

FIRE DETECTION SYSTEM LOGBOOK



2025

14th Jan 2025

COMPANY LOGO

Introduction

This logbook needs to be issued for ALL fire detection systems and kept for the purpose of recording all events that occur in respect of the system, including fire signals, fault signals and work on the system. The logbook must be mounted adjacent to ALL fire panels and repeater panels.

The following information should be recorded in the logbook:

- The name of the responsible person
- Details of the installer
- Brief details of maintenance arrangements
- Non-compliance items
- User responsibilities
- Testing by user
- Inspections and testing
- Alarms
- Dates and times and results of daily inspections
- Dates and times of all fire alarm signals
- Dates and times of false alarms
- Causes, circumstances surrounding and category of all false alarms
- Dates, times, and types of all tests and fire drills
- Dates, times and types of all faults and defects
- Dates and types of all maintenance (e.g. service visit or non-routine attention).

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Site Information**CUSTOMER:**

Customer Name:

Address of fire system:

Responsible person appointed:

Tele. No:

Email:

CONTRACTOR INFORMATION:

Company:

Contact Person:

Tel:

Email:

Installation Date:

SYSTEM DESIGNER:

Name:

Company:

Contact No:

Email:

Standard designed to

COMMISSIONER:

Name:

Company:

Contact No:

Email:

INSTALLER:

Name:

Company:

Contact No:

Email:

System installation date

SYSTEM VERIFICATION DONE BY:

Name:

Company:

Contact No:

Email:

SYSTEM ACCEPTANCE BY:

Name:

Company:

Contact No:

Email:

System Information

CATEGORY		
Building occupancy (SANS 10400):		
System category (SANS10139):		
Non-addressable:	Addressable:	
ITEMS:		
The fire detection system comprises of the following equipment:		
EQUIPMENT	MAKE	QTY
Fire panels		
Repeater panels		
Manual call points		
Smoke detectors		
Heat detectors		
Beam detectors		
Aspirating detectors		
Multi-criteria detectors		
Other detectors		
Shut down devices		
Interface devices		
Other devices		

Servicing company information

To remain compliant with SANS 10139 the fire detection system shall be serviced by a competent person every 6 months maximum. If environmental conditions are harsh or the system is very large a more frequent maintenance routine may have to be adopted. It is an offense NOT to maintain your fire equipment.

SERVICE COMPANY:	
Name:	Company:
Contact No:	Email:
Emergency contact No:	
Contract start date:	End date:
Normal maximum attendance time	

At each service at least one fire detector per zone shall be tested to ensure all alarms operate correctly. Every device shall be tested once a year.

Non compliances/ variations

The following non- compliances and/ or Variations to the national standard are included in the design of this system.

DAILY LOG SHEET

I, the responsible person, have inspected the panel and signed that no alarms are present.

2025

JANUARY				FEBRUARY				MARCH			
Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature
01		17		01		17		01		17	
02		18		02		18		02		18	
03		19		03		19		03		19	
04		20		04		20		04		20	
05		21		05		21		05		21	
06		22		06		22		06		22	
07		23		07		23		07		23	
08		24		08		24		08		24	
09		25		09		25		09		25	
10		26		10		26		10		26	
11		27		11		27		11		27	
12		28		12		28		12		28	
13		29		13		29		13		29	
14		30		14				14		30	
15		31		15				15		31	
16				16				16			

DAILY LOG SHEET

I, the responsible person, have inspected the panel and signed that no alarms are present.

2025

APRIL				MAY				JUNE			
Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature
01		17		01		17		01		17	
02		18		02		18		02		18	
03		19		03		19		03		19	
04		20		04		20		04		20	
05		21		05		21		05		21	
06		22		06		22		06		22	
07		23		07		23		07		23	
08		24		08		24		08		24	
09		25		09		25		09		25	
10		26		10		26		10		26	
11		27		11		27		11		27	
12		28		12		28		12		28	
13		29		13		29		13		29	
14		30		14		30		14		30	
15				15		31		15			
16				16				16			

DAILY LOG SHEET

I, the responsible person, have inspected the panel and signed that no alarms are present.

2025

JULY				AUGUST				SEPTEMBER			
Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature
01		17		01		17		01		17	
02		18		02		18		02		18	
03		19		03		19		03		19	
04		20		04		20		04		20	
05		21		05		21		05		21	
06		22		06		22		06		22	
07		23		07		23		07		23	
08		24		08		24		08		24	
09		25		09		25		09		25	
10		26		10		26		10		26	
11		27		11		27		11		27	
12		28		12		28		12		28	
13		29		13		29		13		29	
14		30		14		30		14		30	
15		31		15		31		15			
16				16				16			

DAILY LOG SHEET

I, the responsible person, have inspected the panel and signed that no alarms are present.

2025

OCTOBER				NOVEMBER				DECEMBER			
Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature	Date	Signature
01		17		01		17		01		17	
02		18		02		18		02		18	
03		19		03		19		03		19	
04		20		04		20		04		20	
05		21		05		21		05		21	
06		22		06		22		06		22	
07		23		07		23		07		23	
08		24		08		24		08		24	
09		25		09		25		09		25	
10		26		10		26		10		26	
11		27		11		27		11		27	
12		28		12		28		12		28	
13		29		13		29		13		29	
14		30		14		30		14		30	
15		31		15				15		31	
16				16				16			

Weekly Tests

The responsible person shall operate a different manual call point each week during working hours and ensure:

- the relevant fire alarm zone indicator illuminates on the control panel.
- the common fire indicator illuminates.
- the panel buzzer sounds.
- the zone area sounders operate
- Check the signal is received at any remote alarm receiving centre

The tests should be carried out at the same time each week so that building occupiers are accustomed the fire alarm sounders and understand it is a test. Occupiers should report lack of audibility of the fire alarm signal.

A different manual call point should be operated every week so that all manual call points are tested in rotation over a prolonged period.

The time duration of each weekly test should not exceed one minute so that occupants can be aware of alarms sounding over a prolonged period.

Record all results in the weekly test log sheet

WEEKLY TEST LOG SHEET

I, the responsible person have tested a manual call point and record the result below

Week No	MCP No	Signature		Week No	MCP No	Signature		Week No	MCP No	Signature
1				19				37		
2				20				38		
3				21				39		
4				22				40		
5				23				41		
6				24				42		
7				25				43		
8				26				44		
9				27				45		
10				28				46		
11				29				47		
12				30				48		
13				31				49		
14				32				50		
15				33				51		
16				34				52		
17				35						
18				36						

FIRE ALARM LOG

[illegible]

FIRE ALARM LOG

[illegible]

FALSE ALARM LOG

[illegible]

FALSE ALARM LOG

[illegible]

MAINTENANCE WORK LOG

[illegible]

NOTES

Users' responsibilities - Responsible person

The user needs to appoint a single, named responsible person to supervise all matters pertaining to the fire alarm system. The role of the responsible person is to ensure that the system is tested and maintained in accordance with the recommendations of SANS 10139:2021, that appropriate records are kept and that relevant occupants in the protected premises are aware of their roles and responsibilities in connection with the fire alarm system. It also needs to be the duty of the responsible person to ensure that necessary steps are taken to avoid situations that are detrimental to the standard of protection afforded by the system and to ensure that the level of false alarms is minimized.

The following recommendations and duties apply:

- a) A single, named responsible person should be appointed to supervise all matters pertaining to the fire alarm system. The responsible person should be given sufficient authority to carry out the duties described in *SANS 10139:2021* and should normally be the keeper of the documentation.
- b) Ensure that the control and indicating equipment is checked at least once every 24 h to confirm that there are no faults on the system.
- c) Ensure that arrangements are in place for testing and maintenance of the system.
- d) Ensure that the system logbook is kept up to date and is available for inspection by any authorized person (e.g. representatives of enforcing authorities and property insurers).
- e) Ensure that the zone plan is displayed and kept up to date with any structural or system changes.
- f) Ensure that all relevant occupants of the protected premises are instructed in the proper use of the system. Care should be taken to ensure that relevant occupants are able to interpret fire, pre-alarm, and fault indications, and that they are adequately familiar with the appropriate controls, including those associated with initiation of fire

alarm signals, silencing of fire alarm signals, and resetting the system. It should also be ensured that all occupants are aware of the measures necessary to avoid the generation of false alarms.

- g) Ensure that appropriate action is taken to limit the rate of false alarms.
- h) Ensure that a clear space of at least 500 mm is preserved in all directions around and below every fire detector, and that all manual call points remain unobstructed and conspicuous.
- i) Establish a liaison between those responsible for changes in, or maintenance of, the building fabric (including redecoration etc.) to ensure that the work does not unnecessarily compromise the protection afforded by the system, create system faults, or cause false alarms. If structural or occupancy changes occur or are planned, the responsible person should ensure that any necessary changes to the fire alarm system are considered at an early stage.
- j) Ensure that when changes are made to the system that records, drawings and operating instructions are updated.

Spare Parts

- k) Ensure that the following spare parts are held within the premises:
 - 1) Six frangible elements and appropriate tools for manual call points unless there are fewer than 12 manual call points in the protected premises in which case only two spare frangible elements with appropriate tools need be held.
 - 2) Such other spare parts agreed between the user and the organization responsible for servicing the system.

Daily checks by the user

The responsible person should check that the control and indicating equipment to confirm that there are no faults or alarms on the system.

Weekly testing by the user

The following is the responsibility of the user of the system.

When testing the fire detection system, there may be a need to isolate ancillary outputs.

- a) Every week, a manual call point should be operated during normal working hours. It should be confirmed that the control equipment can process a fire alarm signal and providing an output to fire alarm sounders, and to ensure that the fire alarm signal is correctly received at any alarm receiving centre to which fire alarm signals are transmitted. It is not necessary to confirm that all fire alarm sounder circuits operate correctly at the time of this test.

NOTE 1

It is essential that any alarm receiving centre is contacted immediately before, and immediately after, the weekly test to ensure that unwanted alarms are avoided and that fire alarm signals are correctly received at the alarm receiving centre.

NOTE 2

The user needs to take account of the manufacturer's recommendations, particularly when battery powered devices are being tested, for example within radio-linked fire alarm systems.

- b) The weekly test should be carried out at the same time each week; instructions to occupants should then be that they should report any instance of poor audibility of the fire alarm signal. In systems with staged alarms incorporating an "Alert" and an "Evacuate" signal, the two signals should be operated, where practicable, sequentially in the order they would occur at the time of a fire (i.e. "Alert" and then "Evacuate").

- c) In premises in which some employees only work during hours other than that at which the fire alarm system is normally tested, an additional test(s) should be carried out at least once a month to ensure familiarity of these employees with the fire alarm signal(s).
- d) A different manual call point should be used at the time of every weekly test, so that all manual call points in the building are tested in rotation over a prolonged period. There is no maximum limit for this period (e.g. in a system with 150 manual call points, the user will test each manual call point every 150 weeks). The result of the weekly test and the identity of the manual call point used should be recorded in the system logbook.
- e) The duration for which any fire alarm signal is given (other than solely at control and indicating equipment) at the time of the weekly test by the user should not normally exceed 1 min, so that, in the event of a fire at the time of the weekly test, occupants will be warned by the prolonged operation of the fire alarm devices.
- f) Voice alarm systems shall be functionally tested weekly and comprehensively every six months

Monthly testing by the user

- a) If an automatically started emergency generator is used as part of the standby power supply it should be started up once each month by simulation of failure of the normal power supply and operated on-load for at least 1 h. The test should be carried out in accordance with the instructions of the generator manufacturer, including instructions on the load that should be operated.
At the end of the test, the fuel tanks should be left filled, and the oil and coolant levels should be checked and topped up, as necessary.
- b) If vented batteries are used as a standby power supply, a visual inspection of the batteries and their connections should be made to ensure that they are in good condition. Action should be taken to rectify any defect, including low electrolyte level.

NOTE

Care should be taken to ensure that any person undertaking these tasks is competent to do so safely and has the relevant technical knowledge and training.

Inspection and servicing

It is essential that the system is subject to periodic inspection and servicing so that un-revealed faults are identified, preventive measures can be taken to ensure the continued reliability of the system, false alarm problems are identified and suitably addressed, and that the user is made aware of any changes to the building that affect the protection afforded by the system.

Periodic inspection and servicing need to be carried out by a competent person with specialist knowledge of fire detection and alarm systems, including knowledge of the causes of false alarms sufficient information regarding the system, and adequate access to spares.

This will normally be an outside fire alarm servicing organization; care needs to be taken to ensure that, if, for example, in-house employees are used for this task, they have equivalent competence to the technicians of a typical fire alarm servicing organization.

Competence of a fire alarm servicing organization can be assured by using technicians who are registered with SAQCC Fire.

Recommendations for periodic inspection and testing of the system

The period between successive inspection and servicing visits should be based upon a risk assessment, considering the type of system installed, the environment in which it operates and other factors that may affect the long-term operation of the system.

The recommended period between successive inspection and servicing visits should not exceed six months.

If a risk assessment shows a need for more frequent inspection and servicing visits, then all interested parties should agree the appropriate inspection and servicing schedule.

**If this recommendation is not implemented, it should be considered that the system is no longer compliant with the standard.
It is an offense not to maintain fire equipment**

Alarms

Action in the event of a FIRE ALARM

Should the fire sirens be activated the responsible person should quickly investigate the fire panel.

Check the zone LED to give an indication of the area of a fire.

Check the LCD display (if fitted) this will indicate the device that has activated and the exact location of the device.

One should go and investigate the area of alarm and determine if there are visible signs of a fire. If one cannot see flames or smoke, inhale deeply and determine if you can smell any burning.

If there is no sign of anything burning investigate the area for signs of smouldering, burns or chemicals in the air.

If nothing is sensed return to the panel, press silence and reset buttons. Ensure the alarm does not re-occur.

Record the event in the logbook with the device number and location.

If there are signs of a small fire, find the nearest fire extinguisher, attack, and extinguish the fire.

If there is a large fire, or out of control fire, start immediate evacuation orders of all personnel in the area and the floor above, if necessary, evacuate the entire building.

Phone or contact the fire department.

Try and control the fire with an extinguisher.

Once the fire has been extinguished examine the area and if safe to do so call personnel back to the building.

Record the event in the system logbook.

If there is any damage to the fire alarm equipment call your maintenance service provider.

Action in the event of PRE-ALARMS

A pre-alarm can be a response to a slow growing fire or to indicate detector contamination. Whatever the reason, the following actions should be taken:

- a) Determine and thoroughly inspect the area from whence the pre-alarm has originated
- b) If a fire is discovered, carry out the predetermined fire evacuation routine
- c) If no fire is discovered, record the events or activities near the suspect detector in the logbook and, if there is need for work to be undertaken on the fire alarm system, inform the maintenance company.

Action in the event of FALSE ALARMS

The user should arrange for suitable investigation and, if appropriate, action to be taken on every occasion that a false alarm occurs. This may, for example, comprise managerial changes within the building, modifications to the fire alarm system or an investigation by the organization that maintains the system.

- a) The user should record appropriate details regarding EVERY false alarm that occurs. Information recorded should include the following:
 - Date and time

- Identity and location of device (if known)
- Category of false alarm (if known)
- Reason for false alarm (if known)
- Activity in the area (if the reason for the false alarm is unknown)
- Action taken
- The person responsible for recording the information.

b) At the time of every service visit, the system false alarm record should be checked carefully to determine the following:

The rate of false alarms during the previous 12 months, expressed as number of false alarms per 100 detectors per annum (the rate should be recorded in the logbook by the service technician)

Whether, since the time of the previous service visit, two or more false alarms, other than false alarms with good intent, have arisen from any single manual call point or fire detector (or detector location)

Whether any persistent cause of false alarms can be identified.

c) At least, a preliminary investigation should be carried out as part of the service work if any of the following apply

1) The rate of false alarms over the previous 12 months has exceeded one false alarm per 25 detectors per annum

2) 11 or more false alarms have occurred since the time of the previous service visit (i.e. typically, within the previous six months)

3) Two or more false alarms (other than false alarms with good intent) have arisen from any single manual call point or fire detector (or detector location) since the time of the last service visit

4) Any persistent cause of false alarms is identified.

The purpose of the preliminary investigation is to determine whether any action could be taken to reduce the potential for false alarms; the

user should be informed of the outcome of the investigation and be given appropriate advice, including advice regarding the need for a more in-depth investigation.

Acceptable rate of false alarms

From the point of view of the user and the fire service, any false alarm is undesirable. Nevertheless, it needs to be accepted that, particularly in installations that incorporate many automatic fire detectors, complete elimination of false alarms is impossible. From time to time, events will occur that give rise to a false alarm. The objective of all parties involved, from specification and design to everyday use of the system, is to minimize the number of false alarms that occur. It follows, therefore, that there is a need to define an "acceptable" rate of false alarms.

As recommended in SANS 10139:2021, the service organization needs to make, at least, a preliminary investigation if, at the time of a service visit, it is determined that the rate of false alarms in the previous 12 months has exceeded one false alarm per 25 detectors per annum. The user needs to instigate an in-depth special investigation at an even higher rate.

This may be undertaken by the servicing organization, the manufacturer of the system or a suitably qualified third party (such as system inspectors or consultants).

Categories of false alarms

It is a common misconception that most false alarms arise from faults in equipment. In fact, most false alarms arise from a combination of environmental influences, fire-like phenomena, inappropriate action by people in the building and accidental damage.

For any investigation of false alarms to be successful, and for appropriate action to be taken on false alarms, it is important that false alarm records record the Category of false alarm whenever this can be accurately determined.

Unwanted alarms

Is used to describe inappropriate action by people in the building and accidental damage.

Equipment false alarms

Is used to describe those alarms arising from the malfunction of equipment.

Malicious false alarms

Is used to describe those arising from malicious action, and false alarms with good intent involving genuine belief by a person that there is a fire

Unknown false alarm

Is used to describe those where doubt exists

When the user records false alarms the Category of false alarm (if known) should also be recorded. It should not be assumed that, in the absence of other information, a false alarm must have arisen from an equipment fault.

Causes of false alarms

In many premises, most false alarms take the form of unwanted alarms. Recognized causes of unwanted alarms (albeit, in some cases only from certain types of automatic fire detector), are as follows:

- Fumes from cooking processes (including toasting of bread)
- Steam (from bathrooms, shower rooms and industrial processes)
- Tobacco smoke
- Dust (from a prolonged period of time or released from an industrial process)
- Insects
- Aerosol spray (e.g. deodorants and cleaning fluids);
- High air velocities

- Smoke from sources other than a fire in the building (outside influences)
- Cutting, welding and similar "hot work"
- Processes that produce smoke or flame (e.g. flambéing of food)
- Cosmetic smoke (e.g. in discotheques and theatres)
- Incense
- Candles
- Electromagnetic interference
- High humidity
- Water ingress
- Substantial fluctuation in temperature
- Accidental damage (particularly to manual call points)
- Testing or maintenance of the system, without appropriate disablement of the system or warning to building occupants and/or an alarm receiving centre
- Pressure surges on water mains serving automatic sprinkler systems that are interfaced with the fire alarm system.

Most of these causes can be minimized by appropriate choice of detection system and suitable management arrangements.

False alarms can also arise from faults in equipment ("equipment false alarms"). These can be minimized by choice of decent quality equipment that satisfies relevant standards, has third party certification and has been regularly serviced and maintained.

Malicious false alarms tend to occur with most frequency in certain premises to which the public attend in large numbers, such as shopping centres, places of entertainment, public car parks and sports centres, and in educational establishments, such as universities and schools.

Mainly, malicious operation of manual call points is involved.

Where there is significant potential for malicious false alarms, or an existing system is subject to these, consideration needs to be given to the locations of manual call points.

Little can be done to prevent false alarms with good intent. These are unlikely to present a significant problem, and it is important that people

are never discouraged from operating a manual call point if they suspect that there might be a fire.

Recommendations for system management

- a) The user should ensure that staff in the building and visiting contractors are aware of the presence of any automatic fire detectors, and of the measures necessary to minimize the likelihood of false alarms.
- b) Tender documents for contract work to be carried out in a protected area should contain a clause making the contractors responsible for informing their staff of the presence of any automatic fire detectors, and of the precautions to be adopted when working.
- c) Where temporary work involving the generation of dust, smoke, paint spray, etc. is to be carried out in an area protected by smoke detectors, precautions should be taken to prevent unwanted alarms. One method of managing such work would be the operation of a permit to work system.

Other suitable measures include the following:

- 1) Temporary replacement of smoke detectors by other types of detectors that will be less susceptible to the effects of the pollutants in question
- 2) Provision of a temporary screen between the work and the detectors
NOTE: the flammability of the screen should be considered to ensure that it does not increase the fire risk.
- 3) Provision of brightly coloured temporary covers over detectors to prevent the ingress of contamination
- 4) Disablement of automatic fire detectors.

On completion of the work, the responsible person appointed by the user to manage the system should ensure that proper reinstatement of the protection occurs.

- d) Suitable notification of building occupants, and any alarm receiving centre to which fire alarm signals are transmitted, should occur prior to routine testing or maintenance work on the fire alarm system that might result in the occurrence of a fire alarm signal.
- e) The user should ensure that building defects (e.g. leaking roofs), plant defects (e.g. steam leaks) and environmental problems (such as inadequate ventilation) that could cause unwanted alarms receive suitable attention.
- f) All false alarms should be properly recorded by the user in the system logbook.
- g) Suitable action should be taken by the user when false alarms occur.

END OF DOCUMENT