Kidde Fyrnetics

Smoke and Heat alarm
Installer's Guide

230V Interconnectable Mains Operated Alarms For models:
123I, 123/9HI, 123/9HILL, 223I, 223/9I, 223/9ILL, 223/9HI, 223/9HILL, 323/9HI, 323/9HILL

Thank you for purchasing a Kidde Fyrnetics alarm.
Please read through our guide in full. It should be retained for future reference.

Kidde Fyrnetics recommends for maximum protection that both ionisation and photo-electric (optical) smoke alarms be installed. Ionisation technology is faster at detecting fast flaming fires that give off little smoke. Photo-electric (optical) technology is faster at responding to slow, smouldering smoky fires.

Heat alarms should be installed in environments where excessive steam, dust etc. make smoke alarms impractical e.g. kitchens/boiler rooms/lofts.

Electrical rating 230V AC,
50Hz 80mA max per alarm
(maximum 80mA for originating unit with 24 alarms interconnected).

Lic No: 7861
BS 5446: Pt. 1: 2000
for 123+223 models
Pt 2:2003 for 323 models

Kidde Safety Europe, Mathisen Way, Colnbrook, SL3 oHB, UK.
www.kiddefyrnetics.co.uk

The additional Owner's Manual should be left in a safe place for the property owner. e.g. near Consumer Unit.
DO NOT LEAVE THIS INSTALLER'S GUIDE WITH THE PROPERTY OWNER.

Contents

1. Installation Instructions – Introduction

This alarm is designed for installation by a qualified electrician, in accordance with the latest I.E.E. Regulations and in regard to relevant Building Regulations.

- Read these instructions **thoroughly** before proceeding.
  Peoples **lives depend on it**.

- **This manual** is supplied for your guidance and **should not be left with the property owner**. This is for use by qualified electricians.

- AC alarms must be powered by a constant 230V AC, 50Hz supply that is not controlled by any form of switch.
  BS5839 Pt6: 1995 advises as follows:

  Grade 'E' – AC only:
  Connect to dedicated spur on the Consumer Unit, preferably not via a r.c.d. type device*. (If one is deemed essential, the r.c.d. must only serve the smoke alarm circuit. Additionally it should be independent of any r.c.d.'s protecting sockets/portable equipment etc..)
  This alarm type has no secondary power source.
  * Only smoke or heat alarms must be connected on this circuit.

  Grade 'D' – AC with secondary power e.g. Alkaline battery/rechargeable cells.
  Connect to dedicated circuit with provisions as for Grade 'E' type or, to a regularly used local lighting circuit, that is separately electrically protected.

- Only interconnect to the identical brand of smoke or heat alarm. Do not connect to any other brand of alarm/auxilary device.

- When testing the alarm, stand back so your hearing is not damaged by the 85dB sounder.

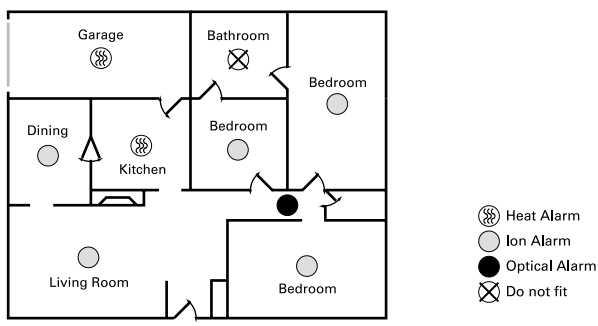
- In new build or refurb projects, protect the alarm with a dust cap to prevent insects or dust contamination by following trades. The property owner or other responsible person must be advised to remove them for the alarms to operate correctly. (Ideally, fit alarms at latest stage possible onto pre-installed mounting base.)

- *Do not* **Meggar Test** *the alarm circuit without disconnecting the alarm. Failure to do so will cause the alarms to fail and be outside of the guarantee provisions.*

Danger – electrical shock hazard!
Never restore power supply until all alarms are completely installed.
Doing so before hand can cause serious injury.

2. Recommended Locations for Smoke/Heat Alarms

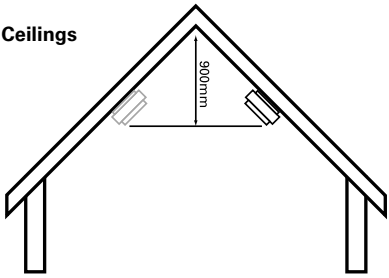
- Ideally locate near centre of room on ceiling but at least 300mm (12") from any light fixture† and 300mm away from any wall.



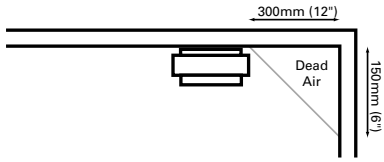
† *See Section 3*

- On peaked ceilings install within 900mm (36") of highest point.

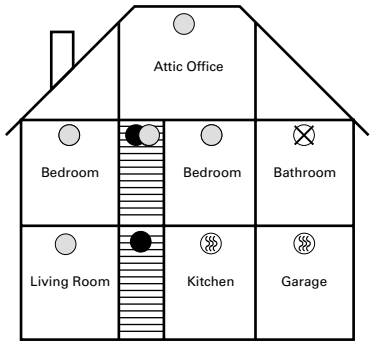
Sloped/Peaked Ceilings



Flat Ceilings



- Install one in every room, including occupied attics, but not in kitchens/bath rooms/shower rooms/boiler rooms/garages.



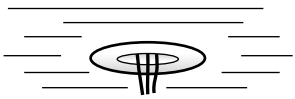
3. Locations to be Avoided *(Smoke Alarms)*

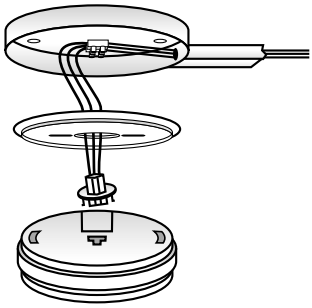
- Do not site within 3m of a steam source e.g. kitchen/bath room or garage.
- Do not site within 1m of dimmer control cabling.
- Do not site within 1.5m of any light fixture
- In locations where temperature may fall below 5°C (41°F), or above 40°C (104°F).
- In very dusty/dirty/insect laden areas.
- Any location where the free flow of smoke to the alarm could be interrupted (e.g. next/above a door/air vent/heater/air-con unit).
- Areas where routine maintenance or operating hush/test button is difficult (e.g. top of stairwells).
- Siting should be in accordance with the current Building Regulations and/or BS5839 Pt6/current I.E.E. Regulations.
- Heat Alarms should not be placed directly over hobs/ovens/sinks

4. Installing Alarm

- These are mains powered alarms, so isolate the mains supply before commencing installation. **They are for installation by a qualified electrician in accordance with the current I.E.E. regulations**.

- Select suitable location having regard to earlier advice.





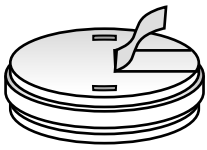
- Bring house wiring through a dry lining box or Kidde Fyrnetics Surface Pattress, into terminal block.

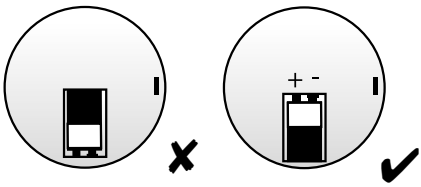
- If alarm is not being interconnected, the white interconnect cable from the alarm is unused. Leave the encapsulated sheathing in place – if exposed in error, seal with PVC tape and secure.

Battery activation

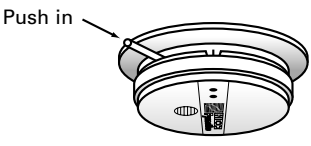
- Remove battery freshness tab to activate.

  The alarm battery door will not shut without a battery in the compartment.*

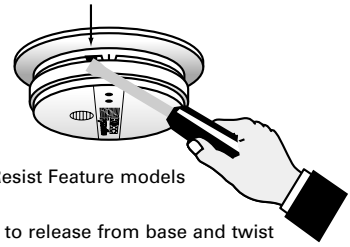




- Connect flying leads from cable harness to terminal block.



Locking pin models

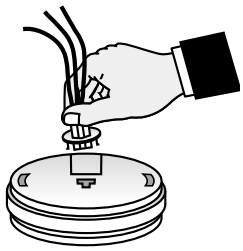


Tamper Resist Feature models

Push screwdriver where shown or remove pin to release from base and twist

** On rechargeable/Long Life models there is no battery drawer – type of alarm is indicated on label on underside of alarm.*

- Close door and plug in harness – if you need to remove, squeeze on sides of connector.
- Check harness is secure into back of alarm.
- Reinstall on alarm base plate affixed to ceiling and push (and hold) test button to verify battery operation.
- Slot in locking pin as in illustration



5.Initial Testing and Checking of Alarm

Having energised circuit, press and hold the test button again – the alarm should sound and other interconnected ones also, within a few seconds.

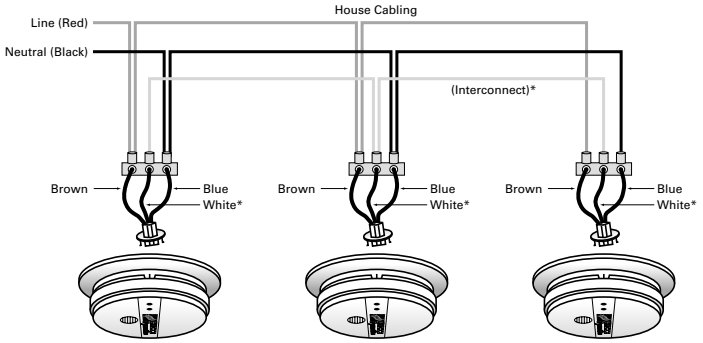
Do this for all alarms.

If any do not sound, isolate mains and recheck cabling.

- On optical alarms if the red L.E.D. blinks every 30-40 seconds and the alarm chirps inbetween, it indicates failure of the sensing chamber.

Advise the house-holder (if present) as to how to test the alarms.

6. Interconnecting



* Interconnect only – if single alarm installation, leave unconnected with sheathing intact.

These are double insulated products and do not need earthing – never use earth conductor to interconnect – use 3 core and earth.

You may interconnect up to 23 Kidde Fyrnetics AC smoke, heat or CO alarms to this unit. i.e. 24 in total.

Crossing line and neutral connections or line and interconnect connections will fatally damage all interconnected alarms invalidating the guarantee.

All interconnected alarms must be powered off the same fuse/circuit breaker.

- Total cable length between alarms must not exceed 250m (273yds) and be 1.5mm in diameter, 3 core and earth (BS6243Y).

7. Timing of Installing/Decorating

Install the base plate (and surface pattress if used) at 1st fix.

- **Do not install alarm itself until following trades have finished e.g. plasterers/painters/carpet fitters etc.**.
- Do not install if property remains damp/unheated.
- Dust and other contaminants e.g. paint fumes, will enter the alarm causing possible nuisance alarms and damage the sensitive components within.
  (It will also invalidate the guarantee provisions.)
- Never plug in or remove cabling harness when circuit is live as you could short circuit it and invalidate the guarantee.

After installation, cover the alarm with the supplied dust cover – **this must be removed just prior to occupation for the alarm to function**.

8. Decorating

- Never paint the alarm itself.
- During redecoration, all alarms should be covered with the supplied dust cover or a plastic bag to prevent contamination by fumes.
  (These can permanently damage the alarm).
  Do not uncover until the surrounding paintwork is thoroughly dried.
- Whilst covered, the alarm **cannot** operate.
  Remove covering as detailed above.

9. L.E.D. Status

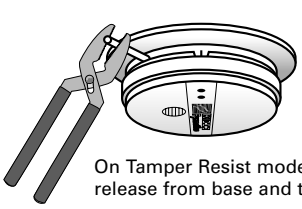
- Green L.E.D. is lit when AC power is present.
- Red L.E.D. blinks to indicate normal operation of alarm function. (If model with battery back-up, also indicates healthy battery.) In alarm state (i.e. triggered), L.E.D. will flash rapidly.
  If interconnected to other alarms only the triggering alarm will have a rapidly flashing L.E.D..
  On optical alarms if the red L.E.D. blinks every 30-40 seconds and the alarm chirps inbetween, it indicates failure of the sensing chamber. Householders should consult Owner's Manual or installer/landlord.
- The alarm sounder and flashing L.E.D. will remain whilst the alarm continues to detect smoke (or excessive heat in a heat alarm).

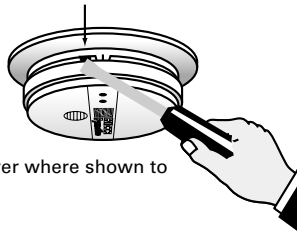
10. Ongoing Maintenance

- Alarms are sensitive electrical devices. The test button should be pushed (and held) once a week to verify operation.
- Once a month the alarm should be wiped with a mildly damp cloth, having previously vacuumed the outside of the unit, especially through the grill area. *The mains supply should first be isolated.*

11. Battery Replacement *(AC models with loose battery only)*

- If the alarm type has replaceable battery cells, they should be replaced annually. (If using alkaline, this can be extended to 2 years).
- A chirp once every 40 seconds indicates the battery needs replacement. Do this as soon as possible.
- Mains power should be disconnected at the Consumer Unit/fuse box.
- *See section 4 to see how to remove alarm and locate battery draw.*
- Replace with an alkaline battery such as Eveready Energiser 522, Duracell MN1604, Duracell Ultra MX1604. (Do not use rechargeable cells.)
- *If a chirping noise is present after this, wait for 10 minutes to elapse, as it may be due to the hush button having been pushed.*
  On Long Life models there are no user replaceable components.





On Tamper Resist models, depress screwdriver where shown to release from base and twist.

12. Repair/Servicing

- If the alarm is not functioning, first check the troubleshooting section. If this does not rectify the problem:
- Ensure the alarm has recently been cleaned and that the green L.E.D. is lit.
- If within guarantee, return postage paid to the address at the end of this manual, with a copy of the invoice or proof of date of installation.
- *Do not attempt to dismantle the alarm – this will invalidate the guarantee.*

13. Troubleshooting

- Always turn off the mains supply to AC alarms before checking connections etc..

Symptom	Possible cause/solutions
1. Green L.E.D. not lit	*a. Loss of mains power – check at Consumer Unit for Blown Fuse or tripped Circuit Breaker.* *b. Check cable harness at back of alarm, is properly plugged in (see "Battery Changing" section).*
2. Frequent nuisance alarms	*See sections 4d and 7.*
3. Alarm chirps every 40 seconds	*See section 5 (if the hush button has been pressed the unit will chirp for 7 minutes to indicate it is in hush mode).*
4. Alarm does not sound when test button pressed and held.	*See parts 1a and 1b above.*
5. Interconnected alarms do not sound when test button is pressed and held.	*See part 1b above – consult a qualified electrician or your Landlord to remedy as soon as possible.*

14. Limitations of Smoke/Heat Alarms

Warning! Alarms are devices that can provide early warning of possible fires at a reasonable cost; however, alarms have sensing limitations. *Ionisation* type alarms offer a broad range of fire sensing capability but are better at detecting fast flaming fires than slow smouldering fires. *Optical (Photo-electric)* alarms sense slow smouldering fires better than flaming fires. Home fires develop in different ways and are often unpredictable. Neither type of alarm (Photo-electric or Ionisation) is always best, and a given alarm may not always provide warning of a fire.
Heat alarms are triggered when a temperature of 57°C is reached – they must always be used in conjunction and interconnected to smoke alarms.

Loose batteries, where fitted must be of the specified type, in good condition and installed properly.

AC only powered alarms will not operate if AC power has been cut off such as by an electrical fire, an open fuse or loss of mains supply.

All alarms must be tested regularly to make sure the batteries and the alarm circuits are in good operating condition.

Smoke alarms cannot provide an alarm if smoke does not reach the unit. Therefore, smoke alarms may not sense fires starting in chimneys, walls, on roofs, on the other side of a closed door or on a different floor. If the alarm is located outside the bedroom or on a different floor, it may not wake up a sound sleeper. Equally heat alarms will only be triggered if they are correctly sited to detect heat. The use of alcohol or drugs may also impair ones ability to hear the alarm. For maximum protection a smoke alarm should be installed in each sleeping area on every level of a home. Hearing impaired occupiers should consider fitting additional strobe accessories to give a visual alarm.

Although smoke/heat alarms can help save lives by providing an early warning of a fire, they are not a substitute for an insurance policy. Home owners and renters should have adequate insurance to protect their property.

15. Service and Guarantee

If after reviewing this manual you feel that your smoke alarm is defective in any way, do not tamper with the unit. Return it prepaid for servicing to: Kidde Safety Europe, Mathisen Way, Colnbrook, SL3 0HB, UK – Email: info@kiddesafety.co.uk, or refer to your installer or Landlord.

Guarantee
Kidde Fyrnetics warrants to the purchaser that the enclosed smoke alarm (but not any loose batteries) will be free of defects in material, workmanship or design under normal use and service for a period of 6 years,10 years on Long Life [LL] products (from the date of purchase). The obligation of Kidde Fyrnetics, 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, postage prepaid, to Kidde Safety Europe, Mathisen Way, Colnbrook, SL3 0HB, UK.

This guarantee shall not apply to the alarm if it has been damaged, modified, abused or altered after the date of purchase, or if it fails to operate due to incorrect selection, siting, installation, maintenance or inadequate AC or DC electrical power.

The liability of Kidde Fyrnetics, 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 be liable for consequential loss or damaged resulting from the failure of the alarm or for the breach of this or any other guarantee, express or implied, or for damaged caused by failure to abide by the instructions supplied. This guarantee does not affect your statutory rights. Kidde Fyrnetics makes no guarantee, express or implied, written or oral, including that of merchantability or fitness for any particular purpose, with respect to the battery, except built-in rechargeable/Long Life cells.