User Manual v1.0

Safety instructions

Please read and follow these safety guidelines in order to maintain safety of operators and people around:

- GSM communicator ET07 (further referenced as system) contains a radio transceiver operating in GSM900 and GSM1800 bands.
- Don't use the system where it can interfere with other devices and cause any potential danger.
- Don't use the system with medical devices if this is required in the manual of the medical device.
- Don't use the system in hazardous environment.
- Don't expose the system to high humidity, chemical environment or mechanical impacts.
- Don't attempt to personally repair the system.
- System labelling sticker is at the bottom of the device.

⚠ System ET07 is a device mounted in limited access areas. Any system repairs must be done only by qualified, safety aware personnel.

⚠ Mains power must be disconnected before any installation or tuning work starts. The system installation or maintenance must not be done during stormy conditions.

⚠ The system must be powered by main 11-24V 50Hz ~300mA AC or 11-24V --- 300mA DC power supply which must be approved by LST EN 60950-1 standard and be easily accessible.

⚠ Any additional devices linked to the system ET07 (computer, alarm control panel etc.) must be approved by LST EN 60950-1 standard.

⚠ External power supply can be connected to AC mains only inside installation room with automatic 2-pole circuit breaker capable of disconnecting circuit in the event of short circuit or over-current condition. Open circuit breaker must have a gap between connections of more than 3mm.
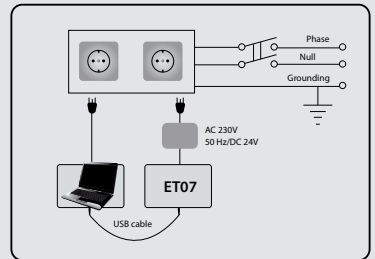
⚠ Fuse F1 type 5x20 mm 3A Slow blown. Blown fuse cannot be replaced by the user and the replacement fuses have to be exactly the same as indicated by the manufacturer.

⚠ The device is fully turned off by disconnecting 2-pole switch off device of the external power supply or any other linked device that the system ET07 is powered from.

🗑 The WEEE (Waste Electrical and Electronic Equipment) marking on this product (see left) or its documentation indicates that in the EU the product must not be disposed of together with household waste.

CE

Limited Liability

The buyer must agree that the system will reduce the risk of fire, theft, burglary or other dangers but does not guarantee against such events. "ELDES UAB" will not take any responsibility regarding personal, property or revenue loss while using the system. "ELDES UAB" responsibility according to local laws does not exceed value of the purchased system. "ELDES UAB" is not affiliated with GSM operators providing cellular services, therefore is not responsible for network services, coverage or its operation.

Manufacturer Warranty

The system carries a 24-month warranty by the manufacturer "ELDES UAB".

Warranty period starts from the day the system has been purchased by the end user. The warranty is valid only if the system has been used as intended, following all guidelines listed in the manual and within specified operating conditions. Receipt with purchase date must be kept as a proof.

The warranty is voided if the system has been exposed to mechanical impacts, chemicals, high humidity, fluids, corrosive and hazardous environment or other force majeure factors.

Package Content

CONTENT

About User Manual. Quick Start.

This document describes remote informing system ET07, its operation and installation. It is very important to read User Manual before start using the system. A quick start guide is located in first two chapters.

1. General Information

1.1 Function

Communicator ET07 is for transferring information from the Alarm Control Panel to the monitoring station via GSM audio connection channel or/and users via SMS message.

The system van be used in the following applications:

- Property security
- To make and receive telephone calls via GSM audio connection channel

1.2 Operation Description

Communicator ET07 works over GSM network. The communicator transmits CONTACT ID and 4+2 protocol messages and fully imitates telephone line. When dialling a number with a telephone or via Alarm Control Panel, tonal (DTMF) number dialling mode must be enabled. The user can also call from communicator to the telephone.

Communicator ET07 can operate in 3 modes, i. e.:

1. transmits information from the Alarm Control Panel to the monitoring station via GSM audio connection signal;
2. transmits information from the Alarm Control Panel only to the registered users via SMS message;
3. transmits information from the Alarm Control Panel to the monitoring station via GSM audio connection signal as well as to registered users via SMS message.

An additional computer program ET07 Configuration Tool is also used for configurations which are necessary for the system to operate in the second and third modes, i. e., to send SMS messages to the registered users. The device is connected to the computer via USB or RS232 type connection (depending on which type of connection is implemented in the card – see fig. 1).

1.3 Technical Specifications

Electrical and Mechanical Specifications

Supply voltage	11-24V 50 Hz ~ 300mA max ar 11-24V ⎓ 300mA max
Current used in standby mode	70mA max
GSM modem frequency	900/1800/1900 MHz
Supported protocols	CONTACT ID, 4+2
Maximum number of users to whom SMS messages are delivered	5
Dimensions	139x84 mm
Operating temperature range	-20...+55°C
Generated phone line voltage	48 V
Generated phone line current	25 mA
Generated phone line impedance	600 Ohm
Ringing voltage of generated phone line	± 72 V (25 Hz)
Dial tone of generated phone line	350 Hz

1.4 Connection Circuit
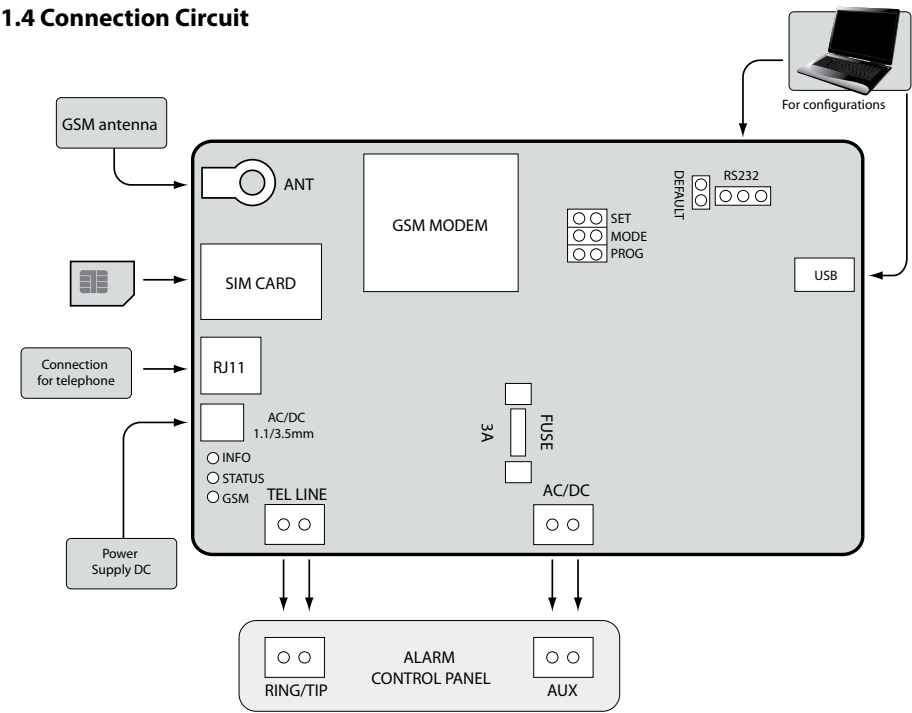
1.5 Connectors and LED Indicators Functionality

Main Units

GSM MODEM	GSM network 900/1800/1900 MHz modem
SIM CARD	SIM card
ANT	GSM antenna SMA type connector
FUSE	3A fuse

Light Emitting Diodes LED

INFO	Working mode indicator
STATUS	Device activity indicator
GSM	GSM network quality indicator

Connector Functionality

Labelling	Explanation
AC/DC	Power supply connection pins
AC/DC 1,1/3,5mm	Alternative power supply connection pins. Connected in parallel with AC/DC connection. Internal diameter of the plug is 1.1 mm, , external diameter of the plug is 3.5 mm
TEL LINE	Pins connected to the Alarm Control Panel pins RING and TIP. Connected in parallel with RJ11 connection.
RJ11	RJ11 type connection for telephone. Connected in parallel with TEL LINE connection.
DEFAULT	Connectors for restoring factory default settings
RS232	COM port connection
USB	Mini USB port
SET	Connectors for enabling the 3rd operation mode of the device
MODE	Connectors for connecting the 2nd operation mode of the device
PROG	Not used

1.6 System Installation

Device installation and Pre-operation:

1. Fasten the system in the box using fastening holders

2. Place SIM card in the holder but make sure that SIM card PIN code is disabled. (PIN code can be disabled by putting SIM card into mobile phone and following proper menus). SIM card should not have any remaining SMS messages.

3. Connect the antenna (the device cannot be turned on without antenna).

4. Connect the circuit as shown in fig. no. 2 – connect telephone line output of the Alarm Control Panel (RING/TIP) to TEL LINE connectors of communicator ET07. In this case power supply is usually used as AUX output of Alarm Control Panel.

5. When AC power supply (ground transformer) is used, connect according to circuit no. 3. In this case you do not need to connect any other power supplies.

6. The system should start in less than a minute. STATUS indicator should be blinking every five seconds indicating connection to GSM network. If the indicator is blinking very frequently, i. e., several times per second, it is possible that SIM card is inserted incorrectly or PIN code request is not disabled.
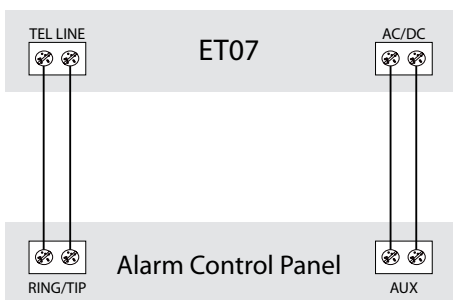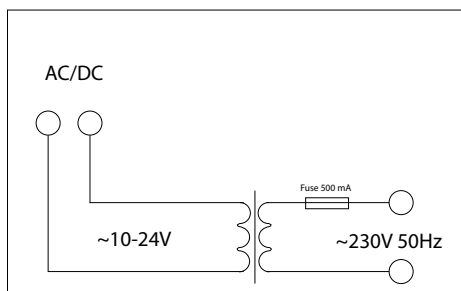

Fig. No. 2

Fig. No. 3

The system can be installed only in a metal or non-flammable plastic box. When the metal box is also used as power supply ground transformer it is necessary to ground the box using yellow/green colour cable. For the connection of ground 230V transformer use 3x0.75 mm2 1 thread double isolated cable. The initial winding of the ground transformer must be connected through 0.5A fuse. 230V power supply cables cannot be grouped with low voltage cable group. For the connection of power supply and output connectors use 1 thread 2x0.75 mm2 cable. For the connection of input/output connectors use 0.50 mm2 1 thread cable.

1.7 Light Emitting Indicators Functionality

Connection Strength Indicator

To identify connection strength GSM indicator is used. To ensure the best quality of the network adjust the position of GSM antenna and find the best possible connection by watching the frequency of indicator blinking.

GSM indicator blinking	Meaning
Off	No connection
Every 3 seconds	The connection is not reliable
Every second	Satisfactory
Several times per second	Good
Indicator is lit	Excellent

It is recommended to install the antenna remotely from communicator panel. Thus you will ensure better quality of audio signal. We do not recommend installing the antenna in a metal box.

It is also used few others indicators – device activity indicator STATUS and working mode indicator INFO.

Device Activity Indication

STATUS indicator blinking	Meaning
Off	No power supply or some fault is present
Blinking several times per second	SIM card is used improperly/is not used
Indicator is lit	The device is working properly and ready for use

Working Mode Indication

INFO indicator blinking	Reikšmė
Off	The device is in passive mode
Blinking several times per second	The device retransmits the data sent from Security Control Panel to the panel of security service. (this indication is possible then device is working in first mode)
Indicator is lit	The device decodes the data sent via CONTACT ID protocol to textual, user-understandable information.

2. System Pre-operation

Communicator ET07 can operate in 3 modes:

1. Informing security service mode – transmits information from the Alarm Control Panel via GSM audio connection signal only to security service panel;
2. Informing users via SMS messages mode – transmits information from the Alarm Control Panel via SMS messages only to registered users;
3. Informing security service and user mode – transmits information from the Alarm Control Panel via GSM audio connection signal to security service panel as well as to registered users via SMS messages.

This chapter describes pre-operation and system operation when each of the above mentioned modes is enabled.

ATTENTION:

On the Alarm Control Panel you should enable tonal (DTMF) number dialling mode, activate CONTACT ID or 4+2 data transmission protocol and enter telephone number of security service panel.


ATTENTION:

It is also necessary to enter telephone number of security service on the Alarm Control Panel when you do not need to transmit data to security service and you are using only SMS messaging mode. In such a case you can use any telephone number (you can use the number consisting of one digit).

2.1 Informing Security Service Mode

If you want the device to operate in this operating mode you must ensure that all connectors in connector group SET-MODE-PROG are not short-circuited (jumper is not used).

When this mode is enabled communicator ET07 only retransmits data sent from Alarm Control Panel via CONTACT ID or 4+2 protocol to security service panel via GSM audio connection channel. The device does not require any additional configurations.
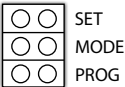
2.2 Informing Users via SMS Messages Mode

This operation mode is enabled by putting a jumper on MODE connectors in connector group SET-MODE-PROG (as demonstrated in the example). Other connectors must not be short-circuited.

When this operation mode is used the information about the secured object is delivered only to user (users) and security service is not informed. In this case the device decodes the data sent from the Alarm Control Panel via CONTACT ID protocol to user-understandable text and sends it via SMS message. This decoding is performed according to the preset parameters which can be specified by the user only by using the program *ET07 Configuration Tool* (for more information please refer to user manual of this program). SMS messages can be received by up to 5 users.
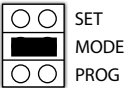
2.3 Informing Security Service and Users via SMS Messages Mode

This operation mode is enabled by putting a jumper on SET connectors in connector group SET-MODE-PROG (as demonstrated in the example). Other connectors must not be short-circuited.

When this operation mode is used the information about the secured object is received by the user (users) as well as security service. Device retransmits the data sent from the Alarm Control Panel via CONTACT ID protocol to the panel of security service and decodes this data to user-understandable text and sends it via SMS message (indicator INFO informs only about decoding).The text is created by the user. This decoding is performed according to the preset parameters which can be specified by the user only by using the program ET07 Configuration Tool (for more information please refer to user manual of this program). SMS messages can be received by up to 5 users.
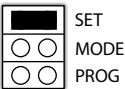
3. Appendix

3.1 Restoring Factory Default Parameters

To restore factory default parameters:

- disconnect power supply;
- short circuit (connect) connectors DEFAULT;
- connect power supply for 5 seconds;
- disconnect power supply;
- disconnect connectors DEFAULT.

3.2 ET07 Configuration Program

System configuration is performed by using program software *ET07 Configuration Tool* that can be downloaded from internet website www.eldes.lt

Before connecting the cable to the computer via USB (or RS232 type) port read *ET07 Configuration Tool* user manual that can be found in HELP section of the program.

3.3 Technical Support

Indicator STATUS is off and not blinking	• no external power supply • circuit not properly connected • blown fuse • no network signal
Indicator STATUS is blinking several times per second	• SIM card is not inserted • SIM card PIN code request has not been disabled • SIM card not active
System does not deliver any SMS messages	• SIM card account depleted • incorrect SMS central number • no network signal • user telephone number is not programmed in users list • user telephone number is indicated improperly (read more about it in ET07 Configuration Tool user manual which can be founf in Help section of the program)

If your problem could not be fixed by the self-guide above, please contact your distributor or ELDES technical support by e-mail support@eldes.lt. More up to date information about your device and other products can be found at the manufacturer's website www.eldes.lt