Heat Detector i10

careium

User Guide
English

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1. Product overview

This heat detector is approved to BS5446-2: 2003. A heat alarm is used to supplement optical fire alarms, to ensure they function correctly even if there is a high content of particles in the ambient air. A heat alarm is exceptionally resistant to nuisance alarms and does not react to dust, aerosols, moisture or vapours in any form, it only reacts if the room temperature rises quickly or above 57°C. The heat detector with the built-in battery has a guaranteed service life of 10 years.

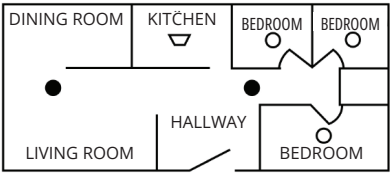
1.1. Product features

- Built-in 10 year lithium battery.
- Tailored software maximises detection and reduces false alarms.
- The fire alarm switches on automatically when clicked into place on the mounting plate or radio base.
- Red LED flashes approximately every minute confirming that the unit is powered and ready to detect a fire. (Standby mode)
- If the battery is low or the heat detector has reached the end of its service life, a beep will be emitted every minute. It is possible to silence the alarm for ten hours by pressing the test button. The heat detector does not need to be removed from the mounting plate and can be replaced at your convenience the following day/days.
- Extra large test button for easy and complete function control.
- Reacts quickly with a strong signal (85dB at 3 metres) that automatically resets when the heat has left the sensor.
- Pause function – Silence your detector briefly, ideal for non-emergency situations when unwanted alarms occur, such as from steam or cigarette smoke. The red LED flashes every 12 seconds to remind you that it has been silenced and automatically resets to standby within 10 minutes.

2. Placement

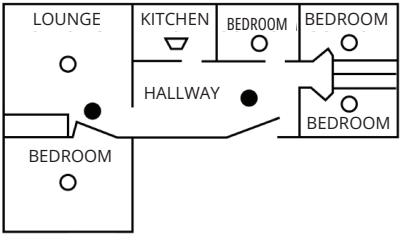
Heat detectors are most suited to kitchens, boiler rooms and workshops as well as garages where dirt and dust contaminate smoke detectors, causing false alarms and in some cases failing to detect fire early. Heat detectors should NOT be used on walls or in bedrooms occupied by children and the elderly. To avoid any delay in evacuating the elderly or disabled, special measures should be taken if they are in areas monitored by heat detectors only.
N.B. Heat alarms should NOT be used along escape routes and should preferably be interconnected or used together with smoke detectors if possible.

Recommended placement of smoke and/or heat detectors in a single-storey house with one bedroom area

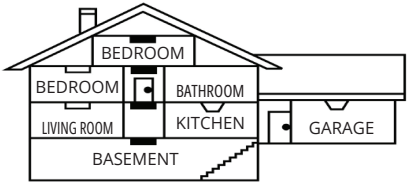


● SMOKE DETECTOR MINIMUM POSSIBLE INSTALLATION
○ SMOKE DETECTOR RECOMMENDED INSTALLATION
▽ HEAT DETECTOR RECOMMENDED PLACEMENT

Recommended placement of smoke and/or heat detectors in a single-storey house with two bedroom areas.



Recommended placement in a multi-storey building.



▬ SMOKE DETECTOR MINIMUM INSTALLATION
▭ SMOKE DETECTOR RECOMM. INSTALLATION
▽ HEAT DETECTOR RECOMM. PLACEMENT

The life of the alarm can be significantly reduced by adverse environments, improper placement or failure to regularly clean and maintain the alarm according to the following instructions. Improper placement and lack of reasonable care may also cause it to fail and may void the warranty.

2.1. Avoid the following locations

- Do not install heat detectors on walls.
- Do not place near fans or ventilation devices, as they can draw heat away from the alarm.
- Do not install in bathrooms or showers
- Do not install in rooms in which the normal temperature can exceed 45°C or fall below 0°C. This can cause false alarms.
- Do not install at the top of a ridge roof or sloping roof, as stagnant or dead air can delay heat reaching the sensor.
- Do not install less than 50 cm from walls and mounted light fittings where rising heat or dead air can prevent smoke from reaching the alarm.
- Do not install heat detectors in areas such as children's bedrooms, playrooms or areas where elderly or disabled people can spend long periods of time.
- Do not install on poorly insulated walls and ceilings where cold air boundary layers can prevent heat from reaching the heat detector.
- Do not install near objects that can prevent heat from reaching the alarm e.g. high bookshelves.
- Do not install closer than 150 cm from fluorescent tubes, which can trigger interfering false alarms when switched on/off.
- Do not cover or paint the alarm.

2.2. Additional placement information

At least one smoke detector must be installed along escape routes from all floors in the building.
The detection element of a heat detector must be fitted between 2.5 cm and 15 cm below the ceiling.

- Heat detectors must be installed at least 50 cm from walls or light fittings.

- Heat detectors should NOT be mounted on walls.
- Do not use heat detectors along escape routes.
- To give the earliest possible first warning of a detected fire, all smoke and heat detectors in your home should be connected if possible. No heat detector should be further than 5 metres from other heat or smoke detectors.

3. Mounting/Installation

Do not store detectors at temperatures below 0°C and above 45°C as this may cause unwanted alarms and disturbances after initial installation. However, these will stop after a short time when the detector has become acclimatised to the new temperature. Prolonged periods under these conditions will reduce the lifetime of the detector and may void the warranty. Separate the detector from the radio base. The heat detector is supplied switched off with the radio base not attached. If the detector has been activated before installation, press the small locking wedge located on the side and turn the alarm counter-clockwise while holding the radio base. Then remove the heat detector.

Decide where to install the device. See previous section. Always ensure that surfaces do not contain hazardous materials, e.g. asbestos, water or electrical wires before drilling. The enclosed screws are suitable for use in wood, and screws and plugs are used for plasterboard and concrete. For some installations, the installer may need to use another solution such as double-sided tape or adhesive to avoid drilling. If mounting adhesive is used, consider the drying time before actually fitting the heat detector. If you use double-sided tape or adhesive, make sure that the surfaces are clean, dry, flat and have good adhesion. Always take appropriate safety precautions when attaching the mounting plate to the ceiling. Wear protective equipment, e.g. protective goggles and a face mask when drilling.

3.1. Installing a device

N.B. If you want to use multiple devices connected via Wi-Fi, see section 3.2.

1. Fix the base unit to the ceiling using your preferred solution.
2. Activate the radio card in the base unit: press and hold the push button on the radio card, see Fig. 1 A. Turn on the radio card with the power switch, see Fig. 1 B. The push button (1 A) now flashes quickly. Release the button. Press the button again. The button will light up for a while and then go out. The radio card is now activated as a single unit. Connect the cable.
3. Align the arrow on the back of the heat detector with the arrow inside the radio base, when the heat detector is aligned correctly on the radio base, turn clockwise until the locking wedge clicks into place. The built-in battery will now automatically activate and the heat detector will start up with an internal silent test.
4. Activate the radio learning mode in the personal alarm phone/system
5. Press the test button once to send a radio message that can be used to pair the heat detector with the personal alarm phone.
6. Confirm the setting on the receiver unit.
7. Configure the desired alarm type on the receiving unit.
8. Test the entire alarm chain by pressing the test button three times. It is important to wait for the detector to stop sounding between each press. After the 3rd press, an alarm is sent, wait for the operator to respond to the alarm. See Fig 2. Remember to alert the alarm receiver.

Fig. 1

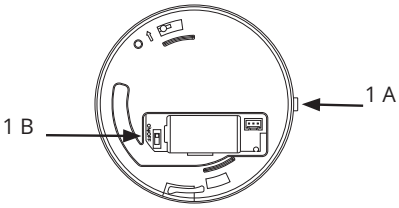
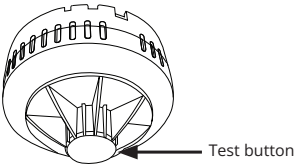


Fig. 2



3.2. Installation of devices connected in series

The radio card is used to connect our various detectors for smoke, heat and carbon monoxide to each other, max. 8. The radio card has a built-in non-replaceable lithium battery for 10 years of operation.

The radio cards must be connected with each other in order to be able to communicate, which takes place either automatically the first time they are turned on or via a manual procedure. The link creates a group in which the one entered as the master is designated number 1 and the others are designated from 2 upwards.
Radio communication can be tested manually to ensure that all devices are in contact with each other. Automatic testing of radio communication takes place once a week.
In the event of an alarm from one of the connected detectors, the connected radio card will transmit this to other connected detectors so that their connected warning system also emits an alarm.

3.2.1. Automatic pairing

The first time a non-connected radio device is started via the switch on the radio card, automatic pairing is activated. In order for interconnection to work, one device must initiate interconnection and others must be ready to pair. The radio card's output is reduced during pairing, so the devices need to be close together (max. 2 metres).
Hold down the push button on the device that is to initiate pairing, see Fig. 1 A, and start it via the switch, see Fig. 1 B, on the radio card. Release the push button (1 A). It will flash rapidly and wait for other devices for 60 seconds. The devices to be connected are activated by simply turning on the switch (1 B) on their radio card. Pairing will automatically end 60 seconds after the last paired device is connected or if the main device push button (1A) is pressed once.
N.B. The connected devices must not be switched off or moved away until the master device is ready and its push button has gone out. All devices must be paired with the personal alarm phone in accordance with section 3.1, points 3–8. See section 7 for testing the entire chain.

3.3. Manual pairing

Manual pairing of devices is done in installer mode.
See section 4 Installer settings.
All devices must be paired with the personal alarm phone in accordance with section 3.1, points 3–8. See section 7 for testing the entire chain.

4. Installer settings

By pressing and holding (5 seconds) the radio card button. The LED should then light up continuously and then continue as required using the short button presses according to the table below. If no further buttons are pressed, the radio card returns to normal mode after 8 seconds. The radio card's output is reduced during pairing, so the devices need to be close together (max. 2 metres).

Number of short presses	Description	LED indication
One	Start pairing	Goes out briefly – Steady on – Flashes quickly for 60 sec – Steady on when finished – Goes out when ready
Two	Adding devices	Goes out after pairing or timeout (50 sec)
Three		
Four		
Five	Re-order group	Goes out briefly five times
Six:	Deleting devices	Goes out briefly 6 times

Interconnection can take place by starting the radio card with the switch and stepping to the “Start pairing” position via the push button according to the table.
Start other radio cards you want to add by stepping to the “Add device” function via the push button. Pairing is terminated automatically after 60 seconds or if the radio button on the master device is pressed once.
N.B. The connected devices must not be switched off or moved away until the master device is ready and its push button has gone out.
It is not possible to add a device that is already paired. It must first be reset via “Delete device”. To remove a device from the group, use the “Delete device” function.
If a device does not work or if you have deleted a device, re-sort the group using “Re-sort group”. For example, if you have 4 units; 1, 2, 3 and 4 and you delete device 2, the other devices will continue to try to contact device 2, which is not possible, so you should sort the group from 1, 3 and 4 into a group of 1, 2 and 3.

4.1. Adding device to existing group

You can add one or more devices to an existing group by activating one of them as “Start pairing” and then activating the others to be linked again via “Add device”.
If a new, non-previously connected device is to be added, it is sufficient to start it via the switch.
If it is a previously connected unit, after “Delete device”, activate it as “Add device”.

5. Description of push button/LED radio

In normal operating mode (no alarm) (See Fig. 1 A)

- Briefly press the button once to display the device number of the radio card.
- The button flashes with x flashes for the device number.
- Briefly press the button twice to start a test sequence for radio communication.
- When the test is in progress, the LED flashes rapidly. If the detector gives a click when the test is complete, it indicates that one or more devices in the linked group are not communicating.
- The LED flashes the same number of times for each missing device number.
- Example “2 flashes – pause – 4 flashes”, to show that devices 2 and 4 are missing.
- The sequence is only shown once. To see it again, restart the test.

5.1. LED indicators on the radio card

The LED can indicate the following error modes without first pressing the button.

One flash every minute	Low battery in this radio card
Two flashes every minute	Low battery in other radio card
Three flashes per minute	Cannot contact other radio card
Four flashes every minute	Fault in any connected detector

If a device has lost communication (indicated by 3 flashes as above), the result of the system test done once a week and automatically reset the following week shows if the communication then works. A communication test can be performed manually with 2 short presses on the radio card button for a new test, which will reset the error code if the communication is working.

6. Alarm from a device connected in series

If there is an alarm from one device, the others will first emit a pre-alarm. The pre-alarm consists of three beeps and then the number of clicks for the device number of the detector activated. (Example: beep beep, click, click, "Device no. 2 has activated"). The detector will emit a warning sound as for a normal alarm and the entire sequence will be repeated.
If the alarm is to be regarded as a false alarm, silence the detector by pressing the detector test button/Silence button once. This will silence the connected detector and other paired devices will go silent.

A secondary detector (the one that did not initiate the alarm) cannot be silenced by pressing the detector's test button, but must be silenced locally by pressing once on the radio card push button. If you press on a detector that has not triggered an alarm, a normal test of the detector takes place.

7. Testing the alarm

Testing of alarms can be done either separately for each detector, testing the entire alarm chain for individual devices and testing the entire alarm chain for serial-connected devices. Testing of alarms and the alarm chain needs to be carried out every six months, so warn anyone who might be affected in advance.

7.1.1. Testing the heat detector

Warning, wear ear protection!! (85dB at 3m)

Press and release the test button, (see Fig. 2) to test the function. The fire alarm should sound three times with a flashing red light and then stop. After the test, check that the red light flashes approximately every minute. N.B. Pressing the test button only tests the actual fire alarm, not radio functions.

WARNING: The test button provides a complete test of the actual fire alarm. Do not attempt to test the alarm using either heat, smoke or an open flame, as this may damage the unit or the surrounding environment.

7.1.2. Testing an individual heat detector in an alarm chain

Test the entire alarm chain by pressing the test button (see Fig. 2) three times, it is important to wait for the detector to stop sounding between each press. After the 3rd press, an alarm is sent, wait for the operator to respond to the alarm.

7.1.3. Testing several heat detectors in an alarm chain

To test the alarm chain from one detector to one or more others, press the heat detector's test button 5 times (see Fig. 2). Between each press, wait until the beep sounds 3 times. This initiates an alarm as described under section 6 “Alarms from serial-connected device”, wait for the operator to respond to the alarm.

8. User information

Protect your home from fire and visit the emergency services website to find help in designing your fire protection. Their information is free and identifies potential fire hazards in and around your home. Also make sure that everyone in the building knows what a fire alarm sounds like!

8.1. Control lamp/signal

	Control lamp	Signal
Normal operation	1 flash/min.	Silent
In case of alarm	Continuous flashing	Pulsating sound
Battery warning	1 flash/min.	One short click once a minute.
Test button stuck		One click every 11 seconds
Device error		Double click every minute

8.2. What to do if the alarm sounds

- Make sure everyone leaves the building as soon as possible.
- Check that nobody is left behind!
- Do not run, and leave personal belongings behind.
- If safe to do so, close all windows and doors when evacuating the premises/area to prevent fire from spreading.
- Call the emergency services if necessary.
- Smoke is the main cause of death from fire, so if you are trapped inside a building, cover your mouth, hold your breath and crawl close to the floor until you reach safety. Do not stand up more than necessary!
- If possible, try to limit/extinguish the fire.
- Do not reset a fire alarm until you know the cause of the alarm and when all personnel are safe!

8.2.1. Preventive measures.

- Draw up an evacuation plan with an assembly point away from the building/property.
- Practice how to act in a live situation.
- If there is firefighting equipment, where is it and who can use it?
- Who does what? Is it possible to allocate different areas of responsibility? Upper floors, lower floors, etc.
- Do not leave candles unattended, and handle recently burnt ashes with great care.
- Regularly carry out a health check of electrical appliances and installations.
- Keep matches/lighters out of reach of children.
- Do not store flammable or explosive liquids near heat sources.
- Be careful with flammable textiles/curtains near windows/tables with candles.
- It is a good idea to supplement your fire protection with a fire blanket or extinguisher.

9. Maintenance manual

A regular fire alarm maintenance program will help keep your alarm in good working order.

- Vacuum the alarm every six months and wipe with a damp cloth to prevent the sensors from clogging.
- Do not paint the alarm.
- Cover the fire detector when performing dusty work, such as sanding floors or walls.
- A fire alarm is a sensitive life-saving device. The lifetime of the alarm can be significantly reduced by not regularly cleaning and maintaining it according to the instructions. Lack of reasonable care may also cause malfunction and may void the warranty.

10. General information

The internal battery lasts for 10 years and cannot be replaced. At the end of its operating period, the detector beeps once per minute for at least one month to indicate that it is time to replace the fire alarm. The life of the battery can be significantly reduced by incorrect storage and/or use, e.g. at temperatures below 0°C or above 45°C. The service life can also be shortened by repeated or prolonged periods in full alarm, often caused by the presence of cigarette smoke, steam, aerosol spray or condensation. In such circumstances, the warranty does not apply. If a low battery warning occurs at night, press the test button to pause the battery warning for 10 hours. Replace the alarm as soon as possible, preferably within the next few days if possible.

Check that the alarm has been installed according to the instructions. In the event of repeated false alarms, check that the unit is free from dust, spider webs and is not affected by external contamination from e.g. cigarette smoke or spray from household aerosols and steam, as this will in the long term shorten the service life of the fire alarm. If this does not solve the problem, DO NOT attempt to repair the device yourself. There are no easy to service parts inside the device.

11. Technical data

The product is intended for indoor use in a normal residential environment	
Temperature	Temperature range +5ºC to +35ºC
Humidity	0–75% relative humidity (non-condensing)
Emission class	1
Detector type	Heat
Dimensions	Dia. 91 x 75 mm
Power supply	Lithium battery, not replaceable
Battery life	10 years
Radio frequency	869.2125 MHz, 868.1 MHz
Radio max output power	10 mW (10 dBm)
Equipment class	Class 1 radio equipment

12. Other

12.1. EU declaration of conformity

Deltronic AB hereby certifies that this radio equipment is in conformity with the RE Directive 2014/53/EU and other applicable regulations in the EU and the UK. The full text of the declaration of conformity is available online at: www.deltronic.com/careium.

12.2. Environmental information

This product conforms with the applicable regulations of the EU and the UK.
These regulations regulate product liability for packaging, electronics and battery recycling with the aim of increasing recycling and minimising waste.

This product is marked with the crossed-out wheeled bin symbol, which means it should be returned for recycling. The product can be returned free of charge to a recycling centre that is affiliated, directly or via a recycling system, to Careium or to your distributor.

For detailed instructions, declarations and compliance information, please contact your distributor or visit our website, www.careium.com. Use the QR code to access product information.

12.3. Battery safety

The device contains lithium batteries with potential hazards if used improperly or damaged

Lithium batteries can cause potential chemical burns if swallowed. If swallowed or placed inside any part of the body, seek immediate medical attention.

Keep batteries away from children.

- Do not disassemble, crush, puncture or damage batteries.
- In the event of fire: Large amounts of cold water are an effective extinguishing agent for lithium batteries. Do not use warm or hot water. Do not use Halon extinguishing media. You can use dry powder, sand or soil.

See the Material Safety Data Sheet (MSDS) for additional first aid measures, fire prevention measures, and other safety information.

13. Legal information

The information contained herein is subject to change without notice. The only warranties applicable to Careium products and services are set forth in the warranty terms accompanying these products and services.
Nothing herein should be construed as constituting any additional warranty.
Careium accepts no liability for technical errors or errors or omissions in this document.

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