

The smoke detector reacts early and reliably to smouldering and open fires with smoke emission. Smoke detectors can save your life, and are one of the most important elements in preventive fire protection; however, they absolve no one of their full responsibility for taking care and paying attention to potential fire hazards.

- The smoke detector must not be painted.
- The loud warning signal can cause damage to hearing. When you are carrying out functional tests, we recommend that you maintain a distance of at least 0.5 m between the smoke detector and your ears. In addition, the duration of a test should not be longer than 10 seconds.
- For deaf persons, a warning light or a vibrating cushion should be installed. These can be operated by the relay module (see accessories).
- As power supply, use only alkaline batteries, Type 6LR61.
- Install a sufficient number of smoke detectors to cover the entire living quarters and ensure that you have optimum protection.
- Correct installation and following the care and maintenance instructions are very important for reliable and trouble-free operation of the smoke detector. Your specialist dealer will be pleased to help if you have any questions.
- If you are only responsible for installing the unit, you must ensure that the Installation and Operating Instructions are handed over to the owner or occupant of the house or apartment.

Only after completion of building operations, conversion work, renovation work etc., such as brick-laying, painting, floor-covering, and/or cleaning should smoke detectors be installed. Smoke detectors that have already been installed must be removed or completely covered before starting such operations. An increased presence of dust and dirt can cause contamination of the smoke sensing chamber and so cause malfunctioning.

- Do not paint the smoke detector.
- Please make sure that the permissible ambient temperature and humidity are not exceeded.
- Unsuitable locations are:
  - rooms in which the smoke detector could be triggered by vapours, condensation, normal smoke, or exhaust gases (e.g. bathrooms, shower rooms, etc.)
  - locations in which extreme temperatures (below +5°C / over 45°C) may occur.
- Avoid situations in which the unit is exposed to continual air draughts (e.g. open windows, ventilators, air conditioners etc.).

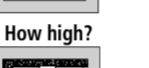
The smoke detector incorporates high-quality evaluation logic to avoid false alarms. When smoke is detected, the smoke detector emits a loud, unceasing alarm sound (pulsing warning sound). In addition, the red LED blinks. When that happens, do the following things:

- Leave the room or place that is on fire, **immediately**. The escape period, after you have been warned by the smoke detector, is a maximum of two minutes. Do not waste time with getting dressed or collecting valuables to take with you.
- Warn the other occupants.
- If dense smoke has spread through the building, keep close to the floor, and, if possible, breathe through a damp cloth.
- Do not call the fire service until you are out of the building and in safety.
- Make sure that all persons have left the scene of the fire. Go to the designated assembly point, and do not go back into the building.

Where?



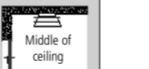
How high?



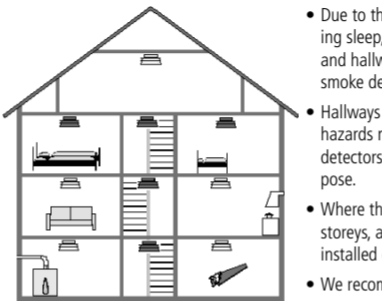
Whereabouts?



How big an area?

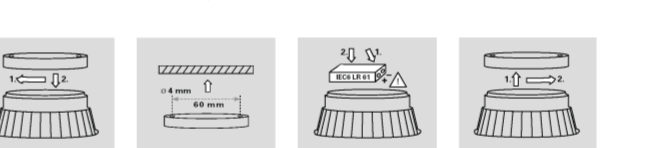


- The smoke detector must be mounted on the ceiling, as close as possible to the middle of the room. It can monitor a room with a maximum of 60 m<sup>2</sup> floor area, up to a maximum of 6 metres high. The detector must be at least 0.5 m from walls and fittings. In hallways and narrow passages (up to 3 m wide), the smoke detector can monitor up to 7.5 m on either side.
- When used in boats, caravans, portable cabins etc., it is also best to install the detector below the ceiling.
- If you are on a journey, you can easily take your smoke detector with you into your hotel room.
- For optimum protection, a network of smoke detectors should be installed in all rooms, halls, cellars and storerooms. If one smoke detector senses smoke, it triggers an alarm signal, which activates all the other smoke detectors in the system, so that they also give the alarm.
- Smoke detectors should not be installed in rooms where steam, dust or fumes are to be expected from the work carried out in them (e.g. welding), near air ducts, or in strong air draughts.



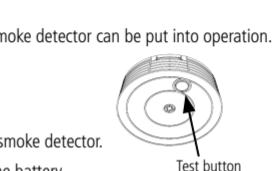
- Due to the reduced sensitivity to smoke during sleep, it is especially nurseries, bedrooms and hallways that must be monitored by smoke detectors.
- Hallways and corridors with localised fire hazards must be monitored using smoke detectors because of the special risk they pose.
- Where there are open connections to several storeys, at least one smoke detector must be installed on the top floor.
- We recommend:
  - the installation of a smoke detector with alarm at every level;
  - the monitoring of every room with a smoke detector.

- Release the smoke detector from its socket by turning it anti-clockwise.
- Mount the socket using the fasteners provided.
- Remove the insulating strip between the battery and its poles.
- Place the smoke detector in its socket and turn it clockwise to secure it. If the smoke detector cannot be mounted in the socket, check that the battery has been correctly installed.
- The smoke detector is now ready for operation!



**The smoke detector generates a very loud alarm sound, which can cause damage to your hearing. For this reason, during the functional test, keep at least 0.5 m from the detector.**

- Once it has been successfully mounted, the smoke detector can be put into operation.
- Press the test button for at least 3 seconds:
  - ▶ a loud alarm signal will sound
  - ▶ the LED will blink.
- You have now tested the functionality of the smoke detector.
- If the alarm does not sound, please replace the battery with a new one and carry out the functional test (Point 2) again. If the alarm still does not sound, the smoke detector is defective and must be replaced.



Carry out a functional test once a month. In this way, you will make you and your family, employees, etc. more familiar with the sound of the alarm. Pressing the test button simulates the effect of smoke and checks the complex electronics of the smoke detector. No smoke is needed for the test.

The smoke detector incorporates high-quality evaluation logic to prevent false alarms. If the smoke response threshold is exceeded, a loud alarm signal sounds. The alarm remains active as long as there is smoke in the sampling chamber. After an alarm, the smoke detector resets itself automatically to the ready state.

Signal		Status of smoke detector
Alarm sound	LED	
Loud pulsating sound	Blinks	<b>Local smoke alarm!</b> Smoke has been detected.
Loud pulsating sound	--	<b>External smoke alarm!</b> Smoke detector signals an alarm at another smoke detector in the network.
--	Blinks every 45 sec.	<b>Automatic self-test</b> , normal operating status.
Short alarm sound every 45 sec.	Blinks in parallel with alarm sound	<b>Low battery indicator</b> , battery must be changed within 30 days.
Short alarm sound every 45 sec.	Blinks alternating with alarm sound	<b>Functional defect</b>
Loud alarm sound	Blinks	<b>Functional test.</b> <i>Test button is being pressed</i>

To ensure the continued functional reliability of the smoke detector, you should carry out maintenance approximately every 6 months (and when a defect is signalled).

To carry out maintenance, proceed as follows:

- Remove the smoke detector from its socket (turn it anti-clockwise and pull it gently downwards) and remove dust with a soft brush or similar (do not use compressed air).
- Wipe the surface of the smoke detector clean with a damp cloth. Do not use any aggressive cleaning agent.

- Insert the smoke detector into its socket again and turn it clockwise until it engages.

**Warning: without a battery fitted, the smoke detector cannot be mounted!**

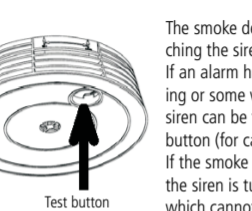
- Change the battery, when the low-battery signal sounds (see Operating and Warning Signals). Do not change the battery during the alarm condition.

- Use only alkaline batteries: Type 6LR61. These are leak-proof and have a particularly long life.

**Warning: do not use rechargeable batteries!**

- Check that the automatic self-test is carried out (see Operating and Warning Signals) and, when appropriate, carry out a functional test (see Commissioning / Functional Test).

### Siren-off function



Test button

The smoke detector is provided with a means for switching the siren off.

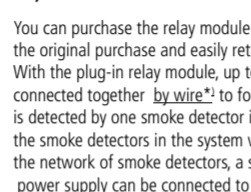
If an alarm has been triggered accidentally, e.g. by cooking or some work producing fumes, the smoke detector siren can be turned off temporarily by pressing the test button (for ca. 8 min.)!

If the smoke density should increase by a factor of 3 while the siren is turned off, a new alarm will be triggered, which cannot be turned off!

The alarm condition remains as long as there is smoke in the sensing chamber. When the "mute" time has expired, the detector automatically returns to the original function again.

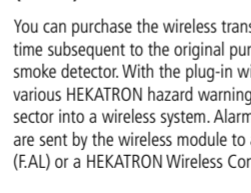
By pressing the test button during an alarm, the siren-off function (muting function) is activated.

### Relay module (REM)



You can purchase the relay module (REM) at any time subsequent to the original purchase and easily retrofit it to your smoke detector. With the plug-in relay module, up to 40 smoke detectors can be connected together **by wire\*** to form a networked system. If smoke is detected by one smoke detector in a networked system, then all the smoke detectors in the system will give the alarm. In addition to the network of smoke detectors, a separate alarm siren with its own power supply can be connected to each individual relay module.

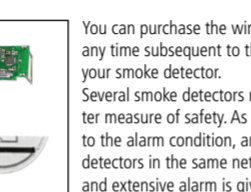
### Wireless module (F.SEM)



You can purchase the wireless transmission module (F.SEM) at any time subsequent to the original purchase and easily retrofit it to your smoke detector. With the plug-in wireless module, you can integrate various HEKATRON hazard warning devices from the Home Security sector into a wireless system. Alarms, faults, and operating conditions are sent by the wireless module to a Hekatron Wireless Alarm Unit (F.AL) or a HEKATRON Wireless Controller (F.KO) by radio.

\*1) We recommend:  
Industrial control lines without screening, Type: LiYY 2 x 2 x 0,75mm<sup>2</sup>

### Wireless Module Duo-Line / Duo-Line Plus



You can purchase the wireless module Duo-Line / Duo-Line Plus at any time subsequent to the original purchase and easily retrofit it to your smoke detector. Several smoke detectors networked together by radio provide a greater measure of safety. As soon as one detector senses smoke, it goes to the alarm condition, and gives this alarm signal on to the other detectors in the same network. In this way, a loud, comprehensive, and extensive alarm is given at all the smoke detectors in the system.

The radio module Duo-Line / Duo-Line Plus transmits the following information wirelessly:

- smoke alarms
- low-battery signals
- test functions during commissioning

Features:

- Wireless transmission of smoke alarms and low-battery signals
- Duplex radio-frequency transmission at 868.8 MHz and 869.8 MHz
- Selectable repeater (amplifier function) \*1
- Test functions (radio-range test / smoke-alarm test)
- Line formation (lines 1 to 8)
- Special line for collective alarm
- Siren for alarms and fault signals can be switched off on networked smoke detectors
- Output (smoke alarm / low-battery indicator) on the module \*1

\*1 Only Duo-Line Plus version

As the end user, you are legally required, among other things, to return all used batteries to a recycling centre or similar (battery regulations). Disposal as domestic refuse is forbidden!



Batteries containing hazardous substances are marked with the symbols shown here, which indicate that they must not be disposed of as domestic refuse.

The symbols for the relevant heavy metals are :

Cd = cadmium / Hg = mercury/ Pb = lead

In most countries, there are places where used batteries

are collected free-of-charge, for example provided by the local authority, or at your dealer, or where batteries are sold.

By doing this, you are fulfilling your legal obligation and making a contribution to protecting the environment.

The smoke detector was manufactured under the stringent criteria of a Quality Assurance and Environmental Management Systems to DIN ISO 9001.

<b>Function</b>	Smoke detection Measurement principle	Opto-electronic smoke detector infra-red radiation / optical (light-scattering) / photodiode to prEN ISO 12239
	Alarm threshold	
<b>Technical data</b>	Power supply	9 V DC alkaline battery (block), Type 6 LR 61
	Current draw	10 µA quiescent / 10 mA in alarm
	Ambient op. temperature	+ 5 °C to + 45 °C
	Storage temperature	- 5 °C to + 60 °C
	Humidity limits	at 40°C max. 70 % relative humidity Dew formation is not permissible.
	Battery-failure signal	ca. 1/45 s "beep" +LED flash, min 30 days
	Sensor fault signal	ca. 1/45 s "beep" +after ca. 22s LED flash
	Optical indicator	LED, red
	Acoustic alarm	ca. 85 dB (3 m)
	Life of battery	min. 2 years (without alarms) for alkaline battery
	Degree of protection	IP 30
<b>Mechanical data</b>	Height/Width/Depth	H: 48 mm
	Diameter	Ø 96 mm
	Weight	ca. 130 g
<b>Approvals</b>	Recognised/approved	VdS G 202061
<b>Colour/material</b>	Colour, material	white, plastic (Calibre)

For this equipment, we offer 2 years guarantee (except for the battery), without prejudice to claims of the end user against the specialist dealer resulting from the purchasing contract, as follows:

- If the unit fails to function correctly due to verifiable material or production defects, HEKATRON will, at its choice, repair the unit or supply a new one;

- Supply of a unit when the capacity of the unit to function is restricted or not present due to verifiable material or production defects.  
Consequential damage is excluded from the manufacturer's guarantee.

- The period within which claims must be made is as stated in our general conditions for sales and business. Evidence that the claim falls within the guarantee period must be provided in the form of an attached invoice, delivery note, or other document showing the date of purchase.

- If the purchaser makes changes to the smoke detector that are not described here, or if the unit is subjected to inappropriate treatment, all guarantee rights are invalidated.

This document corresponds to the technical status of the unit supplied.

Status 03/05

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## Home Smoke Detector HSD IV

Optical smoke detector with integral siren, battery-operated, incl. 9 V alkaline battery Type 6LR61

Art. No.: 5000577-0001

VdS No.: G 202061

Dear Customer,  
Congratulations on your purchase of this quality product, you have chosen wisely.

This Hekatron smoke detector has been developed on the basis of an industrial smoke detector. It has optimal response behaviour to smoke, very high security against false alarms, error-free smoke detection, and a very high degree of security against extraneous signals. The Smoke Detector HSD IV complies with all valid directives and standards for smoke detectors.

Before commissioning the smoke detector, please read these Installation and Operating Instructions thoroughly.

If you have any questions, your specialist dealer will be pleased to help you.



DIN EN ISO 9001