



**Battery operated Optical Smoke Alarm
Model DS110**

Please take a few minutes to read this manual thoroughly and familiarize yourself and your family with its operation. Please keep the user manual for the entire lifetime of the product.

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Description

The smoke alarm uses photoelectric technology which is sensitive to detecting slow smouldering fires which may smoulder for hours before bursting into flames, generally followed with only a little presence of heat. The smoke alarm does not contain any radioactive material, which is harmful to the environment.

This generation of smoke alarm includes a ramping alarm signal, instead of a full scale alarm from the start. Better both for testing and situations where you wake up at night.

This smoke alarm has a non replaceable built in 10-year lithium battery and comes with a 10-year warranty.

Product Specification

Operation current:	<6uA(standby) <100mA(full alarm)
Alarm volume:	> 85 dB (A) at 3 m
Alarm sensitivity:	0,100 - 0,160 dB/m
Operating temperature:	0 °C - 40 °C
Operating humidity:	< 93 %
Warnings:	Low battery & Fault
Hush function:	Yes for 10 minutes
Sound and LED pattern:	Beep 0.5s - Pause 0.5s Beep 0.5s - Pause 0.5s Beep 0.5s - Pause 1.5s
Complies to:	EN14604:2005/ AC:2008

Important Safety Information

1. Press the test button to test the function of the smoke alarm. Do not use any other test method. Test the smoke alarm weekly for your own protection.
 2. If you have caused an alarm on your own and there is no immediate danger, open windows or turn on the fan to blow out the smoke around the smoke detector, then it will silence. Do not remove or disconnect the battery, you will remove your fire protection. If you want, use the hush function instead.
 3. Observe and follow all local and national electrical and building codes for installation.
 4. This smoke detector is designed for use in a single family home. In multi-family buildings, each individual apartment should have its own fire alarm. Do not install in other types of premises without approval from the relevant authority. This smoke detector is not a substitute for a complete fire alarm system.
 5. There are many reasons why smoke may not reach the alarm, for example if a fire starts in a distant part of the house, on another floor, in a chimney or on the other side of a closed door, so install a smoke alarm in each room and on all levels in the house
- Note:** A single smoke detector will not immediately detect a fire in another area of the building, except in the area or room where it is installed!
6. Ordinary smoke alarms may not warn all people every time. The alarm signal is loud to alert all individuals to a potential danger, however, there may be certain circumstances where a person may not hear the alarm (e.g. noise outside or indoors, heavy sleepers, drug or alcohol use, poor hearing etc.). If you suspect that this smoke detector will not alert a person, install special smoke detectors instead with additional lights and vibration cushion.
 7. All persons must hear the alarm to reduce the risk of injury, personal injury or death that may result from a developing fire. Check after installation so that all residents hear the alarm!
 8. Smoke alarms sound when they detect smoke or combustion particles in the air. They do not feel heat, flames or gas. This fire alarm is designed to give a clearly audible warning if a fire is developing. However, some fires are explosive, intentional or caused by carelessness or other reasons. Under these circumstances, smoke may not reach the unit quickly enough to ensure safe evacuation.
 9. Although we take every precaution when selecting components and materials for this smoke detector, all smoke detectors have their limitations. For this reason, you must test the smoke detector every week and replace the unit every ten years. Smoke alarms do not protect life or property from fire, it only warns the occupants, so home owners and tenants should insure their lives and property.

Status Indications

Standby Status: Red LED flashes once every 40 seconds indicating that the smoke alarm is operating properly (surveillance mode)

Alarm & Test Status: When the test button is pressed or when the smoke alarm senses combustion particles it will go into alarm (constant pulsating sound), the red LED will flash once per second. The LED indication and pulsating alarm will continue until the air is cleared of smoke or the test button is

released.

Low Battery Voltage Status: An intermittent chirp/click with a single red LED once every 40 seconds.

Fault Status: An intermittent chirp/click with a single red LED once every 40 seconds plus an additional red LED flashes 16 seconds later.

First Time Activation

Press the test button and hold it for approximately 3 seconds until the LED indicator lights up and then release the test button immediately. The smoke alarm will generate a beep to indicate that it's activated. It is not possible to deactivate the smoke alarm after this action!

Note: If no sound is generated, the smoke alarm is not activated properly and shall not be used!

Test

Right after the first time activation. Test the unit to ensure proper operation by pressing down the test button for at least 5 seconds, which will trigger the alarm if the electronic circuitry, horn and battery are working properly. If no alarm, erratic or low sound volume* the unit may be defect. Refer to the "Trouble Shooting" section for a solution.

Never use an open flame to test your alarm, you could damage the alarm or ignite combustible materials and start a fire!

CAUTION: Due to the sound volume (85 decibels) of the alarm, always stand an-arm-length away from the unit when testing.

NOTE: Weekly testing is recommended!

* The sound pressure will increase (ramp-up) after six sound beeps to above 85 dB(A) be careful.

Silence/Hush Mode

The Silence Mode is temporarily prohibiting the alarm circuit to detect smoke for about 10 minutes by decreasing the sensitivity of the device. This feature can be used to minimize annoying false alarms when a known alarm condition occur, such as smoke from cooking or a fire place that could activate the alarm.

When the alarm detects smoke, press the test button on the device for at least 5 seconds to silence the device and active the silence mode, the alarm will stay in silence mode for about 10 minutes.

The smoke alarm will automatically reset after approximately 10 minutes. If particles of combustion still exists after this period, the smoke alarm will re-activate the alarm again. The silence mode can be repeated until the air has been cleared. Silence mode is extremely useful in a kitchen or other areas prone to nuisance alarms initiated by combustible particles.

CAUTION: Before activating the Silence Mode, identify the source of the smoke and be sure it is safe to use the silent option.

DANGER: If the detector sends pulsating alarm constantly and not because of test, the unit has reacted on sense of smoke

THE SOUND OF THE ALARM REQUIRES YOUR IMMEDIATE ATTENTION AND ACTION!

Trouble Shooting

Problem	Solution
Smoke alarm does not sound when testing.	Try to activate! If not working replace with a new smoke alarm.
The alarm clicks together with a short red flash once every 40 seconds.	Low battery! Please replace the unit with a new smoke alarm. Low battery warning may be silenced for 10 hours by means of the test btn.
Fault indication! The alarm clicks just as with low battery, but has another short red flash after 16 seconds.	Clean the smoke alarm referring to the Maintenance and Cleaning section. If the problem still exists change to a new smoke alarm.
Smoke alarm makes unwanted alarms intermittently or when residents are cooking, taking showers, etc.	Press test button to pause the alarm. Clean the smoke alarm. Please refer to the Maintenance and Cleaning section. Move smoke alarm to new location and press the test button.
The alarm sounds different from normal operation.	Clean the smoke alarm. Please refer to the Maintenance and Cleaning section. If there are failures during warranty, you can contact your retailer, if not, replace unit with a new alarm.

Installation

Smoke alarms should if possible be installed in every room (except the bathroom and kitchen) and in every other area of the home, making sure that residents will be able to hear and respond to the alarm. For minimum protection you should fit an alarm in the hallway between the living and sleeping areas. Place the unit as near the living areas as possible to ensure the alarm is audible in all bedrooms.

Keep in mind that if you sleep with the door closed and charge equipment in the room, we strongly recommend that you install a smoke detector in this area and not outside.

At a typical single storey dwelling:

Install a smoke alarm in the ceiling of each bedroom and in the adjoining hallway. If the hallway is more than 12 meters long, install a smoke alarm at each end. If there is a basement: install a smoke alarm on the basement ceiling at the bottom of the stairwell.

At a typical multi-storey dwelling

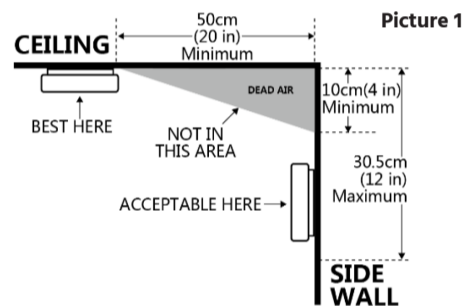
Install a smoke alarm in the ceiling of each bedroom and in the adjoining hallway. If the hallway is more than 12 meters long, install a smoke alarm at each end. Install a smoke alarm at the top of a first - to-second floor stairwell and similar for level 2-3 etc.

Don't install smoke alarms as per below:

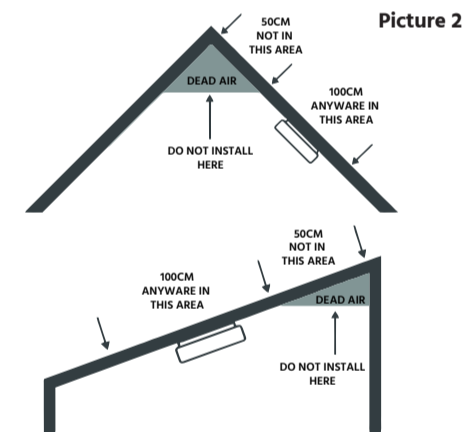
1. Near appliances or areas where normal combustion particles regularly occurs (kitchens, near furnaces, water heaters, fire places), use special heat alarm for this areas.
2. If high humidity, like bathrooms or areas near dish-washers or washing machines, always install at least 3 meters away from these areas.
3. Install at least 3 meters away from return air or heating and cooling vents. The air could blow or drag smoke away from the detector and delay the alarm.
4. You may experience reduced battery capacity and annoying false alarms in rooms where temperatures may fall below 0°C or rise above 40°C, or at humidity higher than 93%.
5. In extremely dusty, dirty, or insect - infested areas, influence particles can interfere with smoke alarm operation and create annoying false alarms.

Where is the best place of installation:

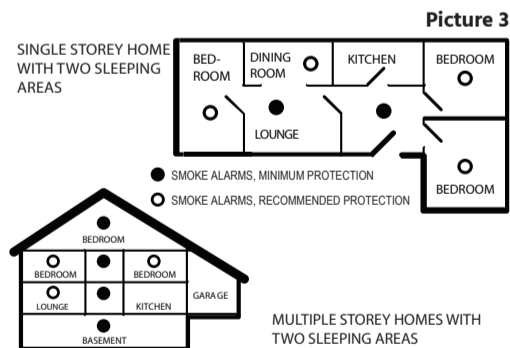
- First you need to install an alarm in the bedroom and along the escape routes. In the case of several bedrooms, you should install an alarm in every bedroom if possible.
- Install it in the stairway and on every floor.
- Smoke, heat and burning items spread horizontally after rising to the ceiling, install the alarm in the middle of the ceiling of ordinary housings accordingly.
- If alarm couldn't be installed in the middle of the ceiling always use a distance of 50cm from the wall and corners, see picture 1.
- If the length of the room or the hall is beyond 12 meters, you need to install several alarms.
- In rooms with ceiling slopes higher than 1m the smoke alarm shall be located on the high side of the room. If installing a smoke alarm on sloping, peak or cathedral ceiling place it between 50cm and 150cm from the highest point of the ceiling, see picture 2.
- For single storey dwelling or multiple storey dwelling, please refer to picture 3.



Picture 1



Picture 2

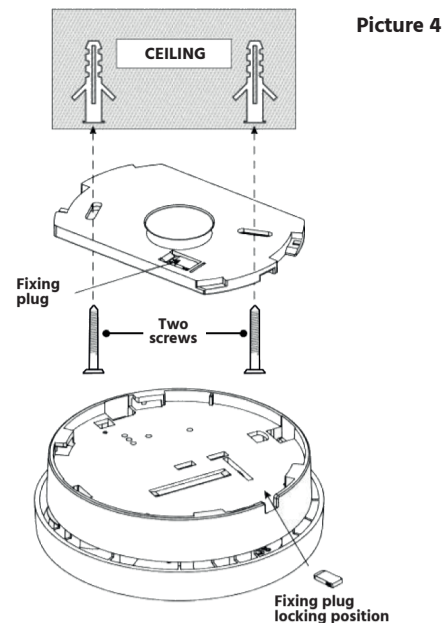


Picture 3

Installation Steps: (Please refer to Picture 4)

- Use personal protective equipment and be careful not to drill into hidden water or electrical pipes.
- Remove the fixing plug from the mounting plate (if necessary, use a screw driver for this)
- Place the ceiling bracket on the desired installation place and mark the installation holes with pencil .
- If concrete or plasterboard drill two holes with diameter 5mm.
- Strike the two plastic plugs into holes with a hammer.
- Insert the screws through the bracket and tighten them firmly into the plastic plugs
- Fit the alarm on the bracket and turn the alarm clockwise, until firmed locked position.
- If you want to secure the smoke alarm insert the fixing plug into the hole between the mounting plate and the smoke alarm.
- Activate the unit and then press the test button. If no sound, please follow the **Trouble Shooting** section.
- If you have any questions regarding installation, you can contact your retailer.

WARNING: To prevent personal damage from units falling down, the unit must be securely attached to the ceiling in accordance with the installation instructions. Using magnetic fasteners is not recommended, if needed use double-sided tape between the ceiling and the ceiling bracket.



Picture 4

Maintenance and Cleaning

In addition to weekly testing, the alarm requires periodic cleaning to remove dust, dirt and debris. Clean the alarm at least once a month or at regularly intervals. Vacuum all sides of smoke alarm by a vacuum cleaner, attach the soft brush . Be sure that all the vents are free of debris. Use a damp cloth to clean the cover of the alarm.

This alarm has a low battery voltage monitor which could cause the alarm to chirp every 40 seconds combined with a LED indication for a minimum of 30 days, if this happens replace it with a new smoke alarm as soon as possible.

IMPORTANT: Do not attempt to remove the cover to clean inside. There is no serviceable parts inside. This will affect your right to claim warranty.

Practice Fire Safety

Prepare to act if a smoke alarm goes off. Your immediate action can be decisive. Make a family evacuation plan with everyone in the household and practice these measures regularly.

1. Expose everyone to the sound of a smoke alarm and explain what the sound means. Check at the same time so that all occupants hear the signal clearly from all sleeping areas.
2. Determine two possible exits from each room and follow the escape route outside.
3. Instruct to leave personal belongings behind and bring only the essentials.
4. Teach all persons to feel the doors before they are opened to avoid running into a room with a developing fire. Instruct them not to open the door and instead use an alternate escape route.
5. Also teach the people to crawl along the floor to stay under dangerous smoke, fumes and gases if necessary.

Designate a safe gathering place for all members outside the building.

What To Do In Case Of Fire

1. Don't panic and stay calm.
2. Leave the building as quickly as possible. Touch doors to feel if they are warm/hot before opening them. Use an alternative escape route if necessary. Crawl along the floor and do not stop to pick up personal belongings.
3. Meet at the assembly point outside the building and check attendance.
4. Call the emergency services outside the building.
5. Never go back into a burning building. Wait for the emergency services to arrive.

Note: These guidelines will assist you in the event of a fire, however, to raise the rate of a safe escape, practice fire safety rules and prevent hazardous situations regularly.

Product Warranty

Deltronic Security AB guarantees to you, as a purchaser, that the enclosed Alarm will be free from defects in material, workmanship or design under normal use and service for a period of 10 years. This Guarantee is not assignable. Our liability to you, under this guarantee is limited to repairing or replacing any part which we find to be defective in material, workmanship or design, free of charge to the customer, upon sending the alarm with proof of date of purchase, with postage paid to the address stated below.

The terms of this guarantee will not apply in the following circumstances:

If the Alarm has been modified, dismantled, contaminated, damaged, neglected or otherwise abused or altered following the date of purchase, or if it fails to operate due to incorrect siting, installation or damage caused by failure to abide by the instructions supplied. It is specifically drawn to the users attention that substantial periods in alarm will shorten the life of the Alarm, during which time the Alarm will have provided valuable protection, no claim under the guarantee will be entertained. The 10-year warranty is based on surveillance mode only, including weekly tests. The liability of **Deltronic Security AB**, arising from the sale of this alarm or under the terms of this guarantee shall not in any case exceed the cost of replacement of the alarm.

In no case, shall **Deltronic Security AB** be liable for consequential loss or damage resulting from the failure of the alarm or the breach of this or any other guarantee, express or implied or for damage caused by failure to abide by the instructions supplied. This guarantee does not affect your statutory rights.

