

# **ALARM SPRAY**

**EXTERNAL KEYPAD**

## **TACTICAL DEFENSE SPRAY**

### **INSTRUCTION MANUAL**

**[ DO NOT MISPLACE THIS INSTRUCTION MANUAL]**

**IMPORTANT:** PLEASE READ THIS INSTRUCTION MANUAL, BEFORE OPERATING ALARM SPRAY



# SAFETY INSTRUCTION

Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it. To avoid potential hazards, use this product only as specified.

*Only qualified service personnel should perform service procedures.*

## TO AVOID FIRE OR PERSONAL INJURY

**Use Proper Power Supply Unit.** Use ONLY the power adapter supplied for this product.

**DO NOT Operate Without Covers.** Do not operate this product with covers or panels removed.

**DO NOT Operate With Suspected Failures.** If you suspect there is damage to this product, have it inspected by qualified service personnel.

**DO NOT Operate below or above specified temperature and humidity condition.**

**DO NOT Operate in an Explosive Atmosphere.**

**DO NOT Drop the Activated spray.**

**DO NOT Expose the Alarm Spray to extreme temperatures lower than 4°C and higher than 40°C**

**Keep away from children.**

**Keep Product Surfaces Clean and Dry.**

**NEVER attempt to DISASSEMBLE the Alarm Spray.**

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## CHAPTER 1 BEFORE YOU START

### 1.1 PARTS OF ALARM SPRAY UNIT

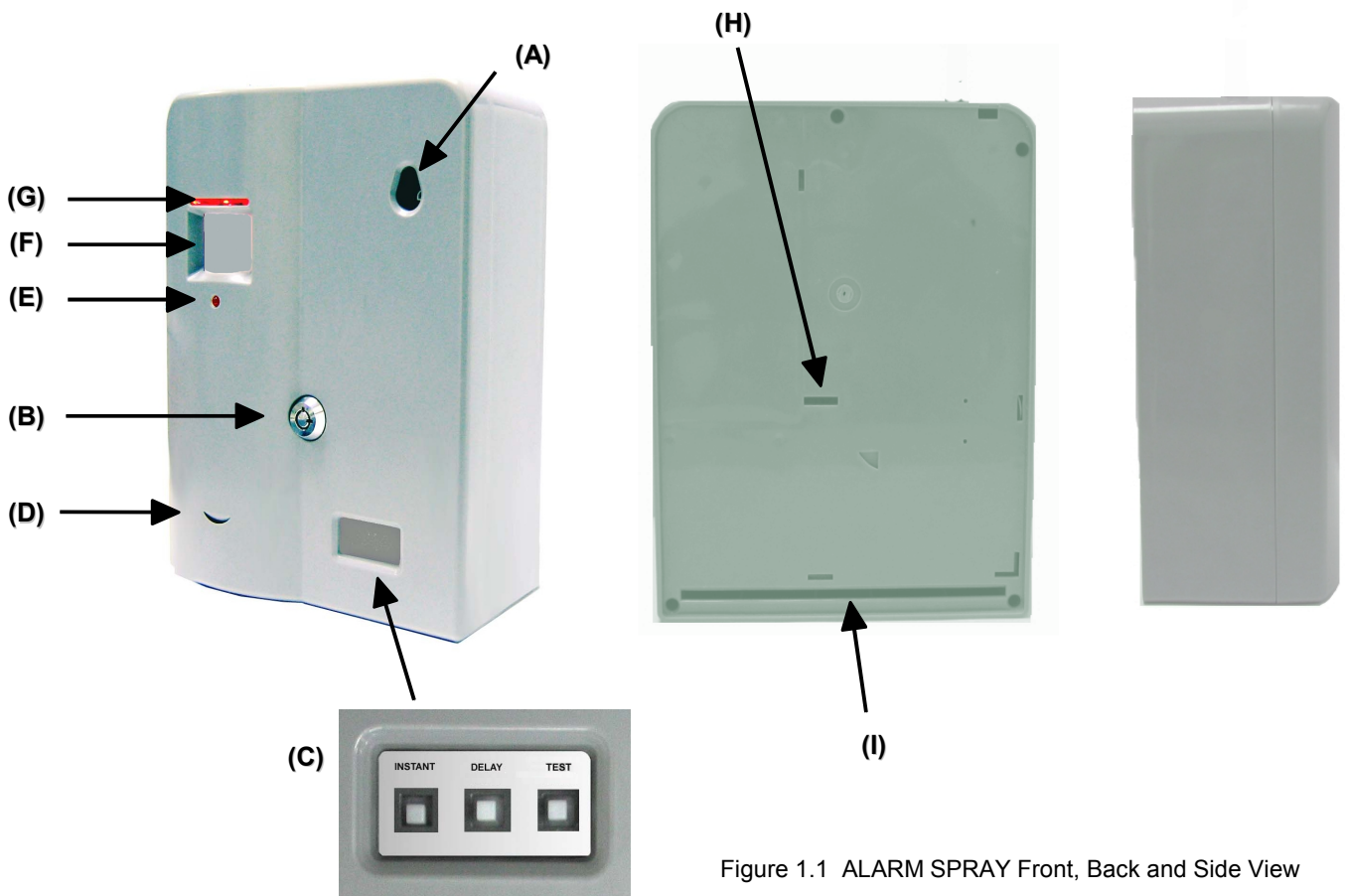


Figure 1.1 ALARM SPRAY Front, Back and Side View

No	Item	Description
A	Spray Opening	To discharge the inflammatory agent (tactical defense system)
B	Tubular Cam Lock	To lock the Alarm Spray to the <i>Mounting Bracket</i>
C	Operation Switch	To select operation mode (page 11)
D	Siren Hole	To enable siren's sound to effectively heard
E	System Status LED	To indicate the Alarm Spray status
F	Dual Tech Sensor	To detect intrusion via motion and temperature changes
G	Sensor LED	To indicate the status of the sensor
H	Guide Opening	To allow the bracket guide insertion
I	Guide Opening	To allow the bracket guide insertion



### 1.2 SYSTEM DESCRIPTION / FEATURES

1. Integration to external alarm system.
2. Two selectable arm/disarm input mode (level or pulse)
3. Two selectable operation mode (instant or delayed)
4. One feedback contact (NO or NC)

## CHAPTER 2 SETUP OF THE ALARM SPRAY

### 2.1 INSTALLATION OF ALARM SPRAY UNIT

1. Make the necessary connections according to the attached wiring diagram.
2. Configure the external alarm input mode  
(refer to external alarm system specification)

Status	Description
	<b>SECURE STAGE</b> The alarm spray is secured to the bracket and the operation switch cover is closed. Turn Tubular CAM Lock Key Anti-Clockwise to release the Alarm Spray from the bracket.
	<b>RELEASE STAGE</b> The alarm spray is release and the operation switch cover is open. Turn Tubular CAM Lock Key Clockwise to re-secure the Alarm Spray to the bracket.

### 2.2 CONFIGURING THE ARM/DISARM INPUT MODE

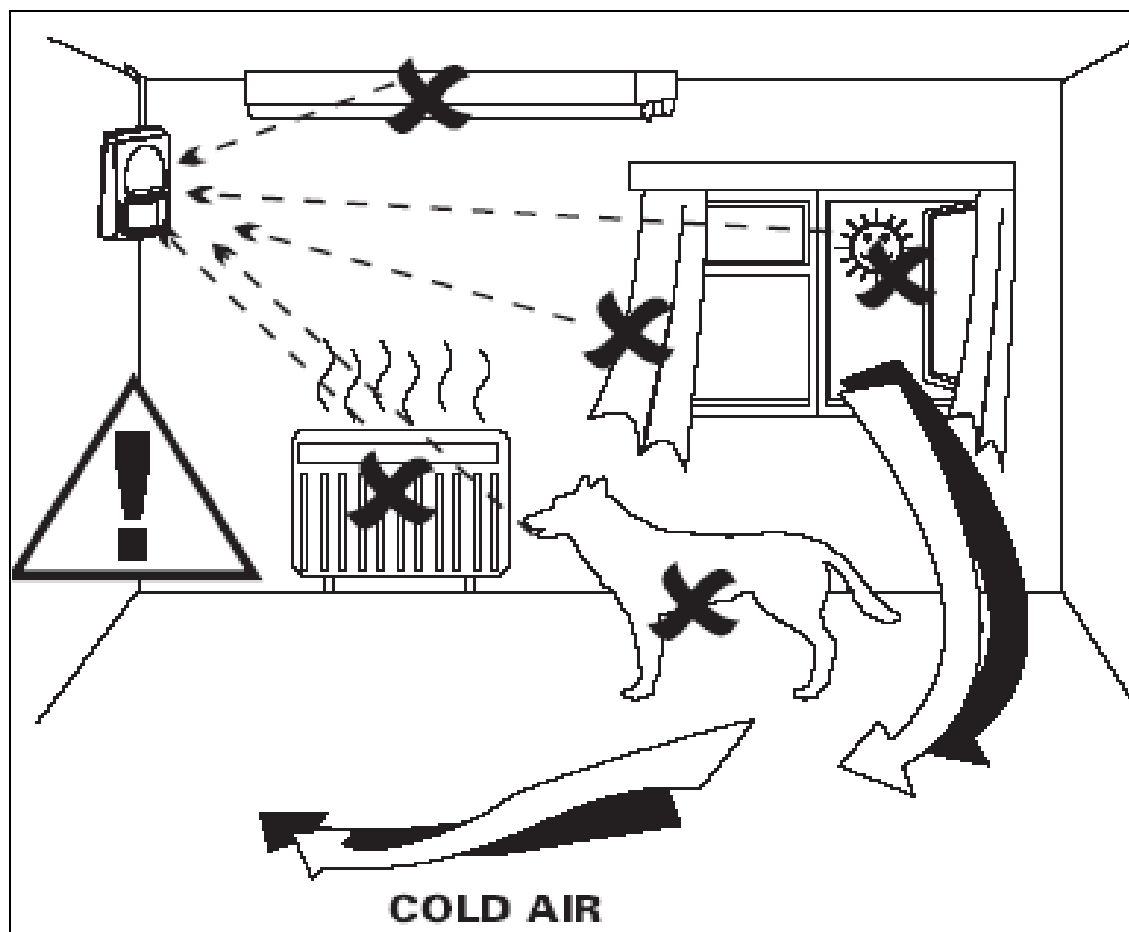
1. To select the “LEVEL” arm/disarm input mode
  1. Ensure the alarm spray system is powered OFF
  2. Connect the jumper wire (yellow wire)
  3. Ensure the arm/disarm wire (brown wire) is connected to the external keypad
2. To select the “PULSE” arm/disarm input mode
  1. Ensure the alarm spray system is powered OFF
  2. Disconnect the jumper wire (yellow wire)
  3. Ensure the arm/disarm wire (brown wire) is connected to the external keypad



1. The jumper wire (yellow wire) MUST NOT BE EXPOSED from the rear metal bracket guide after configuration.
2. Please refer to external alarm system specification for the configuration of the external alarm input mode.
3. For LEVEL or PULSE arm/disarm input mode please refer to external keypad configuration

**IMPORTANT: Avoid all possible false alarm sources for both PIR and Microwave by :**

1. DO NOT install the Alarm Spray under direct sunlight.
2. DO NOT install the Alarm Spray near heaters/ radiator/ fluorescents light or source of heat.
3. DO NOT install near that possibly have wind/ draughts such as open window(s), air-conditioner.
4. DO NOT allow moving objects such as animals/ blowing curtain to near the Alarm Spray.
5. DO NOT install on vibrating surfaces. Use solid wall for mounting.



## **2.3 BEFORE YOU POWER UP THE ALARM SPRAY**

The warning signage (standard accessories included in the package) must be displayed at the area of the Alarm Spray coverage to secure the area and also as a safety reminder over the activation of Alarm Spray.

## CHAPTER 3 USING THE ALARM SPRAY

### 3.1 EXTERNAL KEYPAD PROGRAMMING PROCEDURE

**Master PIN: 123456 (Default) - 6 digits password to enter programming mode.**

#### **STEP 1 – READER COLD START**

- i. Switch **OFF** the power
- ii. Press (\*) and (#) together
- iii. Switch **ON** the power, at the the same time keep pressing (\*) and (#) until you hear a long beep sound followed by a few blinks of the 3 LEDs.

#### **STEP 2 – CHANGE MASTER PIN**

- i. Press (\*) Button
- ii. Key in the current Master PIN
- iii. Press (0) & (6) on keypad
- iv. Key in the new Master Pin
- v. Key in the new Master Pin again (for confirmation)

#### **Note:**

*3 LEDs will be running in sequence to indicate the process of registering a new Master Pin.*

#### **STEP 3 – PULSE / LEVEL**

- i. Press (\*) Button
- ii. Key in the Master PIN
- iii. Press (0) & (5) button to select Pulse/Level Mode
- iv. Press (1) to set **Pulse Mode ON / Level Mode (Arm)**
- v. Press (0) to set **Pulse Mode OFF / Level Mode (Disarm)**

#### **PULSE MODE**

- Set step 3 pulse mode ON
- After setting all configuration, use the PIN (4 digit) to arm or disarm the alarm spray.

#### **LEVEL MODE**

- Set step 3 pulse mode OFF
- After setting all configuration, use step 3 to arm or disarm the alarm spray.  
(eg. Press \*123456 05 1 to arm the alarm spray and  
Press \*123456 05 0 to disarm the alarm spray)

#### **STEP 4 – ARM TIME SET**

- i. Press (\*) Button
- ii. Key in the Master PIN
- iii. Press (0) & (3) button to select ARM TIME
- iv. Press (0) & (1) button to set Arm Time to **Immediate**

#### **STEP 5 – PIN MODE**

- i. Press (\*) Button
- ii. Key in the Master PIN
- iii. Press (0) & (1) button on keypad
- iv. Press (1) to set PIN mode **ON**

#### **Note:**

(Pin mode need to be set as 'ON')

#### **STEP 6 - SET PIN (Max. 32 sets)**

- i. Press (\*) Button
- ii. Key in the Master PIN
- iii. Press (1) & (0) on keypad \*\*
- iv. Key in desired 4 digits PIN on keypad

#### **Set PIN Example**

Press (1) & (0) = Set 1  
Press (1) & (1) = Set 2

...

Press (1) & (9) = Set 10  
Press (2) & (0) = Set 11

...

Press (3) & (9) = Set 30  
Press (4) & (0) = Set 31  
Press (4) & (1) = Set 32



## 3.2 OPERATION MODE

The operation mode selection switch functions as a power switch as well as the operation mode selector. The system will be powered ON once any of the operation switch is depressed.

This model of Alarm Spray system consists of two (2) operation mode and one (1) test mode. An operation mode has to be selected for the system to function. The modes are :

- |                   |                                    |
|-------------------|------------------------------------|
| 1. [Instant] Mode | – The Instant Action Mode          |
| 2. [Delay] Mode   | – The 20 Seconds Delay Action Mode |
| 3. [Test] Mode*   | – Test Mode                        |

### 1. [INSTANT] MODE – THE INSTANT ACTION MODE

Instant mode allows the Alarm Spray system to guard the premises when ARMED, and spray pepper spray instantly when TRIGGERED by the PIR / Door contact. This is the recommended mode when integrate with external alarm system.

Refer to the images below to select this operation mode,



Step 1: Unlock the panel



Step 2: Press the 1<sup>st</sup> button (Left)

### ACTIVATION EFFECT:

1. The Alarm Spray system will **arm instantly** upon receiving the arm signal from external keypad or an external alarm system.
2. The Alarm spray system will **instantly discharge the spray** when the object (intruders) are detected within the PIR / Microwave sensor range or when the door contact detected a break-in.
3. The Alarm Spray system will **disarm instantly** upon receiving the disarm signal from external keypad or an external alarm system.

## 2. [DELAY] MODE – THE 20 SECONDS DELAY ACTION MODE

The delayed operation mode allows a grace period of 20 seconds for the users to leave the area covered by the Alarm Spray System before it is ARMED. It also allow users to have a grace period of 20 seconds to disarm the system before it is triggered.

To select this operation mode,



Step 1: Unlock the panel



Step 2: Press the 2<sup>nd</sup> button (Middle)

### ACTIVATION EFFECT:

1. The Alarm Spray system will start a **20 sec countdown** upon receiving the arm signal from the external keypad. The Alarm Spray will be **armed** after the countdown.
2. The Alarm Spray will start the **20 sec countdown before discharge of spray** when the intruders are detected within the PIR / Microwave sensor range or when the door contact detected a break-in.
3. The Alarm Spray system will **disarm immediately** upon receiving the disarm signal from external keypad.
4. During the countdown, the Status LED will blink and the buzzer will beep for 20 times.

## 3. [Test] MODE – THE TEST MODE\*

The Test Mode is to test the installation of the Alarm Spray System to enable troubleshooting of the wiring, installation and the functionality of the system. The Alarm Spray system will perform all functions similar to the Instant Mode except discharging the spray and activation of the siren when the system is triggered. Once testing is completed, choose either of the previous operation modes. **This mode is only for testing purposes.**

To select this operation mode,



Step 1: Unlock the panel



Step 2: Press the 3<sup>rd</sup> button (Right)

### ACTIVATION EFFECT:

1. Similar to Instant Mode, except that the siren and spray will not be activated and discharged.

### 3.3 ACTIVATING THE ALARM SPRAY BY EXTERNAL KEYPAD

#### 1. ARM THE ALARM SPRAY

- i. Ensure that the Alarm Spray System is in the **READY STATE**, with the LED being constantly 'ON'.
- ii. Ensure that all door contacts are close and the PIR indicator is off.
- iii.
  - a. Key in the 4 digit pin set on the external keypad (Pulse Mode)
  - b. Key in the the master pin then code 051, eg. \*123456 051 (Level Mode)
- iv. System will enter **ARMING STATE**, followed by **ARMED STATE** (system may enter countdown state before ARMING if delayed operation mode is selected)
- v. Refer to General Status/State Indicator for the states indicator of the system.

#### 2. DISARM THE ALARM SPRAY

- i. To disarm the Alarm Spray
  - a. Key in the 4 digit pin set on the external keypad (Pulse Mode)
  - b. Key in the the master pin then code 050, eg. \*123456 050 (Level Mode)
- ii. The system will enter **DISARMED STATE** and then return to **READY STATE**
- iii. Refer to General Status/State Indicator for the states indicator of the system.

### 3.4 FEEDBACK CONTACT (OUTPUT)

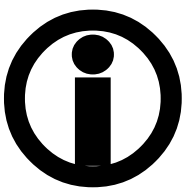
The feedback contact is a general purpose contact which may be used as a feedback to external alarm system when the Alarm Spray system has triggered. This consist of 3 wires known as:

**Black (COM), Orange (NC) and Purple (NO)**

Under normal operation (not triggered) the Black and Orange wire will be constantly shorted. When the system is triggered, the Orange wire will be disconnected from the Black and the Purple wire will be connected to the Black wire.

*(refer to external alarm system specification for proper voltages to be feedback)*



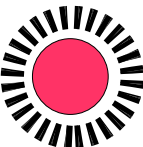
### 3.5 ADDITIONAL INFORMATION



1. The Alarm Spray System is designed to enable it to follow the previous operating state upon power up after a power failure occurred.
2. If the system is configured to operate in LEVEL Arm/Disarm Input mode, the system will follow the state of the Alarm Input wire upon power up.
3. If the system is configured to operate in PULSE Alarm Input mode, the system will follow the STATE before it is powered up.
4. Precautions should be taken when powering it up again to avoid untoward situations.
5. If Alarm Spray buzzer and LED is constantly ON during arm, the Alarm system fail to arm due to PIR / Door contact disconnected. Disarm the Alarm Spray and check the PIR / Door contact.

## CHAPTER 4 ALARM SPRAY'S STATUS INDICATORS

### 4.1 SYSTEM STATUS'S LED INDICATOR (ALARM SPRAY / EXTERNAL KEYPAD)

Status	Description
	LED is OFF
	LED constant ON
	Blinking LED

### 4.2 GENERAL STATUS/STATE INDICATOR

LED	BUZZER	STATE	DESCRIPTION
OFF	OFF	<b>POWER OFF / NO POWER</b>	System is not switched ON
ON	OFF	<b>READY</b>	System is switched ON and is ready to be use
ON	Continuous ON	<b>ARM FAILED</b>	System is unable to arm due to PIR / Door contact disconnected
4 fast blinks	4 fast beeps	<b>ARMING</b>	System is arming (entering armed mode)
2 slow blinks	2 slow beeps	<b>DISARMED</b>	System is disarming (exiting armed mode)
Slow Constant blinking	OFF	<b>ARMED</b>	System is armed
Fast constant blinking	Continuous ON	<b>TRIGGERED</b>	System is triggered, the siren will sound and the spray will be discharged.
3 slow blink	3 slow beeps	<b>TRIGGERED EVENT (SENSOR)</b>	System was last triggered by <b>PIR/Door contact disconnection</b> . (status shown once upon power up)
5 fast blink	5 fast beeps	<b>TRIGGERED EVENT (PANIC BUTTON)</b>	System was last triggered by the <b>Panic Button</b> . (status shown once upon power up)
20 blinks	20 beep	<b>COUNT DOWN</b>	System is counting down before arming (delay operation mode only).

## APPENDIX A FIRST AIDS AND DECONTAMINATION

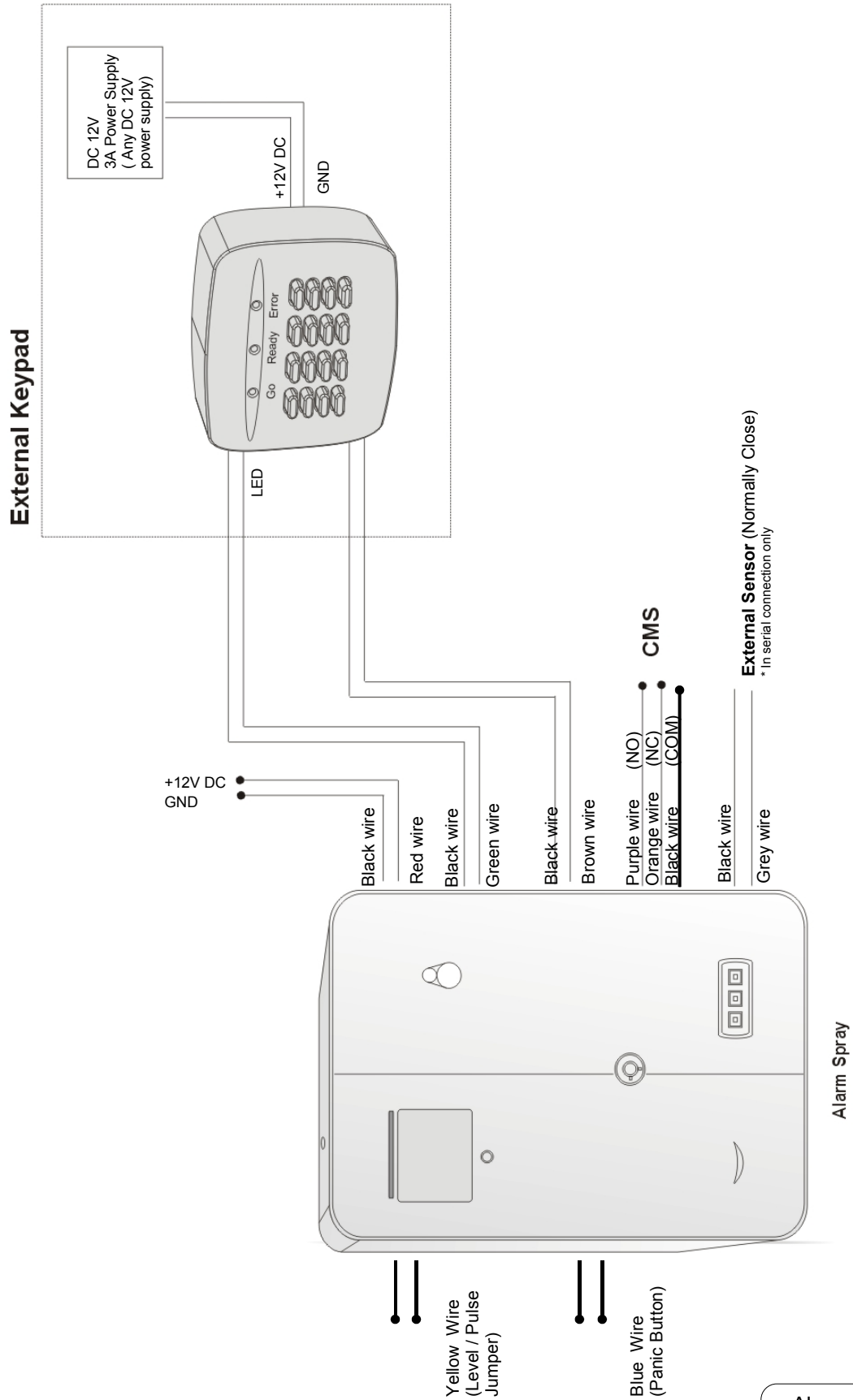
1. Move affected individuals to a well ventilated area.
2. Reassure and keep them calm – talk continuously, the affected individuals CANNOT see you.
3. Wash affected parts with cool and clean water (Skin ONLY, NOT eyes).
4. Use ONLY cool and clean water to cleanse eyes (fill a basin with water and have victim place his face in water and blink eyes rapidly).
5. Continue Flushing with water until symptoms disappear (UP TO half an hour).
6. NEVER use oil, creams, salve or ointment – this traps the “HEAT” on the skin.
7. If symptoms persist or others appear, obtain medical attention immediately.

## APPENDIX B TECHNICAL SPECIFICATION

No.	ITEM	DESCRIPTION
1	Housing	Made of Polycarbonate Material
2	Operating Temperature	6°C to 40°C
3	Power Consumption	12vDC, 1A (Active), 80mA (Passive)
4	Mounting Height	1.7 meter – 1.9 meter
5	Gross Weight	1.8 KG
6	Dimension	195mm (W) x 258mm (H) x 100mm (D)
7	Spray Capacity	100 ml
8	Spray Efficiency	Effect last for approximately 120 minutes
9	Spray Range	3 meter
10	Spray Type	FOG Spray
11	Spray Coverage	120 cubic meter (in closed area)
12	Dual Tech PIR	Passive Infra Red (Temperature) and Microwave (Motion) Detecting Sensor
13	Detection Range	5 – 12 meter

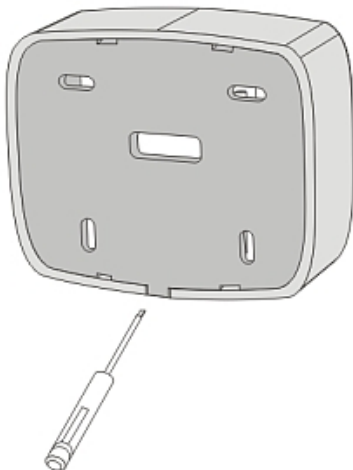
# APPENDIX C WIRING DIAGRAM

## Alarm Spray(Keypad) Wiring Diagram



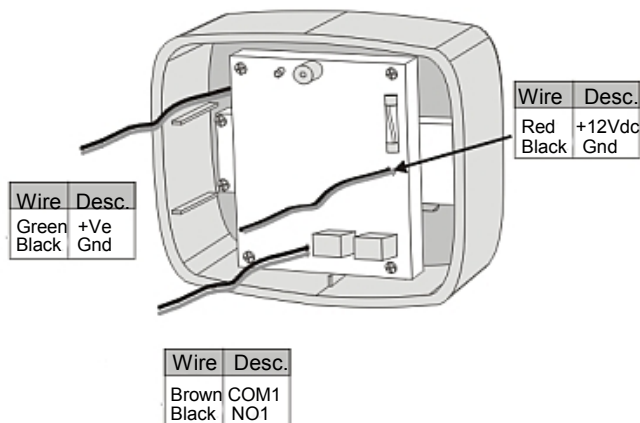
## Step 1

Use the test pen to remove the base bracket.



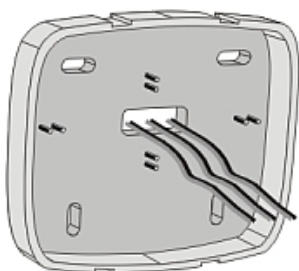
## Step 2

Cable description.



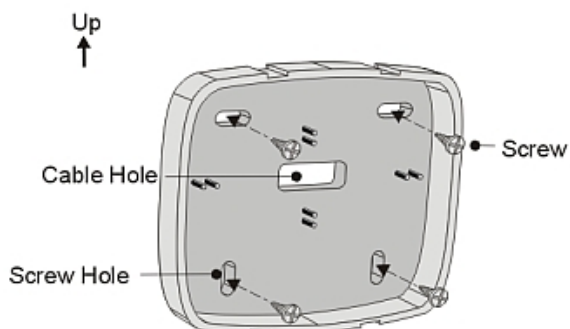
## Step 3

Pass the cable through the cable hole.



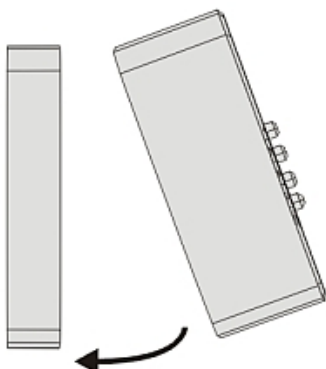
## Step 4

Mount base on selected wall & secure it with 4 screw.



## Step 5

Install the external keypad reader front cover by tilt 15 degree top down.



## Step 6

Power up external keypad.

