User Manual

X500
GSM/SMS/RFID Touch Alarm System
Congratulations on buying this smanos X500 alarm system. Installing the smanos X500 alarm system is easy and quick. Before using the product we recommend reading the manual first. There are some parts of the installation which have to be done in the right order to complete the installation successfully.
Overview of X500 Alarm System

Front View

- Arm
- Home mode
- Disarm
- RFID tag reader
- Touch screen
- LCD screen
- Play voice memo
- Record voice memo

Rear View

- On/Off
- Tamper switch

Bottom View

- Adapter jack
- SIM card slot
- Wired connection terminals

Included accessories

The smanos X500 Alarm System has the following accessories included in the box:

- English manual
- English quick guide

- 2 x Wireless door/window contact
- 2 x Multifunctional remote control
- 2 x RFID tag
- 1 x Wireless PIR motion detector
- 1 x Adapter
- 1 x Desk stand
- 1 x Wall mount
Operating principle of the alarm system

The alarm system will receive a signal when a sensor is triggered. The control panel will sound the alarm and send a SMS to all stored phone numbers. When texting is done it will call stored phone numbers. When an optional external siren is placed it will be send a signal to the siren.

Sensors

Sensor placement

The alarm system is more effective with well-placed and set sensors. Determine which areas you want to monitor and with which sensor. In the picture below are potential places shown for different types of sensors from which you can determine what the best placing is for your space.

A. Alarm panel
1. Front door
2. Living area
3. Window: living area
4. Window: living area
5. Terrace door
6. Window
7. Bedroom
8. Kitchen
9. Wash room

B. Remote control
: Door/window contact
: PIR motion detector
: Door/window contact
: Door/window contact
: Door/window contact
: PIR motion detector
: Gas detector
: Water flood detector

C. Siren

[Diagram showing sensor placements in a house layout]
Zone mode

Each detector can be placed in a zone modes. Four different zone modes can be selected. The home mode zone, normal zone, 24 hour zone or single delay zone. Please refer to page 23 for setting the zone mode.

IMPORTANT: Determine before setting the alarm system which zone a detector should be placed.

Normal zone: The supplied door/window contact is by default set in the normal zone. In the normal zone setting, a detector is always activated when the alarm system is armed.

Home mode zone: The supplied PIR motion detector is by default which set in the home zone. When the alarm system is in home mode, the detectors set in home zone will send a signal to the alarm system when triggered but does not respond to the signal. Detectors in the normal zone will send a signal when triggered and the alarm system will respond. With the home zone it is possible to partially arm the house with the advantage of being able to walk around in it.

Single delay zone: One or more detectors can be set in single delay zone that will alarm at the specified time after being triggered. The state is usually used for door/window contact on entrance. For example, if the user does not want to carry the remote control, he/she can set the door/window contact in single delay zone and set the time to 30 seconds. When the user comes home the control panel will alarm after 30 seconds, so it leaves certain time for the user to disarm the system.

24 hour zone: It is recommended to set smoke detector, gas leakage detector, vibration detector, glass break detector, water flood detector and IR beams to 24 hour zone. When set to this zone the detector is always active and will always send a signal without delay to the control panel when triggered, regardless whether the system is armed or disarmed.

Changing sensor name

The supplied motion detector and door/window contact are by default paired with the alarm system. Every sensor is called a zone and every sensor will get it’s own zone number assigned. The door/window contact is by default assigned to zone 1. The motion detector is by default assigned to zone 2. Each sensor that will be assigned afterwards will become zone 3, zone 4... in the sequence of pairing order. Names can be set up to 50 zones.

Test mode alarm system

The alarm system can be put in a testing mode. This will cause the alarm beep three times when it getting a signal from a sensor which is triggered, instead of ringing the siren.

The test mode can be started by sending “100” to SIM card which is inserted in the control panel. After 10 minutes the system will automatically stop the test mode. It is also possible to stop the test mode by pressing the [SOS] button on the control panel.

Record alarm message

When the alarm is activated, the control panel will call the pre-stored emergency numbers and play a message. This message can be changed by pressing the [1] button, press again the [0] button and finally press the [1] button. From that point you have 10 seconds to leave a message.
Getting Started

Inserting SIM card
Before inserting the SIM card, please perform the following steps:

1. Make sure the alarm system is powered off.
2. IMPORTANT: Remove the (default) code permanently from the SIM card.
3. Turn off the voice mail function if it is enabled.
4. Insert the SIM card into the SIM card slot from the alarm system as shown in the illustration below.

Turning on the control panel
Connect the power adapter to the connector in the back of the control panel. Then slide the power switch to "On".

Network connection (indicator)

After switching on the system, the network icon [ ] will show on the LCD screen. This indicates that the control panel is connected to a network.

Settings inquiry by SMS

IMPORTANT: If the network icon does not show on the LCD screen, the control panel has not connected to a network. Make sure the security code of the SIM card is permanently deactivated.

The settings of the alarm system can be changed by simply sending a SMS with a mobile phone. You can request an entire menu for information on possible SMS commands. The complete menu consists of three parts which can be requested by sending one, two or three question marks as can be seen below.

Sending ‘?’
Control panel replies:

- ‘0’ Disarm
- ‘1’ Arm
- ‘2’ Home mode
- ‘3’ Two-way talk
- ‘4’ Call-back voice memo
- ‘00’ Settings inquiry
- ‘??’ Store phone and SMS No.

IMPORTANT: In order to use and setup the alarm system, SMS texting will be used. The use of SMS texting cost money. Consult your carrier for the costs.

IMPORTANT: The Android and/or Apple App both make use of SMS texting.
Control Panel Operation

Arming the system
Press 📞. All the sensors will be activated.

Partially arming the system
Press 📞. Sensors which are set in the home mode zone will not active when home arm is activated. All other sensors in other zones will remain active.

Disarming the system with the control panel
Disarming the system with the control panel can be done by entering the 4-digit password (default: 1234) and press the 📞 button. You will hear one beep and the system will be disarmed. If you hear three beeps, the password is entered incorrectly.

Disarming the system by RFID tag
Hold the RFID tag close to the RFID reader. The system will beep as a confirmation it is disarmed.

IMPORTANT: The control panel must be connected to AC adapter when using a RFID tag to disarm the system.

IMPORTANT: RFID tags can only be used to disarm the system.
Record and play back voice message

Press the ③ button for 2 seconds to record a personal message of up to 10 seconds. If your message is shorter than 10 seconds, press the ④ button to stop recording. The voice message can be played back by pressing the ③ for 2 seconds.

Naming RFID tags

Besides the ability to disarm the system, the RFID tags can be given a name. If someone disarms the alarm system, a message with the name will be sent to the pre-stored RFID text number.

Speed dial

When you press the ⑤ button for 3 seconds, the system will dial the preset emergency number immediately. The call ends when you press the ⑤ button again. How to set the speed dial number can be found at page 22.

Phone dial

Enter a phone number and press the ⑤ button. The system dials out and you can make the call via the built-in microphone and speaker of the alarm system. When you press again the call is ended.

Changing the language

English

Send a SMS message with "0001" to the telephone number of the SIM card in the control panel. The language of the alarm system will be changed into English. The control panel will send a SMS message to confirm the language is set successfully.

IMPORTANT: The administrator can only receive a notification if the RFID tag has been assigned a SMS number for RFID tags is stored. (Settings can be found at page 21 and 25.)
Dutch
Send a SMS message with "0031" to the telephone number of the SIM card in the control panel. The language of the alarm system will be changed into Dutch. The control panel will send a SMS message to confirm the language is set successfully.

The language can also be set in the X500 Alarm App.

Disarming the alarm system by SMS
The main menu, which you receive after texting "?", will display the command for disarming the system ("0"). If you want to disarm the system, you only have to send a "0" to the number of the SIM card in the control panel. You will receive a confirmation if it succeeded as shown in the picture below.

Disarming

Arming the system by SMS
If you want to arm the system, you only have to send a "1" to the number of the SIM card in the control panel.

Arming

Partially arming (home mode) the system by SMS
If you want to partially arm the system you only have to send a "2" to the number of the SIM card in the control panel.

Home Mode (Stay)
Two-way talk
Send a text message with number "3" to the telephone number of the SIM card in the control panel. You will be called back by the system and will be able to listen and/or speak.

Leaving a message by phone call
Send a text message with number "4" to the telephone number of the SIM card in the control panel. You will be called back by the system. Pick up the phone to leave a message for 10 seconds. The message can be played back by pressing the 3 button for 2 seconds on the control panel.

Phone operation when receiving emergency call
When the alarm system is alarming, the control panel will call the pre-stored emergency numbers. The following commands can be used to operate the alarm system when pick up the call:

<table>
<thead>
<tr>
<th>Function</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disarm</td>
<td>0</td>
</tr>
<tr>
<td>Arm</td>
<td>1</td>
</tr>
<tr>
<td>Two-way talk</td>
<td>3</td>
</tr>
<tr>
<td>Turn off siren</td>
<td>6</td>
</tr>
<tr>
<td>Turn on siren</td>
<td>9</td>
</tr>
<tr>
<td>Monitor on site</td>
<td>*</td>
</tr>
<tr>
<td>To exit remote</td>
<td>#</td>
</tr>
</tbody>
</table>

Apple and Android App
The X500 alarm system can also be operated with an App. You can download it by searching the keyword "X500 Alarm" in the App Store or Google Play. Download and install the App on your smartphone.

IMPORTANT: The Android and/or Apple App both make use of SMS texting.

Adding an account
The alarm system can be operated with the X500 Alarm App. When using the Apple App there will be set up a SMS text message automatically for every function. Press the "send" button to send the text message and set the function you have chosen. When using an Android smartphone, the App will send a text message in the background without needing to confirm sending the message.

Launch the App on your phone and select "Add account".

Enter a name for the alarm (eg. Alarm home) and enter the mobile number of the SIM card installed in the alarm system.

Once the account is added it will appear on the home screen of the App.
X500 alarm App overview
The illustration below shows the functions of the home screen of the App. Other tabs will be explained in the following pages.

Setting up the Alarm System with the App

Setting the alarm system can be done by sending text messages but also by using the App. This chapter will show how this can be done for all the functions.

Request alarm system status by SMS
Send a text message with "00" to the SIM card telephone number in the control panel.

System armed
Entry and exit delay time: 0sec
Single zone delay time: 30sec
Siren volume: 2
Siren ringing time: 5min
Disarm password: 1234

In the X500 Alarm App press the following button:
Store emergency telephone numbers

Emergency numbers are the telephone numbers which have to be called when the alarm goes off. To get a list of the current settings, send “5” to the control panel.

1. TEL: Copy the received SMS message entirely and paste it into a new text message. Here you can fill in five numbers you would like to. You can specify multiple phone numbers in the same text message. When you have finished the entry, the message can be sent.

Right is an example of a list of numbers filled in the text message.

2. Forward Edit

3. IMPORTANT: Only phone numbers stored in the alarm system can make changes and modify the system.

4. Store emergency SMS numbers

Emergency SMS numbers are the numbers that should be text to when the alarm goes off. When sending “6” to the SIM card in the control panel you will receive the current settings. Copy and edit this text message and send it back. After sending the message it will send back a message from the control panel to confirm the new settings.

5. SMS:

   1. 6123654789
   2. 6123654788
   3. 6123654787
   4. 6123654786
   5. 6123654785

Note: When alarming, the control panel will call these numbers for three rounds at most, if the phone is pick up with operation on phone button, the system will stop calling.
Store SMS number for RFID tags
The SMS number for RFID tag is the number which will be used to send a text message to when a RFID tag is used to disarm the system.

7

SMS No. for RFID tags (0-20 digits):
1.

Copy and edit the received text message and send it back with the new telephone number. After sending the message it will send back a message from the control panel to confirm the new settings.

In the App:

Store speed dial number
In this menu you can assign a phone number that will be stored as speed dial number. You can speed dial by pressing the " button for 3 seconds.

8

Speed dial phone number (0-20 digits):
1.

Copy and edit the received text message and send it back with the new telephone number. After sending the message it will send back a message from the control panel to confirm the new settings. It is highly recommended to start with your area code or land code.

In the App:
Change sensors name and zone mode

Each sensor is referred to as a zone. 50 sensors’ name and zone mode can be changed according to personal preference. Each sensor (zone)’ name is not allowed to exceed 30 characters.

Zone 1 name:
Zone 1 alarm
Zone 1 type(0, 1, 2, 3):
0

Zone 1 name:
Bedroom PIR sensor
Zone 1 type (0, 1, 2, 3):
1

IMPORTANT:
0 = Normal Zone
1 = Home Mode Zone
2 = 24 Hour Zone
3 = Single Delay Zone

After sending this message you will receive a confirmation of the new settings being adjusted successfully. Send 902,903,904 etc.... to change the rest of the sensor’s name and zone type if you want to.
Change RFID tags name

With this menu you can adjust the names linked to the RFID tags. 20 RFID tags can be renamed. Send 101-120 to rename the RFID tags.

Change RFID tags SMS notice:

1.
2.
3.
4.

Left is the response message of the alarm system shown when texting "101" to the control panel. Copy the message and adjust the names behind the numbers as shown below.

Change RFID tags SMS notice successfully

In the App:

Change entry/exit delay time

The system can be armed or alarmed with a time delay. When a delay time is set you will hear a beep every second as a warning of this delay. The beep will go faster in the last 15 seconds. The default setting is turn off the entry/exit delay time.

entry and exit delay time (0-300 sec):
0

Left is the response message of the alarm system shown when texting "11" to the control panel. Copy the message and adjust the time as shown below.

Set delay time successfully.

In the App:
Setting alarm volume

Alarm volume of the siren can be adjusted in this menu. The default setting is low.

Siren volume (0 Mute, 1 Low, 2 High):
1

121

Left is the response message of the alarm system shown when texting “121” to the control panel. Copy the message and adjust the volume (“0, 1 or 2”) of the siren as shown below:

Siren volume (0 Mute, 1 Low, 2 High): 2

Set siren volume successfully.

Setting alarm duration

Alarm duration of the siren can be adjusted in this menu. The default setting is 5 minutes.

Siren ringing time (1-9min):
5

122

Left is the response message of the alarm system shown when texting “122” to the control panel. Copy the message and adjust the duration of the siren as shown below:

Siren ringing time (1-9min):
3

Set siren ringing time successfully.

In the App:
Set disarm password

The default disarm password is 1234. To change the disarm password, follow the menu below.

Disarm password(4-6 digits): 1234

Left is the response message of the alarm system shown when texting "13" to the control panel. Copy the message and adjust the password as shown below.

Disarm password(4-6 digits): 8888

Set disarm password successfully.

In the App:

Setting single zone delay time

The system will be delayed to alarm if single delay zone sensor is triggered. It is recommended to set the entry door/window contact in single delay zone.

Single zone delay time (0-300 sec.): 30

Left is the response message of the alarm system shown when texting "14" to the control panel. Copy the message and adjust the delay time for the single zone as shown below.

Single zone delay time (0-300 sec.): 15

Set single zone delay time successfully.

In the App:
Set duress code

The default duress code is 1111. Duress code can be used when the user is threatened to disarm the system. When using duress code to disarm the system, the control panel will dial out silently. Change the duress code by following the menu:

**Duress code:**

1111

Left is the response of the alarm system show when texting "15" to the control panel. Copy the message and change the duress code (four digits).

**Duress code:**

2345

Operate successfully.

In the App:

Set timing

Below is the response message of the alarm system shown when texting "16" to the control panel. Copy the message and adjust the timing as shown below.

**Timing:**

1. 00:00 0
2. 00:00 0
3. 00:00 0
4. 00:00 0
5. 00:00 0
6. 00:00 0

Left is the response of the alarm system show when texting "16" to the control panel. Copy the message and change the settings.

**Timing:**

1. 09:00 1
2. 18:00 0
3. 00:00 0
4. 00:00 0
5. 00:00 0
6. 00:00 0

Operate successfully.

**IMPORTANT:** *0*=TURN OFF THE TIMING. *1*=ARM. *2*=DISARM.

Please synchronize panel time before set timing. See details on page 34.
Delete wireless sensors by SMS
All sensors can be removed from the system by texting "21" to the SIM card number in the control panel.

Delete all RFID tags by SMS
All RFID tags can be removed by texting "22" to the SIM card number in the control panel.

Delete all remote controls by SMS
All remote controls can be removed by texting "23" to the SIM card number in the control panel.

In the App, you can remove the sensors, RFID tags and remote controls separately.

Delete wireless sensors successfully.
Delete RFID tags successfully.
Delete remote controls successfully.

Restore system to default setting
Also called a "hard reset." Text "0000" to the SIM card number in the control panel.

A hard reset can also be performed by holding the button, then slide the power switch of the control panel from off to on. Until 2 beeps are heard, means the system has been restored to default setting.

IMPORTANT: If the control panel is on, turn it off first to apply the function.

Synchronize control panel time
When the control panel is power off, the time will restore to 00:00. Please synchronize the time by sending "99".

The control panel will send notification "Operate successfully" when the time is restored. The system will send notification "Please reply '99' to sync panel time." when the power is turned on from power failure.
SMS notification of low battery sensors
Control panel: It sends out an SMS "Control panel low battery", meanwhile the LCD screen flashes once every 1 second to notice user.
Sensor: User will receive SMS "[sensor name] + low battery".

SMS notification of tampering sensors
This feature applies to sensors with a built-in tamper switch. You will receive a message and an alarm call when a sensor is sabotaged. The message exists out of the sensor name supplemented with the message "Tamper alarm".

SMS notification of AC power failure and recovery
This failure applies to control panel when the main power was cut off. You will receive a message with "Control panel AC failure". When the main power recovers, it will notify as "Control panel AC recovery."

Arm & Disarm by free phone call
Arming the alarm system can be done by calling the SIM card telephone number in the control panel. When you hear the dialing tone, hang up. You will be called back by the same number. Do not answer but decline the call. The alarm will be armed.
Disarming the alarm system can be done by calling the SIM card telephone number. Keep hanging until the system disconnects by itself. The alarm system will not call you back and the alarm system is disarmed.

**IMPORTANT:** To arm or disarm the alarm system, make sure voicemail is disabled on the SIM card of the alarm system.

Connect (new) wireless sensors, remote controls & RFID tags
Connect new wireless sensors and remote controls
The included sensors are paired with the control panel by default. If you want to pair new sensors, follow these instructions: enter the password and press the ① button on the control panel. Now you can pair a sensor by triggering it. For remote control, press any button. When you hear a beep from the control panel, the sensor or remote control is paired successfully. If you hear the control panel beep twice, it has already been paired before.

Connect new RFID tags
Enter the password and press the button ① on the control panel. The button lights up. Now you can hold a RFID tag in front of the RFID reader on the control panel. When you hear a beep from the control panel, the RFID tag is paired successfully. If you hear the control panel beep twice, the RFID tag has already been paired before.

**IMPORTANT:** The RFID tag does only function when the control panel is connected to AC. The LCD screen will show how many remote controls, sensors and RFID tags are paired with the control panel. For example, if LCD screen display as ⑧ 102 01. Which represents 1 remote control, 2 sensors and 1 RFID tag have paired with the control panel.

Connect wireless siren
This siren is an extra accessory. Put the siren into connecting state. Then press the arm button on the control panel. You will hear a single beep when paired successfully. Please refer to the manual of siren on how to make it into connecting state for details.

Delete all accessories
To delete all accessories, hold the disarm button, then slide the power switch from off to on (if the control panel is on, slide it to off first). 3 beeps will be heard within 10 seconds, then you can release the disarm button. All accessories (remote controls, sensors and RFID tags) are deleted.

Delete wireless siren
Hold the connect button of the wireless siren until a beep is heard. It indicates the connection between the wireless siren and the control panel is deleted.
Accessories

Accessories in this kit can work only with its own control panels.

Remote Control

RE2300 can be attached to your key ring, or just put into your pockets or purses. When you are about to exit or entry the house, you can use it to arm or disarm the system. In case of any emergency, just press the [SOS] button, the alarm will be activated immediately.

Overview

Arm (Away arm)

In arm state, the system will trigger an alarm when detecting intrusion.

Press the [Arm ️] button. The control panel beeps once and the mode LED is on, indicating the system is in the arm state.

Note: If you do not want to take the remote control, entry and exit delay can be set. For related definition and setting, please refer to page 26. If a wireless keypad is used, you only need to enter the password on the keypad without using the remote control.

Disarm

In disarm state, the detectors (except those sensors in the 24-hour zone) will not trigger an alarm when detecting intrusion.

Press the [Disarm ✅] button. The control panel beeps twice and the mode LED is on, indicating the system is in disarm state.

Note: If entry and exit delay is set, you can enter your home directly in the arm state, then disarm the system within the delay time. No alarm will be triggered in this case. If you disarm the system after the delay time, the system will trigger an alarm.
Home mode (Part arm)

In home mode, detectors setting to home zone are in disarm state; the other detectors are still in arm state. That is, you can move freely in the home zone area; however, the rest areas are still being protected.

Press the [Stay ③] button, 3 seconds later, the control panel beeps once and the mode LED is on.

Note: The PIR detector is set to home zone by default. That is, the PIR detector will not trigger an alarm after you press the [Stay ③] button.
The zones include home zone, normal zone, 24-hour zone and single zone. For details of each zone, please refer to page 5.

SOS

In case of emergency, you can press the [SOS] button.

Whenever you press the [SOS] button, on the remote control, the system will alarm immediately. The control panel will send SMS with the content "Emergency call" to user and call the pre-stored phone numbers.

Mute operation

You can arm and disarm the system silently.

Press the [Stay ③] button, the LED indicator on the remote control flashes once, and then press [Arm ②] button within 3 seconds. The alarm system will be armed without making any noise.

Press the [Stay ③] button, the LED indicator on the remote control flashes once, and then press [Disarm ③] button within 3 seconds. The alarm system will be disarmed without making any noise.

Note: If wireless strobe sirens are used, they will not beep either.
Test and Install the Door/Window Contact

The contact contains a transmitter and a magnet which can be mounted on a door, window, or any object that can be opened or closed. When the transmitter and magnet are separated, the contact will send a signal to the control panel and the control panel will trigger an alarm. The tamper switch ensures that sabotage attempts to disassemble the contact will trigger an alarm.

Overview

LED indicator
Transmitter
Tamper Switch
Magnet

Front side
Back side

LED indication

Flash once: Intruder is detected.
Flash once per 3 seconds after triggered: Low battery. Replace the battery as soon as possible.

PCB layout

Tamper Switch
CR2032 Lithium Cell Battery

Test the door/window contact

This is to test whether the contact can work properly.

1. Remove the insulating strip
The contact works immediately.

2. Pay attention to the direction
There are triangle marks on the side of the transmitter and magnet. Make sure the triangle marks is close to each other and within the range of 1 cm.

3. Test the door/window contact
Press the [Arm onomies] button. The system switches to the arm state. Separate the transmitter and magnet with the space more than 2 cm. The red LED on the transmitter is on. Then, the control panel triggers an alarm. This means the contact works properly.

Note: When tamper switch is pressed, system will alarm immediately.
Install the Door/Window Contact

Make sure the contact works properly before installing it. There are triangle marks on the side of the transmitter and magnet. Make sure the triangle marks is close to each other and within the range of 1 cm. As long as the space between the transmitter and magnet is over 2 cm and the LED on the transmitter is on.

Secure the contact with double-sided tapes
Secure the transmitter and magnet on the desired locations with double-sided tapes.

Note: If this product is installed on metal door, place spacers under the transmitter and magnet. This product is not suitable for shutter door, please purchase shutter door sensor for your use.

Test and Install the PIR Motion Detector

The detector adopts digital dual-core fuzzy logic control processing technology and intelligent analysis algorithm, effective resolution of interfering signal and human movement signal, preventing false alarm. It features automatic temperature compensation and resistance to flow technology, adapting to environmental and temperature change. It can detect human movement within the 8-meter cone space, suitable for halls, hallways, etc.

Overview

LED indication
Flash continuously: Self-testing.
Flash once: Intrusion is detected.
Flash twice: 3 minutes testing mode is finished, enters power saving mode.
Flash once per 3 seconds: Low battery indication, user will receive SMS notification if detector was connected with panel please change the batteries immediately.

PCB layout

Note: When tamper switch is triggered, system will enter alarm state.
**Working mode**

**Testing mode**

After self-testing, press the test button, the detector switches to the testing mode and detects once every 10 seconds. It triggers an alarm. After 3 minutes, the LED flashes twice, and the detector switches to the power saving mode.

---

**Power Saving mode**

The product features power-saving design. If the detector detects human movement twice in 3 minutes, it will switch to the sleeping state to save power. At this time, the LED will not flash and no alarm. After no movement within the next 3 minutes, the detector switches back to the working state automatically.

1. **Case 1:** Initial start and then arm.
2. **Case 2:** Press the test button and then arm
3. **Sleep after detecting human movement twice**
4. **No human movement within 3 minutes**
5. **Switch from sleep to arm.**

---

**Note:** After the detector is in the sleeping state, ensure no human movement within 3 minutes; otherwise, the detector remains sleeping.

In the sleeping state, it is recommended that you leave the room after arming the system. Ensure no human movement in 3 minutes. Then, go into the room, the system alarms immediately.

---

**Test the PIR motion detector**

This is to test whether the PIR detector works normally.

1. **Remove the insulating strip**

Remove the insulating strip.

2. **Arm the system**

Press the [Arm] button on the remote control. The system is armed.

3. **Trigger an alarm**

Keep pressing the test button at the back until the control panel sounds. It indicates that the PIR motion detector is connected to the control panel.
Install the PIR motion detector
After making sure the detector works normally, do as follows.

1. Choose a suitable installation location
For installation notices, please see page 49-50.

2. Fix the detector
Fix the installation bracket on the wall with screws, and then fit the groove at the back of the detector on the bracket. For the detector of this model, you can stick it at the corner with double-sided tapes.

3. Test the PIR motion detector
Press the test button at the back. It switches to the testing mode and sustains for 3 minutes. Walk in the detection scope and observe the LED. When human movement is detected, the LED flashes once.

4. Adjust the angle
Adjust the bracket angle to achieve the best detection effect.
Installation Notices
Pay attention to the following during installation:

1. Mount the detector to a location close to the entry or exit

It is recommended to mount it at the height of 2m from the ground. The detector aims at preventing intrusion. Detecting human movement at the entry or exit is critical for security.

2. Mount the detector in a proper angle

The installation angle affects sensitivity directly. The sensitivity is optimal when the walk direction is vertical to the infrared direction. Choose the best location and angle according to the actual situation and detection scope diagram.

3. Avoid facing to glass windows or doors

Strong light interferes with detection sensitivity. In addition, complicated situations, such as traffic flow, stream of people, also should be avoided.

4. Avoid facing to or positioning close to heat/cold sources

Heat/cold sources, such as heat extraction units, heaters, air conditioner, microwave oven, refrigerator, which may cause false triggering, should be avoided.

5. Avoid facing to swinging objects

Swinging objects may also trigger false triggering. Besides, if there are two detectors covering the same scope, adjust the locations to prevent cross-interference.
## Technical Specifications

### Control Panel

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>12V DC 500 mA</td>
</tr>
<tr>
<td>GSM Frequency</td>
<td>850/900/1800/1900 MHz</td>
</tr>
<tr>
<td>Standby Current</td>
<td>&lt;100 mA</td>
</tr>
<tr>
<td>Alarm Current</td>
<td>&lt;220 mA</td>
</tr>
<tr>
<td>Transmitting Distance</td>
<td>&lt;80 m (open area/no interface)</td>
</tr>
<tr>
<td>Back-up Battery</td>
<td>Lithium battery 3.7V 1200 mA</td>
</tr>
<tr>
<td></td>
<td>18650 (1x)</td>
</tr>
<tr>
<td>Built-in Siren</td>
<td>95dB</td>
</tr>
<tr>
<td>Maximum Wireless Accessories</td>
<td>10 x Remote control, 50 x Sensor</td>
</tr>
<tr>
<td></td>
<td>50 x RFID Tag</td>
</tr>
<tr>
<td>Radio Frequency</td>
<td>868 MHz or 915 MHz</td>
</tr>
<tr>
<td>Housing Material</td>
<td>ABS plastic + Acrylic</td>
</tr>
<tr>
<td>Operating Condition</td>
<td>Temperature: -10°C~ +55°C</td>
</tr>
<tr>
<td></td>
<td>Relative humidity: &lt;80% (no condensing)</td>
</tr>
<tr>
<td>Dimensions</td>
<td>220 x 130 x 26 mm (L x W x H)</td>
</tr>
</tbody>
</table>

### MD2300 PIR Motion Detector

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>DC3V (1.5VAA battery x2)</td>
</tr>
<tr>
<td>Standby Current</td>
<td>&lt;50 µA</td>
</tr>
<tr>
<td>Alarm Current</td>
<td>&lt;11 mA</td>
</tr>
<tr>
<td>Detection Scope</td>
<td>8 m/110°</td>
</tr>
<tr>
<td>Transmitting Distance</td>
<td>&lt;80 m (open area/no interface)</td>
</tr>
<tr>
<td>Radio Frequency</td>
<td>868 MHz or 915 MHz</td>
</tr>
<tr>
<td>Housing Material</td>
<td>ABS plastic</td>
</tr>
<tr>
<td>Operating Condition</td>
<td>Temperature -10°C~ +55°C</td>
</tr>
<tr>
<td></td>
<td>Relative humidity &lt;80% (non-condensing)</td>
</tr>
<tr>
<td>Detector Dimensions</td>
<td>101.5 x 59 x 37.5 mm (L x W x H)</td>
</tr>
<tr>
<td>Bracket Dimensions</td>
<td>60 x 29 x 27 mm (L x W x H)</td>
</tr>
</tbody>
</table>
**DS2300 Door/Window Contact**

- **Power Supply**: DC 3 V (CR2032 lithium cell battery x 2)
- **Standby Current**: <1 uA
- **Alarm Current**: <10.5 mA
- **Transmitting Distance**: <80 m (open area/no interference)
- **Radio Frequency**: 868 MHz or 915 MHz
- **Housing Material**: ABS plastic
- **Operating Condition**: Temperature -10°C ~ +55°C
  - Relative humidity <80% (non-condensing)
- **Transmitter Dimensions**: 72.5 x 28 x 10 mm (L x W x H)
- **Magnet Dimensions**: 58 x 14 x 9.5 mm (L x W x H)

**RE2300 Remote Control**

- **Power Supply**: DC 3 V (CR2032 lithium cell battery x 1)
- **Transmit Current**: <9.5 mA
- **Transmitting Distance**: <80 m (open area/no interference)
- **Radio Frequency**: 868 MHz or 915 MHz
- **Housing Material**: ABS + PC plastic
- **Operating Condition**: Temperature -10°C ~ +55°C
  - Relative humidity <80% (non-condensing)
- **Dimensions**: 71 x 38 x 12 mm (L x W x H)

Electrical products should not be discarded with household products. According to the European Directive 2002/96/EC on waste electrical and electronic equipment and its implementation into national law, electrical products used must be collected separately and disposed of at collection points provided for this purpose.

Talk with your local authorities or dealer for advice on recycling.

**CAUTION**: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT BATTERY TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
## Troubleshooting

When the X500 alarm system is not working properly please try following solutions:

<table>
<thead>
<tr>
<th>Problems</th>
<th>Reason/Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The control panel cannot start up</td>
<td>Confirm whether the power supply is connected correctly. Make sure the power is on</td>
</tr>
<tr>
<td>Remote control does not work</td>
<td>Check whether the indicator on the remote control is on when pressing. Check whether the remote control has paired to the control panel successfully. The distance between the control panel and the remote control is too far away.</td>
</tr>
<tr>
<td>Door/window contact does not work</td>
<td>Check whether the LED indicator is on when magnetic separates from transmitter. Door/window contact is far away from the control panel. Check whether the system is in armed state. Check whether space between the magnet and transmitter is within 1 cm.</td>
</tr>
<tr>
<td>The PIR detector is triggered but the control panel does not alarm</td>
<td>Press the test button of the detector continuously in armed state. If the control panel does not alarm, please re-pair the PIR to the control panel. The detector is far away from the control panel. Check whether the detector has entered sleeping state. Check if the battery is exhausted.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Problems</th>
<th>Reason/Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The control panel does no response to SMS instruction</td>
<td>Make sure the inserting direction of SIM card is right. Make sure inserting the SIM card first before powering on. Check whether the SIM card is GSM standard. Check whether the SIM card has balance credit. Check whether the SIM card has enabled Caller ID Display function, text function.</td>
</tr>
<tr>
<td>Do not receive phone calls when alarm</td>
<td>Check whether the alarm notification number has been stored. After alarm, do not disarm the system immediately otherwise the system will stop calling. Check whether the SIM card has balance credit.</td>
</tr>
<tr>
<td>No sound when sending out alarm</td>
<td>Check whether control panel volume is set as mute; Reset alarm ring volume by SMS or APP.</td>
</tr>
<tr>
<td>Lifespan of the battery in door/window contact</td>
<td>The door magnet itself has one AA battery, and its service life is approximately 8-12 months. For example, as for a family of three people who go out early and come home late without anyone at home in the daytime, its standby time is 12 months; places having large flow of people every day that need open and close doors frequently, such as stores, it could be used for around 8 months.</td>
</tr>
<tr>
<td>Lifespan of the battery in PIR motion detector</td>
<td>The detector itself has two AA batteries whose service life is approximately 8-12 months. For example, as for a family of three people who go out early and come home late without anyone at home in the daytime, its service life is 12 months; as for places having large flow of people every day, such as stores, its service life is about 8 months.</td>
</tr>
<tr>
<td>No response when swiping RFID tag</td>
<td>RFID function can be used only after the control panel is connected to the power adapter. Check if the RFID tag is paired to the control panel. If not, please pair it again.</td>
</tr>
</tbody>
</table>
## Troubleshooting

<table>
<thead>
<tr>
<th>Issue</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swiping RFID tags without sending SMS notification</td>
<td>Check if RFID SMS notification number and RFID tags name were stored</td>
</tr>
<tr>
<td>The detector, remote control and other accessories do not respond any more after the control panel is moved</td>
<td>Press the tamper switch on the bottom of control panel for three times within 5 seconds, and all the connection between the control panel and accessories will be cleared. Pay attention not to trigger the tamper switch frequently when installing the control panel</td>
</tr>
<tr>
<td>Get replied SMS “Phone number is unauthorized”.</td>
<td>Whether the SIM card has enabled Caller ID Display function</td>
</tr>
<tr>
<td></td>
<td>Whether the cell phone number is set as alarm number</td>
</tr>
<tr>
<td>GSM network indicator blinks</td>
<td>When the GSM network indicator blinks once per second the network is being searched. When the indicator blinks once every two seconds a network has been found.</td>
</tr>
<tr>
<td>Motion detector doesn’t seem to work properly</td>
<td>When the PIR motion detector is triggered 2 times in 3 minutes it automatically goes into power saving mode. When no movement is detected in the next 3 minutes it will set itself in the normal mode. During the 3 minutes the detector won’t be active and will not send a signal to the control panel. As long as motion is detected within the 3 minutes the power saving mode will be extended.</td>
</tr>
</tbody>
</table>

## Caution and Warnings

Due to laws and regulations determined by the European Parliament, some (wireless) devices may be subject to restrictions on their use in certain European countries. In some EU Member States, the use of equipment are prohibited. Contact your (local) government for more information on these restrictions.

Always follow the instructions in the manual, especially when it concerns devices which need to be assembled.

Warning: in most cases it is an electronic device. Incorrect or improper uses of the device may result in (serious) injuries.

Repairing the unit must be done by smanos qualified personnel. The warranty expires immediately if the unit is repaired and/or when the product is misused.

**Note:** smanos manuals are made with the utmost care. Due to new technological developments, it may happen that a printed manual does not contain the latest information.

**Note:** If you experience problems with the printed instructions, always visit our website [www.smanos.com](http://www.smanos.com) where the most recent manual is available for downloading.