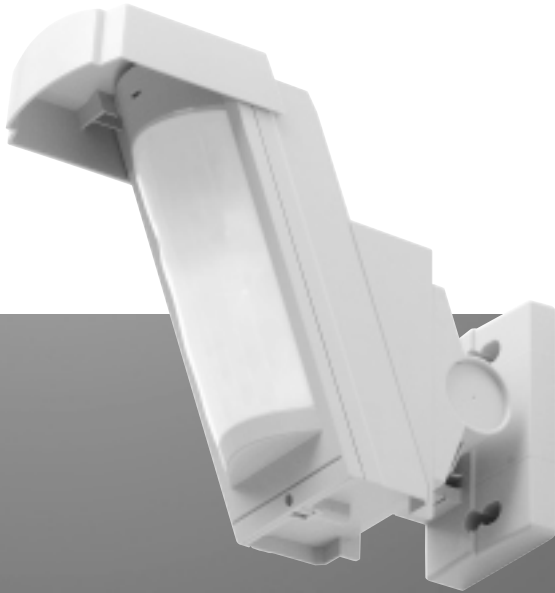


SH146AX



external detector antimask
Special animal immune
antimask 12 m

INSTALLATION MANUAL
Updated for e-Nova applications

Contents

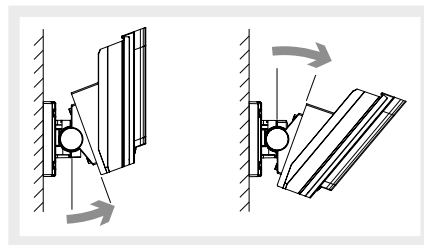
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1. Introduction

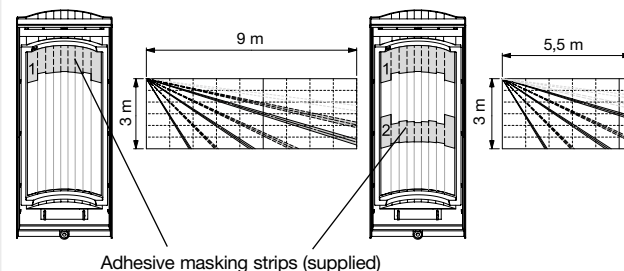
IMPORTANT

- Some functions are only available with control panel version 2.0.0 or later (enter on the control panel keypad to check the version).
- Operating differences with respect to former ranges are described in the compatibility booklet available in the Daitem Installers section at www.daitem.co.uk.

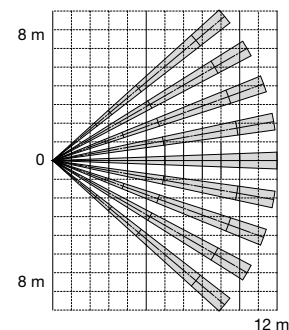
The 12 m external motion detector with anti-mask feature detects intruders before they break in. Fitted with a specific lens and two infrared sensors, the detector can tell the difference between a human being and a small animal. Combined with internal electronics, the anti-mask feature detects attempts to mask the detector. Its detection angle can be adjusted by adding masking strips to the lens. The detector's sensitivity can be set to reduce the likelihood of false alarms triggered by movement (cars, persons or animals outside of the required detection zone). The ideal installation height is between 2.5 and 3 m as this makes it difficult for intruders to access the detector.



Side view



Top view



The detector comprises a mechanical device for adjusting the detection zone. The protected area can be checked with the help of a LED located behind the lens.

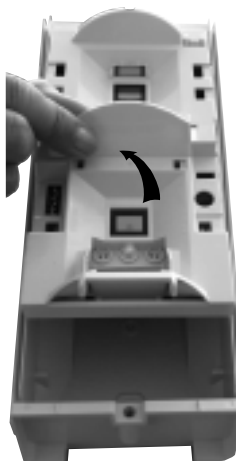
2. Preparation

2.1 Opening the detector

1. Loosen the locking screw using a Philips screwdriver and remove the cover.



2. Remove the back box.

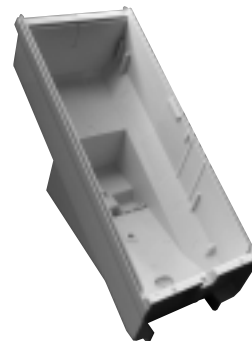


3. **Guarantee sticker:** remove the pre-cut part of the sticker and stick it to the guarantee certificate in the user manual supplied with the control panel. If you are adding to an existing system, use the guarantee certificate supplied with this product.



2.2 Description

Back box



Cover



Locking screw

**Detection module
(front view)**

Set of upper
detection
beams

Operating option
dip switches

Sensitivity
selection dip
switch

LED

Set of lower
detection beams

Anti-mask
selection dip
switch

Cover



**Angle adjustment
bracket**



**Detection module
(rear view)**

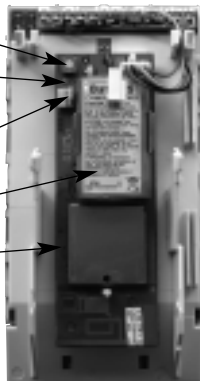
Test button

Programming
LED

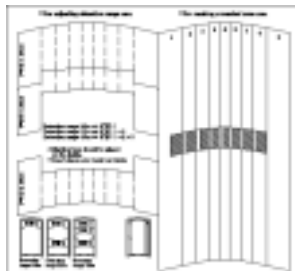
Lithium battery
connector

Lithium battery

Radio card



Sheet of adhesive masking strips



Bag of accessories



Two 4 x 20 mm screws (for
fixing box to adjustment bracket)



Two 3 x 10 mm screws
(for fixing cover)

2.3 Power supply

Connecting the battery.

Detection circuit
connector



When the detector is switched on, the **LED** flashes every second for 45 s (detection circuit stabilisation period). The **programming LED** lights up for 2 s.

IMPORTANT: if the LED does not flash, check the connector is in the right position (detection circuit).

3. Recognition programming

IMPORTANT: the device does not need to be placed close to the control panel for recognition programming. In fact, we advise you to move the product at least 2 metres away from the control panel.

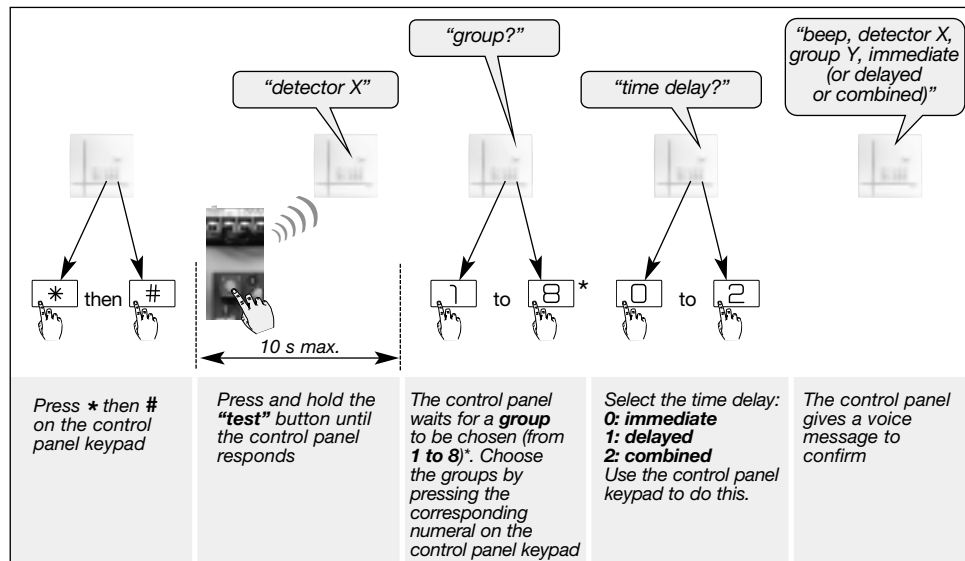
1. Put the control panel in installation mode by entering the following:

2 # #
master code

then:

3 # #
installer code

2. Proceed as follows to programme the detector to be recognised by the control panel.



* Depends on the type of the control panel

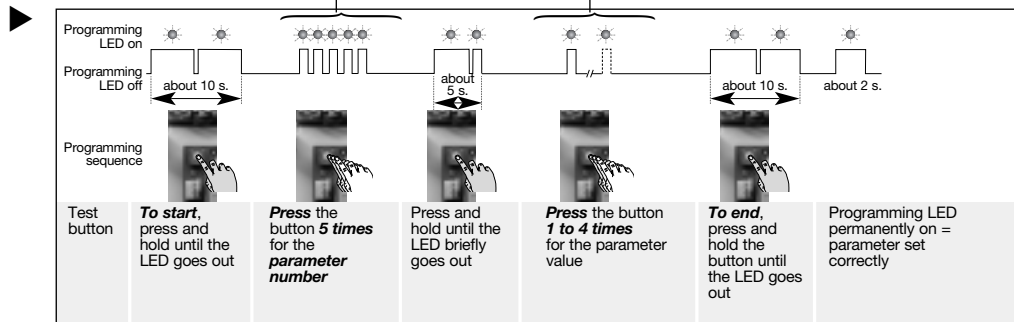
IMPORTANT: the control panel indicates there is an error by emitting 3 short beeps. When this happens programming should be carried out again.

4. Parameter-setting

The motion detector is factory-configured for a deterrence (see your control panel installation guide for system responses). The alarm level can be changed by resetting the parameters as shown opposite.

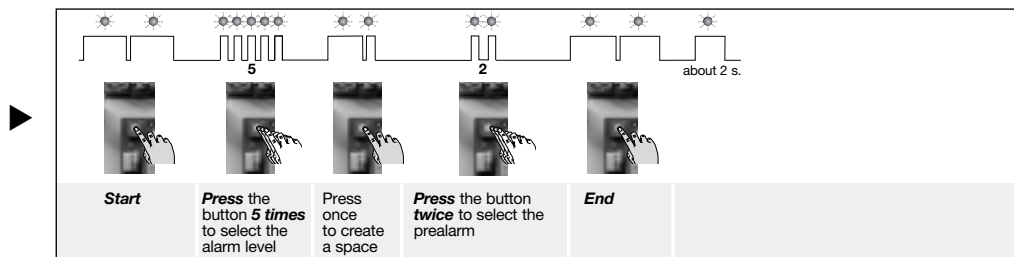
Parameter-setting sequence

Parameter n°	Alarm level	Parameter value
5	Intrusion	1
	Prealarm	2
	Deterrence	3 (factory setting)
	Warning	4 (the feature is available using control panels with 2.0.0 version software or later)



Parameter-setting example:

setting the detector to full) prealarm :
parameter number 5, parameter value 2.

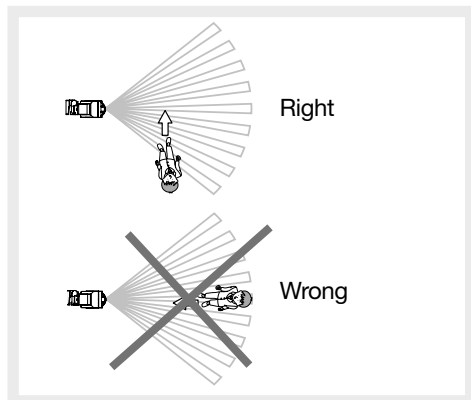


5. Installation precautions

IMPORTANT: make sure each product is at least two metres away from other devices, except other detectors.

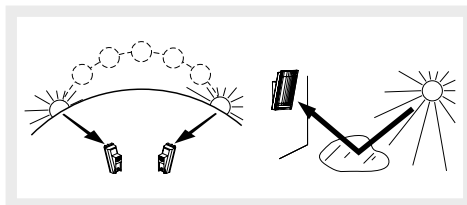
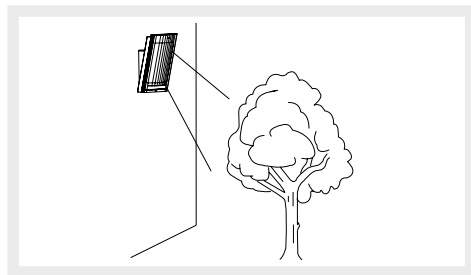
The detector must be placed: perpendicular to entrance points to be protected to ensure intruders are quickly detected.

- do not place where the detection beams are likely to be directly or indirectly impacted by the sun's rays or by a very powerful source of light,

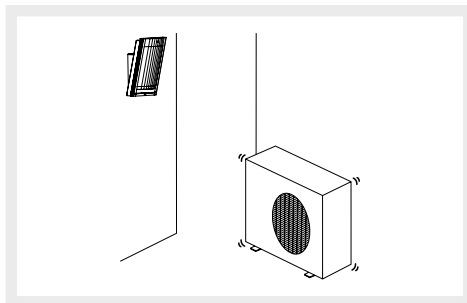


The detector must not be placed:

- facing a moving object (branches, bushes, curtains, etc.),



- skew in relation to the wall,
- do not fix directly on a metal wall or close to sources of interference (e.g. heat pump).



6. Installing the detector

Before fixing the detector in place:

- Define the fixing height (2.5 to 3 m).
- Determine the detection zone.
- With the detector in the chosen location, check the radio link with the control panel: Press (> 5 s) on the detector **"test"** button. The control panel will issue the voice message: *"beep, test detector X (personalised message), group Y, immediate (or delayed or combined)"*.

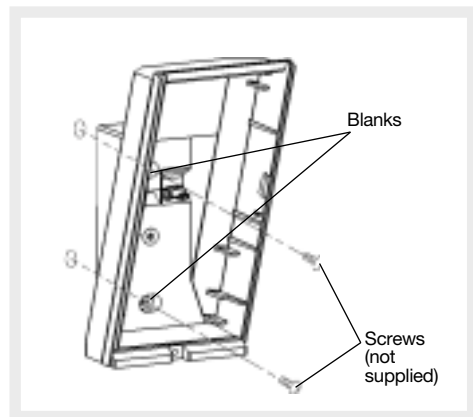
"beep, test detector X, group Y, (immediate or delayed or combined)"



6.1 Fixing the detector in place

Fixing it flat against the wall

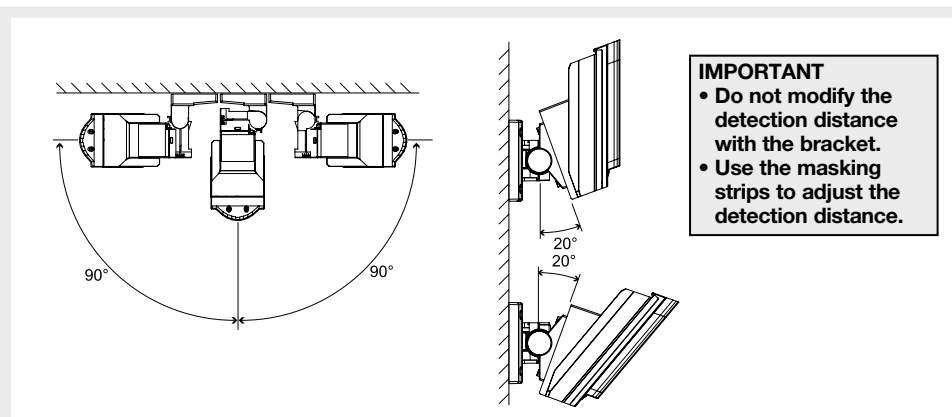
The detector can be fixed to the wall without the bracket if it does not need any horizontal or vertical adjustments.



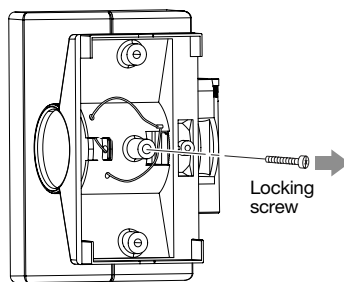
1. Pre-drill the 2 blanks on the back box.
2. Fix the back box to the wall using suitable washers and screws (not supplied).
3. Install the main unit and set the detection range as described in the next chapter.

Fixing the angle adjustment bracket

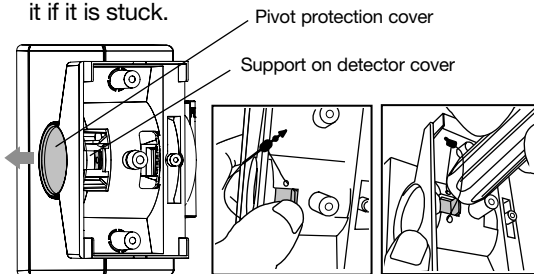
The bracket makes it possible to adjust the horizontal angle by approximately 90 degrees. If the ground is uneven and therefore not parallel to the base of the unit, the bracket allows for a vertical adjustment of approximately 20 degrees.



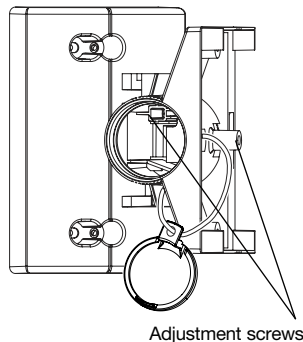
1. Remove the locking screw.



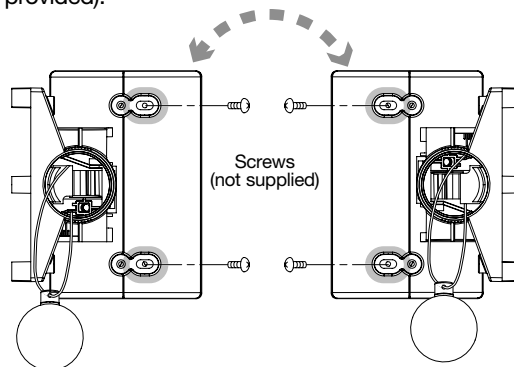
2. Remove the pivot protection cover by pressing on the detector cover support with your thumb. Use a flat-headed screwdriver to remove it if it is stuck.



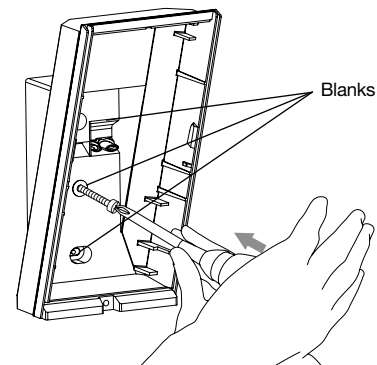
- 3. Loosen the adjustment screws so as to be able to rotate the axle.**



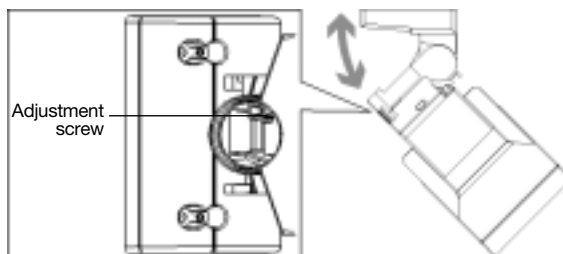
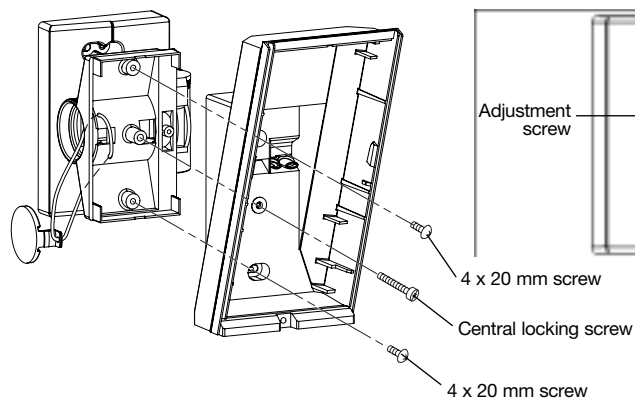
- 4. Decide which way round to fix the bracket depending on the required detector angle. Then fix the angle adjustment bracket to the wall using suitable screws and washers (not provided).**



- 5. Prepare the 3 blanks on the back box.**



- 6. Tighten the central locking screw and the other two screws and then adjust the horizontal angle.**

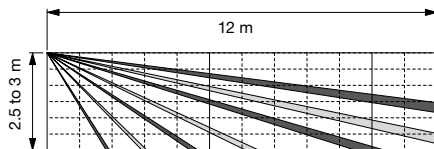
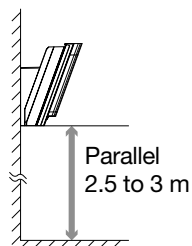


- 7. Install the main unit and the cover on the base. Re-insert the locking screw (without tightening it) and the protection cover.**

- 8. Adjust the vertical angle as described in the next chapter.**

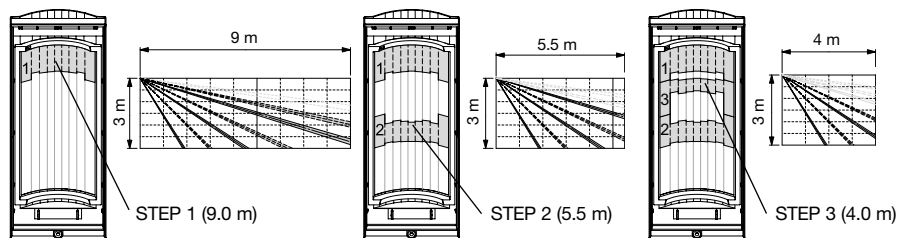
6.2 Setting the detection range

1. Install the detector at a height of 2.5 to 3 m. The lower edge of the detector must be parallel to the ground.

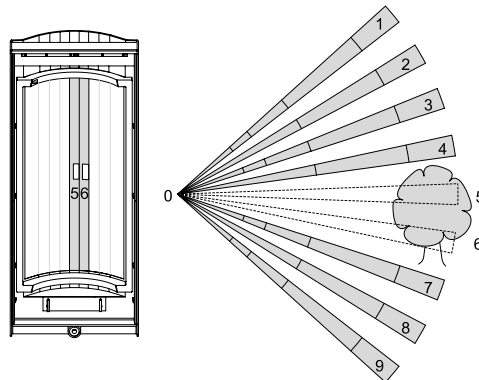


2. Apply the masking strips to the lens to adjust the detection distance. To set a distance below the standard 12 m, choose one of the three shapes and apply it to the lens.

Internal views of the lens

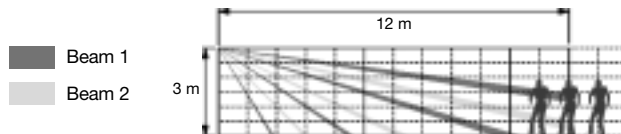


Applying a masking strip to a specific area



6.3 Setting the vertical angle

- 1. IMPORTANT:** to ensure proper detector performance, set the vertical angle so that the base of the product is parallel to the ground.
- Determine the required detection distance and mask the lens using the appropriate strips.
- Perform a detection test making sure that the 2 beams (1 and 2) are interrupted one after the other.



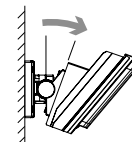
IMPORTANT: the detection zone can be adjusted using the masking strips without changing the angle. The base of the detector should be parallel to the ground to ensure the quoted detection range is achieved. Minor range adjustments can be effected by adjusting the vertical angle as follows.

If the detection distance is shorter than required, increase the vertical angle.



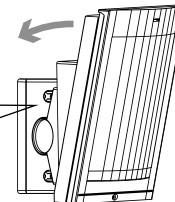
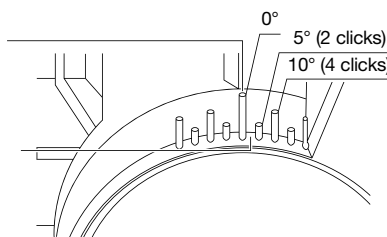
If the detection distance is in line with the requirement, there is no need to change the angle.

If the detection distance is greater than required, reduce the vertical angle.



0 degrees is the right setting for an installation height of 3 m as long as the wall is perpendicular to the ground over the entire detection length

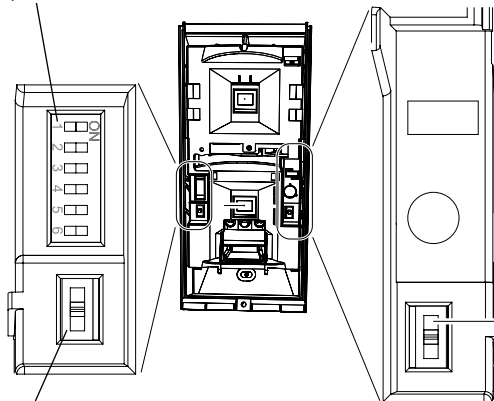
Adjustment: 1 click corresponds to a 2.5 degree upward adjustment



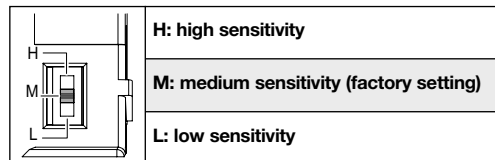
- 4.** Tighten the locking screw.

7. Operating options

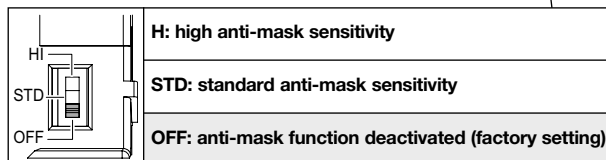
Dip switches



Infrared sensitivity (depends on the ambient temperature): an H setting may be advisable in regions where the climate is mild or hot for most of the year.



Anti-mask (24-hour protection): when the detector is completely masked for roughly 3 minutes (i.e. an opaque object is placed over the lens), this triggers a tamper warning.



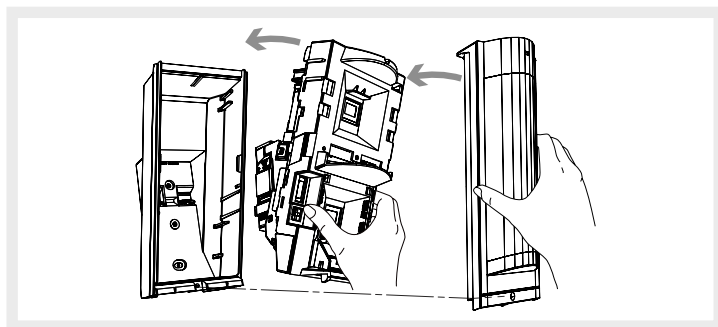
	Detector in test mode The LED lights up when something is detected whatever the position of dip switch 6.
	Detector in normal user mode (factory setting) Normal operating mode The LED is not lit when dip switch 6 is in OFF position.
	Detection every 5 s
	Detection every 120 s (factory setting) Recommended dip switch position to economise on the lithium battery.
	Hostile environment sensitivity (difficult environment: wind, moving tree leaves or branches, etc.) The sensitivity will necessarily be lower.
	Normal sensitivity (factory setting) Sensitivity for most installations.
	Mandatory position (factory setting)
	Mandatory position (factory setting)
	Detection LED lighting (leads to a decrease in detector battery life) The LED lights up with each detection.
	Non-lighting of detection LED (factory setting) The LED does not light up even when an intruder is detected.

factory setting

8. Operating test

8.1 Testing the detection zone

1. Mount the detection module and the lens on the back box.



2. Close the detector and tighten the locking screw.
3. Put the control panel in test mode by entering the following:

2 # #
 master code

4. Check the detection zone using the LED and adjust if necessary.
Each time something is detected, the control panel issues the voice message: *"Beep, deterrence detector X"* (depending on the configuration).
5. Put the control panel back in installation mode by entering:

3 # #
 installer code

6. Open the detector, set the infrared sensitivity if necessary and then close it.

8.2 Performing a real test

1. Put the control panel in user mode by entering:

1 # #
 installer code

2. Put the control panel in Total Arm mode.
3. Wait 120 s for the detector to become activated.
4. Walk across the protected area and check the control panel response (see control panel installation manual).

9. Maintenance

Recommendations

The user must not attempt to access the siren's internal parts, except areas described in this manual. If the user does access these parts, the product guarantee will be considered null and void and DAITEM shall not be held responsible for any problems. Touching the siren's internal parts and/or electronic components can damage the product. Furthermore, the siren is designed in such a way that these parts and components do not need to be accessed for operation or maintenance purposes.

9.1 Fault indications

The control panel responds to detector battery faults, tamper faults and radio faults.

Battery fault:

Following a system command, the control panel issues the voice message: *"Beep, fault, battery, detector X"*.

Tamper fault:

Following a system command, the control panel issues the voice message: *"Beep, fault, tamper, detector X"*. This fault is caused by the detector box not being closed properly but may also be triggered when the detector is completely masked (the anti-mask function is triggered when an opaque obstacle is placed in front of the lens).

Radio fault

Following a system command, the control panel issues the voice message: *"Beep, fault, radio, detector X"*.

IMPORTANT: briefly press on the test button to check the detector's battery. The radio card LED lights up red.

9.2 Changing the battery

IMPORTANT: the detector's parameters are saved when the battery is changed.

1. Put the Control panel into the Installation mode by requesting the User to enter the following:

2 # #
master code

then enter:

3 # #
installer code

2. Open the detector box (see § 2. Preparation).
3. Replace the flat lithium battery and close the detector.
4. Put the control panel back in user mode by entering:

1 # #
installer code

5. Perform the operating test again (see § 8. Operating test).

- The lithium battery pack must be replaced by the same type of pack with the same technical characteristics, i.e. (3.6 V - 4 Ah).
- We advise you to use the DAITEM BatLi05 pack available in the catalogue in order to guarantee individual safety and equipment reliability.
- Dispose of the waste lithium power pack in an appropriate recycling bin.



10. Technical data

Technical specifications	12 m external motion detector with anti-mask function
Type of detection	dual passive infrared
Coverage	12 m – 85°
Adjustable detection distances	4 m, 5.5 m, 9 m and 12 m
Use	interior/exterior
Battery	BatLi05 3.6 V – 4 Ah lithium battery
Battery life	• 5 years when anti-mask function is not validated • 3 years when anti-mask function is validated
Radio links	TwinBand® 400/800 MHz
Wall fixing	• flat • on angle adjustment bracket (supplied)
Fixing height	2.5 to 3 m
Operating temperature	- 20°C to + 60°C
Mechanical protection rating	IP 55
Anti-tamper protection	against opening
Anti-mask function	24-hour protection
Dimensions (without angle bracket)	148 x 92 x 197.5 mm
Weight	630 g (with battery, bracket and cover)

 **Disposing of waste electrical and electronic devices at the end of their service life** (Applicable in European Union countries and other European countries with a waste collection system). This symbol on products or product packaging indicates that the product must not be thrown out with normal household waste. It must be taken to an appropriate collection point for recycling waste electrical and electronic equipment. By disposing of such products in the appropriate manner, you are helping to prevent any harmful effects they may have on the environment and human health. For further information about recycling this product, you should consult your local authorities, waste collection centre or the shop where you bought the product.



DECLARATION OF CONFORMITY

Manufacturer: **Hager Security SAS**
Address: **F-38926 Crolles Cedex - France**

GB
13

Product type: **Exterior 12 m motion detector with anti-mask function**
Trade mark: **Daitem**

We declare under our sole responsibility that the product to which this declaration relates is compliant with the essential requirements of the following directives:

- **R&TTE Directive: 99/5/CE**
- **Low Voltage Directive: 2006/95/CE**
- **ROHS Directive: 2002/95/CE**

in compliance with the following harmonised European standards:

Product reference	SH146AX
EN 300 220-2 V2.1.2	X
EN 50130-4 (95) + A1 (98) + A2 (2002)	X
EN 60950 (2006)	X
EN 301 489-1 V1.8.1	X

This product can be used in all EU and EEA countries and Switzerland.

Crolles, 02.04.2013

Signature:
Patrick Bernard
Research & Development Director

Non-binding document, subject to modifications without prior notice.

[illegible]

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

