Contents

Introduction

Operation principle

The optical smoke detector is especially suited for detecting slow-starting fires that may smoulder for several hours before breaking out. It is designed to protect the private areas of buildings or apartment blocks and mobile homes.
It can be:
- used as a stand-alone unit,
- integrated into a Logisty alarm system **with TwinPass® control panels L2302F, L3303F, L3305F and L3310F**,
- inter-connected in a wired network of up to 40 detectors.

In stand-alone mode, it produces the following alarms and **indications throughout the smoke detection period:**

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Detector transmitting the smoke detection signal	the LED flashes quickly	lit	a built-in alarm sounds on a **continuous** basis (85 dB(A) at 3m)
Other wired inter-connected detectors	-	lit	a **modulated** built-in audible alarm sounds (85 dB(A) at 3m)

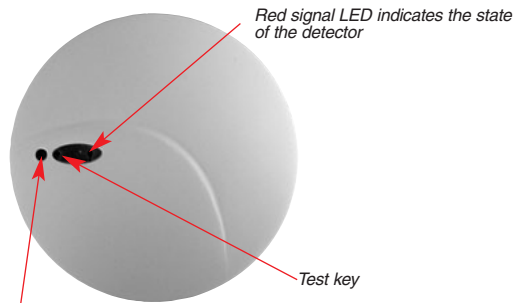Connected to a Logisty alarm system it also activates **immediately smoke is detected:**
- triggering of the control panel siren and the alarm sirens in fire alarm modulation for 5 minutes,
- triggering of the telephone dialler.

It is recommended to replace the smoke detector subject to a regular and normal maintenance every 10 years. The replacement date is indicated on back of the product.
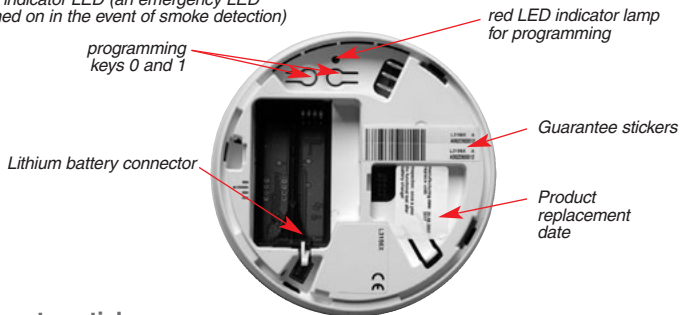
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Description

Red signal LED indicates the state of the detector

Test key

Connect the lithium battery respecting the polarity

⇨ The red indicator lamp flashes for 15 sec, then once every 10 sec, signalling the normal operation of the detector.

White indicator LED (an emergency LED is turned on in the event of smoke detection)

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programming keys 0 and 1

red LED indicator lamp for programming

Guarantee stickers

Lithium battery connector

Product replacement date

Guarantee stickers

① Detach the removable pre-cut section of the guarantee sticker, and stick it on to the guarantee extension request supplied with the control panel or the telephone dialler.

② If you are adding to an existing system, stick the guarantee sticker on to the extension request supplied with the product.

Personalised radio house/site code programming

Using the two programming buttons 0 and 1 enter your personalised radio code to enable communication between the sensor and the other components of the system.

① Use the personalised radio code selected in § "Selecting a personalised radio code" in the guide to the system. On the first line, put crosses in the squares corresponding to your chosen code.

	1	2	3	4	5	6	7	8	9	10
Personalised radio code										
Smoke detector code										

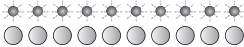② On the 2nd line of the table, fill in a "0" (zero) below each cross.

③ Fill in the empty boxes of the second line with a "1" (one).

④ Program the radio code by pressing the "0" and "1" keys on the detector as indicated below:

Start programming by pressing both keys simultaneously until the indicator light goes out	Enter the sequence of 10 short key presses corresponding to the personalised radio code	Confirm the programming by pressing both keys simultaneously until the indicator light goes out. The indicator light will come on for 5 seconds to indicate the programming has been successful

Checking the personalised radio code

Control panel in test mode (tamper sensor released).
Hold down the detector programming key "0":

● **correct:** high pitched BEEP and the "Fire" indicator light comes on or the voice message *"Fire alarm"*,

● **incorrect:** low BEEP from the control panel or no voice message at all. Reprogramme the personalised radio code.

If you make a mistake, the red indicator light will flash. Repeat the procedure from the beginning.

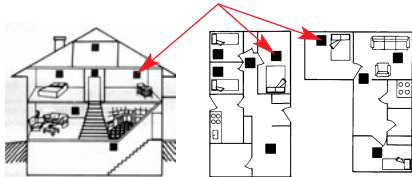## Choosing the right place

The detector must be placed:

● in rooms where there is a risk of fire (living rooms with a fireplace, children's bedrooms, lofts or basements that are occupied),

● preferably at the center of the ceiling,

● at a distance from ventilation grilles where smoke might spread,

● more than 50 cm away from obstacles (walls, partitions, beams, etc.),

● at either end of corridors more than 10 m long.

If the smoke detector cannot be installed at a horizontal ceiling, mount it:

● more than 50 cm away from the corners of the room (Fig. 1),

● 50 to 60 cm away from the ceiling (Fig. 1),

● far away from potential sources of electrical interference (electricity meter, metal cabinet, etc.),

● if it is to be installed on a metal wall, insert a shim made of non-magnetic material (wood or plastic).
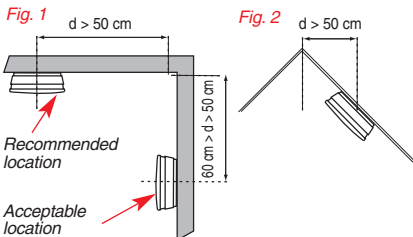
The detector must not be placed:

● directly on a metal surface,

● near fluorescent tubes,

● in very dusty rooms,

● in rooms where the temperature could drop below -10°C or rise above +55°C, as this will prevent the detector from operating properly,

● less than 1 m away from heating, cooling or ventilation grilles likely to spread smoke,

● less than 6 m away from a fireplace or wood-burning stove where combustion fumes could cause untimely alarms,

● in premises where cooking fumes and steam could result in untimely triggering,

● in premises where there is a risk of condensation or humidity (bathrooms, laundries, etc.),

● at the top of pointed (A-shaped) ceilings as an air pocket at this point could prevent smoke from reaching the detector (Fig. 2).

Installation examples:

Smoke detectors

Mounting examples:

Fig. 1 d > 50 cm

60 cm > d > 50 cm

Recommended location

Acceptable location

Fig. 2 d > 50 cm

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Testing the radio link at the chosen location

If you are adding to your system, you must first of all put the control panel into test mode in order to carry out this test. Refer to the alarm system installation guide.

① Hold down the detector programming key "0" or the test key until the integral alarm sounds:

● **correct:** high pitched BEEP and the "Fire" indicator light comes on or the voice message *"Fire alarm"*,

● **incorrect**: Low BEEP from the control panel or no voice message at all, go back to the smoke detector at the control panel.

② Return the control panel to normal mode (see alarm system installation guide).
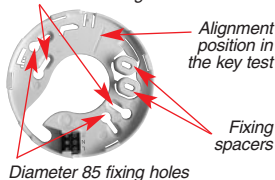
Mounting

Standard fixing method

① Install the base in the desired location, then mark the position of the 2 fixing holes using a pencil (Ref. mark ⑥⓪ or ⑧⑤).
② Drill holes using a 5 mm Ø drill bit.
③ Fix the base using appropriate pins and screw.

Fixing with flush-mounting box

● For boxes of 60 mm diameter: use holes marked ⑥⓪.
● For boxes of 85 mm diameter: use holes marked ⑧⑤.
● Fix the base using suitable screws.

For passing the interconnecting cables, remove the 2 fixing spacers and insert them between the ceiling and the mounting base by covering the 2 selected fixing holes.

Diameter 60 fixing holes

Alignment position in the key test
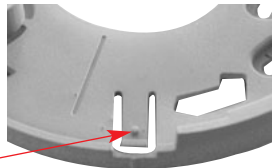
Fixing spacers

Diameter 85 fixing holes

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Optional locking of the detector on the mounting base

Optional locking is designed to prevent unauthorized dismounting of the detector.
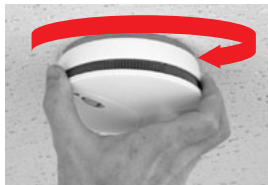Using cutting pliers, cut the locking nipple.

Opening will now be possible only by means of a flat blade screwdriver.

Locking nipple

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Align the 2 locating arrows marked on the mounting base and the detector, then lock the unit by turning clockwise.

The detector cannot be fixed to the base if the battery is not properly seated.
Do not use force.

Installing several detectors in a network

It is possible to inter-connect up to 40 detectors to enable alarm activation over the whole range of smoke detectors of the home.

You can therefore be sure of being warned if smoke is detected in a room far away from the room in which you are in.

① After the detector's mounting base has been installed (see Mounting), unfasten the connector block.
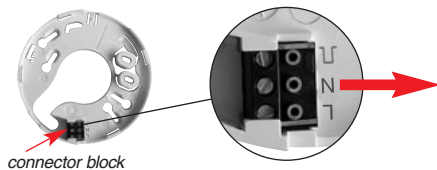
connector block

② Then wire as follows:

Cable terminals

Not used

Signal   Common
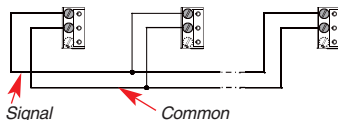
For a wire of 1.5 mm² section the total length of the network must not exceed 400 m.

③ Fix the connector block back onto the mountting base.

④ Lock the detector on its base (see Mounting).

Connect only detectors of the same model within the network.

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Detector tests

Although the alarm sound volume is reduced during a manual test of a smoke detector, it is advisable to inform neighbours prior to running the test and to use all suitable hearing protection devices.

Manual test:

Press (for approximately 10 sec) the test key until the built-in alarm sounds.

The alarm rings **until the test button is released:**

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Detector transmitting the test signal	the LED flashes quickly	lit	the alarms rings for 1 sec (75 dB (A) from a 3 m distance), then stops for **1 sec.**
Other wired inter-connected detectors	the LED flashes quickly	lit	the alarms rings for 1 sec (75 dB (A) from a 3 m distance), then stops for **2 sec.**

Connected to a Logisty system it activates **immediately a button is pressed for 10s:**

● triggering of the control panel siren and the alarm sirens in fire alarm modulation for 5 minutes,
● triggering of the telephone dialler.

Stop the sirens and check that the control panel has memorised the alarm (See section on Indication).

Detection test:

Using the smoke generator (Ref. TESTFUM), spray smoke through the slots about 10 cm away from the detection head for 1 to 2 seconds.

After 10 seconds maximum, the detector issues a series of increasingly fast beeps until the detector is triggered (12 to 22 seconds after spraying).

If the detector does not beep, there is not enough smoke around the detection head. Spray some more smoke through the slots.

For this type of test, the detector's responses are described in the "Detector operation" paragraph.

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Never use a naked flame to test the smoke detector.
A test should be carried out at least once a month, particularly after you have been away for a long period of time.

Manual disabling of the detector

It is possible to disable the detector for a 15 min period:

● prior to activities likely to produce smoke (sweeping of a dusty room, of a chimney…) and cause unwanted alarm activation,

● to stop alarm in the event of detection of non-dangerous smoke.

In order to disable the detector, press the test key until the 1st beep sounds or until the detector stops its built-in audible alarm.

The indicator signalling the state of the detector flashes every 2 sec.

For the 15 min disable period, the detector will not detect any smoke, nor release any audible alarm.

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Sensor shut down	the unit flashes once every 2 sec.	-	-
Other wired inter-connected detectors	the unit flashes once every 10 sec.	-	-

After the 15 min disable period has passed, the detector is automatically reset to normal operation with the detector state indicator flashes every 10 s.

To leave shut down mode more quickly press the test button for about 10 s until the alarm sounds (see reaction in the sensor Test chapter).

Events memory

The sensor remembers the last event (trigger or error signal)
To review the memory of events press the test button for two pips and release.
The sensor recalls the last memorised event for 10 s.

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Triggered	the unit flashes quickly	lit	a built-in alarm is released on a continuous basis (75 dB(A) from 3 m)
Power supply fault	the unit flashes once every 5 sec.	-	the unit releases 2 fast beeps every 60 sec
Indication of detection head clogging	the unit flashes 8 times over an 8-sec period	-	the unit beeps fast 8 times over a 58-sec period

Erasing the memory of events
It is advisable to erase the memory of events after it has been read. To do this press the Test button until the 3rd pip and release.

... Alerts

On the detector:
To check which sensor has triggered the alarm consult the Memory of Events paragraph.

On the control panel:
When your alarm system is deactivated, the control panel will report the problem:

● with the voice message *"Alarm, fire detector"*,

● or with sound messages, and the "Alarm" and "Fire" indicator lights will come on.

... Faults

In order not to wake you up, alarms resulting from mains supply problems or dirty sensors are shut down during the night. Any errors are corrected after daybreak within 10 minutes i.e. 12 hours after the event.

Power supply fault on the detector:

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Detector at the source of the fault indication	the unit flashes once every 5 sec.	-	the unit releases 2 fast beeps every 60 sec.
Other wired inter-connected detectors	-	-	-

When a battery fault becomes evident, the detector continues to function perfectly for 30 days. It is advisable to replace the battery as soon as possible.

If the sound indication of the power supply failure occurs at an inappropriate time, it is possible to postpone its occurrence for an 8-hour delay over a maximum 7-day period by pressing the test key until the 1st beep is released. This is the time period available for replacing the Lithium battery

Power supply fault on the control panel:
Next time the system is set, the control panel will report the problem:

● with the voice message *"Battery low, fire detector"*,

● or with sound messages, and the "Batteries" and "Fire" indicator lights will come on.

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Indication of detection head clogging:

When this problem arises, the detection head should be cleaned as quickly as possible (see Maintenance).

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Detector at the source of the fault indication	the unit flashes 8 times over an 8-sec period	-	the unit releases 8 fast beeps every 58 sec.
Other wired inter-connected detectors	-	-	-

If the sound indication of the soiled detector head state is released at an inappropriate time, it is possible to postpone its occurrence for an 8-hour delay over a maximum 7-day period by pressing the test key until the 1st beep is released. This is the time period available for cleaning the detector.

Maintenance

Detector head maintenance

The regular maintenance of the detector is of utmost importance. The detector head slots are to be vacuum-cleaned at least once a year or upon each indication of detector head soiling (see section on Fault indication).

If the detector head dirty indication remains after dusting, replace the detector.

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We advise you to clean detector using a soft cloth. Never use alcohol or acetone to clean it.

Maintenance

Changing the battery

If the optional opening of the detector is not locked (see Fixing)

① Remove the detector from its base by turning it counter clockwise until you hear a click.
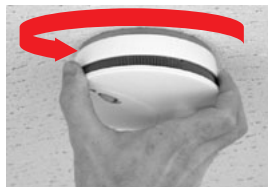
② Replace the worn battery.
③ Lock the detector back onto its base (see Mounting).
④ Carry out a test (see section detector tests).

If the optional opening of the detector is locked (see Fixing)

① Insert a flat blade screwdriver into this notch.

② Remove the detector from its base by turning it counter clockwise until you hear a click.
③ Replace the worn battery.
④ Lock the detector back onto its base (see Mounting).
⑤ Make a test (see section detector tests).

In case of any works in the room

Painting the detector is prohibited.
Protect the detector by covering it fully with the plastic cover supplied.

 Cover the detector with the plastic cover prior to carrying out any work in the room after detector's installation.

 Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type (BatLi 26 or BatLi 25, 3,6 V).
Please dispose of the old Lithium battery in a container for this purpose.

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Be prepared for a fire

● Plan an evacuation route.
● Prepare an evacuation plan for every bedroom.
● The least smoke is near the ground: crawl out of the house.
● When the alarm rings, wake up everyone.
● Prearrange an assembly point outside the house.
● Avoid going into the house unnecessarily if there is a fire.
● Call the fire brigade.

In case of any works in the room

Painting the detector is prohibited. Protect the detector by covering it fully with the plastic cover supplied.

Cover the detector with the plastic cover prior to carrying out any work in the room after detector's installation.

Summary of your detector's responses and indications

Normal operation

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
All your detectors	the unit flashes once every 10 sec.	-	-

Smoke detection (1)

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Detector transmitting the smoke detection signal	the LED flashes quickly	lit	a built-in alarm sounds on a **continuous** basis (85 dB(A) at 3m)
Other wired inter-connected detectors	-	lit	a **modulated** built-in audible alarm sounds (85 dB(A) at 3m)

(1) The detector response lasts until the smoke has dissipated.

Detector tests (2)

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Detector transmitting the test signal	the LED flashes quickly	lit	the alarms rings for 1 sec (75 dB (A) at a 3 m distance), then stops for **1 sec.**
Other wired inter-connected detectors	the LED flashes quickly	lit	the alarms rings for 1 sec (75 dB (A) at a 3 m distance), then stops for **2 sec.**

(2) The detector(s) respond until test button is pressed and held pressed for longer than 10 sec. and then released.

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Battery fault indication

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Detector at the source of the fault indication	the unit flashes once every 5 sec.	-	the unit releases 2 fast beeps every 60 sec.
Other wired inter-connected detectors	-	-	-

Indication of dirt on the detection head

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Detector at the source of the fault indication	the unit flashes 8 times over an 8-sec period	-	the unit releases 8 fast beeps every 58 sec.
Other wired inter-connected detectors	-	-	-

To prevent users from being disturbed at inconvenient times, audible indications of a battery fault or dirt on the detection head can be delayed for 8 hours over a maximum period of 7 days by holding the test button pressed until the first beep sounds. You should contact your installation engineer within this same period in order to rectify the problem.

In order not to wake you up, alarms resulting from mains supply problems or dirty sensors are shut down during the night. Any errors are corrected after daybreak within 10 min i.e. 12 hours after the event.

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Manual disabling of the detector

It is possible to disable the detector for a 15 min period:
● prior to activities likely to produce smoke (sweeping of a dusty room, of a chimney…) and cause unwanted alarm activation,
● to stop alarm in the event of detection of non-dangerous smoke.
In order to disable the detector, press the test key until the 1st beep sounds or until the detector stops its built-in audible alarm. The indicator signalling the state of the detector flashes every 2 sec.

	Red signal LED indicates the state of the detector	White indicator LED	Built-in audible alarm
Sensor shut down	the unit flashes once every 2 sec.	-	-
Other wired inter-connected detectors	the unit flashes once every 10 sec.	-	-

For the 15 min disable period, the detector will not detect any smoke, nor release any audible alarm.

After the 15 min disable period has passed, the detector is automatically reset to normal operation with the detector state indicator flashes every 10 s.

Technical data

Technical data	Residential radio smoke detector **L3156X**
Type of detection	optical smoke detector
Average coverage	50 m^2
Installation	Inside premises
Power supply	3.6 V BatLi 26 or BatLi 25 lithium battery
Battery life	approximately 5 years under normal operation
Red signal LED	• state of the detector • alarm activations • faults
White indicator LED	emergency LED is turn-on in the event of detection
Built-in audible alarm	• > 85 dB at 3 m In the event of detection • > 75 dB at 3 m in the event of test or signalling
Wired interconnection	of up to 40 detectors
Length of the network	maximum 400 m
Maximum cable diameter	1,5 mm^2
Radio link	TwinPass® 400/400 MHz
Operating temperature	-10 °C to + 55 °C
Protection class	IP 32
Dimensions (D x H)	125 x 48 mm
Weight	210 g

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To obtain advice when installing your system or before returning equipment, please contact the LOGISTY technical support team (see telephone number at the back of the alarm system installation manual) or www.logistysupport.co.uk. A team of qualified technicians will tell you what to do.

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