred, the other events of the					
	larm will sound first if the zone is violated:	Zone Speed 🖌 🛛 🛛 🖓	same zone will not be responded for the time set in Event Repeat Timeout. After this					
	ry delay if entry delay is active. Recommended		time expired (or when disarmed), a new count of the number of zone events will be started.					
for motion sensor in front of the		Event Repeat Timeout 🛩 🖊 🖻						
Instant When armed, instant al		Max Alarm Count 🚽 🛛 🖇	Zone Alarm action: Determines which output will be activated					
	iolated, audible alarm at default not		/ Alarm report enabled: The system will report alarm event and log it to the event buffer					
	I modes. Recommended for safes,	Zone Alarm action: 🔶 🔤	ione Alarm action:					
storehouses, tampers.	,		/, Tamper Enabled: The system will detect a tamper condition with one or more sensors on the system					
Silent Always active, not deper	nding from ARM, DISARM modes. The SMS	Zone Options	V, Bypass Enabled: The system will allow zones to be Manually Bypassed.					
	ot be activated. Recommended for voltage,	Alarm report Enabled	Shutdown if max alarm count: The system will stop generating alarms once the max alarm count Limit is reached.					
	failure control and for alarm of silent panic.	Restore report Enabled	It resets every time the system will be armed.					
	nication when violated not depending from	Tamper Enabled						
	ignal with interruptions will be generated.		Zone Force ARM: Only force zones can be bypassed when the module is Force armed. Fire Zones cannot					
Recommended for smoke, fire	detectors.	Shutdown if max alarm count	be Force Zones.					
ON/OFF		Zone Force ARM <						
	t' except the module will auto bypass							
the zone if Armed in the Stay m								
	t' except the module will auto -bypass		OK					
the zone if Armed in the Stay m	node							

Alarm Text: It is possible to customize alarm text

Restore Text: It is possible to customize restore text

Zone Hardware Location: Select the zone hardware input

Wiring Type:

EOL End of line resistor. Input type with resistor.

NC The alarm will be send when the circuit between input and ground (-V) will be broken.

NO The alarm will be send when the input will be connected with ground (-V)

Contact ID code: The module will automatically generate the reporting event when transmitting to the CMS.

<u>Zone Speed</u>: Defines how quickly the module responds to an open zone detected on any hardwired input terminal (does not apply to addressable motion detectors and door contacts).

Event Repeat Timeout: Insensitive time to recurrent zone events

Max Alarm Count: When the particular number of zone events set has occurred, the other events of the same zone will not be responded for the time set in Event Repeat Timeout. After this time expired (or when disarmed), a new count of the number of zone events will be started. Zone Alarm action: Determines which output will be activated

Zone Alarm action: Determines which output will be activated

Alarm report enabled: The system will report alarm event and log it to the event buffer

Restore report enabled: The system will report restore event and log it to the event buffer

Tamper Enabled: The system will detect a tamper condition with one or more sensors on the system

Bypass Enabled: The system will allow zones to be Manually Bypassed.

Shutdown if max alarm count: The system will stop generating alarms once the max alarm count Limit is reached. It resets every time the system will be armed.

Zone Force ARM: Only force zones can be bypassed when the module is Force armed. Fire Zones cannot be Force Zones.

Zone definition:

Delay When armed, provides entry delay when violated. Recommended for door sensors.

Interior When armed, instant alarm will sound first if the zone is violated; Instant alarm will follow the entry delay if entry delay is active. Recommended for motion sensor in front of the door.

Instant When armed, instant alarm when violated.

24 hours instant alarm when violated, audible alarm at default not depending from ARM, DISARM modes. Recommended for safes, storehouses, tampers.

Silent Always active, not depending from ARM, DISARM modes. The SMS will be send, but the siren will not be activated. Recommended for voltage, Temperature control, AC mains failure control and for alarm of silent panic.

Fire Instant alarm and communication when violated not depending from ARM, DISARM modes. Siren signal with interruptions will be generated. Recommended for smoke, fire detectors.

ON/OFF

Interior STAY Similar to 'Instant' except the module will auto bypass the zone if Armed in the Stay mode

Instant STAY Similar to 'Instant' except the module will auto -bypass the zone if Armed in the Stay mode

5.7 Outputs. Bell & PGM programming

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SERA2>Outputs (PGM)>[Outputs]

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SERA2 [GTalarm3]																		_	
le 🔌 Settings 🔒 Device		🙄 Write [F6] 💦 🕴	📒 Update 🛛 📎 Hel	0															
	Outputs Outputs Calcadeday	bla Balanna																	
Isers/Access control	Outputs Scheduler	Holidays										Г		0.1					
puts/Burglar Alarm Zones utputs (PGM)	ID Output Locat	ion in Hardware	Output Name	Out definition	No	Mode	Time Inver	t Pulsating	ON Time	OFF Time	Count	Input	1 2	Sched	1ules 5 6 7	7 8	[ON] Event Text	[OFF] Event Tex	t e r
utomation/Sensors	1 GTalarm3, OUT1		OUT1		V N/A	Steady	10s 🗆		100ms	100ms	0						ON Text	OFF Text	
ivent List ivent Log	2 GTalarm3, OUT2	(1A)	OUT2	Disable		Steady	10s 🗌		100ms	100ms	0	N/A					ON Text	OFF Text	
us Modules	3 GTalarm3, OUT3		OUT3	Buzzer		Steady	10s 🗌		100ms	100ms	0	N/A						OFF Text	
sting&Monitoring	4 GTalarm3, OUT4		OUT4	Flash Svstern State		Steady	10s		100ms	100ms	0	N/A					ON Text	OFF Text	
nware	5 GTalarm3, I/O1 () 6 GTalarm3, I/O2 ()		OUT5 OUT6	ARM Status		Steady Steady	10s 10s		100ms 100ms	100ms 100ms	0	N/A N/A					ON Text ON Text	OFF Text OFF Text	
	7 GTalarm3, I/O3 (OUT7	 Remote Control & Automati AC OK 	ion	Steady	10s		100ms	100ms	0	N/A						OFF Text	
	8 GTalarm3, D1 (1) mA, Max Voltage 3		Battery OK		Steady	10s 🗌		100ms	100ms	0	N/A					ON Text	OFF Text	
	9 GTalarm3, D2 (1	0mA, Max Voltage 3	OUT9	System Armed Status Alarm Indication		Steady	10s 🗌		100ms	100ms	0	N/A					ON Text	OFF Text	
SMART	10 GTalarm3, D3 (1			Lost Primary Chanel Lost Secondary Chanel		Steady	10s 🗌		100ms	100ms	0	N/A					ON Text	OFF Text	
	11 GTalarm3, LED F 12 Output Disabled	N	LED FN OUT12	Fire Sensor		Steady Steady	10s 10s		100ms 100ms	100ms 100ms	0	N/A N/A					ON Text	OFF Text OFF Text	
	13 Output Disabled		OUT13	RH Sensor Trouble Access Gained		Steady	10s		100ms	100ms	0						ON Text	OFF Text	
	14 Output Disabled		OUT14	STAY Armed Status SLEEP Armed Status		Steady	10s 🗌		100ms	100ms	0	N/A					ON Text	OFF Text	
	15 Output Disabled		OUT15	Pulse On ARM / DISARM		Steady	10s 🗌		100ms	100ms	0	N/A					ON Text	OFF Text	
	16 Output Disabled		OUT16	Output State Zone OK		Steady	10s 🗌		100ms	100ms	0	N/A					ON Text	OFF Text	
	17 Output Disabled 18 Output Disabled		OUT17 OUT18	Activate by ARM/DISARM		Steady	10s		100ms	100ms 100ms	0	N/A N/A					ON Text	OFF Text OFF Text	
	19 Output Disabled		OUT19	Activate by SLEEP/DISARN Activate by STAY/DISARM		Steady	10s		100ms	100ms	0	N/A						OFF Text	
A CARLEN THEFT	20 Output Disabled		OUT20	Access Control	19795	Steady	10s		100ms	100ms	0							OFF Text	
A Contraction	21 Output Disabled		OUT21	Disable	N/A	Steady	10s 🗌		100ms	100ms	0	N/A					ON Text	OFF Text	
D	1	Output in	dex numbe	ər															
_ Dutput Locati	ion in	Carparin																	
lardware		The outp	uts hardwa	re location.															
		<u>0</u>																	
Dutput Label		Output na																	
		Output O	peration N	ode Selection:															
		•	Disable:	Output is deac	tivated	1.													
		•	Bell: Con	nects to a sou	nder (s	siren).	Emits a	a conti	inuous	or pul	satin	g sic	nal	(for	fire)) up	on alarm	activation	
		•		Emits a pulse c															
											c uui	ing i		,	July	010			10
				buzzer when t															
		•		irs with a light			stem s	tatus.	Puisa	tes dur	ring E	XIT L	Jela	y, re	emai	ns (continuol	is auring	
				nd stops upon															
		•	System S	State: For light	indica	tors sh	lowing	syster	m stati	us. Pul	sates	s dur	ring	Exit	Dela	ay,	remains :	steady	
Out definition	า			arms, and stop									U					,	
		•	-	tus: Activates		-				stem is	: arm	ed							
		•				•							vice	~	- ^ -	nc	EME or n	hono coll	
Out definition	No	•		Control &Auto											a Ap	p, c	51v13, 01 µ	none can.	
Disable	✓ N/A			vs automated of					.g. the	rmosta	at or s	sche	dule	s.					
Disable Bell		•		ndicates the pa															
Buzzer		•	Battery C	DK: Indicates b	oattery	power	supply	for th	e cont	trol par	nel.								
Flash System State		•	System A	Armed Status:	: Conn	ects to	a light	indica	ating s	vstem	statu	s. C	ontir	nuoi	us si	igna	al when th	ne system	is
ARM Status			armed.				0		0	,						0		,	
Remote Control & Auton	nation	•		dication: Indic	atos a	larm et	atus E	mite a	a conti	nuque	signs	al un	on a	alarr	n 0v	ont	of the sv	stom	
AC OK Battery OK																			
System Armed Status		•		nary channel:															
Alarm Indication		•		ondary chanr														el fails.	
Lost Primary Chanel	.	•	Fire Sens	sor: Resets fire	e sens	or opei	ration.	Chang	ges sta	atus foi	r 5 se	con	ds b	efor	re re	ver	ting.		
Lost Secondary Chanel Fire Sensor		•	RH Sens	or Trouble: In	this m	ode. th	ne outp	ut car	autor	natical	lv res	set th	he h	umi	ditv :	sen	lsor if a m	alfunction	
RH Sensor Trouble			occurs.			, .					,								
Access Gained				Coincedulf o up	or hoo	the rig	ubt to A			1 the e	watar	n th			wo h			to control	
STAY Armed Status SLEEP Armed Status		•	ALLESS	Sained: If a us		une ng	μπ. τΟ Α 	1 XIVI/ U	JARI	พ แเษ S	ysief	n, un	icy 8	uwa	ysn	ave			
Pulse On ARM / DISARN	M		•	it. If the ARM/[•					disarmed	•
Output State		•		med Status: T															
Zone OK Activate by ARM/DISAR	RM Command	•	SLEEP A	rmed Status:	This o	utput a	activate	s whe	n the	system	n is se	et to	Arm	ned	SLE	EP	mode.		
Activate by SLEEP/DISA	ARM Command	•		ARM/DISARM															
Activate by STAY/DISA	RM Command	•		tate: Reflects														itout 1 if	
Access Control	I NVA I		[No]=1.				001000	cu ou	iput, it	n oxun	npic,			ouq	Jui	Jun		apat i n	
		•		: Indicates whe	en all s	security	/ syster	n zon	es are	not vie	olateo	d. A	cont	inuc	ous s	sıgr	hal indica	tes the	
			system's	readiness.															
		•	Activate	by ARM/DISA	RM C	ommai	nd: Act	ivates	when	the sy	/stem	ı rec	eive	s ar	ו AR	M/۲	DISARM	command	
		•	Activate	by SLEEP/DIS	SARM	Comm	hand: A	Activat	es wh	en the	svste	em r	ecei	ves	a Sl	LEF	EP/DISAF	RM	
			command		-					-		-	-		-	_	-		
		•		 by STAY/DIS/		omma	and Ar	tivoto	s who	n the c	vetor	n ro	ceiv	<u></u>	ST	Δνι		command	4
		•		•															
		•		Control : This n			•						or a	cce	55 C	Unti	ioi. it logs	s every us	er
				ent, and if act	ivated	by a ca	all, it st	ores t	ne pho	one nu	mber	-							
		Output C	ontrol Mod	e:															
		•	Pulse: Th	nis mode gene	rates a	a sinale	e impule	se siai	nal Ac	cording	g [Tin	nel r	bara	met	er w	her	n the outn	ut is	
			activated	•		.3.0	1	- 9				1 1					•P		
Mode		•		his mode mai	ntaina	the cur	tout in	aithar	an 🗥			ato o	moo	it'a	activ	vot-	he		
																		4l	
		•		unt: In this mo		oon act	ivation	, the c	output	produc	es a	seri	es o	r im	puls	es l	based on	tne	
				[Count] param															
Time		Then [Mo	de]=Pulse	, Pulse time d	uratior	can se	et from	1 to	99999	9 sec.									
nvert			version is																
Pulsating				ctivated. Then	Outor	t is act	ivatad	t varill -	oulect	2 2000	rdina	nula		1	ima	1		ime ¹	
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Pulse ON Tim				se ON duration															
Pulse OFF Tir	mo	Dulcating	modo nul	se OFF duratio	n														

Pulsating mode pulse OFF duration.

Pulse OFF Time

5.8 Automation & Sensors Programming



SERA2> Automation /Sensors

GTalarm3 Module Automation Insights:

Sensors:

- The GTalarm3 module interfaces with standard sensors that produce either an analog voltage/current (0-30V, 0-20mA) or digital data via the Maxim Dallas 1-Wire bus.
- $_{\odot}$ $\,$ Sensor configurations and parameters are set using the SERA2 software.
- Remote Configuration/Monitoring /Control/Access:
 - Enables monitoring, controlling, and data logging from almost any global location through GSM GPRS/LTE networks.
 - Data is transmitted via GPRS/LTE, leveraging the TCP/IP protocol. Connection is made to the 'SERA Cloud service' which registers all devices. This connection is initialized by the SERA2 configuration tool using a unique identifier.
 - The SERA2 configuration tool sets up the connection using a unique ID, either IMEI or MAC.
 - The 'SERA Cloud service' facilitates efficient setup and configuration.
 - o Ranges from basic data viewing to advanced features like receiving text alerts during alarms or transferring data logs remotely. Thanks to
 - the GSM and GPRS/LTE capabilities, users can access this data whenever needed.
- Testing & Monitoring:

Monitoring of essential parameters like temperature, humidity, and potentially security, is crucial.

- Localized Monitoring Systems:
 - Adaptable for various environments, including but not limited to labs, museums, warehouses, computer rooms, food processing units, hospitals, and greenhouses.
 - Depending on specific needs, users can monitor ambient temperature, humidity, or utilize other processes like thermocouples. Sensors generating analog voltage/current or pulse outputs can broadcast this data universally.
- Installation:
 - $_{\odot}$ $\,$ Attach the GSM antenna and insert the SIM card with the PIN request deactivated.
 - Utilize a 10-30V/1A supply for power, and optionally connect the battery and the AC loss signal to IN4.
 - Connect the analog sensors (0-30V, 4-20mA) and digital sensors, like the DS18b20, following the GTalarm3's schematics.
- Configuration:
 - Start by setting up the SERA2 software.
 - \circ ~ Using a mini USB cable, link the module to a PC.
 - o Initiate sensor parameters, PGM control outputs, and provide server reporting details.
 - o Real-time monitoring offers insights on parameters like sensor inputs, voltages, current, and more.

5.8.1 Automation/Sensors (Automation/Sensors/Analog Inputs) Programming in SERA2 Software

Connecting Sensors to the Module:

- Double click on the selected sensor's line. ٠
- Click on "Sensor type/ hardware location" and default sensor settings appear.
- Connect the sensors to the module. Connect the power supply.
 - Sensor's type should be select in the System Options> Digital I/O Settings window. 0
- Click [Read]. •

• •

The connected sensors will appear in the list.

Sensor Name		Se⊓sor Hardware ID	Unit	RT Value	Max Val SMS	Min Val SMS	Max		
Daviklis 1	GTalarm,Input D1,1	-Wire,DS18B20 Temperature,SN:28A91B640400	°C	21.1	2	-2			
Daviklis 2	GTalarm,Input D2,1	-Wire,DS18B20 Temperature,SN:284B84C30400	°C	21.1	2	-2			
		Sensor 1 Settings					x		
Sensor Settings									
Sensor Name:		Daviklis 1							
Sensor type/hardw	are location:	GTalarm,Input D1,1-Wire,DS18B20 Temperature;	SN:28A9	918640400			•		
Sensor Unit Text: Sensor Disabled GTalarm,Input IN1,0-10V GTalarm,Input IN2,0-10V									
High/Max Value A	ction Settings	GTalarm, Input IN3,0-10V GTalarm, Input IN4,0-10V							
Max Value Alarm E	vent/SMS:	GTalarm, Input 101,0-10V GTalarm, Input 102,0-10V							
Max Value To Acti	vate Output:	GTalarm,Input IO1,0-20mA							
Max Value Hystere	sis:	GTalarm,Input IO2,0-20mA GTalarm,Input D1,1-Wire DHT22 RH,Humidity							
Max Alarm Event D	elay:	GTalarm Input D1,1 Wire DHT22 Temperature GTalarm Input D2,1 Wire DHT22 RH.Humidity							
Max Value Output	Control Delay:	GTalarm, Input D2,1-Wire DHT22 Temperature							
GTalarm.Input D3,1-Wire DHT22 RH,Humidity Output: GTalarm.Input D3,1-Wire DHT22 Temperature									
Contact ID Report	Code:	GTalarm,Input D1,1-Wire,DS18B20 Temperature, GTalarm,Input D2,1-Wire,DS18B20 Temperature,							
SERA2 [GTalarm3]									
le 🗞 Settings 🏯 Devices 🛛 🐺 Rea	d [F5] 🛛 🖏 Write [F6] 🛑 Upo	iate 📎 Help							

munications		Sensor Name	Sensor Hardware ID		RT Value	dax Val SMS	Min Val SMS	Max Val OUT	Min Val OUT	Max Hyst	Min Hyst	Max A	Max R	Min A	Min R Max Alarm SMS	Min Alerm SMS	Max OUT	Min OUT	Mut.Coef. Correction S	Sum. Coef. Correction N	faxCID /	MinCID Mr	ax SMS Delay Ma	ax OUT Delay ?	Min SMS Delay I	Min OUT D
cess control		1 Sensor Name 1	GTalarm3,input D1,1-Wire,DS18820 Temperature	*C	26.2	30	5	28	10	1	1	~	V	•	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	1000
rglar Alarm Zones	Ø	2 Sensor Name 2	Sensor Disabled	*C	NKA	30	5	28	10	1	1	~	1	•	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	1000
an/Sensors	Ø	3 Sensor Name 3	Sensor Disabled	•C	N/A	30	5	28	10	1	1	~		1	Max Value	Min Volue	NONE	NONE	1	0	158	159	10000	1000	10000	1000
t		4 Sensor Name 4	Sensor Disabled	*C	N/A	30	5	28	10	1	1	V	V		Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	1000
		5 Sensor Name 5	Sensor Disabled	*C	NKA	30	5	28	10	1	1			•	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100
		6 Sensor Name 6		•C	N/A	30	5	28	10	1	1			7	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	1000
		7 Sensor Name 7		•C	N/A	30	5	28	10	1	1			1	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	1000
		8 Sensor Name 8		*C	N/A	30	5	28	10	1	1	~	✓	4	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	1000
	Z	9 Sensor Name 9	Sensor Disabled	°C	NKA	30	5	28	10	1	1			4	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	1000
	21	0 Sensor Name 10	Sensor Disabled	•C	N/A	30	5	28	10	1	1			1	Max Value	Min Volue	NONE	NONE	1	0	158	159	10000	1000	10000	100
		1 Sensor Name 11		*C	N/A	30	5	28	10	1	1	~			Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100
	21	2 Sensor Name 12	Sensor Disabled	*C	NKA	30	5	28	10	1	1	~	-	~	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
	21	3 Sensor Name 13	Sensor Disabled	•C	N/A	30	5	28	10	1	1			7	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100
		4 Sensor Name 14		•C	N/A	30	5	28	10	1	1			1	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100
		5 Sensor Name 15		*C	N/A	30	5	28	10	1	1	~	✓	4	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
	21	6 Sensor Name 16	Sensor Disabled	*C	NKA	30	5	28	10	1	1	~	-	7	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
	21	7 Sensor Name 17	Sensor Disabled	•C	NKA.	30	5	28	10	1	1	v	-	7	Max Value	Min Volue	NONE	NONE	1	0	158	159	10000	1000	10000	100
		8 Sensor Name 18		*C	N/A	30	5	28	10	1	1				Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
		9 Sensor Name 19		*C	N/A	30	5	28	10	1	1	•		•	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
		0 Sensor Name 20		•C	N/A	30	5	28	10	1	1	v	-	7	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100
	22	1 Sensor Name 21	Sensor Disabled	•C	N/A	30	5	28	10	1	1	v		1	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
		2 Sensor Name 22		*C	N/A	30	5	28	10	1	1	~	✓	•	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100
		3 Sensor Name 23		•C	N/A	30	5	28	10	1	1	~	-	7	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100
		4 Sensor Name 24		•C	NKA.	30	5	28	10	1	1	v		7	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100
		5 Sensor Name 25		*C	N/A	30	5	28	10	1	1	~	✓		Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100
		6 Sensor Name 26		*C	N/A	30	5	28	10	1	1	•		•	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
		7 Sensor Name 27		•C	NKA.	30	5	28	10	1	1	7		7	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
		8 Sensor Name 28		•C	NKA.	30	5	28	10	1	1	V		•	Max Value	Min Value	NONE	NONE	1	0		159	10000	1000	10000	100
		9 Sensor Name 29		*C	N/A	30	5	28	10	1	1	~	✓	•	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
		0 Sensor Name 30		•C	N/A	30	5	28	10	1	1	7		•	Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	10
	2 3	1 Sensor Name 31	Sensor Disabled	•C	N/A	30	5	28	10	1	1	v		V	Max Value	Min Volue	NONE	NONE	1	0	158	159	10000	1000	10000	100
	23	2 Sensor Name 32	Sensor Disabled	*C	NKA	30	5	28	10	1	1	V	V		Max Value	Min Value	NONE	NONE	1	0	158	159	10000	1000	10000	100

Setting Sensor Parameters:

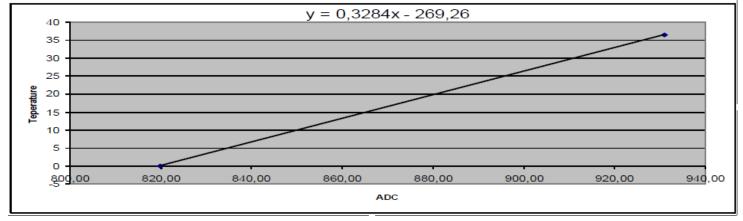
- n3_052308231303_4G_E2 Double-clicking on the desired sensor's line will open its configuration window.
 - For instance, double-clicking on the "Sensor Name 1" line will display the "Sensor 1 Settings" window.
- Within this window, you can adjust and set the required parameters for the chosen sensor.

IMEL066011050174036

Sensor Unit Text: Upper limit High/Max (e.g. A/C Cooler, Fan) Value Action Settings Upper limit Value Alarm Event/SMS: Upper limit Value To Activate Output: Hysteresis: 1		ire.DS18820 Temperature.SN:2848E6C30400
Sensor Name: Sensor Name 1 Sensor type/hardware location: GTalarm31nput Sensor Unit Text: "C Upper limit High/Max (e.g. A/C Cooler, Fan) Value Action Setting: 30 Upper limit Value Alarm Event/SMS: 30 Upper limit Value To Activate Output: 28 Hysteresis: 1	t D1,1-Wir	High Temp Alarn High Temp Alarn High Temp
Sensor type/hardware location: GT alarm3.Jnput Sensor Unit Text: "C Upper limit High/Max (e.g. A/C Cooler, Fan) Value Action Settings Upper limit Value Alarm Event/SMS: 30 Upper limit Value To Activate Output: 28 Hysteresis: 1	t D1,1-Wir	High Temp Alarn High Temp Alarn High Temp
Sensor Unit Text: Upper limit High/Max (e.g. A/C Cooler, Fan) Value Action Settings Upper limit Value Alarm Event/SMS: Upper limit Value To Activate Output: Hysteresis: 1	ms	High Temp Alarn High Temp Alarn High Temp
Sensor Unit Text: *C Upper limit High/Max (e.g. A/C Cooler, Fan) Value Action Settings 30 Upper limit Value Alarm Event/SMS: 30 Upper limit Value To Activate Output: 1 Hysteresis: 1		High Temp Cooler Hysteresis Cooler ON
Upper limit High/Max (e.g. A/C Cooler, Fan) Value Action Settings Upper limit Value Alarm Event/SMS: 30 Upper limit Value To Activate Output: 28 Hysteresis: 1		High Temp Cooler Hysteresis Cooler ON
Upper limit Value Alarm Event/SMS: 30 Upper limit Value To Activate Output: 28 Hysteresis: 1		High Temp Cooler Hysteresis Cooler ON
Upper limit Value Auim Event/Striss. Upper limit Value To Activate Output: Hysteresis:		High Temp Cooler Hysteresis Cooler ON
Hysteresis:		High Temp
41 5 10.1		- Cooler OFF
Alarm Event Delay: 10000	me	
Output Control Delay: 1000	1110	Comfort Zone
Output: NONE V		
Contact ID Report Code: 158		Heater Hysteresis
Alarm Event SMS Text: Max Value		Low Temp
Alarm Event/SMS 🗹 Restore Event/SMS	\square	LowTemp Alarm SMS Alarm LowTemperature
Lower limit Low/Min (e.g. Heater) Value Action Settings		3W3 Main Low Temperature
Lower limit Value Alarm Event/SMS: 5		Sensor Calibration
Lower limit Value To Activate Output: 10		X - Multiplier
Hysteresis: 1		
Alarm Event Delay: 10000	ms	Y - Offset
Output Control Delay: 1000	ms	Equation: Temperature=X*ADC+Y
Output: NONE V		
Contact ID Report Code: 159		
Alarm Event SMS Text: Min Value		
Alarm Event/SMS Restore Event/SMS		OK

Table Column	Field name in Sensor Form	Column/Field Description
Sensor Name	Sensor Name	Sensor name
Sensor Type/ Hardware location Sensor Hardware D Sensor Hardware Sensor Hardware<		 Location of sensor connected to the module: Specify which sensors are connected to the module. Sensor disabled: Check if the sensor is deactivated. GTalarm, Input IN1IN4, 0-30V: Assign voltage input ranging from 0-30V to IN1IN4. GTalarm, Input I/O1I/O3, 0-30V: Assign voltage input ranging from 0-30V to I/O1I/O3. GTalarm, Input I/O1I/O3, 0-20mA: Assign current input for I/O1I/O3 ranging from 0-20mA. GTalarm, Input D1D3, 1-Wire DHT22 RH, Humidity: Assign digital input D1D3 for 1-Wire DHT22 RH Humidity sensor. GTalarm, Input D1D3, 1-Wire DHT22 RH, Temperature: Assign digital input D1D3 for 1-Wire DHT22 RH Temperature sensor. I-Wire Temperature sensors: Assign digital input D1D3 for 1-Wire DS18b20 Temperature sensor.
Unit	Sensor Unit Text	Specify the unit used for the sensor.
Max Val SMS	Max Value Alarm Event/ SMS	Define the maximum temperature value that triggers a report.
Max Val OUT	Max Value To Activate Output	Set the maximum temperature value to activate a specific output.
Max Hyst	Max Value Hysteresis	Specify the hysteresis value for the upper set point.
Max SMS Delay	Max Alarm Event Delay	Set the delay for SMS/App notifications when the upper limit is reached.
Max OUT Delay	Max Value output Control Delay	Determine the delay for output control when the upper limit is hit.
Max OUT	Upper Limit/Max>Output	Select the output that will be triggered when the maximum temperature value is hit.
Max Alarm SMS	Alarm Event SMS Text	Enter the text to be displayed in the SMS message when the set temperature limit is exceeded.
Max SMS en	Enable Alarm Event SMS	Check to send the indicated high temperature report.
Min Val SMS	Min Value Alarm Event/ SMS	Define the minimum temperature value that triggers a report.
Min Val OUT	Min Value To Activate Output	Set the minimum temperature value to activate a specific output.
Min Hyst	Min Value Hysteresis	Specify the hysteresis value for the lower set point.
Min SMS Delay	Min Alarm Event Delay	Set the delay for SMS/App notifications when the lower limit is reached.
Min OUT Delay	Min Value Output Control Delay	Determine the delay for output control when the lower limit is hit.
Min OUT	Lower Limit/Min>Output	Select the output that will be triggered when the minimum temperature value is hit.
Min Alarm SMS	Alarm Event SMS Text	Enter the text to be displayed in the SMS message when the set temperature limit is exceeded.
Min SMS en	Enable Alarm Event/ SMS	Check to send the indicated low temperature report.
Mult Coef Corr.	X-multiplier	Coefficient derived from the equation "Temperature = X*ADC + Y". Measure temperature in at least two points to calculate X.
Sum Coef Corr.	Y-offset	Coefficient derived from the equation "Temperature = X*ADC + Y". Measure temperature in at least two points to calculate Y.
Max CID	Contact ID Report Code	Input report codes in Ademco CID or SIA DC09 format. The module can set default
Min CID	Contact ID Report Code	report codes, and they can be modified. For custom notifications, add text in the "Alarm SMS Text" field.
RT Value		After connecting to the module and selecting the [Read] icon, this field displays the real-time sensor value.

Fig illustrate how to calculate X-multiplier and Y-offset with excel chart.



5.8.2 Recommendations for the user & installer

What to Do if You Detect a Sensor Trouble in the "Event Log" Window?

- Use the "RT Testing & Monitoring" Window: Sensor troubles are highlighted in red in this window. Navigate to the Automation/Sensors window, deactivate the problematic sensor, and then press [Write]. It's possible the issue might be related to the sensor's connection to the module.
- If the issue persists, ensure you save the configuration. Next, send this configuration to the seller. Be detailed in your description: specify the issues, mention connections related to zone: 001, and provide any other relevant information before forwarding it to the seller.

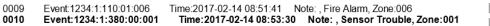
0009	Event:1234:1:110:01:006	Time:2017-02-14 08:51:41 Note: , Fire Alarm, Zone:006
0010	Event:1234:1:380:00:001	Time:2017-02-14 08:53:30 Note: , Sensor Trouble, Zone:001

5.8.3 Realtime Testing & Monitoring > Sensors/ Automation

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- Navigate to the Automation/Sensors window, deactivate the problematic sensor, and then press [Write]. It's possible the issue might be related to the sensor's connection to the module.
- If the issue persists, ensure you save the configuration. Next, send this configuration to the seller. Be detailed in your description: specify the issues, mention connections related to zone: 001, and provide any other relevant information before forwarding it to the seller.



③ SERA2 [GTalarm3]										—		Х
📄 <u>F</u> ile 🔌 <u>S</u> ettings 🔒 <u>D</u> evi	ices – 選 <u>R</u> ea	ad [F5]	🚰 <u>W</u> rite	e [F6]	📒 <u>U</u> pdate	<u>्रि</u> elp						
	Monitoring	window				-						
- GSM Communications	Hardware	Security	/ Alarm Pan	el/Access	Sensors/A	utomation	Event Monitoring	1				
Users/Access control Inputs/Burglar Alarm Zones	-ID1,Senso	r Name 1	Sensor Dis	abled								^
- Outputs (PGM)	Value	26.31]•c	Active	\checkmark	Upper Va	lue Alarm		Lower value alarm			
- Automation/Sensors	-D2.Senso	r Name 2.	- Sensor Dis	abled								
Event List	Value	23.25]•c	Active	\checkmark	Upper Va	lue Alarm		Lower value alarm			
Event Log		u blava a 2	J - Concer Die	a la la al								
Bus Modules Testing&Monitoring		24.94	Sensor Dis	Active		Upper Va	hua Alawa		Lower value alarm			
Firmware	Value] ℃		\checkmark	Opper va	iue Alarm		Lower value alarm			
	-ID4,Senso	r Name 4,	Sensor Dis	abled								
	Value	55.00	°C	Active	\checkmark	Upper Va	lue Alarm		Lower value alarm			
	-ID5,Senso	r Name 5,	Sensor Dis	abled								
	Value	24.70]•c	Active		Upper Va	lue Alarm		Lower value alarm			
SMART	-ID6,Senso	r Name 6,	- Sensor Dis	abled								
	Value	25.44	P⁼C	Active	\checkmark	Upper Va	lue Alarm		Lower value alarm			
	-ID7,Senso	r Name 7,	- Sensor Dis	abled								
	III [`]	04.00	1	A		11	han Album	-	I second second second			
Sensor1Sensor32	Sensor I	number										
Value	The valu	ie of ser	sor's volt	ane							-	

Value	The value of sensor's voltage
Active	If checked and the color is green, the sensor is active
High Val Alarm	If checked and the color is red, the high value alarm is generated
Low Val Alarm	If checked and the color is red, the low value alarm is generated

Monitoring window
Hardware Security Alarm Panel/Access Sensors/Automation Event Monitoring
0000 CID:1234:1134:01:001 Time:2018-11-1311:28:05 Note: Entry/Exit Alerm
0001 CID:1234:3134:01:001 Time:2016:11:1311:28:05 Note: EntryExit Restore
0002 CID:1234:1:133:01:004 Time:2016-11-13 11:28:05 Note: , 24 Hour (Safe) Alarm 0003 CID:1234:1:122:01:005 Time:2016-11-13 11:28:05 Note: , Silent
0003 CID:1 234:1:1 22:01:005 Time:2016-11-13 11:28:05 Note: , Silent 0004 CID:1 234:3:1 33:01:004 Time:2016-11-13 11:28:07 Note: , 24H (Safe) Restore
0004 CD:1234:312301005 Time:2016-11-311.2007 Note: ,34int Restore
0006 CD:1234:134:01001 Time:2016-11-311:2007 Note: Safet Asrm
0007 CD:1234:1122:01:005 Time:2016:11-1311:28:11 Note: Silent
1

Figure 37 How to find required RT Testing & Monitoring > Event Monitoring window.

0000 0001 0002	CID:1234:1:134:01:001 CID:1234:3:134:01:001 CID:1234:1:133:01:004	Time:2016-11-13 11:28:05 Time:2016-11-13 11:28:05 Time:2016-11-13 11:28:05	Note: , Entry/Exit Alarm Note: , Entry/Exit Restore Note: , 24 Hour (Safe) Alarm
0003	CID:1234:1:122:01:005	Time:2016-11-13 11:28:05	Note: Silent

Figure 38 The example of RT Testing & Monitoring > Event Monitoring window

Table 7 Explanation of every field in "Event Monitoring" window

	Event number
CID	Contact ID Code
Time	Event date and time
Note	Event report text which was indicated.
-	

5.1 **Event List**

<u>Event</u>	List The Event List table illustrates Contact ID codes of the events and enable user to change the text that wil be reported in case if the event occur.						/ill										
ID	Report sequ	Jence	num	ber													
Name of Status	Event Event (repo	ort) na	me														
Code	Report Con	tact If	D cod	e.													
Enable	The indicate				sen	t wh	en it	t is d	chec	ked							
Alarm SMS Text												red					
	rm SMS Text Alarm text which will be visible in SMS message is entered. tore SMS Text Restore text which will be visible in SMS message is entered.																
Restore Sivis Te	None	L WINC		De v	15101	em	SIVIC	5 1110	5330	iye i	5 61	liere	u.				
						<u> </u>											
Туре	USER		efer t														
.)po	ZONE	<u> </u>	efer t	o Zoi	ne R	lepc	rt O	ptior	าร								
	NUM	R	efer t	o Nu	meri	ical	Rep	ort C	Optic	ons							
[SMS], [DIAL], [CMS1. [APP1 These chec	kboxe	es det	ermi	ne tł	ne c	omn	nuni	catio	on cł	nanı	nel to	o wł	nich	a specific event wil	l be sent.	
📄 File 🔌 Settings 🚑 Devi																	
- System Options	Events	~															
- GSM Communications	ID Name of Status Event	Code	Type	Enable	SMS1	DIAL 1	SMS2	DIAL2	SMS3	DIAL3	SMS×	DIALX	CMS				
													CIMS	APP	Alarm SMS Text	Restore SMS Text	^
Users/Access control	A non-specific medical condition exists	100	ZONE		~		v		~		◄		C₩S ▼	APP	Alarm SMS Text Medical Alarm	Restore SMS Text Medical Restore	^
Inputs/Burglar Alarm Zones	A non-specific medical condition exists Emergency Assistance request	100 101	~		v		V V		V		>						^
	i inner	101	ZONE	~			र र र		V		S		~	◄	Medical Alarm	Medical Restore	
Inputs/Burglar Alarm Zones Outputs (PGM)	2 Emergency Assistance request	101	ZONE	V V	~		र र र र				A		~	V	Medical Alarm Personal Emergency	Medical Restore Personal Emergency	
Inputs/Burglar Alarm Zones Outputs (PGM) Automation/Sensors Event List Event Log	2 Emergency Assistance request 3 A user has failed to activate a monitoring device	101 e 102 110	ZONE ZONE ZONE	V			<u>ব</u> <u>ব</u> <u>ব</u>				A		~	> >	Medical Alarm Personal Emergency Fail to report in	Medical Restore Personal Emergency Fail to report in	^
 Inputs/Burglar Alarm Zones Outputs (PGM) Automation/Sensors Event List Event Log Bus Modules 	2 Emergency Assistance request 3 A user has failed to activate a monitoring device 4 A non-specific fire alarm condition exists	101 e 102 110 or 111	ZONE ZONE ZONE ZONE	<u>र</u> र र			র র র র র				A		~	> >	Medical Alarm Personal Emergency Fail to report in Fire Alarm	Medical Restore Personal Emergency Fail to report in Fire Restore	
- Inputs/Burglar Alarm Zones - Outputs (PGM) - Automation/Sensors - Event List - Event Log - Bus Modules - Testing&Monitoring	Emergency Assistance request A user has failed to activate a monitoring device A non-specific fire alarm condition exists A nalarm has been triggered by a smoke detect	101 102 110 110 or 111 et 112	ZONE ZONE ZONE ZONE ZONE	<u>र</u> र र	 		र र र र र र				A		~	S S S	Medical Alarm Personal Emergency Fail to report in Fire Alarm Smoke Alarm	Medical Restore Personal Emergency Fail to report in Fire Restore Smoke Restore	^
 Inputs/Burglar Alarm Zones Outputs (PGM) Automation/Sensors Event List Event Log Bus Modules 	Emergency Assistance request A user has failed to activate a monitoring device A non-specific fire alarm condition exists An alarm has been triggered by a smoke detect An alarm has been triggered by a combustion de	101 102 102 110 or 111 et 112 et 113	ZONE ZONE ZONE ZONE ZONE ZONE	<u>र</u> र र र	र र र र र		द द द द द द				A		~	<u>र</u> द द द	Medical Alarm Personal Emergency Fail to report in Fire Alarm Smoke Alarm Combustion	Medical Restore Personal Emergency Fail to report in Fire Restore Smoke Restore Combustion Restore	^
- Inputs/Burglar Alarm Zones - Outputs (PGM) - Automation/Sensors - Event List - Event Log - Bus Modules - Testing&Monitoring	Emergency Assistance request A user has failed to activate a monitoring device A non-specific fire alarm condition exists An alarm has been triggered by a smoke detect An alarm has been triggered by a water flow de T An alarm has been triggered by a water flow de	101 102 102 110 or 111 et 112 et 113	ZONE ZONE ZONE ZONE ZONE ZONE ZONE	র র র র র র	<u>र</u> र र र		<u>र</u>		र र र र		रादा		<u>द</u> द द द द द द	र र र र र र	Medical Alarm Personal Emergency Fail to report in Fire Alarm Sinoke Alarm Combustion Water flow	Medical Restore Personal Emergency Fail to report in Fire Restore Smoke Restore Combuston Restore Water flow Restore	
- Inputs/Burglar Alarm Zones - Outputs (PGM) - Automation/Sensors - Event List - Event Log - Bus Modules - Testing&Monitoring	Emergency Assistance request A user has failed to activate a monitoring device A non-specific fire alarm condition exists An alarm has been triggered by a smoke detect An alarm has been triggered by a combustion di An alarm has been triggered by a water flow de An alarm has been triggered by a heat detector	101 102 110 or 111 et 112 et 113 114 115	ZONE ZONE ZONE ZONE ZONE ZONE ZONE ZONE	र र र र र र	र र र र र		र र र र र र र र र र		र र र र		रादा		<u>द</u> द द द द द द	र र र र र <u>र</u>	Medical Alarm Personal Emergency Fail to report in Fire Alarm Smoke Alarm Combustion Water flow Heat	Medical Restore Personal Emergency Fail to report in Fire Restore Smoke Restore Combustion Restore Water flow Restore Heat Restore	
- Inputs/Burglar Alarm Zones - Outputs (PGM) - Automation/Sensors - Event List - Event Log - Bus Modules - Testing&Monitoring	Emergency Assistance request A user has failed to activate a monitoring device A non-specific fire alarm condition exists An alarm has been triggered by a smoke detect An alarm has been triggered by a water flow dd An alarm has been triggered by a heat detector 9 A pull station has been activated	101 102 110 or 111 et 112 et 113 114 115 116	ZONE ZONE ZONE ZONE ZONE ZONE ZONE ZONE	র র র র র র র	র র র র র র র		र र र र र र र र र र र र		र र र र		रादा		<u>द</u> द द द द द द	<u>र</u> द द द द द द	Medical Alarm Personal Emergency Fail to report in Fire Alarm Smoke Alarm Combustion Water flow Heat Pull Station	Medical Restore Personal Emergency Fail to report in Fire Restore Smoke Restore Combustion Restore Water flow Restore Heat Restore Pull Station Restore	
- Inputs/Burglar Alarm Zones - Outputs (PGM) - Automation/Sensors - Event List - Event Log - Bus Modules - Testing&Monitoring	2 Emergency Assistance request 3 A user has failed to activate a monitoring device 4 A non-specific fire alarm condition exists 5 An alarm has been triggered by a worke detect 6 An alarm has been triggered by a combustion di 7 An alarm has been triggered by a varter flow di 8 An alarm has been triggered by a varter flow di 9 A pull station has been activated 10 An alarm has been triggered by a duct detector	101 101 102 110 or 111 et 112 et 113 114 115 116 r 117	ZONE ZONE ZONE ZONE ZONE ZONE ZONE ZONE	র র র র র র র র র	द द द द द द द द		र र र र र र र र र र र र		र र र र		रादा		<u>र</u> र र र र र र र र	र र र र र र र र र	Medical Alarm Personal Emergency Fail to report in Fire Alarm Smoke Alarm Combustion Water flow Heat Pull Station Duct	Medical Restore Personal Emergency Fail to report in Fire Restore Smoke Restore Combustion Restore Water flow Restore Heat Restore Pull Station Restore Duct Restore	

5.2 **Events Log**

0,0 Events Log

The Event Log window show real time information of the events that has been occurred

The event log allows to chronologically register up to 3072 time stamped records regarding the following system events:

- System start. ٠
- System arming/disarming. •
- Zone violated/restored.
- Tamper violated/restored. .
- Zone bypassing.
- Temperature deviation by MIN and MAX boundaries. •

- System faults.
- Configuration via USB. •
- User phone number that initiated the remote configuration.

] File 🔌 Settings 🔒 Dev	/ices	<u>ଞ R</u> ead [F5]	🞇 <u>W</u> rite [F6]	🦲 <u>U</u> pda	te <u>%H</u> elp			
	Ever	nts Log						
GSM Communications								
		Read I	Event Log			Clear Event Log		
Inputs/Burglar Alarm Zones	_							
Outputs (PGM)	1964	Event:1:602	:00:000:[0]	Time:2023-09	-02 13:30:00	Periodical test		^
Automation/Sensors	1963	Event:3:159	:00:017:[0]	Time:2023-09	-01 20:11:14	Low Temp Restore, Sensor:017	Note: Sensor17, :30.19	
	1962	Event:1:159	:00:017:[0]	Time:2023-09	-01 19:56:45	Low Temp Alarm, Sensor:017	Note: Sensor17, :24.94	
- Event List	1961	Event:3:159	:00:017:[0]	Time:2023-09	-01 18:58:53	Low Temp Restore, Sensor:017	Note: Sensor17, :30.19	
- Event Log	1960	Event:1:159	:00:017:[0]	Time:2023-09	-01 18:46:41	Low Temp Alarm, Sensor:017	Note: Sensor17, :26.75	
- Bus Modules	1959	Event:1:602	:00:000:[0]	Time:2023-09	-01 13:30:00	Periodical test		
Testing&Monitoring	1958	Event:3:159	:00:017:[0]	Time:2023-09	-01 08:03:08	Low Temp Restore, Sensor:017	Note: Sensor17, :30.13	
- Firmware	1957	Event:1:159	:00:017:[0]	Time:2023-09	-01 07:48:03	Low Temp Alarm, Sensor:017	Note: Sensor17, :26.00	
	1956	Event:1:602	:00:000:[0]	Time:2023-08	-31 13:30:00	Periodical test		
	1955	Event:1:602	:00:000:[0]	Time:2023-08	-30 13:30:00	Periodical test		
	1954	Event:3:159	:00:017:[0]	Time:2023-08	-30 08:06:05	Low Temp Restore, Sensor:017	Note: Sensor17, :35.13	
	1953	Event:1:159	:00:017:[0]	Time:2023-08	-30 07:46:57	Low Temp Alarm, Sensor:017	Note: Sensor17, :28.00	
	1952	Event:1:602	:00:000:[0]	Time:2023-08	-29 13:30:00	Periodical test		

Table 8 Explanation of every field in "Events Log" window

Read Event Log	Events could be read from the module by clicking Read Event Log button
Clear Event Log	Events could be cleared from the module by clicking Clear Event Log button
Event Number	Event sequence number
Event	Object number and registered event report in Contact ID code.
Time	Event date and time.
Note	Event report text which was indicated.

RT Testing & Monitoring > Hardware

Real-time monitoring of the system hardware can be achieved via USB or TCP Cloud connection. The Hardware Monitoring window offers real-time insights into the states of inputs and outputs, system state, voltages, sensor functionality, and GSM network registration information.

③ SERA2 [GTalarm3]			- 🗆 X
📄 <u>F</u> ile 🔌 <u>S</u> ettings 🔒 <u>D</u> evie	:es 選 <u>R</u> ead (F5) 🛛 🚰 <u>W</u> rite (F6) 🛑 <u>U</u> pdate 🧐 <u>H</u>	lelp	
System Options	Monitoring window		
GSM Communications Users/Access control	Hardware Security Alarm Panel/Access Sensors/Automat		
Inputs/Burglar Alarm Zones	Stop Monitoring Stop Monitoring		Outputs states
Outputs (PGM)		IN1 1225 11.72 V PullUp	OUT1 OUT1 On/Off
Automation/Sensors Event List	GSM info	IN2 1220 11.67 V PullUp	OUT2 OUT2 On/Off
Event Log	IMEI: 86601	IN3 1223 11.70 V Pullup IN4 1226 11.73 V Pullup	OUT3 OUT3 On/Off
- Bus Modules	SIM ICCID: 89370038003012856960		OUT4 OUT4 On/Off
Testing&Monitoring	SIM card: READY		
Firmware	Signal level: 27	IO1 1177 11.26 ∨ PullUp 4 0.02 mA	□ 1/01 1/01 On/Off
		IO2 1176 11.25 ∨ PullUp 4 0.02 mA	1/02 1/02 On/Off
	Registration:	IO3 1179 11.28 ∨ ∨ PullUp 5 0.03 mA	[]1/03 1/03 On/Off
	Registered, home network SMS Service Centre Address:	IO1-IO3 PullUp On/Off	
SMART	: "+37068499199",14		
	. 101000100100 ,14	✓ D1 (I/O)	D1 (I/O) D1 On/Off
	System Status	D2 (1/0)	✓ D2 (I/O) D2 On/Off
		☐ D3 (I/O)	D3 (I/O) D3 On/Off
	System Voltage: 1330 13.03 V		
	System Voltage		
	RTC Clock 🗸 OK		
and the second	Module Real Time Clock: Set RTC Clock		
A CONTRACT OF THE OWNER OWNER OF THE OWNE	2023-08-29 17:56:26,Tuesday		
The second			

Figure 39 The example of RT Testing & Monitoring > Hardware window

Start Monitoring	Pressing Start Monitoring button starts the monitoring of the module.
Stop Monitoring	Pressing Stop Monitoring button stops the monitoring of the module.
IMEI	IMEI number of GSM modem available in the module
	ICCID (Integrated Circuit Card Identifier) - A SIM card contains its unique serial number (ICCID). ICCIDs are
	stored in the SIM cards and are also printed on the SIM card.
SIM Card	If note READY is visible, it means that SIM card is fully functioning. Otherwise, check whether PIN code request
Silvi Caru	is off or replace SIM card.
Signal level	Signal strength of GSM communication
Registration	State of GSM modem registration to GSM network.
SMS Service Centre	SMS center number. This number should be checked if it is correct. If this number is incorrect. SMS messaging
Address	may be impossible. This number may be changed after inserting SIM card into any mobile phone.
System Voltage	Power supply voltage. Nearby number is value of ADC voltage. When multiplying this number by the coefficient
System voltage	Fig. 32, voltage value (V) will be achieved.
System Voltage	System voltage OK/Trouble
RTC Clock	Real time clock OK/Trouble
Module Real Time Clock	Indicates the time of the module RTC
Set RTC Clock	By pressing this button real time clock of the module will be set.
Inputs In1In4	In1In4 is the indicated input ADC and voltage value V.
I/O1I/O3	I/O1I/O2 is the indicated voltage ADC value and current ADC value mA.
Out1Out4 On/Off	Checked box nearby the appropriate output Out1Out4 means that this output currently has '0' or '1' state. The
Out 1Out4 On/On	output could be activated by pressing On/Off button
I/01I/03 On/Off	Checked box nearby the appropriate input/output I/O1I/O3 means that this input/output currently has '0' or '1'
	state. The output could be activated by pressing On/Off button
D1D3 (I/O) On/Off	Checked check box nearby the digital outputs D1D3 (I/O) means that the output currently has '0' or '1' state.



After pressing the button ARM, arm mode should be entered

After pressing the button STAY, arm mode should be entered

The number of users phone that is calling to the module's SIM.

The number of Wiegand RFID Key Card that is arming the system.

no trouble with system voltage

Real time and date is indicating

After pressing the button SLEEP, sleep mode should be entered

If the checkbox is checked and the color is red the trouble with system voltage is indicating. If color is green, there is

If the checkbox is checked and the color is red RTC clock is not set. If color is green, RTC clock is set.

The number of iButton Maxim iButton key DS1990A - 64 Bit ID code that is arming the system.

5.1.1 **RT Testing & Monitoring Security Alarm Panel/ Access**

ARM SLEEP

STAY

System Voltage

Module Real Time Clock

Wiegand RFID Card Key

RTC Clock

iButton Read Incoming call



List of user SMS commands:

- Set the system mode: Arm/Disarm/Stay/Sleep
 - Bypass zones
 - Set the time of the module
 - Request zone test and system state
 - Forward messages to other number

List of installer SMS commands:

- Add/Edit/Delete user phone numbers
- Control outputs
- Arm/disarm the system or select stay, sleep mode
- Bypass zones
- Set the time of the module
- Request zone test and system state
- Forward messages to other number
- Set periodical test,
- Set GPRS network settings
- Remote control via Internet
- Activate/ deactivate connection to the remote control server.
- Enter/ deleting iButton keys
- Change sensor's values
- Request module configuration information
- Change user, installer password

Installer code – 6-digit password used for system configuration, control and request for information. By default, installer code is 000000, which is highly recommended to change. *User code for SMS commands* – 6-digit password used for system control and request for information. By default, user code is 123456, which is highly recommended to change.

USER commands are exclusively accessible to individuals whose phone numbers have been registered in the module's system. Conversely, INST commands can be transmitted from any phone number, provided the correct installer password is used.

- INST- Installer identification
- Installer's or user's password.
- space character
- Command code.
- space character
- First configuration array
- space character
- Second configuration array
- etc.

- USER User identification
- User's password.
- space character
- Command code.
- space character
- First configuration array
- space character
- Second configuration array
- etc.

Example of how to add a User1 SMS and an autodialer notifications. For more information see the command table

INST<mark>000000_001_</mark>1#3706666666666#111111111#10000000#

SMS configuration is allowed only with Latin characters. Unicode is not allowed.

In this guide, we use the symbol "_" to represent a single space. Each "_" you see should be replaced with one space in your actual SMS text. Please avoid any extra spaces or characters before and after your message. Remember: For SMS, "_" = Space. We use "_" in examples for better clarity.

6.1 The table of installers SMS commands

SMS commands can be sent from any phone number as long as the correct installer (INST) password is used. Please safeguard your INST password diligently! The default password is set to '000000'

Table 9 the table of installers commands

INST000000_001_ID#TEL#SMS#DIAL# e.g. INST000000_001_1#3706666666666611111111111111110000000#	To add admin user phone numbers for SMS and Call notifications upon an event, use the following format: 001 = Code for adding admin user's phone numbers ID = User index (1-8) TEL = User's phone number (max 16 digits), without (+), including country and operator's code. End with '#' SMS = Notification event filter. 1 sends the event, 0 doesn't. Events are ordered (1.2.3n), e.g., 001000 DIAL = Dial event filter. 1 dials if the event occurs, 0 doesn't. Events are ordered (1.2.3n), e.g., 101000 #= delimiter Example: INST00000 001 1#370666666666666666666666666666666666666
INST000000_002_ID e.g. Delete admin User1 at index 1 INST000000_002_1	To delete an admin user's phone number (used for SMS notifications), use the command '002' followed by the user ID index (1-8). 002 = Command code for deletion ID = User index (1 to 8)
INST000000_003	Delete all users in database. 003 = Command code
INST00000 0_004_ID#TEL#OUT#OPT#NAME# e.g. Add user at index 1 , phone-370666666666, out1 INST000000_004_1#3706666666666#1#10#Jon#	To enter user's telephone number for remote control via short call USER NAME-only Latin characters is allowed inside SMS 004= command code (enter user's telephone number for remote control via short call) ID = user ID number 001-800 TEL = user's telephone number (max 16 digits) without (+) comprised of country code, operator's code and user's telephone number. the end symbol #; OUT= output number, that will be controlled, 1-32. 0-Disabled, 1=OUT1=RELAY,2-OUT2, OPT = 0 – disabled 1 – enabled, Sequence from the left to the right 1. User Enabled 2. Enable Arm/Disarm system by call NAME = User Name up to 31 characters.
INST000000_005_TEL# e.g. delete user associated with phone 37061611111 INST000000_005_37061611111	To delete a user's remote control access according phone number, use: 005 = Command code for deletion. TEL = User's phone number (16 digits max, without '+'), including country and operator codes. The number must match the one in the module's memory."
INST000000_006_ID e.g. delete user at index 200 INST000000_006_200	Delete user's phone number by index. 006= command code ID = Enter the user's index number from 001 to 800 to delete all data associated with the user.
INST000000_007_P#PER#HH:mm# e.g. INST000000_007_1#7#18:30#	Automatic periodical test settings 007= command code (Automatic periodical test) P= 0-test disabled, 1- test period by 24 hours, 2- period by hours PER= automatic test sending period from 1 to 99999 days or hours HH-hours 0-23 , mm- minutes 0-59 e.g. INST000000 007 2#1#14:50# The test will be send every 1 hour

INST000000_008_APN#LOGIN#PSW# e.g. INST000000_008_internet### Apn="internet and no login and password.	DATA/GPRS/LTE network settings 008= command code (network settings) APN=31 symbols LOGIN=31 symbols PSW=31 symbols
INST000000_009_ADDR#PORT#PING#KEY# e.g. INST000000 009 cloud.topkodas.tt#1000#600#123456#	SERA cloud Service Parameters 009= command code (Remote control of the module over the Internet) ADDR = the format of IP address xxx.xxx.xxx.xxx (the numbers from 0 to 255 should be separated by dot or domain text length of up to 47 characters) PORT= TCP port number .Default:10000 PING= 600 default. KEY= App Key. App and remote service key. Default:"123456" Default parameters is in the picture bellow. We recommend do not change these parameters. @ SER42 File Settings Devices Read [F5] @ Write [F6] @ Update About File Settings Devices Read [F5] @ Write [F6] @ Update About File Settings Devices Read [F5] @ Write [F6] @ Update About File Settings Devices Read [F5] @ Write [F6] @ Update About File Settings Devices Read [F5] @ Write [F6] @ Update About File Settings Devices Read [F5] @ Write [F6] @ Update About @ SERA2 Cloud Service (Defead) @ Verter Summary @ Verter Summary @ Verter Summary @ Verter Summary @ P or Domain: @ Secal Ferror @ Verter Summary @ Verter Summary </td
INST000000_010_E e.g. deactivate cloud service INST000000_010_0 e.g. activate cloud service INST000000_010_1	Enable or disable the 'SERA Cloud service' for APP and remote device connection. 010= command code (To activate the connection to the remote control server). E= 1- (enabled) or 0 - (disabled).
INST000000_011_E e.g. INST00000_011_1 - Enable GUEST mode e.g. Dual command 011 and 004 set USER9 INST00000_011_1_004_9##1#10#Unauthorized# Enable Guest mode on USER9, set control OUT1 Username: 'Guest'	Enable/Disable GUEST (unauthorized call) mode on USER 9. APP and remote connection to device. 011= command code (activate GUEST mode on USER 9). Enable incoming call guest mode on USER 9 settings. Module will accept all unauthorized calls and do selected action (e.g. to control an output, gate) on USER 9. E= 1-enabled, 0-disabled
INST000000_012_TEL#OUT#OPT#NAME# e.g. INST000000_012_370666666666#1#10#Jon#	Enter the user's telephone number for remote control via a short call without an index. USER NAME-only Latin characters is allowed inside SMS 012= Command code (enter the user's telephone number in the free space for remote control via a short call) TEL = The user's telephone number (max 16 digits) without the (+) sign, consisting of the country code, operator's code, and the user's telephone number. Use the end symbol #. OUT = Output number for remote control that will be controlled value= (0-32). 0 = Disabled, 1=OUT1(RELAY), 2=OUT2 and so on. OPT = 0 – Disabled, 1 – Enabled (Sequence from left to right): 1. User Enabled 2. Enable Arm/Disarm alarm system by call NAME = User Name up to 31 characters.
INST000000_013_TEL # NAME# e.g. INST000000_013_370666666666#Jon#	Add the user's telephone number for remote control via a short call to the free space of memory. Enable the user and assign control of RELAY (OUT1). Note: To assign a user to a specific index or enable user control for other outputs, utilize the commands 004 or 012. 013= Command code TEL = The user's telephone number (max 16 digits) without the (+) sign, consisting of the country code, operator's code, and the user's telephone number. Use the end symbol #. NAME: User Name (optional, up to 31 characters).
INST00000_018	View user phone numbers from the user database using: 018= Command code The response SMS will appear as: [Enabled],[ID],[Phone],[Output] Where: User Enabled (0 for disabled, 1 for enabled) ID= User index Phone= User phone number Output= Chosen output number for remote control.

INST000000_019_N#P e.g. INST000000_019_1#24 Set OUT1 as [Access Control]	To change the operation algorithm of the output 019= command code (To change the operation algorithm of the output) N = output number from 1 to 32 P = output operation algorithm. Set 0 to 24 0. Disable 1. Bell 2. Buzzer 3. Flash 4. System State 5. ARM Status 6. Remote Control & Automation 7. AC OK 8. Battery OK							
INST000000_020_N	Invert output state 020= command code (outputs inversion) N = output number from 1 to 32.							
INST000000_021_N#ST	Output activation or deactivation 021= command code (Output activation or deactivation) N = output number 1-32 ST = output mode 0 – OFF, 1- ON							
INST000000_022_N#TIME#	Output activation for the time interval 022= command code (Output activation for the time interval) N = output number 1-32 TIME = 0-9999999 Time interval in seconds for the output activation.							
INST000000_030_ST	Change security system's mode (ARM/DISARM/STAY/SLEEP) 030= command code (Change security system's mode) ST = 0-DISARM, 1-ARM, 2-STAY, 3-SLEEP							
INST000000_031_ZN#BYP	Zone bypassing by sms command 031= command code (Zone bypassing) ZN = zone number from 1 to 32 BYP= 1 – zone bypass 0- zone active.							
INST000000_063_S	iButton keys learning/deleting mode 063= command code (iButton keys learning/deleting mode) S=iButton keys entering/deletion mode. 0-Disable iButton/RFID keys learning mode 1-Enable iButton/RFID keys learning mode 2-iButton/RFID keys deleting mode. 0-lisable iButton/RFID keys learning mode 2-iButton/RFID keys deleting mode. To delete these keys from memory, which will be touched to the reader							
INST000000_070_N#VALUE # e.g. INST000000_070_1#23.5#	Programming of max sensors value upon reaching, the SMS message with "High Alarm" text will be sent 070= command code (max sensors value upon reaching which, the SMS message with "High Alarm" text will be sent) N = sensor number VALUE= Format 0000.00 High Alarm Value							
INST000000_071_N#VALUE #	Programming of minimal sensors value upon reaching the SMS message with "Low Alarm" text will be sent 071= command code (min sensors value upon reaching which, the SMS message with "Low Alarm" text will be sent) N = sensor number VALUE = Format 0000.00 Low Alarm Value							
INST000000_072_N#VALUE#	Programming of sensor max value upon reaching the selected output will be activated. For example cooling equipment 072= command code (sensor max value upon reaching the selected output will be activated.) N = sensor number VALUE= Format 0000.00 sensor max value upon reaching, the selected output will be activated.							
INST000000_073_N#VALUE#	Programming of sensor min value upon reaching the selected output will be activated. For example heating equipment 073= command code (sensor min value upon reaching the selected output will be activated.) N = sensor number VALUE= Format 0000.00 Sensor min value upon reaching which, the output will be activated.							

INST000000_090_NewInstPsw	Change installer's password (Installers password should be changed before exploitation of the module) 090= command code (Change of installer's password) NewInstPsw = New Installer's password.
INST000000_091_NewUserPsw e.g. INST000000_091_654321	Change user's password (User's password should be changed before exploitation of the module) 091= command code (Change user's password) NewUserPsw = New user's password.
INST000000_092	Remote reset of the module via SMS messages 092= command code (Remote reset of the module via SMS messages)
INST000000_093_yyyy/MM/dd#HH:mm#	Time of the module setting via SMS message. The time is usually synchronized via a server or mobile network. However, if synchronization is disabled, it can be set manually via SMS. 093= command code (Time of the module setting via SMS message) Time format of the module: yyyy/MM/dd#HH:mm# yyyy -year MM-month 1-12 dd - day of the month 1-31 HH-hours 0-23 mm- minutes 0-59
INST000000_094_TEL#SMS e.g. INST000000_094_+370616111111#Hello	SMS from the module forwarding to the other phone number 094= command code (SMS from the module resending to the other phone number) TEL = phone number to which will be forwarded sms text SMS = sms text that will be send to the referred number. TEL=861611111111 local number or international format e.g. +370616111111 SMS text =Latin Charset After this commands could not be other commands like: 094 SMS 030 1 because all messages will be forwarded to other numer "SMS 030 1"
INST 000000_095_E	Zone Walk Test request 095= command code (Zone Test request) E = 1- test request activated, 0- test request deactivated When zone is activated, the bell generates the sound, ARM/DISARM system automatically turn off this function
INST 000000_096	Fire sensors reset.
INST000000_100_N	System state request: 100= command code (System state request) N = System state request type 1- System test request, Request information about the module (: IMEI, FW, LEVEL etc.) 2- the values of active sensors request 3 -Request about active zone states 4 -Request about output states 5 - System state request. The module will send information on input/output states and system state (ARM/DISARM/STAY).

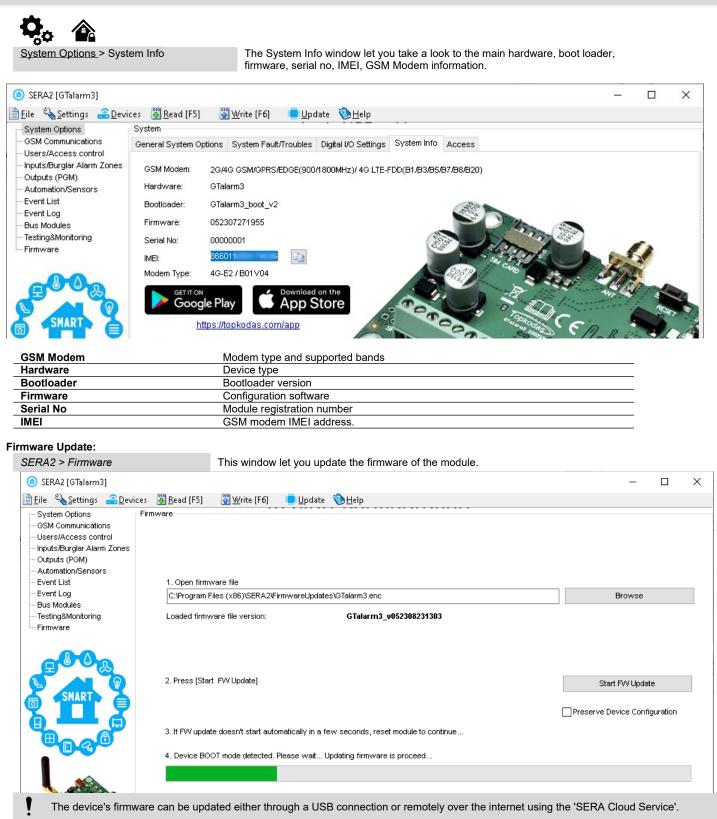
6.2 The table of users SMS commands

SERA2													_
Settings Devices 選 Read	[F5]	🎇 Write [F6] 🛛 🧇 Update	About										
,	ote Co	ntrol Users table											
SM Communications												Temporary access Date	Time window
sers/Access control	En	User Name	Туре	User Tel.	iButton Code	RFID Keycard	Keyb Code	OUT	ARM/DISARM	MIC	Date En	Start Date	Expiration Date
utpute (PGM)	•	Master	User	+3700000000	00000000000000	0000000000	*****	NONE	7			2019-02-25 16:24:26	2019-02-25 16:24:26
utomation/Sensors			User	+	000000000000	0000000000		OUT1				2019-02-25 16:24:26	2019-02-25 16:24:26

Table 10 the table of user's commands

USER123456_020_N	Change state of selected OUT output to the inverted state. Output state changes every time after sending command code. 020= command code (Change state of selected OUT output to the inverted state.) N = output number from 1 to 10.
USER123456_021_N#ST	Activate or deactivate selected output N. 021= command code (Activate or deactivate selected output N) N = output number from 1 to 10. ST= output mode: 0 – deactivated output, 1- activated output
USER123456_022_N#TIME#	Output activation for the time interval 022= command code (Output activation for the time interval) N = output number 1-10 TIME = 0-999999 Time interval in seconds for the output activation.
USER123456_030_ST	Change security system's mode (ARM/DISARM/STAY/SLEEP) 030= command code (Change security system's mode (ARM/DISARM/STAY/SLEEP) ST = Security system mode 0-DISARM, 1-ARM, 2-STAY, 3-SLEEP Enter user phone number in the SERA2> Users/ Access control list
USER123456_031_ZN#BYP	Zone bypassing by sms command 031= command code (Zone bypassing) ZN = zone number from 1 to 32 BYP= 1 – zone bypass 0- zone active.
USER123456_094_TEL#SMS	SMS from the module forwarding to the other phone number 094= command code (SMS from the module resending to the other phone number) TEL = phone number to which will be forwarded sms text SMS = sms text that will be send to the referred phone number
USER123456_100_N	System state request: 100= command code (System state request) N = System state request type 1- System test request, Request information about the module (: IMEI, FW, LEVEL etc.) 2- the values of active sensors request 3 -Request about active zone states 4 -Request about output states 5 - System state request. The module will send information on input/output states and system state (ARM/DISARM/STAY).

7 System Info of device and Firmware Updates



Firmware Update Steps:

- Always keep SERA2 software updated. Each SERA2 software version includes the latest firmware update files.
- (Optional) To change the default firmware file, click [Browse] and open the folder containing the new firmware file.
- To retain the device's current configuration after the update, check the [**Preserve Device Configuration**] box. If unchecked, the configuration will reset to default after the update.
- Click [Start Update].
- If the update doesn't start within a few seconds, reset the module.
- Wait for the process to complete.
- Reset module to continue.

Warranty Terms and Conditions 8

SAFETY INSTRUCTIONS FOR SERVICE PERSONS

Use the following list as a guide to find a suitable place for GTalarm3 module:

- · Locate the module near a power outlet.
- Select a place that is free from vibration and shock.
- Place the module on a flat, stable surface and follow the installation instructions:
- Do NOT locate the module where persons can walk on the secondary circuit cable(s).
- Do NOT connect the module to electrical outlets on the same circuit as large appliances.
- Do NOT select a place that exposes the module to direct sunlight, excessive heat, moisture, vapors, chemicals or dust.
- Do NOT install the module near water (e.g., bathtub, wash bowl, kitchen/laundry sink, wet basement, or near a swimming pool).
- Do NOT install the module and its accessories in areas where there is a risk of explosion.
- Do NOT connect the module to electrical outlets controlled by wall switches or automatic timers.

AVOID sources of radio interference.

AVOID setting up the equipment near heaters, air conditioners, ventilators, and/or refrigerators.

AVOID locating module close to or on top of large metal objects (e.g., metal wall studs).

Safety Precautions Required During Installation

• NEVER install the module during a lightning storm.

• Ensure that cables are positioned so that accidents cannot occur. Connected cables must not be subject to excessive mechanical strain.

 The power supply must be Class II, FAIL SAFE with double or reinforced insulation between the PRIMARY and SECONDARY circuit/ENCLOSURE and be an approved type acceptable to the local authorities. All national wiring rules shall be observed.

Limited Warranty

UAB "Topkodas" warrants the original purchaser that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use. During the warranty period, UAB "Topkodas" shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labor and materials. Any replacement and/or repaired parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original purchaser must promptly notify UAB "Topkodas" in writing that there is defect in material or workmanship, such written notice to be received in all events prior to expiration of the warranty period. There is absolutely no warranty on software and all software products are sold as a user license under the terms of the software license agreement included with the product. The Customer assumes all responsibility for the proper selection, installation, operation and maintenance of any products purchased from UAB "Topkodas". In such cases, UAB "Topkodas" can replace or credit at its option.

International Warranty

UAB "Topkodas" shall not be responsible for any customs fees, taxes, or VAT that may be due.

Warranty Procedure

To obtain service under this warranty, please return the item(s) in question to the point of purchase. All authorized distributors and dealers have a warranty program. Anyone returning goods to UAB "Topkodas" must first obtain an authorization number. UAB "Topkodas" will not accept any shipment whatsoever for which prior authorization has not been obtained.

Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

· Damage incurred in shipping or handling;

- Damage caused by disaster such as fire, flood, wind, earthquake or lightning;
 Damage due to causes beyond the control of UAB "Topkodas" such as excessive voltage, mechanical shock or water damage;
- Damage caused by unauthorized attachment, alterations, modifications or foreign objects;
- Damage caused by peripherals (unless such peripherals were supplied by UAB "Topkodas");
- Defects caused by failure to provide a suitable installation environment for the products;
- Damage caused by use of the products for purposes other than those for which it was designed;
- · Damage from improper maintenance;
- Damage arising out of any other abuse, mishandling or improper application of the products.

Items Not Covered by Warranty

Freight cost to the repair center;

(ii) Products which are not identified with UAB "Topkodas" product label and lot number or serial number;

Poducts disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection or testing to verify any warranty claim.

Under no circumstances shall UAB "Topkodas" be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property. The laws of some jurisdictions limit or do not allow the disclaimer of consequential damages. If the laws of such a jurisdiction apply to any claim by or against UAB "Topkodas", the limitations and disclaimers contained here shall be to the greatest extent permitted by law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so that the above may not apply to you. **Disclaimer of Warranties**

UAB "Topkodas" neither assumes responsibility for, nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

WARNING:

UAB "Topkodas" recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Out of Warranty Repairs

UAB "Topkodas" will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to UAB "Topkodas" must first obtain an authorization number. UAB "Topkodas" will not accept any shipment whatsoever for which prior authorization has not been obtained. Products which UAB "Topkodas" determines to be repairable will be repaired and returned. A set fee which UAB "Topkodas" has predetermined and which may be revised from time to time, will be charged for each unit repaired. Products which UAB "Topkodas" determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit.

WARNING - READ CAREFULLY

Note to Installers

This warning contains vital information. As the only individual in contact with system users, it is your responsibility to bring each item in this warning to the attention of the users of this system.

System Failures

This system has been carefully designed to be as effective as possible. There are circumstances, however, involving fire, burglary, or other types of emergencies where it may not provide protection. Any alarm system of any type may be compromised deliberately or may fail to operate as expected for a variety of reasons. Some but not all of these reasons may be:

Inadequate Installation

The module must be installed properly in order to provide adequate protection.

Criminal Knowledge

This system contains security features which were known to be effective at the time of manufacture. It is possible for persons

With criminal intent to develop techniques which reduce the effectiveness of these features. It is important that a system be reviewed periodically to ensure that its features remain effective and that it be updated or replaced if it is found that it does not provide the protection expected. • Access by Intruders

Intruders may enter through an unprotected access point, circumvent a sensing device, evade detection by moving through an area of insufficient coverage, disconnect a warning device, or interfere with or prevent the proper operation of the system.

Power Failure

Control units, intrusion detectors, smoke detectors and many other security devices require an adequate power supply for proper operation. If a device operates from batteries, it is possible for the batteries to fail. Even if the batteries have not failed, they must be charged, in good condition and installed correctly. If a device operates only by AC power, any interruption, however brief, will render that device inoperative while it does not have power. Power interruptions of any length are often accompanied by voltage fluctuations which may damage electronic equipment. After a power interruption has occurred, immediately conduct a complete system test to ensure that the system operates as intended.

• Failure of Replaceable Batteries

Ambient conditions such as high humidity, high or low temperatures, or large temperature fluctuations may reduce the expected battery life. While each transmitting device has a low battery monitor which identifies when the batteries need to be replaced, this monitor may fail to operate as expected. Regular testing and maintenance will keep the system in good operating condition.

Compromise of GSM network

Signals may not reach the receiver under all circumstances which could include metal objects placed on or near the radio path or deliberate jamming or other inadvertent signal interference.

System Users

A user may not be able to operate a panic or emergency switch possibly due to permanent or temporary physical disability, inability to reach the device in time, or unfamiliarity with the correct operation. It is important that all system users be trained in the correct operation of the module and that they know how to respond when the system indicates an alarm

Smoke Detectors

Smoke detectors may not properly alert occupants of a fire for a number of reasons, some of which follow. The smoke detectors may have been improperly installed or positioned. Smoke may not be able to reach the smoke detectors, such as when the fire is in a chimney, walls or roofs, or on the other side of closed doors. Smoke detectors may not detect smoke from fires on another level of the residence or building.

Every fire is different in the amount of smoke produced and the rate of burning. Smoke detectors cannot sense all types of fire is equally well. Smoke detectors may not provide timely warning of fires caused by carelessness or safety hazards such as smoking in bed, violent explosions, escaping gas, and improper storage of flammable materials, overloaded electrical circuits, and children playing with matches or arson.

Even if the smoke detector operates as intended, there may be circumstances when there is insufficient warning to allow all occupants to escape in time to avoid injury or death.

Motion Detectors

Motion detectors can only detect motion within the designated areas as shown in their respective installation instructions. They cannot discriminate between intruders and intended occupants. Motion detectors do not provide volumetric area protection. They have multiple beams of detection and motion can only be detected in unobstructed areas covered by these beams. They cannot detect motion which occurs behind walls, ceilings, floor, closed doors, glass partitions, glass doors or windows. Any type of tampering whether intentional or unintentional such as masking, painting, or spraying of any material on the lenses, mirrors, windows or any other part of the detection system will impair its proper operation.

Passive infrared motion detectors operate by sensing changes in temperature. However their effectiveness can be reduced when the ambient temperature rises near or above body temperature or if there are intentional or unintentional sources of heat in or near the detection area. Some of these heat sources could be heaters, radiators, stoves, barbeques, fireplaces, sunlight, steam vents, lighting and so on. • Warning Devices

Warning devices such as sirens, bells, horns, or strobes may not warn people or waken someone sleeping if there is an intervening wall or door. If warning devices are located on a different level of the residence or premise, then it is less likely that the occupants will be alerted or awakened. Audible warning devices may be interfered with by other noise sources such as stereos, radios, televisions, air conditioners or other appliances, or passing traffic. Audible warning devices, however loud, may not be heard by a hearing-impaired person.

GSM network

If GSM network are used to transmit alarms, it may be out of service for certain periods of time.

Insufficient Time

There may be circumstances when the system will operate as intended, yet the occupants will not be protected from the emergency due to their inability to respond to the warnings in a timely manner. If the system is monitored, the response may not occur in time to protect the occupants or their belongings.

Component Failure

Although every effort has been made to make this system as reliable as possible, the system may fail to function as intended due to the failure of a component.

Inadequate Testing

Most problems that would prevent the module from operating as intended can be found by regular testing and maintenance. The complete system should be tested weekly and immediately after a break-in, an attempted break-in, a fire, a storm, an accident, or any kind of construction activity inside or outside the premises.

•Security and Insurance

Regardless of its capabilities, the module GTalarm3 is not a substitute for property or life insurance. The module GTalarm3 also is not a substitute for property owners, renters, or other occupants to act prudently to prevent or minimize the harmful effects of an emergency situation.