esse-ti TELECOMUNICAZIONI
LIFT COM DIVISION

CSQ IQNet
Certificato n. 9110.ESTI
UNI EN ISO 9001:2015

9000 GSM

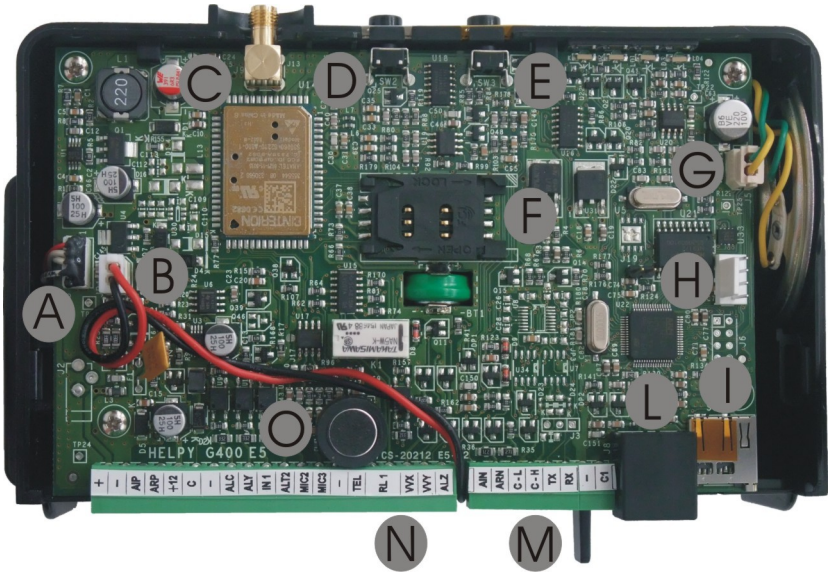
ELSECO

Alarm system for elevators

QUICK GUIDE

7IS-80438

INSTALLING



A	Internal power-supply connector
B	Built-in backup battery connector
C	Antenna cable connector
D	Reset pushbutton
E	Alarm pushbutton
F	SIM Card slot with front panel
G	Built-in loudspeaker connector
H	Serial port for PC connection
I	(not present)
L	RJ11 connector for local telephone
M	Battery compartment door
N	Terminal blocks
O	Built-in microphone

LED signalling alarm / periodical test call (yellow)

LED signalling GSM signal strength (green)

LED signalling GSM status (red)

LED signalling power supply status (blue)

Terminal blocks

N.	NAME	DESCRIPTION
01	**+**	POWER SUPPLY INPUT (11-14VDC)[1]
02	**–**	
03	**AIP**	GIVEN ALARM INDICATOR LIGHT (output: 12VDC)
04	**ARP**	RECEIVED ALARM INDICATOR LIGHT (output: 12VDC)
05	**+12**	12VDC OUTPUT (max. 100mA)
06	**C**	COMMON TERMINAL FOR INPUT ALC[2]
07	**–**	NEGATIVE POLE
08	**ALC**	ALARM INPUT FOR THE ELEVATOR CAR[3]
09	**ALY**	RIDE COUNTER INPUT[4]
10	**IN1**	OUT OF/BACK IN SERVICE INPUT[4]
11	**ALT2**	OUTPUT FOR CONNECTING THE LOUDSPEAKER OF A PASSIVE SPEAKING UNIT
12	**MIC2**	INPUT FOR CONNECTING THE MICROPHONE OF A PASSIVE SPEAKING UNIT OR A SINGLE MICROPHONE
13	**MIC3**	INPUT FOR CONNECTING THE MICROPHONE OF A PASSIVE SPEAKING UNIT OR A SINGLE MICROPHONE
14	**–**	NEGATIVE POLE
15	**TEL**	LOCAL TELEPHONE
16	**RL1**	RELAY[5]
17	**RL1**	RELAY[5]
18	**VVX**	OUTPUT FOR CONNECTING THE ACTIVE SPEAKING UNIT FOR THE ELEVATOR CAR
19	**VVY**	(not available)
20	**ALZ**	DOOR MOVEMENT INPUT[4]
21	**AIN**	GIVEN ALARM INDICATOR LIGHT (output: 0VDC)
22	**ARN**	RECEIVED ALARM INDICATOR LIGHT (output: 0VDC)
27	**–**	NEGATIVE POLE
28	**C1**	COMMON TERMINAL FOR INPUT IN1[2]

[1] : before using this input disconnect the internal power-supply cable from the A connector in the picture at page 2

[2] : can be connected to a block **–**, to the block **+12** or to an external reference

[3] : allows to connect voltage free contact pushbuttons (NO or NC) or powered pushbuttons

[4] : allows to connect voltage free contacts (NC)

[5] : free contact NO

INSERTING THE SIM CARD

Before inserting the SIM card, make sure the device is off and use all due precaution to avoid electrostatic discharge.

- Remove the cover by unscrewing the two screws.
- Push the SIM Card housing cover as indicated by the arrow OPEN until it unlocks and lift it.
- Carefully slide the SIM Card into its housing cover.
- Lower the SIM Card housing cover and push it as indicated by the arrow LOCK until it locks in place.

ATTENTION
It is not required to remove the PIN code prior to the use of the 9000GSM.
The PIN code can be entered, if necessary, by setting parameter 282.

INSTALLING THE ANTENNA

- Screw the antenna extension cable provided in the appropriate connector.

ATTENTION
Position the antenna with magnetic base so that any metal surfaces do not block the signal.

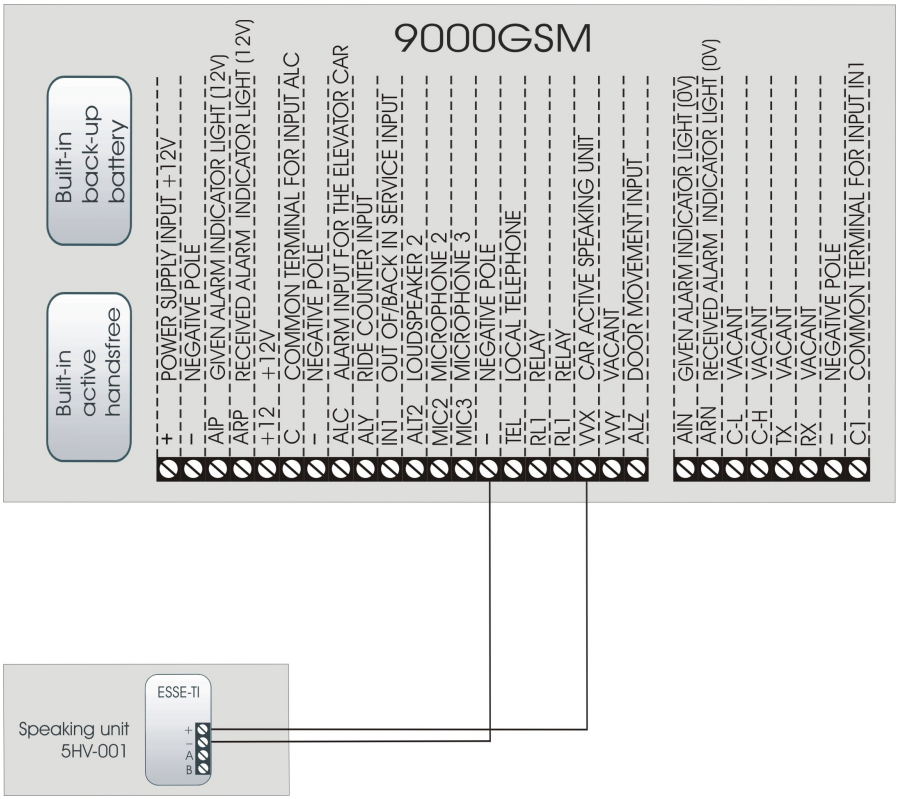
ATTENTION
In order to avoid damage, never power up the base station without having first installed the antenna.

ATTENTION
Do not install the product in the immediate vicinity of other electrical or electronic equipment that was not designed to be combined with it and that could cause disturbance or interference.

CONNECTING THE SPEAKING UNIT FOR THE ELEVATOR CAR

- Connect the active speaking unit (beware of terminal polarity):

ACTIVE SPEAKING UNIT TERMINAL BLOCKS	9000GSM TERMINAL BLOCKS
+	VVX
–	-

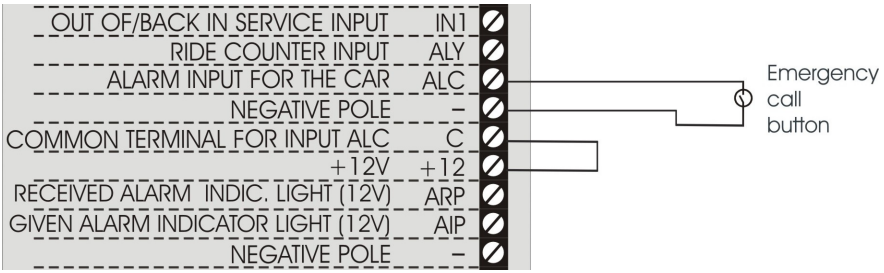


CONNECTING THE EMERGENCY CALL BUTTON

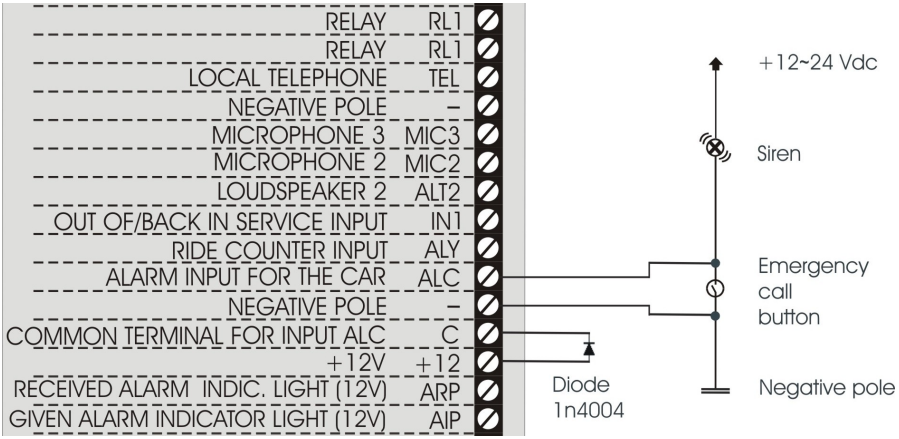
It is possible to connect (inside the elevator car) voltage free contact pushbuttons or powered pushbuttons.

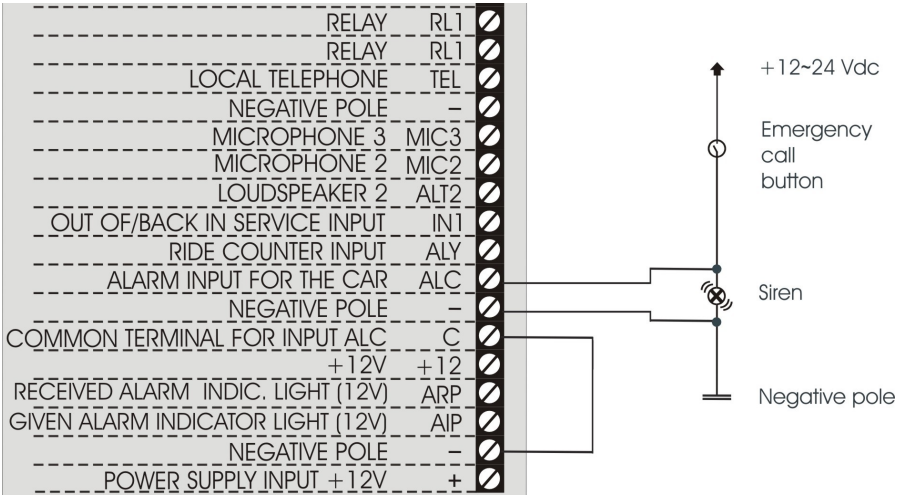
- Connect, following one of the diagrams shown below, the car pushbutton.

Voltage free contact pushbuttons



Powered pushbuttons (12~24Vdc) – 2 solutions

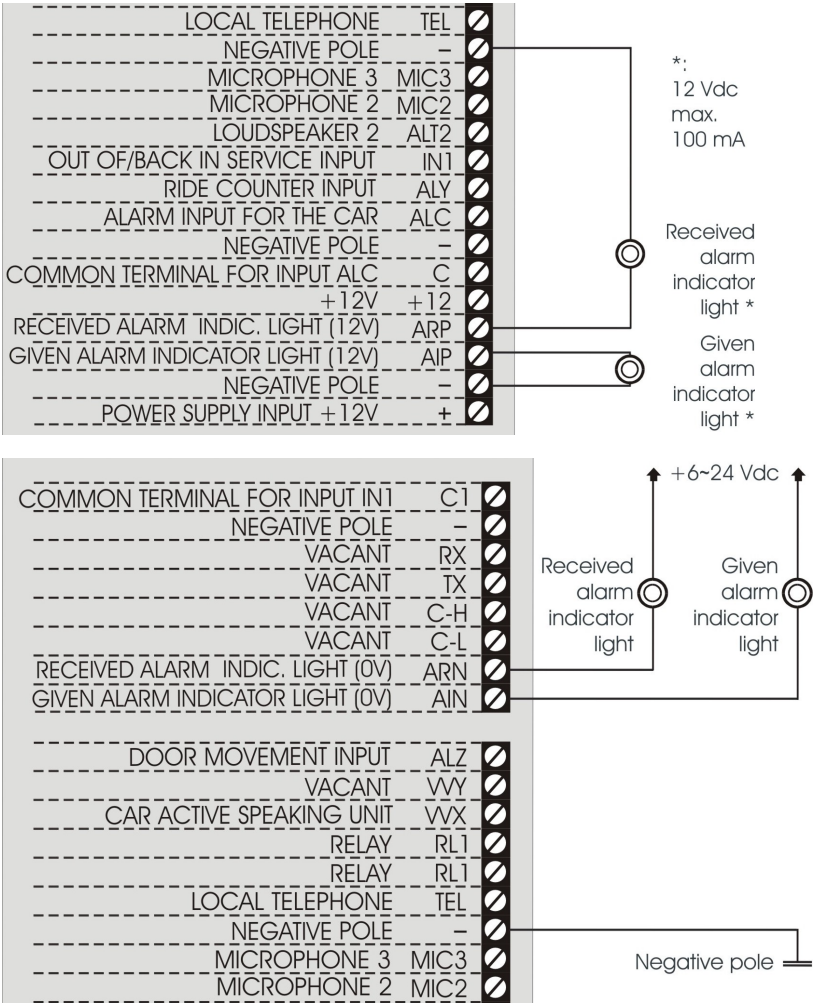



RELAY RL1
RELAY RL1
LOCAL TELEPHONE TEL
NEGATIVE POLE –
MICROPHONE 3 MIC3
MICROPHONE 2 MIC2
LOUDSPEAKER 2 ALT2
OUT OF/BACK IN SERVICE INPUT IN1
RIDE COUNTER INPUT ALY
ALARM INPUT FOR THE CAR ALC
NEGATIVE POLE –
COMMON TERMINAL FOR INPUT ALC C
+12V +12
RECEIVED ALARM INDIC. LIGHT (12V) ARP
GIVEN ALARM INDICATOR LIGHT (12V) AIP
NEGATIVE POLE –
POWER SUPPLY INPUT +12V +
+12~24 Vdc
Emergency call button
Siren
Negative pole

CONNECTING THE INDICATOR LIGHTS

The GIVEN ALARM INDICATOR LIGHT (yellow) switches on after pressing the emergency button to indicate the beginning of the alarm procedure and stays steady light until the end. The RECEIVED ALARM INDICATOR LIGHT (green) switches on when the alarm call is answered.

- Connect, following one of the diagrams shown below, the indicator lights.



CONNECTING THE RIDE COUNTER INPUT AND THE DOOR MOVEMENT INPUT

- Connect the ride counter contact (normally closed) to ALY and – terminals.
- Connect the door movement contact (normally closed) to ALZ and – terminals.

CONNECTING THE OUT OF/BACK IN SERVICE INPUT

- Connect the out of/back in service contact as per one of the modes shown in the table:

C1 TERMINAL CONNECTED TO:	OUT OF/BACK IN SERVICE CONTACT
+12	IN1 / –
–	IN1 / +12
external reference	IN1 / external reference

CONNECTING THE RELAY

- Connect the output RL1 (normally open contact) to the external device.

CONNECTING THE LOCAL TELEPHONE

- Connect the local telephone (for programming and managing the device) directly to the RJ11 connector (L in the picture at page 2) or to TEL and – terminals (irrespective of the polarity).

Power connection

- Connect the power supply cable to the 230Vac mains.

or

- Connect an external 12Vdc power supply (min. 11Vdc, max. 14Vdc) to the power supply input of the terminal block (+ and – terminals).
- Connect the built-in backup battery cable to the slot B in the picture at page 2.
- Close the cover by screwing the two screws.

Note: the power supply cable's plug must be always easily accessible.

Note: a protection cut-out switch must be installed upstream to interrupt power supply in case of fault.

Turning on

- Wait 1 minute after power-up to give time to the 9000GSM to register correctly with the GSM network.
- Make sure the GSM status LED (<) flashes briefly once every 3 seconds as shown in the paragraph "LED signalling GSM status" on page 24.

If the GSM status LED (<) flashes quicker and stays lit for a longer time (see on page 24), the 9000GSM has not properly registered with the GSM provider or the SIM card is protected by PIN:

- Check the SIM is correctly inserted and, if the SIM card has a PIN, enter the PIN using the code 282.
- See also the chapter "Troubleshooting" on page 25.
- Check the intensity of the GSM signal using the LED ◢ (see paragraph "LED signalling GSM signal strength" on page 23) and find, for the placement of the antenna, an area with enough signal.

OPERATION

Alarm calls

When the emergency-call pushbutton is pressed, the device makes a sequence of calls to the programmed numbers.

- To end the alarm, answer by a called party, speak with the trapped person and hang up.

A notification of end of alarm (EOA) is sent to the programmed telephone number.

Ride counter

When the ride counter reaches the programmed number a notification is sent to the programmed telephone number.

RIDES	P100 PROTOCOL
1000	E101
250	E103
100	E104

Door movements

When the door movements counter reaches 2000 door movements a notification is sent to the programmed telephone number.

DOOR MOVEMENTS	P100 PROTOCOL
2000	E102

Out of/back in service

If the IN1 input is open longer than 10 minutes a notification is sent to the programmed telephone number.
A new notification is sent when IN1 is closed.

OUT OF/BACK IN SERVICE	P100 PROTOCOL
IN1 open (>10 m.)	A107
IN1 closed	A109

Stuck button

After an emergency-call, if the pushbutton is stuck longer than 5 minutes a notification is sent to the programmed telephone number.

If the pushbutton is not repaired a new notification is sent every day.

Diagnostic

If the diagnostic alarm is enabled, every 7 days, the speaking unit of the car is checked. If the test fails a notification is sent to the programmed telephone number.

Low battery

If the battery check is enabled, when the charge goes below the threshold a notification is sent to the programmed telephone number.

Power failure

If the control on power failure is enabled, 9000GSM constantly controls the external power supply. If the power failure lasts longer than the preset time interval, a notification is sent to the programmed telephone number.
A new notification is sent when the power supply is restored for 5 minutes.

POWER FAILURE	P100 PROTOCOL
Power supply restored	A131

Automatic tests

If the automatic test is enabled, according to the norms on elevator alarm systems (EN 81-28:2004), a notification is sent to the programmed telephone number every 3 days.

QUICK PROGRAMMING

- Lift the local telephone handset and dial:

access programming mode	*0#
first telephone number for the emergency-call alarm	210112 <telephone number> #
second telephone number for the emergency-call alarm (if any)	210212 <telephone number> #
third telephone number for the emergency-call alarm (if any)	210312 <telephone number> #
fourth telephone number for the emergency-call alarm (if any)	210412 <telephone number> #
number for low battery notification	210526 <telephone number> #
number for automatic test notification	210634 <telephone number> #
number for power failure notification	210776 <telephone number> #
number for LMS notifications (ride counter / door movements / out of/back in service / stuck button / diagnostic)	210846 <telephone number> #
number for start/end of alarm notification	210996 <telephone number> #
P100 protocol identification	223 <identification code>
rides number	261 100 # or 261 250 # or 261 1000 #
enable battery check	521
enable power failure control	51 XX XX = minutes
enable diagnostic check	541
record the elevator identification message	7101 <pronounce the message and hang up>
listen to the message	7201

PROGRAMMING GUIDE

In the tables:

- **INST** indicates that programming is allowed by the installer;
- **OPER** indicates that the programming is allowed by the maintenance technician;
- factory programming is highlighted in bold.

Basic programming

<table>
<tr><th colspan="6">BASIC PROGRAMMING</th></tr>
<tr><td>ACCESS TO PROGRAMMING</td><td colspan="5">[*]<INSTALLER or OPERATOR PASSWORD> [#]
(factory setting: [*] [0] [#])</td></tr>
<tr><td>EXITING THE PROGRAMMING</td><td colspan="5">[*]<INSTALLER or OPERATOR PASSWORD> [#]
(factory setting: [*] [0] [#])</td></tr>
<tr><td rowspan="8">TELEPHONE NUMBERS (INST)</td><td rowspan="8">[2] [1]</td><td rowspan="8">[X] [X]
(position from 01 to 12)</td><td>SOURCE</td><td>RECEIVER</td><td rowspan="8">[X]...[X] [#]
(X...X = telephone number, max 20 digits)</td></tr>
<tr><td>[1] emergency-call button</td><td>-</td></tr>
<tr><td>[2] battery alarm</td><td>[2] USER</td></tr>
<tr><td>[3] periodic automatic test call</td><td>[3] ESSE-TI</td></tr>
<tr><td>[4] LMS</td><td>[4] CLI</td></tr>
<tr><td>[7] no external power supply alarm</td><td>[5] SMS</td></tr>
<tr><td>[9] start/end of alarm</td><td>[6] P100</td></tr>
<tr><td>DELETING TELEPHONE NUMBER (INST)</td><td>[2] [1]</td><td>[X] [X]
(position from 01 to 12)</td><td colspan="3">[#]</td></tr>
</table>

BASIC PROGRAMMING				
Stored numbers: - position 01: 0650951412 (emergency-call button / user) - position 05: 0031851110333 (battery alarm / P100) - position 06: 0031851110330 (periodic automatic test call / CLI) - position 07: 0031851110333 (no external power supply alarm / P100) - position 08: 0031851110333 (LMS / P100) - position 09: 0031851110333 (start/end of alarm / P100)				
DATE (INST)	3 6	WEEKDAY 0 SUNDAY 1 MONDAY 2 TUESDAY 3 WEDNESDAY 4 THURSDAY 5 FRIDAY 6 SATURDAY	X X (dd) X X (mm) X X (yy)	
TIME (INST)	3 5	X X X X (hhmm; from 0000 to 2359)		
RECORD THE MESSAGES (INST)	7 1	0 1 identification message (max. 25s) 0 2 courtesy message (max. 25s)	(record)	(hang up)
LISTEN TO THE MESSAGES (INST/OPER)	7 2	0 1 identification message 0 2 courtesy message	(listen)	
TYPE OF INSTALLATION (INST)	Number of active SPEAKING UNITs	6 3	1 only the built-in active SPEAKING UNIT 3 **built-in active SPEAKING UNIT and 1 active SPEAKING UNIT connected**	
	Active SPEAKING UNIT in the car	7 3	0 no 1 **yes**	

BASIC PROGRAMMING						
LOW BATTERY ALARM (INST)	5 2	0 disabled alarm 1 **enabled alarm**				
REPLACE BATTERY ALARM (INST)	5 6	0 **disabled alarm** 1 enabled alarm				
AUTOMATIC TEST DATA (INST)	Frequency days	3 1	X (days, from **1** to 9)			
	Time of the call	3 2	X X X X (hhmm, from 0000 to 2359; factory default **1628**)			
	Enabling automatic test	3 4	0 automatic test disabled 1 **automatic test enabled**			
	Manually perform a test call		3 4 2			
PROTOCOLS IDENTIFICATION CODE (INST)	2 2	2 Esse-ti 3 P100	X…X (identification Code; P100 factory default **01238765**)		[#]	
SPEAKING UNITS VOLUME (INST/OPER)	8 0	1 built-in active speaking unit 3 speaking unit connected to VVX	X loudspeaker (from 1 to 5; factory default **2**)	X microphone (from 8 to 9; factory default **8**)	#	
MESSAGES VOLUME (INST/OPER)	8 0 4		X (from 1 to 5; factory default **2**)		#	
GENERAL VOLUME (INST/OPER)	8 1	X loudspeaker (from 1 to 5; factory default **2**)	X microphone from 8 to 9; factory default **8**)	X messages (from 1 to 5; factory default **2**)	#	
LISTEN TO THE PROGRAMMING AGAIN (INST)	X…X (programming code prefix) *					

BASIC PROGRAMMING	
RESTORE FACTORY SETTINGS (INST)	9 9 * 0 #

Advanced programming

ADVANCED PROGRAMMING			
CHANGE INSTALLER PASSWORD (INST)	9 1	X...X [*] (old)	X..X [*] (new) X..X [*] (new)
CHANGE OPERATOR PASSWORD (INST)	9 2	X...X [*] (old)	X..X [*] (new) X..X [*] (new)
EMERGENCY CALL BUTTONS DELAY (INST)	4 2	X (seconds, from 0 to 9; factory default **3**)	
CAR EMERGENCY CALL BUTTON (ALC) NORMALLY CLOSED/OPEN (INST)	4 1	0 normally closed	
		1 **normally open**	
ALZ INPUT SETTING (INST)	5 5	0 **emergency-call button**	
		1 auxiliary alarm	
		2 door movement input	
NO EXTERNAL POWER SUPPLY ALARM (INST)	5 1	0 0 disabled alarm	
		X X enabled alarm with XX minutes delay (from 01 to 99; factory default **10**)	
SPEAKING UNIT DIAGNOSTIC ALARM (INST)	5 4	0 disabled alarm	
		1 **enabled alarm**	
ALARM OPERATION WITHOUT TELEPHONE LINE (INST)	2 5	1 **AI indicator light lit and courtesy message**	
		2 AI indicator light unlit and no courtesy message	
		3 AI indicator light lit and no courtesy message	

ADVANCED PROGRAMMING				
HANDSFREE CONNECTION MODE DURING AN ALARM (INST)	7 8	0 handsfree activation by "Handsfree activation" code		
		1 automatic handsfree activation after messages		
		2 **immediate and automatic handsfree activation (no messages)**		
ALARM RESET MODE (INST)	7 7	0 **automatic reset**		
		1 alarm reset by "End alarm" code		
"ACKNOWLEDGE" CODE (INST)	4 7	X…X (from 1 to 3 digits; factory default **5**)		[#]
"HANDSFREE ACTIVATION" CODE (INST)	4 5	X…X (from 1 to 3 digits; factory default **0**)		[#]
"END ALARM" CODE (INST)	4 3	X…X (from 1 to 3 digits; factory default **9**)		[#]
"EXCLUSION" CODE (INST)	4 4	X…X (from 1 to 3 digits; factory default **1**)		[#]
RESET MESSAGES (INST)	7 4	0 1 identification message		
		0 2 courtesy message		
CHANGE LANGUAGE (INST)	7 9	X X (language: 01 English, **90 mute**)		
MULTI-LANGUAGE COURTESY MESSAGE (INST)	8 9	X X (second language)	X X (third language)	[#]
DURATION OF HANDSFREE CONNECTION DURING ALARM (INST)	4 6	X (duration = X * 5 minutes; from 0 to 9; 0 = 10 * 5 minutes; factory default **2**)		
NUMBER OF CALLS TO THE SAME NUMBER FOR EACH CYCLE (INST)	6 0	X (calls, from **1** to 9)		

ADVANCED PROGRAMMING		
CALL CYCLES FOR TECHNOLOGICAL ALARMS AND TEST CALLS (INST)	6 2	X (cycles, from 1 to 9; 0= 10 cycles; factory default **3**)
CALL CYCLES FOR EMERGENCY CALL ALARMS (INST)	6 9	X (cycles, from 1 to 9; 0= unlimited; factory default **3**)
AUTOMATIC ANSWER (INST)	6 4	X (ring number, from 1 to 9; 0= 10 rings; factory default **2**)
OPERATION MODE AFTER AUTOMATIC ANSWER (INST)	7 6	0 programming mode
		1 **direct connection with the car**
CONNECTION DURATION AFTER AUTOMATIC RESPONSE (INST)	6 5	X (minutes, from 1 to **9**)
NOTIFICATION EVENT (INST)	2 3	0 0 notification event disabled
		0 1 **notification event enabled**
RELAY SETTING (INST)	7 5 1	1 same behaviour as output AI
		2 same behaviour as output AR
		3 active for external power failure
		4 door opener
		5 active as long as the emergency alarm progresses
		6 **active as long as the buttons are pressed**
RELAY INTERMITTENCE (INST)	3 0	0 **steady-state**
		1 intermittent (500 ms ON / 500 ms OFF)
DTMF GENERATOR SETTING (INST)	8 3	0 DTMF generated by GSM network
		X DTMF generated by 9000GSM (DTMF duration = X * 50ms; from 1 to 9; factory default **4**)

ADVANCED PROGRAMMING				
ENTER PIN CODE (WHEN PIN ACTIVE) (INST)	2 8 2	X…X (PIN) *	X…X (PIN) *	
DISABLE PIN REQUEST (INST)	2 8 3 0			
RIDES NUMBER (INST)	2 6 1	X…X (X...X = 100, 250 or 1000; factory default **1000**)	#	
TEST OF ALARMS (INST)	9 0 0 9 9	1 emergency-call button		
		2 battery alarms		
		3 periodic automatic test call		
		7 no external power supply alarm		

PROGRAMMING VIA SMS

Programming via SMS can be performed from any mobile phone or other device that can send SMS messages. An SMS notifying the programming was performed is sent by the 9000GSM to the number that sent the programming.

ATTENTION
Programmed performed via SMS sent from the Internet could not have a positive result if the required format is not followed.

MESSAGE FORMAT

Each programming SMS must contain the password, which allows access to programming, and the programming codes to be performed.
The message format must be as follows:

Et.hg *xxx# c..c c..c

Where:
Et.hg : is the start of the programming string
*xxx# : is the password string (default installer password xxx = 0)
c..c : programming code
The strings and programming codes must be separated by a space.
Refer to the related paragraphs for the programming codes.

NOTIFICATION MESSAGE FORMAT

The format of the notification message to the user who sent a programming SMS is similar to the programming message:

Et!hg *xxx# c..c c..cERROR

Where:
Et!hg : is the start of the programming string
*xxx# : is the password string (default installer password xxx = 0)
c..c : is the accepted programming code
c..cERROR : is the refused programming code

QUICK USE GUIDE

In the tables:

–  : lift the local telephone handset

–  : lift the local telephone handset and dial ✳0# to access programming

Local use

LOCAL USE	
CONVERSATION WITH THE CAR	CONVERSATION
CONVERSATION WITH ONE SPEAKING UNIT	11 CAR SPEAKING UNIT 10 DEACTIVATE ALL
EXTERNAL CALLS	0 <TELEPHONE NUMBER>
DOOR OPENER RELAY	821
LISTEN TO THE GSM SIGNAL LEVEL	244

Use remotely with 9000GSM at rest

- Call 9000GSM and wait for a response.
- After listening to the elevator identification message, dial: ✳<password ># (factory setting: ✳0#).
- All of the programming and functions below can now be performed:

USE REMOTELY WITH 9000GSM AT REST	
CONVERSATION WITH ONE SPEAKING UNIT	11 CAR SPEAKING UNIT 10 DEACTIVATE ALL
DOOR OPENER RELAY	821
LISTEN TO THE GSM SIGNAL LEVEL	244

SIGNALS

LED signalling alarm / periodical test call (yellow)

Emergency-call alarm

Emergency call alarm suspended

Other alarms - Test call

LED signalling GSM signal strength (green)

No signal

Low signal level

Medium signal level

Good signal level

High signal level

LED signalling GSM status (red)

GSM module correctly registered on the network

9000GSM registering to the GSM network – 9000GSM not registered correctly – PIN request – PIN incorrect – Other problems

Call in progress

LED signalling power supply status (blue)

The external power supply is connected and the battery has max capacity charge

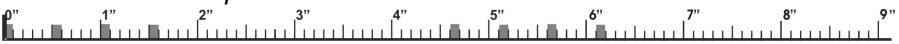
The external power supply is connected and the battery has good capacity charge

The external power supply is connected and the battery has medium capacity charge

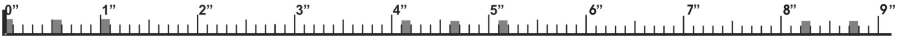
The external power supply is connected and the battery has low capacity charge

The external power supply is connected and the battery is either disconnected or dead

The external power supply is disconnected and the battery guarantees more than 7-hour operation in idle state



The external power supply is disconnected and the battery guarantees up to 7-hour operation in idle state



The external power supply is disconnected and the battery guarantees 2-hour operation in idle state

The external power supply is disconnected and the battery guarantees 1-hour operation in idle state

Troubleshooting

DETECTED PROBLEM	ROOT CAUSE	SOLUTION
All LEDs are unlit	9000GSM not supplied	Check power supply
The GSM status LED ☇ blinks quickly	SIM card not present or not correctly inserted	Correctly insert the SIM card in the dedicated location
	SIM card locked by PIN code	Enter the PIN using the code 282
	SIM card expired or damaged	Check the SIM card operation on your mobile phone
	SIM card not supported (e.g. UMTS)	Use a GSM SIM card
		Make a test with a SIM card from a different GSM provider
	Unconnected antenna or damaged connection cable	Check the antenna connection and the correct operation of the cable
	GSM signal absence	Check the signal strength by your mobile phone
	Insufficient power supply	Check the power supply
	Generic SW problem	Switch off and back on 9000GSM
The GSM status LED ☇ blinks slowly, but the GSM signal LED ◢ is unlit	GSM signal level is too low to allow outgoing calls	Move the antenna into a better position

NOTES

9000GSM

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