

## IMPORTANT NOTICE

- Smoke Alarm will not work until the power-on button is pressed.
- Complete Smoke Alarm must be replaced after 10 years. The battery is not replaceable.

P/N B14464 Rev5

© Ei Electronics 2013



## 10 YEAR SMOKE ALARM

WITH 10 YEAR LITHIUM BATTERY BUILT-IN



### Models:

Ei100TY

Ei100TYK

Ei100TYC

WITH INTERCONNECT

Contains vital information on unit operation and installation. Read and retain carefully. If you are just installing this unit this leaflet **MUST** be given to the householder.

**Please read the first short section containing basic information.**

## 1. Basic Information about your Smoke Alarm

A Smoke Alarm is an early warning device. Used correctly it can give you and your family valuable extra time to escape.

Push the power-on button (inside the cover) until it clicks to connect the battery permanently. Close the cover and press the test button - horn should sound. Note: Battery cannot be disconnected using the power on button.

- A Smoke Alarm does not prevent fires.
- Install correctly, in the centre of the ceiling if possible.
- Test weekly.
- Plan your escape route.
- Proper protection may require more than one Smoke Alarm.
- If you have any doubt or query about Smoke Alarms consult the supplier or your local Fire Brigade.
- Nuisance alarms can be quickly silenced for 8 minutes by pressing the hush button on the cover.
- The complete smoke alarm must be replaced by the year marked on the unit.
- The complete Smoke Alarm must also be replaced if it beeps every 40 seconds for **over an hour** as this indicates the battery is depleted. Cut the "end of life" red wire before discarding, to stop beeps.

## 2. Locating your Smoke Alarm

Sufficient smoke must enter your Smoke Alarm before it will respond. Your Smoke Alarm needs to be within 10 paces (7.5 metres/25 feet) of the fire to respond quickly. It also needs to be in a position where its alarm can be heard throughout your home, so it can wake you and your family in time for you all to escape. A single Smoke Alarm will give some protection if it is properly installed, but most homes will require two or more to ensure that a reliable early warning is given. For maximum protection you should put individual Smoke Alarms in all the rooms where fire is most likely to break out.

Your first Smoke Alarm should be located between the sleeping area and the most likely sources of fire (living room or kitchen for example). But it should not be more than 10 paces (7.5 metres) from the door to any room where a fire might start and block your escape from the house.

### (a) Single Storey Dwelling

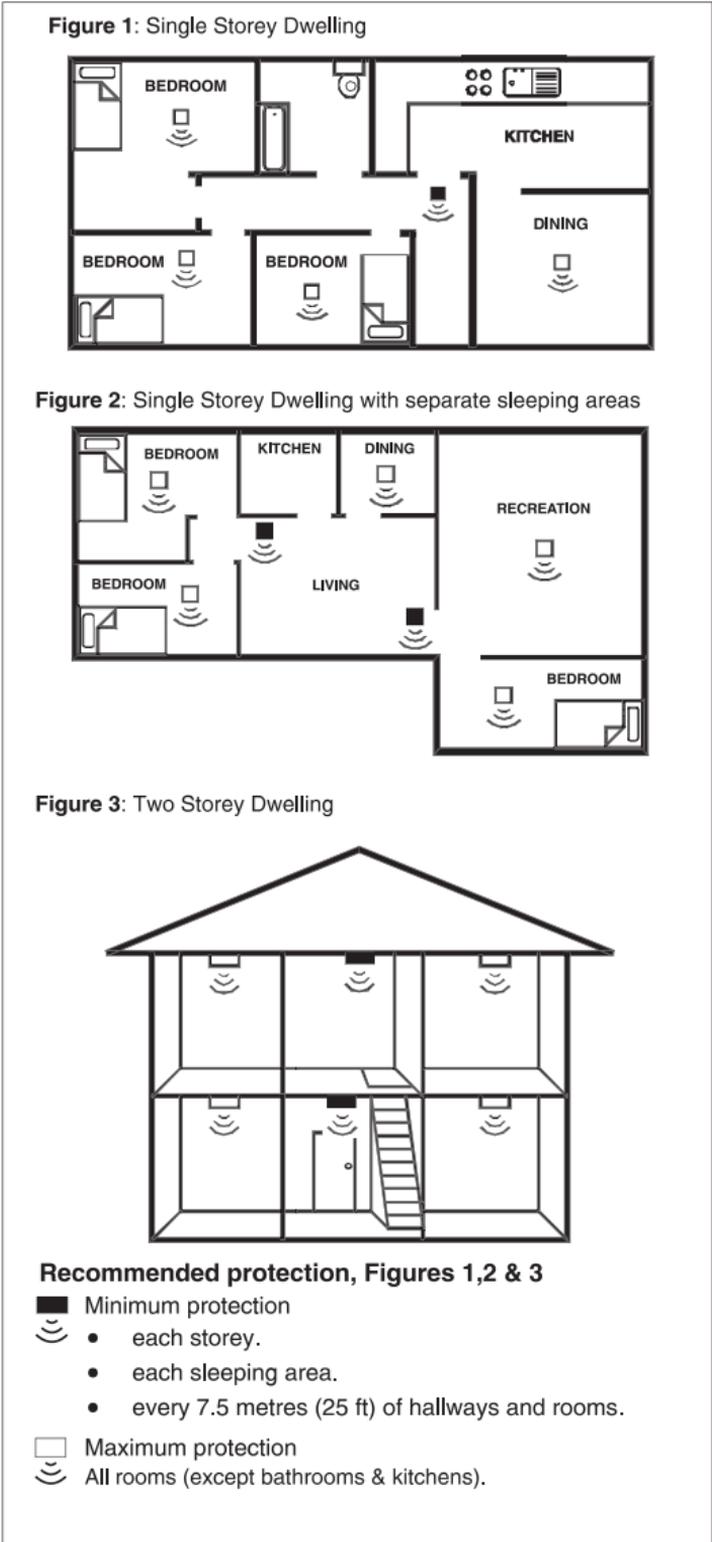
If your Home is on one level (a bungalow or mobile home for example) you should put your first Smoke Alarm in a corridor or hallway between the sleeping and living areas. Place it as near to the living area as possible, but make sure you can hear it loudly enough to wake you in the bedroom. (for example, see figure 1).

If your bungalow is very large and the corridor or hallway is more than say 20 paces (15 metres) long, one Smoke Alarm will not be sufficient. This is because no matter where it is located it will be more than 7.5 metres from potential fires.

In houses with more than one sleeping area, Smoke Alarms should be placed between each sleeping area and the living area (for example, see figure 2).

**(b) Multi Storey Dwellings**

Multi storey dwellings should have a smoke alarm at each level (see figure 3). The best place for your first Smoke Alarm is in the downstairs hallway near the stairs. This is because smoke is likely to be detectable in the hallway before it reaches the upstairs landing and bedrooms. Your second Smoke Alarm should be upstairs, because the downstairs Smoke Alarm is unlikely to detect the smoke from a fire in a bedroom upstairs.

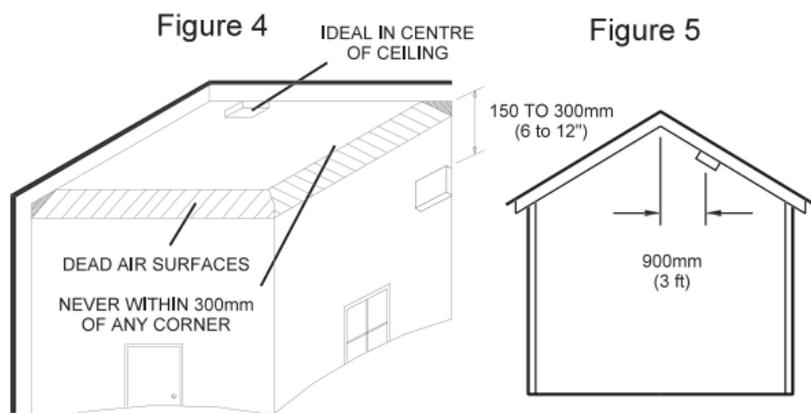


### (c) Maximum Protection

For maximum protection you should put individual Smoke Alarms in all the rooms where fire is most likely to break out (apart from the locations to avoid, mentioned on page 5). The living room is the most likely place for a fire to start at night, followed by the kitchen and then the dining room. You should also consider putting Smoke Alarms in any bedrooms where fires might occur, for instance, where there is an electrical appliance such as an electric blanket or heater, or where the occupant is a smoker. You should also consider putting Smoke Alarms in any rooms where the occupant is unable to respond very well to a fire starting in the room, such as an elderly or sick person or a very young child.

### (d) Checking you can hear your Smoke Alarm

With the Smoke Alarm sounding in its intended location, check you are able to hear it in each bedroom with the door closed, above the sound of your radio. The radio should be set to a reasonably loud conversation level. If you can't hear it over your radio the chances are that it wouldn't wake you.



If a Smoke Alarm is too far away for it to wake you, it is best to link it to another Smoke Alarm near the bedroom. The model Ei 100TYC Smoke Alarms can be interconnected so when one alarm senses smoke, all connected alarms respond. (see page 6 for further details).

## 3. Positioning your Smoke Alarm

### (a) Ceiling Mounting

Hot smoke rises and spreads out, so a central ceiling position is the preferred location. The air is “dead” and does not move in corners, therefore Smoke Alarms must be mounted away from corners. Place the unit at least 300mm (12 inches) from any light fitting or decorative object which might obstruct smoke entering the Smoke Alarm. Keep at least 300 mm (12 inches) away from walls and corners. (See figure 4).

### (b) Wall Mounting

When a ceiling position is not practical (for example on a ceiling having exposed beams or joists, or built-in radiant heating) put the top edge of your Smoke Alarm between 150 and 300mm (6 and 12 inches) below the ceiling. Keep at least 300mm (12 inches) from corners. (See figure 4).

### (c) On a sloping Ceiling

In areas with sloping or peaked ceilings install your Smoke Alarm 900mm (3ft) from the highest point measured horizontally (see figure 5), because “dead air” at the apex may prevent smoke from reaching the unit.

### (d) Locations to Avoid

Don't place your Smoke Alarm in any of the following areas:

- **Bathrooms, kitchens, shower rooms, garages** or other rooms where the smoke alarm may be triggered by steam, condensation, normal smoke or fumes. Keep at least 6 metre (20 ft) away from sources of nuisance alarms - wall mounting if necessary.
- **Attics** or other places where extremes of temperature may occur (below 4°C/34°F or above 40°C/104°F).
- Near a decorative object, **door, light fitting, window molding** etc., that may prevent smoke from entering the Smoke Alarm.
- Surfaces that are normally **warmer** or **colder** than the rest of the room (for example attic hatches, uninsulated exterior walls etc). Temperature differences might stop smoke from reaching the unit.
- Next to or directly above **heaters** or **air conditioning vents, windows, wall vents** etc. that can change the direction of airflow.
- In very **high** or **awkward areas** where it may be difficult to reach the alarm (for testing, etc).
- Locate unit at least 1.5m (5 feet) and route wiring at least 1m (3 feet) away from **fluorescent light fittings** as electrical “noise” and/or flickering may affect the unit.
- Locate the unit at least 1 metre (3ft) from **dimmer controlled lights** and wiring - some dimmers can cause interference.
- Locate away from very **dusty** or **dirty areas** as dust build-up in the chamber can make unit too sensitive and prone to alarm. It can also block the insect screen mesh and prevent smoke from entering the chamber.
- Do not locate in **insect infested areas**. Small insects getting in to the chamber can cause intermittent alarms.

### (e) Nuisance/False Alarms

If, when the alarm goes off, there is no sign of smoke heat or noise to indicate that there is a fire, you should get your family into a safe place, before you start investigating.

Check the house carefully in case there is a small fire smouldering somewhere.

Check whether there is some source of smoke or fumes, for example cooking fumes being drawn past the Smoke Alarm by an extractor.

If there are frequent nuisance/false alarms it may be necessary to re- locate the device away from the source of the fumes.

This Smoke Alarm is designed for more difficult areas, as you can silence the alarm for 8 minutes. This gives time for smoke or fumes to clear, (see page 8 for more details).

## 4. Installing your Smoke Alarm

### (a) Attaching to Ceiling or Wall

(NB details of how to interconnect the Smoke Alarm Ei100TYC are given on page 7).

The Smoke Alarm is battery operated and needs no wiring, (except when interconnecting). Use figure 6 below, as a help in mounting.

1. Pull Cover open at Tab (2). Remove Cover from Base by separating at rear Snap-in Hinges (5).

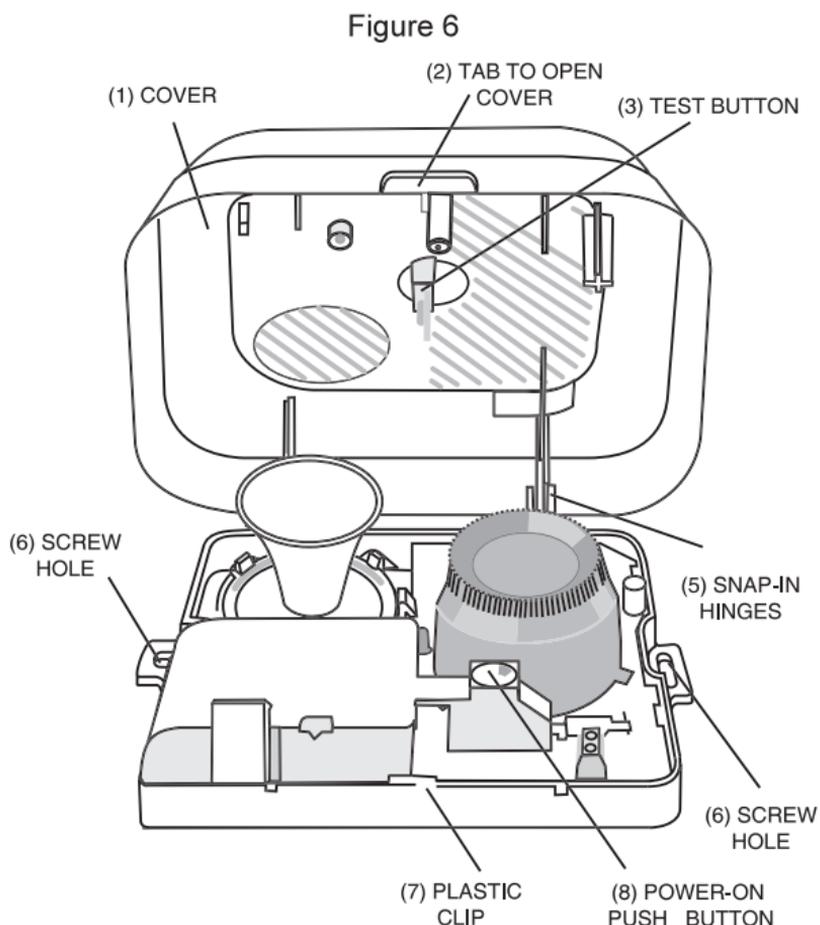
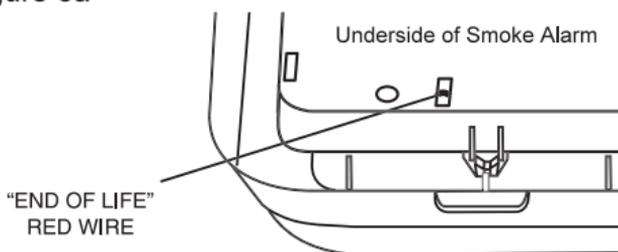


Figure 6a



2. Place the Base on ceiling or wall exactly where you want to mount the unit. With a pencil, mark the location of the Screw Holes (6).

3. Taking care to avoid any electrical wiring in the ceiling or wall, drill a hole through the centers of the marked locations.

Push the plastic Screw Anchors provided into the drilled holes. Screw in firmly.

### (b) Connecting the built-in Lithium battery

Push the power-on button (8), (see figure 6) until it clicks to connect the battery permanently. Note: You may hear a loud chirp when pressing the button. **This is normal.**

To close the cover match up the snap-in hinges (5) and gently press together until they are attached. Press the test button (3) - the horn should sound to show the Smoke Alarm is now working. If the horn does not sound try pushing the power-on button (8) again. **Note:** The power-on button cannot be used to disconnect the battery.

## 5. Interconnecting your Smoke Alarm

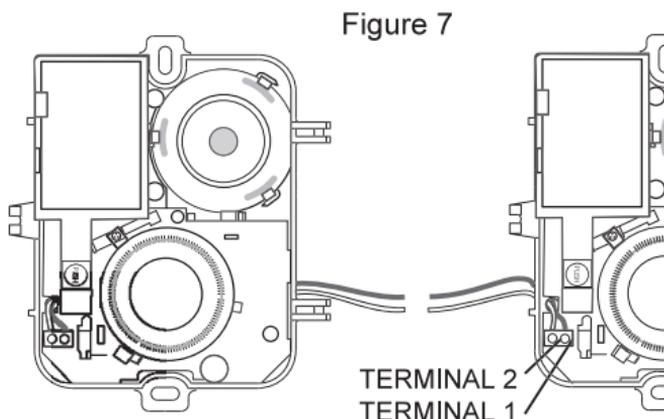
A maximum of twelve Ei100TYC Smoke Alarms may be wired together such that when one unit senses smoke all other units sound a warning. This helps ensure smoke alarms will be heard. (Model Ei100TY & Ei100TYK can not be interconnected).

The Ei100TYC Ionisation Smoke Alarm may also be interconnected to the Ei Optical Smoke Alarm, model number Ei3105TYC.

### **Warning: Do not interconnect to any other Smoke Alarms**

A maximum of 250 metres (820 feet) of wire can be used, (maximum resistance between detectors 50 ohm). The units are interconnected by wiring all the terminals marked 1 together, and all the terminals marked 2 together, as shown in Figure 7. An opening should be made in the label covering the wiring hole in the base, and the wires routed into the unit as shown. Note that the wiring inside the unit must be kept clear of the test button contacts, but must not impede the air flow. Draughts from wiring openings, conduit, or mounting boxes/holes, may blow smoke away from the sensing chamber, making it insensitive. It is essential that all such openings are sealed by silicone sealant or similar.

After wiring together the Interconnect Smoke Alarms, test the first unit by pressing the button. All the detectors should alarm within about 5 seconds. Check all the other units similarly.



These Smoke Alarms should be interconnected only within the confines of a single family living unit. If they are connected between different units there may be excessive nuisance

alarms. Everybody may not be aware that they are being tested or that it is a nuisance alarm caused by cooking etc.

### Indicator light

When interconnected units are in alarm the fast flashing red light behind the test button indicates the unit initiating the alarm. To silence a nuisance alarm, the hush button on the unit with the fast flashing red light must be pushed. (Pressing the hush button on any of the other units will not silence the alarm.)

## 6. Looking after your Smoke Alarm

### (a) Testing your Smoke Alarm

It is recommended that you test your Smoke Alarm once a week to be sure the unit is working. It will also help you and your family to become familiar with the sound of the Alarm.

Press and hold the test button until the Alarm sounds (it may take up to 10 seconds), (Figure 8). The Alarm will stop sounding shortly after the button is released. If the Alarm fails to sound, follow this checklist.

1. Press the power on button to connect the battery permanently.
2. Check the cover is correctly snapped on to its hinge and that it is fully closed.
3. Refer to "Cleaning Your Smoke Alarm" 6 (c) on page 9.

Figure 8



### **WARNING: Do not test with flame.**

This can set fire to your Smoke Alarm and damage your house.

We do not recommend testing with smoke as the results can be misleading unless special apparatus is used. Pressing the test button simulates the effect of smoke during a real fire and is the best way to ensure the Smoke Alarm is operating correctly.

### Power Indicator Light

Some Smoke Alarms (models Ei100TY and Ei100TYC) have a Power Indicator Light which flashes once a minute through the test button to show the Smoke Alarm is powered. Check regularly. Replace the Smoke Alarm if the flashing stops. (This does not apply to the Ei100TYK model).

### (b) Hush Button

This model has a special false Alarm silencer feature to help you control nuisance false alarms.

1. To cancel a false Alarm, press the Hush Button located on the lower right-hand corner. The Alarm will automatically switch to a reduced sensitivity condition. This condition allows unwanted alarms to be silenced for a period of approximately 8 minutes.

2. The unit will reset to normal sensitivity at the end of the silenced period. If additional silenced time is required, simply push the Hush Button again.

3. To quickly return to normal non-silenced operation, simply push the Test Button; the Alarm will sound briefly and return to its normal, sensitive Alarm mode.

4. If the cause of the Alarm is not clear, it should be assumed that it is due to an actual fire and the dwelling should be evacuated immediately.

If kitchen usage/layout is such that there are an unacceptable level of nuisance alarms, re-locate the Smoke Alarm where it will be less affected by cooking fumes etc.

### **(c) Cleaning your Smoke Alarm**

Clean your Smoke Alarm regularly. Use a soft bristle brush or the brush attachment of your vacuum cleaner to remove dust and cobwebs from the sides and cover slots where the smoke enters. Keep cover closed while cleaning. Do not vacuum or brush inside the Smoke Alarm. To clean the cover, remove it completely and use only mild soap and water. Dry cover thoroughly before replacing it.

### **WARNING: Do not paint your Smoke Alarm.**

Other than the maintenance and cleaning described in this leaflet, no other customer servicing of this product is required.

Repairs, when needed, must be performed by the manufacturer.

### **(d) End of life**

The entire Smoke Alarm must be replaced if:-

(i) The unit is installed for over 10 years (check the replace by date marked on the side of the base).

(ii) The unit is giving a short beep every 40 seconds for over 1 hour.

(iii) The unit fails to sound the horn loudly when the test button is pressed.

Before the Smoke Alarm is discarded, cut "end of life" red wire shown in figure 6a with a scissors to stop the low battery beeps or the possibility of the unit alarming. **Do not put the Smoke Alarm into a fire.**

We recommend that the unit is maintained (i.e. battery checked and unit cleaned) as described above at least yearly.

## **7. Important Safeguards**

When using household protective devices, basic safety precautions should always be followed, including those listed below:

- Please read all instructions.
- Rehearse emergency escape plans so everyone at home knows what to do in case the Alarm sounds.

- **NOTE:** Constant exposure to high or freezing temperatures or high humidity may reduce the life of the batteries.
- Do not cut the power lead to stop Alarm sounding as the battery cannot be reconnected. (Pressing the Hush Button or fanning vigorously with a newspaper or similar will remove nuisance smoke from the Smoke Alarm and stop it sounding.)
- Dispose of the complete Smoke Alarm including the batteries inside. Do not attempt to recharge or burn the batteries, as they may explode.
- To maintain sensitivity to smoke, do not paint or cover smoke Alarm in any manner; do not permit any accumulation of cobwebs, dust or grease.
- The black chamber located in the Smoke Alarm contains a small amount of radioactive material (0.9 Microcuries Americium 241). Do not tamper with the chamber. You may safely install and clean the Smoke Alarm following instructions in this leaflet.
- If unit has been damaged in any way or does not function properly, do not attempt a repair. Return Smoke Alarm (see - Getting your Smoke Alarm Serviced page 13.)
- In the United Kingdom Ionisation Smoke Alarms can be disposed of in normal household refuse, but due to the tiny amount of radioactive material contained in the unit, no more than one Alarm per dustbin.
- In the Republic of Ireland Ionisation Smoke Alarms should be returned for disposal to the nearest address at the end of this leaflet.
- This appliance is intended for residential type environments only.
- This is not a portable product. It must be mounted following the instructions in this instruction leaflet.
- Smoke Alarms are not a substitute for insurance. The supplier or manufacturer is not your insurer.

### **(b) Limitations of Smoke Alarms**

Smoke Alarms have significantly helped to reduce the number of fire fatalities in countries where they are widely installed.

However independent authorities have stated that they may be ineffective in up to 35% of all fires. There are a number of reasons for this:

Smoke Alarms will not work if the batteries are depleted or if they are not connected. Test regularly and replace entire Smoke Alarm when battery is depleted.

Smoke Alarms will not detect fire if sufficient smoke does not reach the Alarm. Smoke may be prevented from reaching the Alarm if the fire is too far away, for example, if the fire is on another floor, behind a closed door, in a chimney, in a wall cavity, or if the prevailing air draughts carry the smoke away. Installing smoke alarms on both sides of closed doors and installing more than one smoke Alarm as recommended in this leaflet very significantly improve the probability of early detection.

The Smoke Alarm may not be heard.

A smoke Alarm may not wake a person who has taken drugs or alcohol.

Smoke Alarms may not detect every type of fire to give sufficient early warning. They are particularly ineffective with: fires caused by smoking in bed, escaping gas, violent explosions, poor storage of flammable rags and/or liquids, (for example petrol, paint, spirits etc), overloaded electrical circuits, arson, children playing with matches.

The Smoke Alarm must be replaced after 10 years operation.

The Smoke Alarm has been designed to operate for 10 years and it is covered by a 5 year limited guarantee. The 10 year life is based on accelerated testing, as the actual Smoke Alarm has not been on test for 10 years. The batteries in this Alarm cannot be replaced, and when the batteries are depleted, you must replace the complete Smoke Alarm for continued protection against fire.

## 8. Planning your Escape for when the Alarm goes off

Use the Smoke Alarm Test Button to familiarize your family with the Alarm sound and to practice fire drills regularly with all family members. Draw up a floor plan that will show each member at least 2 escape routes from each room in the house. Children tend to hide when they don't know what to do. Teach children how to escape, open windows, and use roll up fire ladders and stools without adult help. Make sure they know what to do if the Alarm goes off - see below.

1. Check room doors for heat or smoke. Do not open a hot door. Use an alternate escape route. Close doors behind you as you leave.



2. If smoke is heavy, crawl out, staying close to floor. Take short breaths, if possible, through a wet cloth or hold your breath. Most people die from smoke inhalation rather than from flames.



3. Get out as fast as you can. Do not stop for packing. Have a prearranged meeting place outside for all family members. Check everybody is there.



4. Call the Fire Brigade from a neighbour's house. Remember to give your name and address.



5. **NEVER** re-enter a burning house.



## FIRE SAFETY HINTS

Store petrol and other flammable materials in proper containers.

Discard oily or flammable rags.

Always use a metal fireplace screen and have chimneys cleaned regularly.

Replace worn receptacles, switches, home wiring and cracked or frayed electrical cords and plugs.

Do not overload electrical circuits.

Keep matches away from children.

Never smoke in bed. In rooms where you do smoke, always check under cushions for smouldering cigarettes and ashes.

Service furnaces and heating systems regularly.

Be sure all electrical appliances and tools have a recognized approval label.

This device cannot protect all persons at all times. It may not protect against the three most common causes of fatal fires:

1. Smoking in bed.
2. Leaving children at home alone.
3. Cleaning with flammable liquids, such as petrol.

Further information can be obtained from the Home Office Publication entitled "Smoke Detectors in the Home" (FB2) or from your local fire prevention officer.

## Fit both Ionisation and Optical Sensor Smoke Alarms

Both types respond in all standard fires but each type may respond faster to particular fires as shown. Ei Electronics manufactures two complementary 10 Year Smoke Alarms, Optical Smoke Alarm Ei3105TYC and Ionisation Smoke Alarm Ei100TYC each with a built in Lithium battery. For **dual** protection install each type.

### Optical Sensor

Best for slow **smouldering** fires  
- large smoke **particles**



### Ionisation Sensor

Best for fast **flaming** fires  
- small smoke **particles**



### The Home Office states (in FB2):

"If your home has more than one floor, at least one alarm should be fitted on each level. In this case a combination of Optical and Ionisation alarms, preferably interconnected, will give the best protection."

## 9. Getting your Smoke Alarm Serviced

If your Smoke Alarm fails to work after you have read the sections on “Connecting the built-in Lithium battery” and “Looking after your Smoke Alarm” contact Customer Assistance at the nearest address given at the end of this leaflet. If it needs to be returned for repair or replacement put it in a padded box, shipping pre-paid and send it to “Customer Assistance and Information” at the nearest address given on the Smoke Alarm or in this leaflet. State the nature of the fault, where the Smoke Alarm was purchased and the date of purchase.

Disconnect the battery power by cutting the “end of life” red wire (see figure 6a) as described on the label on the side of the unit before shipping. This is to prevent low battery beeps and/or the unit alarming during shipment.

## 10. Five Year Guarantee (Limited)

Ei Electronics guarantees this product against any defects that are due to faulty material or workmanship for a five year period after the original date of consumer purchase or receipt as a gift. This guarantee only applies to normal conditions of use and service, and does not include damage resulting from accident, neglect, misuse, unauthorised dismantling or contamination howsoever caused. If this product has become defective it must be returned to Ei Electronics (see “Getting Your Smoke Alarm Serviced”) with proof of purchase. If the product has become defective during the five year guarantee the manufacturer will repair or replace the unit without charge. This guarantee excludes incidental and consequential damages.

Do not interfere with the product or attempt to tamper with it. This will invalidate the guarantee.

The crossed out wheelie bin symbol that is on your product indicates that this product should not be disposed of via the normal household waste stream. Proper disposal will prevent possible harm to the environment or to human health. When disposing of this product please separate it from other waste streams to ensure that it can be recycled in an environmentally sound manner. For more details on collection and proper disposal, please contact your local government office or the retailer where you purchased this product.



**CE**  
0086

Ei Electronics, Shannon, Co. Clare, Ireland  
08  
DoP No.13-0001

EN14604:2005 + AC:2008

Smoke Alarm Devices:  
Ei100TY, Ei100TYK, Ei100TYC

### Fire Safety

Nominal activation conditions/ sensitivity, response delay (response time) and performance under fire condition	<b>Pass</b>
Operational reliability	<b>Pass</b>
Tolerance to voltage supply	<b>Pass</b>
Response delay and temperature resistance	<b>Pass</b>
Vibration resistance	<b>Pass</b>
Humidity resistance	<b>Pass</b>
Corrosion resistance	<b>Pass</b>
Electrical stability	<b>Pass</b>

The Declaration of Performance No. 13-0001 may be consulted at [www.eielectronics.com/compliance](http://www.eielectronics.com/compliance)

**AICO Ltd.**, Mile End Business Park,  
Maesbury Rd, Oswestry, Shropshire SY10 8NN  
Telephone: 0870 758 4000  
**[www.aico.co.uk](http://www.aico.co.uk)**

**Ei Electronics**, Shannon, Co. Clare, Ireland.  
**[www.eielectronics.com](http://www.eielectronics.com)**