A1500 – GSM MAGNETIC CONTACT ALARM

USER MANUAL

A1500-REV2.1-1604

FW-A1500v2.93

SAFETY INSTRUCTIONS

- This user manual contains important notices for installation, usage and safety instructions. Please read this manual carefully before you start using your device!
- Device is containing a radio transceiver operating on GSM 900/1800 MHz bands.
- Do not use device in environments, exceeding temperature limits (device should operate not lower than -10^0 C and not higher than $+50^0$ C).
- Do not use device in chemical or other hazardous environments.
- Device is intended to use in dry and clean places. Do not use device in high humidity.
- Protect your device from dust, moisture, heat and water.
- Do not expose the device to strong vibrations and mechanical impacts.
- Do not attempt to repair device personally.

USE IN ACCORDANCE WITH THE REGULATION

- The use of this device in accordance with the regulation is sending SMS text messages and making phone calls after an alarm case. Other usages are not permitted.
- Police, fire or healthcare emergency call lines are not permitted to call directly from this device. Do not configure emergency call numbers into this device.

BATTERY RECYCLING

- CR123A batteries are classified as recycled batteries. Please take your empty batteries to a nearest collection point.

BATTERY LIFE

- Battery life, announced by manufacturer, is calculated under normal operating conditions and normal frequency of usage.
- Battery life can vary against frequency of usage, quality of cellular service, environment conditions (temperature, humidity etc.), quality of used batteries and other effects.
- Manufacturer does not guarantee battery life of the device operation.

LIMITED LIABILITY

- The buyer must agree that Reporter devices will reduce the risk of theft, burglary, fire or other dangers but do not guarantee against such events.
- Manufacturer will not take any responsibility regarding personal or property or revenue loss while using devices.
- Manufacturer liability according to local laws does not exceed value of the purchased device.

1. DESCRIPTION

A1500 is a simple & easy to use GSM MAGNETIC CONTACT ALARM which sends SMS and calls you in case of alarm events & restorations. Alarm event occurs in case of NO and NC ports changes. Up to 3 numbers can be registered (1 admin, 2 users). Device is including 1xDigital NO and 1xDigital NC ports. They can be used with any kind of dry contact output type devices/sensors/switches.

A1500 also operates as Power Failure Detector, if used together with power adaptor. Sends you POWER FAIL message in case of power adaptor fails and sends you POWER OK message in case of power restored. Device understands Power Failures and Power Restorations from the adaptor voltage.

Once battery is low, device sends you LOW BATTERY text message. Battery voltage is checked daily and text message is sent if it is low. It will repeat this message every week after the first alert, as soon as batteries are not replaced.

Device sends you STILL ALIVE messages once per week (6~8 days). This message shows that device is working well (means battery or power is OK, SIM card is OK, no errors). This function can be disabled / enabled by admin (Factory default is: enabled).

Device also sends you "GSM Signal Strength Level" while making configuration. This will help you to understand if the location is suitable for installation or not.

Below list shows the feedbacks from your device:

- NO Port Failure : Text Message "PORT1 ALARM" and phone call (ring)
- NO Port Restored : Text Message "PORT1 OK" and phone call (ring)
- NC Port Failure : Text Message "PORT2 ALARM" and phone call (ring)
- NC Port Restored : Text Message "PORT2 OK" and phone call (ring)
- Power Failure : Text Message "POWER FAIL"
- Power Restored : Text Message "POWER OK"
- Low Battery : Text Message "LOW BATTERY"
- Weekly Keep Alive : Text Message "STILL ALIVE"

A1500 might operate in below power options:

- Adaptor + battery used together: In this case all function will work and battery lifetime is up to 4 years.
- Battery-only use: In this case battery lifetime is 1 year (calculated 1 SMS per day). In this mode Power Failure and Power Restoration functions will not work.
- Adaptor-only use: In this case Power failure function will not work.

Note that Reporter devices do not have "voice record" function, so phone calls are used for only ringing your mobile phone. There is no voice call.

Only a local 900/1800MHz GSM SIM card is required to operate the device. SMS and Call function is enough for SIM Card. Data or GPRS functions are not required.

Reporter devices are designed to operate in ultra-low power consumption. Further to this feature; device de-attaches itself from GSM network in standby, for saving battery life. If you try to call or send SMS to device in standby mode, you will not be able to reach the device. It attaches to the network if an alarm occurs or if you press Config Button.

All settings and registered admin & user numbers are saved in device's own EPROM memory. So, settings will not be deleted if battery or SIM card is removed. Device will continue with new batteries or new SIM Card with the last saved settings & numbers.

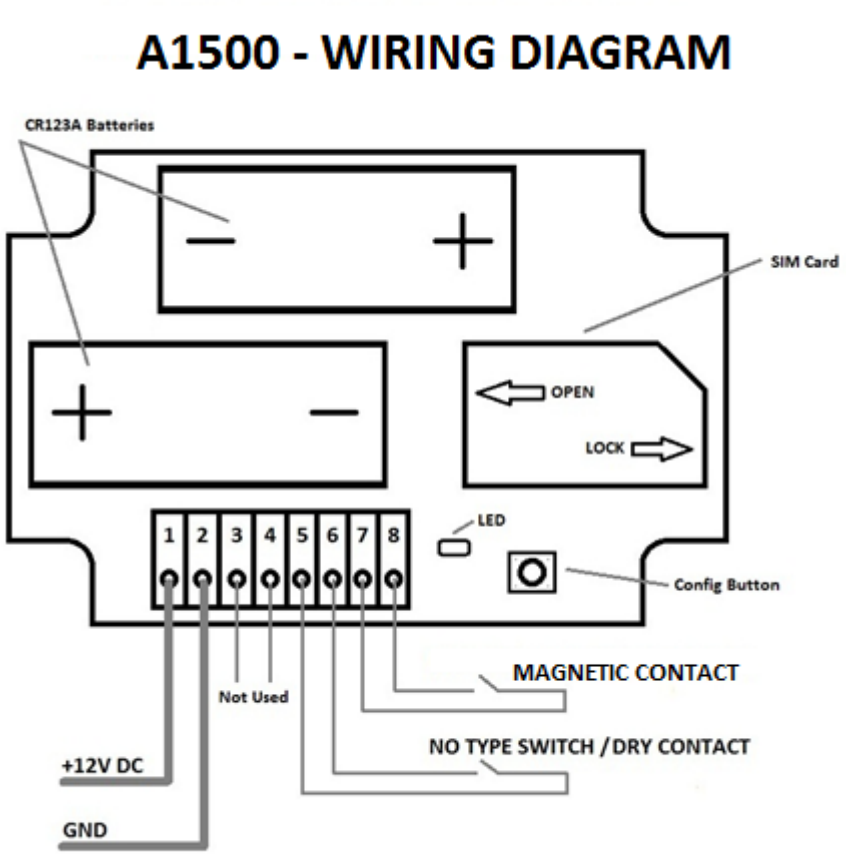
2. GETTING STARTED

2.1. Insert SIM Card

A local SIM card is required to operate the system. Before inserting the SIM card, try it with a mobile phone. And then:

- Disable PIN code protection
- Send an SMS to a mobile number for testing
- Call a mobile phone number for testing

After above steps; please open the screws on the back of the item. And please insert SIM card into your device, by opening the SIM card holder. Once SIM card is inserted, please lock the holder.



2.2. Connect Sensors on Ports

Note: Wires should pass into the holes of the top cover! Please check Wiring Diagram!

NO PORT (Port1): Connect two wires of your NO type device output or cable into terminal block 5 & 6. It does not matter which one is first. This port is a "Normally Open" port and checks if there is any short-circuit between terminal 5 & 6.

NC PORT (Port2): Connect two wires of your NC type device output or cable into terminal block 7 & 8. It does not matter which one is first. This port is a "Normally Closed" port and checks if there is any open-circuit between terminal 7 & 8.

Device ports are digital and device provides required port voltage by itself. Do not apply any external power on these terminal blocks which might cause damages. Also make sure that your external device does not apply any voltage, or sink or sank any currents. Your external device should only provide a dry contact relay output or short or open circuit (i.e. switches, NO/NC sensors).

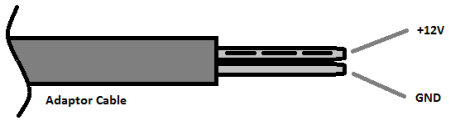
2.3. Connect Power

Connect 12V DC power adaptor into terminal block numbers 1 and 2. Number 1 is positive (+12V) and 2 negative (GND).

Note: Wires should pass into the holes of the top cover! Please check Wiring Diagram!

Connect +12V of power adaptor to the terminal block 1.

Connect GND of power adaptor to the terminal block 2.



Please note power adaptor current should be at least 1000 mA.

Then insert two pieces of CR123A batteries included in the package. (If power adaptor is not used, insert batteries only).

2.4. Register Admin Number

Admin number is authorized to make configurations, change & delete settings of the device. And also will receive all alerts with SMS and/or phone calls. Other users will only receive alerts and will not be able to make configurations.

The LED will blink a few times until it is connected to an available network. Please wait for LED becomes solid ON. Once LED is ON; that means device is connected to a GSM network and ready to work.

Now please call the device's number with your phone. Once you hear the ringing volume, your number is registered to devices memory as ADMIN NUMBER.

Then the LED will blink and device will send you an SMS including "ADMIN OK" message. Once you received this message that means device is ready to work and now operating! If you want to make some changes on settings please continue from below steps.

2.5. Send Configuration Commands

Press config button for 3 seconds and wait LED becomes solid ON. Now your device is waiting for a configuration SMS from you (note that timeout is 2 minutes).

Please note all commands should start with an admin password (except RESET command). Default password is "1111". Also, it is possible to send one or several commands in one SMS.

Commands should be written in "big letters" (correct one: 1111 NEWP:3333, wrong one is: 1111 newp:3333).

There should be a space character between independent commands e.g.: 1111<space>NEWP:1234<space>DEL1<space>DISABLE

Device is case sensitive; please pay attention to text message ingredients.

Attention: If you write the password wrong you will receive an SMS including "WRONG PSWR" text. In that case device will keep in configuration mode. Please wait until LED becomes solid again and send a configuration SMS with correct password. Otherwise device will keep the same settings and continue operation after 2 minutes timeout and LED will become OFF.

Below is the list of commands:

DESCRIPTION	COMMAND	DEFAULT
Change Password	NEWP:XXXX	1111
Add / Change User1	TEL1:+XXXXXXXXXX	
Add / Change User2	TEL2:+XXXXXXXXXX	
Delete User1	DEL1	
Delete User2	DEL2	
Enable Keep Alive	ENABLE	Enabled (Weekly)
Disable Keep Alive	DISABLE	Enabled (Weekly)
Reset Device	RESET	

Table – 1 "Commands List"

EXAMPLE:

1111 NEWP:5555 TEL1:+906661234567 TEL2:+907771234567 DISABLE

Above example means:

- New admin password is now "5555" and you have to use this new password to make new configurations in the future. Please note it carefully.
- You added a new user1 number +906661234567.
- You added a new user2 number +907771234567.
- Weekly keep alive messages are disabled.

Once you sent this SMS to your device, it will reply you with an SMS including "CONFIG OK <XX>" text (where XX is GSM signal strength, see "Table-2" for further details). Now LED will turn off and your device is ready to operate.

Finally close the cover and insert screws on the back.

<XX>	MEANING	ADVICE
Between 19~31	Excellent Signal	
Between 14~18	Good Signal	
Between 9~13	Workable Signal	Try changing location
Between 1~8	Weak Signal	Check antenna / change device location

Table – 2 "GSM Signal Strength Levels"

3. RESET & RECONFIGURE

3.1. Re-configure Your Device

Press at least 1 second to the Configuration Button on your device anytime. LED will blink a few times and please keep waiting for LED becomes solid ON. Then you might send a new configuration SMS to device with using your latest password. The procedure of sending configuration SMS is same with article "2.5. Send Configuration Commands".

3.2. Check GSM Signal Strength

Please follow article 3.1 and then only send your last password with SMS. You will receive "CONFIG OK <XX>" text message where <XX> indicates GSM Signal Strength. For further description please see "Table-2".

3.3. Reset Your Device

Press Configuration button at least 1 second. LED will blink a few times and please keep waiting for LED becomes solid ON. Then send an SMS to the device including "RESET" command. LED will blink a few times and become solid ON. Now your device has been reset, it is ready to start. Please follow instructions starting from "2.4. Register Admin Number".

Please note that RESET can be only made by sending "RESET" text message to your device (while it's in config mode). Password is not required for Reset function. Also Reset can be made from any third person's mobile phone; Admin or users not required to make Reset.

4. TROUBLESHOOTING

TROUBLE	REASON	SOLUTION
I received ADMIN OK, I sent a config SMS but didn't receive CONFIG OK text	SMS is sent while LED is blinking or LED is OFF	Wait for LED is solid OFF. Then press config button 1 sec. Wait for LED blinks and becomes solid ON. Then send your SMS.
LED blinks continuously in first use, never becomes solid ON	SIM card not inserted	Remove batteries and adaptor. Insert SIM card first and then power device.
	PIN code not disabled	Remove batteries, adaptor and then SIM card. Insert SIM card into a mobile phone. Disable SIM Card PIN protection from settings. Insert SIM card to your device first and then power device.
	Signal level not enough (below 13)	Change device location or try with another GSM operator until finding good signal level.
I don't use batteries but I receive "LOW BATTERY" text messages.	Batteries not used	Please use batteries for safer operation. Otherwise you will receive LOW BATTERY alarms with weekly repeat.
Alarm occurred, I received SMS but didn't receive a Call	Network signal was not enough on Reporter location or your own mobile phones location.	Check signal level of Reporter. Check if you had a missed call while your mobile phone is unreachable.
	Low credit on prepaid card	Check your credit (if prepaid cards used).
Alarm occurred, I received Call but didn't receive an SMS	Network signal was not enough on Reporter location or your own mobile phones location.	Check signal level of Reporter. Sometimes SMS messages are delivered after some period of its sent, caused by GSM operators.
	Low credit on prepaid card	Check your credit (if prepaid cards used).
I (admin) receive SMS & Calls on alerts but users don't.	Users not saved correctly	Config messages are correct. Read "Re-configure your device" section and make configuration.
I receive POWER FAIL but don't receive POWER OK texts.	Adaptor not powered or wiring is wrong	Check if adaptor is powered by mains. Check adaptor connection on 1&2 (It might be connected opposite).
My batteries finished very quickly	Device worked without SIM card or PIN code not disabled or signal is too low	Replace with fresh batteries. Check signal level. Disable PIN code protection.

5. TECHNICAL SPECIFICATIONS

A1500 – Technical Specifications	
Power Supply	• 2 x CR123A Lithium batteries (NOT included) • 12V 1000mA DC Adaptor (included)
Battery Life	• More than 1 year under normal usage
Inputs	• 1xNO port, 1xNC port (digital ports) • Power adaptor input
Outputs	• Not available
GSM Module	• GSM 900/1800 MHz Dual Band
Antenna	• Internal Antenna
Event Alerts	• SMS / Call in case of NO Port Failure • SMS / Call in case of NO Port Restored • SMS / Call in case of NC Port Failure • SMS / Call in case of NC Port Restored • SMS for Power Failure • SMS for Power Restored • SMS for Low Battery • SMS for Keep Alive Messages • SMS for GSM Signal Strength (while configuration)
Configurations via SMS	• Change security password • Register & delete user phone numbers (up to 2) • Enable & disable weekly keep alive messages • Reset device
Operating Temperature	• -10 ^{0}C ~ + 50 ^{0}C
Dimensions	• 109 x 58 x 31 mm
Package Content	• 1 x A1500 GSM Alarm Device • 1 x A9900 12V DC 1000mA Power Adaptor • 1 x A9930 Wired Magnetic Contact • 1 x User Manual • 4 x Fixing Screws & Fixing Plugs

Made in Turkey