



Wireless 2-Way Smoke Detector



Model: DSH743 / DSH786

Installation and User Guide

Introduction

PIMA's new DSH Detector combine the most advanced technologies within a contemporary, compact and streamlined design, the ideal choice for homeowners seeking the highest safety standards. The DSH detector has been designed for use in family homes, apartments or small offices. The DSH detector is easy to install and is compatible with PIMA's wireless systems.

NOTE: The smoke and heat alarm is not suitable for use in leisure accommodation vehicles.

How it works

Smoke & Heat

Smoke is detected employing an advanced photoelectric chamber, while temperature is monitored with four separate heat sensors that measure the rate-of-rise, as well as the absolute temperature. With a choice of selecting either smoke or heat detection or a combination of the two, the DSH detector offers a more sensitive and dependable product for early detection of fire hazards in different environments with a reduced risk of false alarms.

The principal function of the DSH detector is to detect smoke and / or heat and then to set off a local alarm. An alarm is activated by the troubled detector and the system's receiver is informed about the alert.

Main Features

- Bi-directional wireless communication
- Wireless, combined smoke and heat detection
- Simple battery replacement performed by the customer
- Multiple heat sensors measuring fixed temperature and rate-of-rise provide accurate readings and high false-alarm immunity (Smoke & Heat mode)
- Visual LED indicates alarms, standby mode, and low battery
- Built-in test mode activates self-test and alarm-sounding
- Ceiling / wall tamper
- Modern look and feel

- Simple to install

Selecting a Device Location

Where to install your smoke alarm / heat detector

- Install a smoke & heat detector in the hallway outside of every separate sleeping area (see *Figure 1*). Two detectors are necessary in a building with two areas with bedrooms.
- Install a smoke & heat detector in every room that is used as a sleeping area.
- Install a smoke & heat detector on every floor in a multi-floor home (see *Figure 2*).
- Install at least two smoke & heat detectors in every home.
- Install smoke & heat detectors at both ends of a hallway between bedrooms if the hallway is more than 12 meters long.
- In basements, install detectors at the bottom of basement stairs.
- For upper story's, install detectors at the top of the staircase leading to the story.
- Make sure that the path of the smoke to the detector is not blocked by a door or another obstacle.
- Install additional detectors in your living room, dining room, family room and attic as well as in the laundry and storage rooms.
- Install smoke & heat detectors as close as possible to the center of the ceiling. If it is not practical, install the detector no closer than 10cm to walls or corners (see *Figure 3*).
- If installing on the ceiling is not possible and state and local authorities allow the installation of the detectors on walls, assemble them on walls at 10cm – 15cm from the ceiling (see *Figure 3*).
- If your home has a sloped ceiling or gables, try to install the detectors 90cm from the highest point of the ceiling, measuring horizontally (see *Figure 4*).

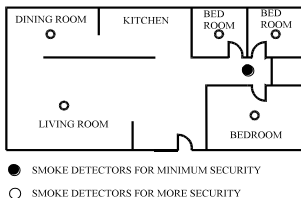


Figure 1: Installation locations for smoke & heat detectors in single-family apartments or homes with only one sleeping area

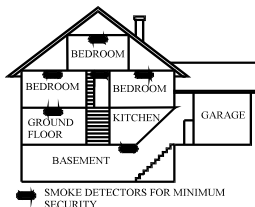


Figure 2: Installation locations for smoke & heat detectors in multiple-floor apartments or homes

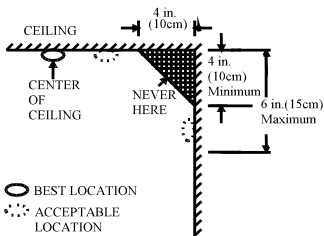


Figure 3: Recommendations for best and acceptable installation locations for installing smoke & heat detectors.

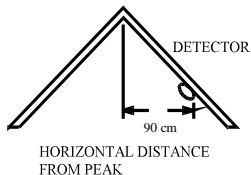


Figure 4: Recommended installation location for smoke & heat detectors in rooms with sloped ceilings or gables (slope >20 degrees).

Where not to install your smoke & heat detector

A false alarm can be triggered if smoke & heat detectors are installed where they cannot function properly. To prevent such false alarms, do not install smoke & heat detectors as follows:

- In areas with constant fresh air supply. Movement of fresh air can keep smoke from entering the smoke & heat detector, thereby limiting its effectiveness.
- Near paint thinner vapors.
- In very hot or cold areas, such as near air conditioners, heaters or fans.
- In areas with still air, such as under pointed roofs or in corners between walls and ceiling. Still air can prevent smoke from reaching the detector (*see Figure 3 and Figure 4 for recommended installation locations*).
- Areas prone to insects. If insects enter the sensor chamber of a detector, they can trigger false alarms. If you have a bug problem, take care of it before you install detectors.
- Near fluorescent lights, since electromagnetic fields from fluorescent lighting can trigger false alarms. Install smoke & heat detectors at least 1.5m from such lights.

Where the “heat only” mode can be used

To prevent false alarms, you can use your detector in “heat only” mode. Use the detector in this mode only in or near areas where typically only harmless combustion particles exist which do not present a fire hazard. If the distance of the detector to places at which combustion particles normally exist – for example in kitchens – is less than 6 meters, install the detector as a heat detector only and as far away from the combustion particles as possible.

To prevent false alarms, make sure the ventilation in such places is good. Never try to prevent false alarms by switching off the detector.

Other locations:

- In damp or humid areas or near bathrooms with showers. The humidity in the air can get into the measuring chamber and form droplets as it cools, which can then trigger false alarms.

- In very dirty or dusty areas. Dirt and dust can collect in the measuring chamber of the detector and cause it to become over-sensitive. In addition, dirt and dust can block the openings to the measuring chamber and prevent the detector from detecting smoke.

Installation

The DSH detector must be assembled on the ceiling or, if necessary, on the wall. The DSH detector cannot be networked with other detectors.

Before installation, read the sections titled “Where to install your smoke & heat detector” and “Where not to install your smoke & heat detector”, in these operating instructions.

Installing the detector

1. Select the installation location.
2. Remove the plastic mounting bracket from the detector (see Figure 5).

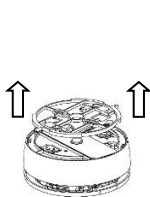


Figure 5

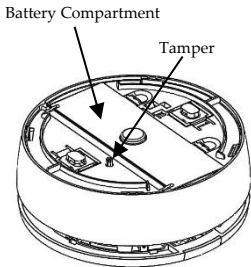


Figure 6



Figure 7

3. Using the mounting holes as a template, secure the mounting bracket to the mounting surface (see Figure 7).

4. Open the battery compartment cover (*see Figure 8*).

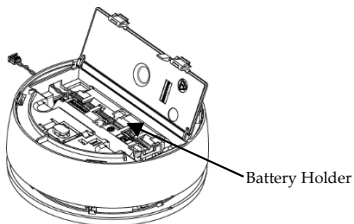


Figure 8

5. Place the batteries into the battery holder while observing polarity.
6. Connect the battery cable to the battery connector
7. Insert the battery holder in the battery compartment and close the battery compartment cover.
8. Configure the detector (*see Configuring the detector*).
9. To Install the detector on the mounting bracket, align the base rib with the bracket rib, insert the base hooks into the bracket cavities and then turn the detector clockwise (*see Figure 9*).

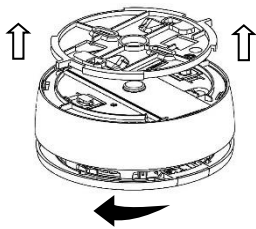


Figure 9

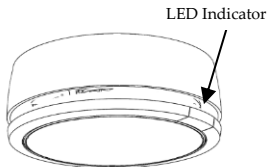


Figure 10

NOTE:

Closing the detector bracket may be a little difficult. While closing the bracket the test button may possibly be pressed.

Replacing the Battery

1. Remove the plastic mounting bracket from the detector (*see Figure 5*).
2. Remove the old battery.
3. Insert the new battery while observing battery polarity (*see Figure 11*).
4. Close the battery compartment cover.

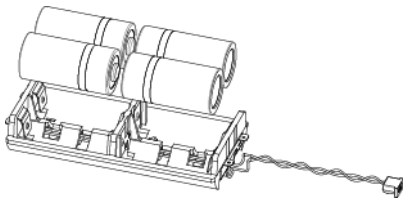


Figure 11

Configuration

Enrolling the detector

For complete description of the wireless configuration and device enrollments, refer to Programming Guide for the FORCE and VISION Alarm Systems

Enrollment of the smoke & heat detector in the system can be performed manually or automatically via the keypad.

Auto Enrolling (using RF Communication):

1. Enter Installer menu, and select:
System Configuration > Peripherals > Wireless Peripherals > Enroll and delete > Detectors > Enroll > Auto Enrollment
2. Insert the batteries and press the tamper button for 3 seconds (or connect the detector to the mounting bracket) until the system indicates that it has received the enrollment message; The serial number should appear on the keypad.
3. Select Enroll and press ↵.

Upon successful registration, the detector's green LED indicator makes 4 short blinks.

Manual Enrolling:

1. Enter Installer menu, and select:
System Configuration > Peripherals > Wireless Peripherals > Enroll and delete > Detectors > Enroll > Manual Enrollment
2. Enter the serial number and press ↵.
3. Select Enroll and press ↵.

Enrolling through the Force Manager Software:

You can enroll the detector using Force Manager software; For information refer to the Force Manager Manual.

Visual / Audible Indicators

If the red LED indicator (*see Figure 10*) flashes once every 30 seconds, the detector is functioning normally.

If the red LED indicator flashes constantly and repetitive beeps are heard, the detector is reacting to a fire alarm (primary or secondary).

The LED indicator flashes, and a short beep is heard once every 30 seconds to indicate low battery or trouble condition.

If a fire alarm is activated, press the cover up firmly (*see Testing the detector*) to silence the alarm and temporarily disable (for approx. 10 minutes) the alarm activation.

Detector Operation Modes

The Smoke & Heat detector can be set to one of the following operation modes:

- Smoke only*
- Heat only
- Smoke and Heat

Installer Menu > Zones > Characteristics > <Zone #> > Wireless Zone

Refer to Programming Guide for the FORCE and VISION Alarm Systems for more information about defining detector parameters.

* NOTE: Only the “Smoke Operation Mode” is approved to EN14604.

Testing the detector

To ensure that your detector is functioning correctly, test it once a week using the following procedure:

1. Press the cover up firmly (*see Figure 12*). If the detector is functioning correctly, a fire alarm is activated (*see Visual / Audible Indicators*) and an alert message is sent to the system receiver.

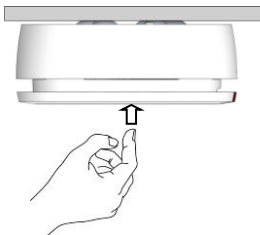


Figure 12

NOTE: A short beep once every 30 seconds indicates that the test is unsuccessful. You must have the detector repaired or replaced immediately.

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2. Release pressure to restore the alarm activation.
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NOTES:

1. It is recommended to press the center of the detector for the quick test results.
 2. If you wish to perform a spray test, the spray must be at 20 cm away from the detector. Press on the spray continuously for at least 5 seconds; the LED will flash every second for 25 seconds followed by alarm activation.
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Cleaning and Maintenance

Clean the detector with a dry or damp cloth to remove dirt or dust.

To clean the detector:

1. Remove the detector from the mounting bracket.
2. Open the battery cover and disconnect the battery.
3. Open the detector housing and disconnect the PCB from the holding snaps.
4. Use a paintbrush to remove any dirt and reconnect the PCB.
5. Close the housing, reconnect the battery and replace the battery cover.
6. Reconnect the detector to the mounting bracket
7. Check if the detector is functioning properly.

To ensure the detector continues to function properly, you must test it once a week (*see Testing the detector*).

To replace the detector batteries:

1. Remove the detector from the plastic mounting bracket.
2. Open the battery compartment cover.
3. Remove the old batteries.
4. Insert the new battery while observing battery polarity (*see Figure 11*), and close the battery compartment cover.
5. Reconnect the detector to the mounting bracket.

Replace the batteries once a year or whenever the low battery signal tone sounds.

NOTE:

Low battery signal tone - If the detector beeps once every 30 seconds, the detector's batteries are low.

Replace the batteries immediately. After you reconnect the detector to the mounting bracket, you need to check the smoke alarm (*see Testing the detector*).

Technical Specification

Parameter	Description
Smoke Alarm	Photoelectrical chamber with optical sensor for detecting smoke
Heat detector	4 sensors for measuring temperature increase, alarm will be triggered at 60°C
Operating modes	Smoke + Heat (OR Logic), Only Smoke, Only Heat
Indicators	Audible (Piezo) and visual (LED)
Volume of the warning	Min. 85 dB at 3m (10')
Sound frequency	3.25 kHz
Power Supply	CR123A 3V x 4
Standby power consum.	0.02mA (typical)
Alarm power consum.	100mA
Battery life	4 years (typical)
Low battery threshold	2.65 V
In event of low battery	One beep every 30 seconds
Operating temperature	0°C to 55°C
Humidity during operation	10% to 85% RH, no condensation or icing
Color	White
Dimensions (D x H)	Ø 133.8 x 50.2 mm (Ø 5.27 x 1.98')
Weight	360 g (net)
Supervision monitoring	1-255 min. (user defined)
Wireless trans. Power	10mW
Wireless range	Up to 300m (unobstructed)
Standards Compliance	EN14604:2005/AC:2008. NOTE: Only the "Smoke Operation Mode" is approved to EN14604.

Ordering Information

Model	Frequency	P/N
DSH743	433MHz	8842202
DSH786	868MHz	8842203

UKCA and CE RED Compliance Statement

Hereby, PIMA declares that this equipment is in compliance with the essential requirements of the UKCA Radio Equipment Regulations 2017 and CE Directive 2014/53/EU.

For the UKCA and CE Declaration of Conformity please refer to our website:

www.pima-alarms.com

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The User understands that a properly installed and maintained equipment may only reduce the risk of events such as burglary, robbery, and fire without warning, but it is not insurance or a guarantee that such will not occur or that there will be no death, personal damage and/or damage to property as a result.

Read this guide in its entirety before attempting to program or operate your system. Should you misunderstand any part of this guide, please contact the supplier or installer of this system. Copyright © 2020 PIMA Electronic Systems Ltd. All rights reserved. E&OE

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