HEKATRON
Brandschutz

Operating manual
Smoke alarm Genius Plus Genius Plus X

Brandschutz
made in Germany

Behaviour in the event of fire

1. Rescue people

- Warn the people living with you.
- Immediately leave the room / the building and close all doors on your way out to prevent a rapid spread of smoke and fire.

- Stay close to the floor if there is dense smoke.
- Ensure that all persons have left the room / the building.
- If, for whatever reason, you are unable to leave the room / the building, close all doors, seal all cracks and slots and try to attract someone's attention at the window.

2. Call the fire brigade

- Wait until you are in a safe place before you call the fire brigade.

3. Extinguish the fire

- Only attempt to extinguish the fire yourself if this does not put you in any danger.

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1. Introduction

i This document is a translation of the original German operating manual.

This manual applies to the smoke alarms Genius Plus and Genius Plus X. To the Genius Plus X with radio networking, however, the "Standard X radio module" operating manual shall apply additionally. The latter includes all relevant information on the radio network.

This manual is available for download as a PDF file on our website www.hekatron-brandschutz.de.
Our website also contains further information as well as interesting FAQs on fire protection. Please note, however, that our website is only available in German.

Additionally, there are various tutorials available for the assembly and commissioning of the Genius Plus X with the Standard X radio module:

www.hekatron-brandschutz.de/genius-video

This manual uses the following symbols and signal words:

Symbol/ signal word	Meaning
CAUTION	Warning which could lead to material damage or functional defects if it is not observed
i	Reference to additional information
▶	Instruction
⇨	Result of an action
■	List

2. Intended use

- The smoke alarm serves to give people an early warning about smouldering fires and open fires with smoke formation. The smoke alarm can neither prevent nor extinguish fires.
- The smoke alarm may be installed in residential buildings, apartments and rooms with similar purposes.
- The smoke alarm can be operated as a stand-alone smoke alarm (Genius Plus) or as a smoke alarm with radio networking (Genius Plus X).

Improper use

- The smoke alarm may not be installed in outdoor areas.
- The smoke alarm may not be used for forwarding alarms (e.g. to the fire brigade). For this purpose, a fire alarm control panel in accordance with the national directives and regulations is to be used.

If the smoke alarm is used improperly, Hekatron Vertriebs GmbH shall not assume any liability for the resulting damage.

3. Safety

If the safety and operating instructions are not observed, no liability and warranty claims against Hekatron Vertriebs GmbH shall be enforceable.

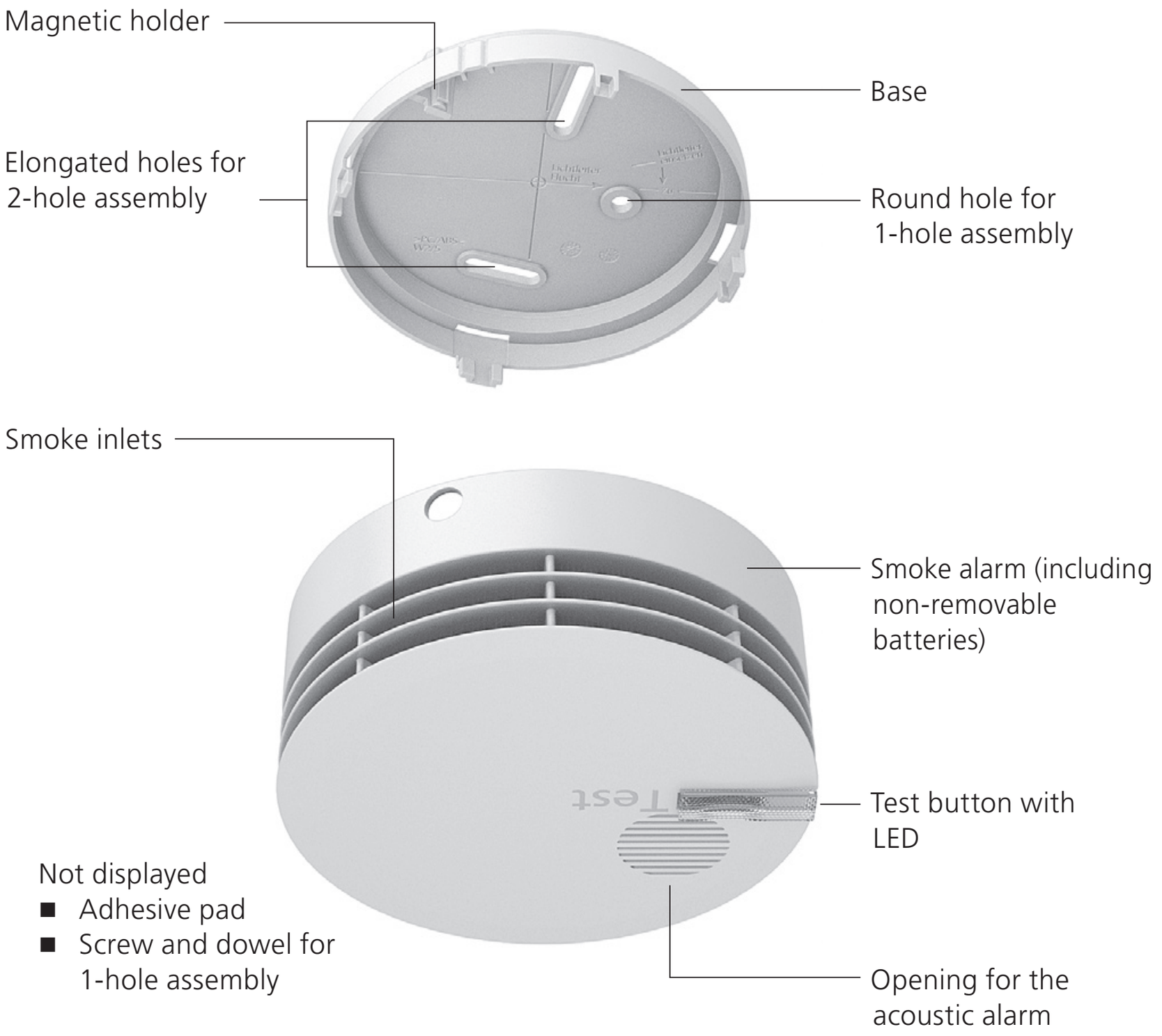
General

- To ensure the proper and safe use of the smoke alarm, read the operating manual completely and follow the instructions.
- Keep the operating manual for future reference.
- Install a sufficient number of smoke alarms in the correct assembly positions (see chapters “Project planning” and “Assembly position”).
- Do not paint over the smoke alarm.
- Do not cover or put tape over the smoke inlets.
- The batteries are firmly installed and may not be replaced.
- Do not expose the smoke alarm to excessive heat, e.g. sunshine, fire, or similar.
- Do not open or modify the smoke alarm.
- Hekatron recommends conducting the project planning, assembly and maintenance according to the national directives and regulations.

Renovation work

- Protect the smoke alarm against dust and contamination (e.g. cover the smoke alarm or dismount it and store it in a plastic bag).
- Once the renovation work is completed, reassemble the smoke alarm or remove the cover.

4. Product description



Not displayed
- Adhesive pad
- Screw and dowel for 1-hole assembly

4.1 Functional principle

The smoke alarm utilises the scattered-light principle. Light beams are regularly sent out in the measuring chamber, which are then absorbed by the measuring chamber. As soon as smoke enters the measuring chamber, the light beams are deflected by the smoke particles (scattered) and hit a lens. This triggers the alarm, which is signalled by the smoke alarm by means of a loud alarm sound and the red flashing LED in the test button.

4.2 Features

- Contamination compensation:
  The smoke alarm automatically adapts to normal changes in its environment and thus guarantees a constant level of sensitivity and a long service life.
- Contamination forecast:
  During the functional check, the smoke alarm calculates whether a secure operation can be guaranteed for another 15 months if the level of contamination remains the same.
- Continuous automatic self-check:
  In normal operation, the smoke alarm regularly carries out an automatic self-check and therefore only needs to be checked once a year (see chapter “Maintenance”).

- Frequency-optimised audible sound:
  Thanks to the different high and deep frequencies, the alarm sound is better perceived by humans.

Radio networking option (only Genius Plus X)

The smoke alarm comprises an interface for the integration of a Standard X radio module and can thus be operated as a smoke alarm with radio networking.

4.3 Conformity

Hekatron Vertriebs GmbH herewith declares that the Genius Plus / Genius Plus X smoke alarm is compliant with EU regulations 2014/30/EU and 2011/65/EU. The complete declaration of conformity can be found on our website www.hekatron-brandschutz.de.

5. Project planning

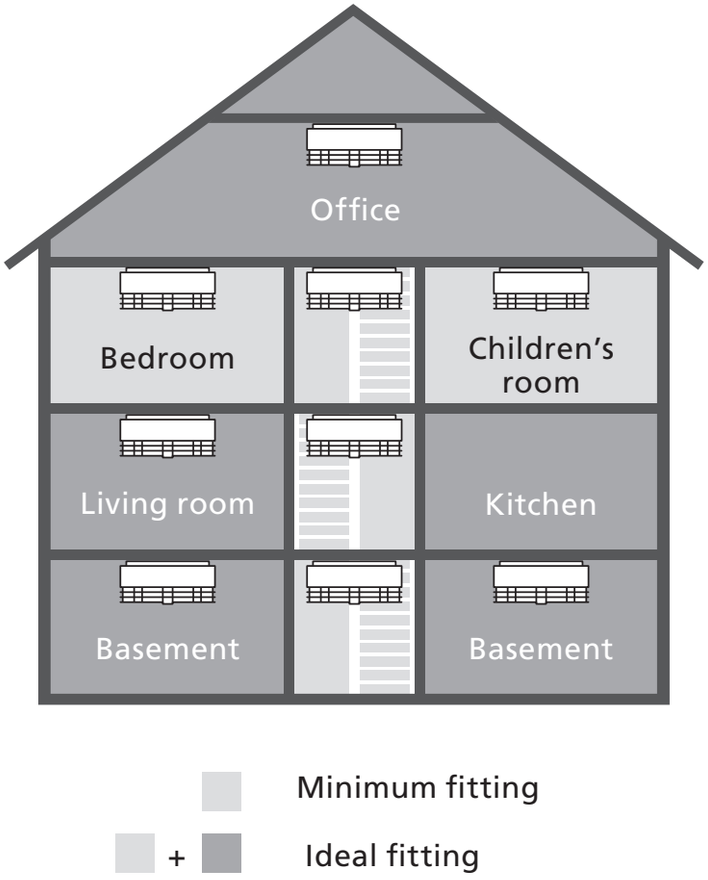
The corresponding national directives and regulations shall apply to the project planning. The figures and information on the minimum fitting and the ideal fitting refer to Germany (mandatory smoke alarms).

Minimum fitting:

- Bedroom (including guest bedrooms)
- Children’s room
- Escape routes (e.g. hallway)

For an **ideal fitting**, we recommend installing additional smoke alarms in the following rooms:

- Living room
- Office
- Basement



6. Assembly position

CAUTION

Selecting the correct assembly position in the room is decisive for the functioning of the smoke alarm.

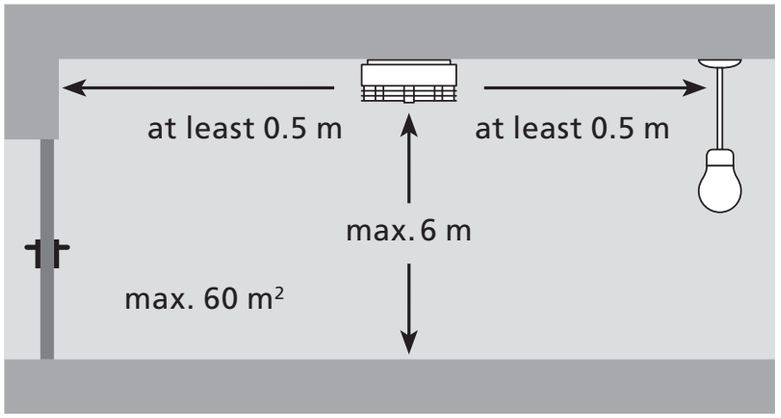
- ▶ Select an assembly position in which smoke can reach the smoke alarm without any obstructions and thus enables an early detection.
- ▶ The standard case and special cases must be observed.

i Genius Plus X:
If radio smoke alarms are used, the chapter "Project planning" in the "Standard X radio module" operating manual is also to be observed.

6.1 Standard case

The following conditions apply to the correct assembly position:

- On the ceiling
- As close to the centre of the room as possible, but at least 0.5 m away from walls, beams or furniture (e.g. lamps).
- Maximum room height: 6 m
- Monitored area per smoke alarm: max. 60 m²



6.2 Special cases

Rooms with sloped ceiling

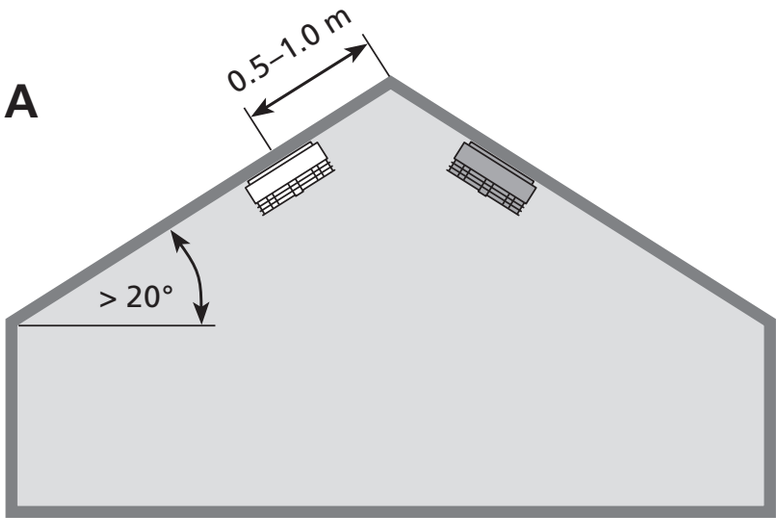
Slope < 20°:
Sloped ceilings with a small inclination are treated like horizontal ceilings (see standard case).

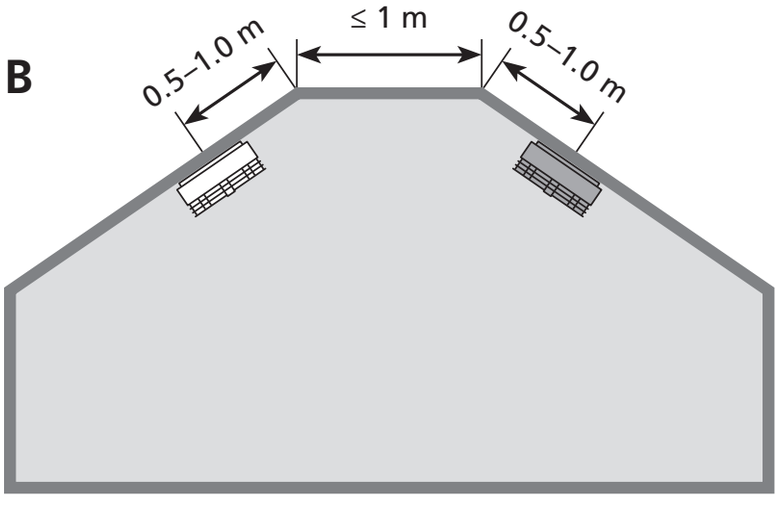
Slope > 20°:
The following applies to sloped ceilings with a larger inclination:

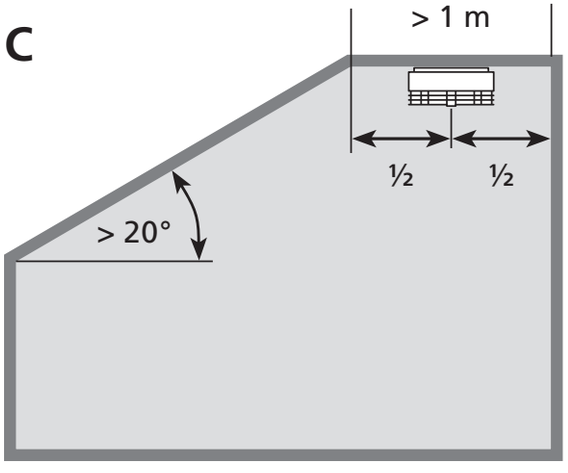
- Clearance to peak:
  0.5 – 1.0 m (see Figure A)

Slope > 20° and horizontal portion:
The following applies to these ceilings:

- If there is a horizontal portion of ≤ 1 m: at the slope with 0.5 to 1.0 m clearance from the horizontal portion (see Figure B)
- If there is a horizontal portion of > 1 m: in a central position in the horizontal ceiling (see Figure C)







Alternative positioning of the smoke alarm

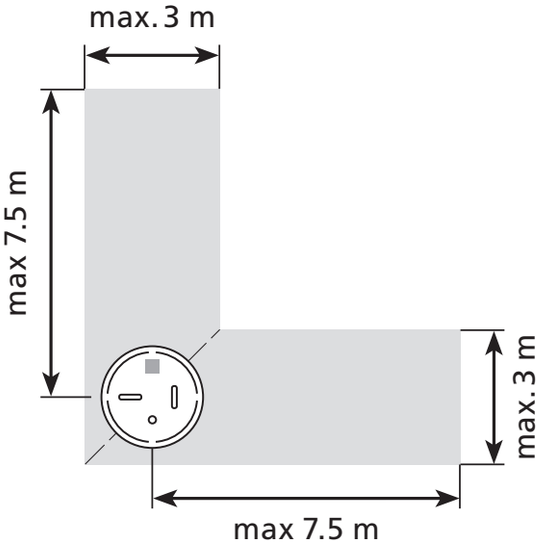
Long and narrow rooms (e.g. hallways)

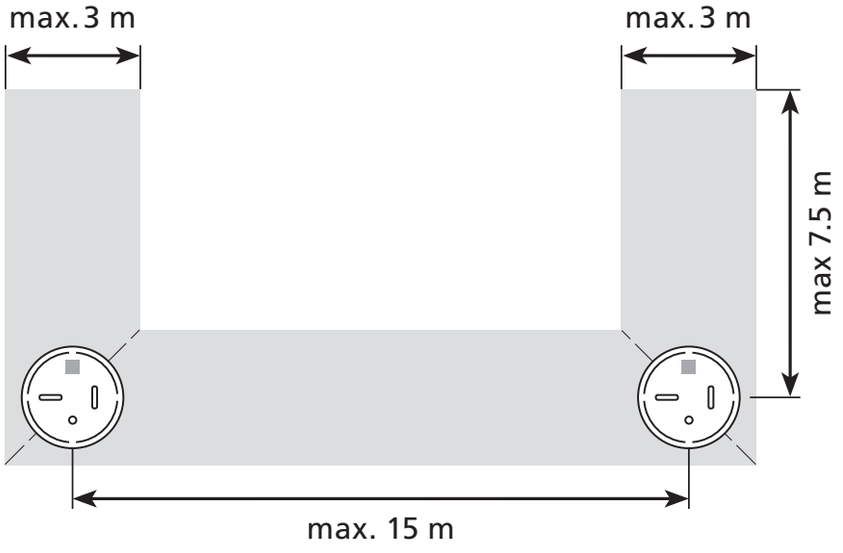
In rooms and hallways with a width of < 1 m, the following assembly position applies:

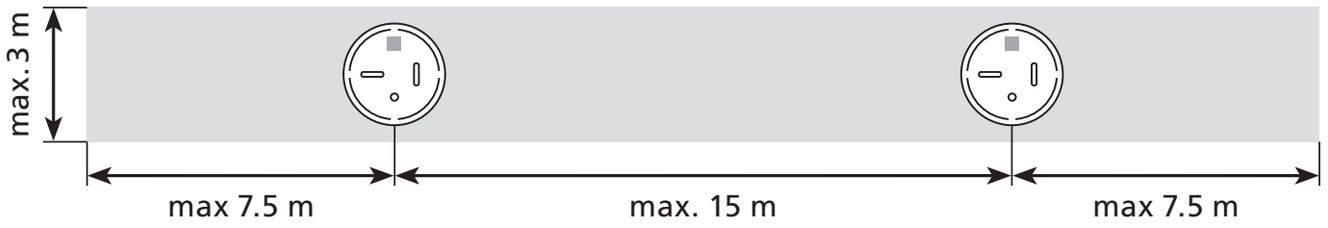
- In a central position on the ceiling between the walls

In hallways with a width of < 3 m, the following assembly position applies:

- Clearance to the front side: max. 7.5 m
- Distance between 2 smoke alarms: max. 15 m







Wall assembly

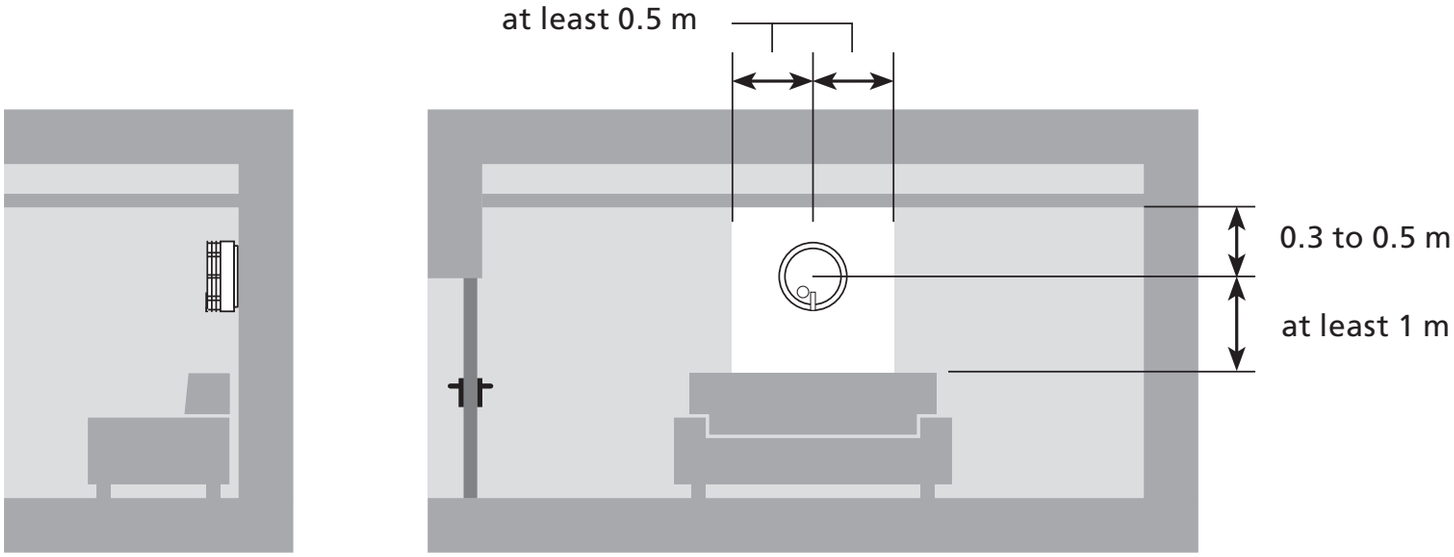
The smoke alarm may be placed on the wall of a room in the following cases:

- Ceiling-assembly is not possible (e.g. in the case of textile ceilings or ceiling heating)
- Rooms and hallways with a surface area of ≤ 6 m²
- Kitchens which serve as escape routes

The following conditions apply to wall assembly:

- In a central position on the longer wall
- Clearance to ceiling: 0.3 to 0.5 m
- Clearance to objects below the smoke alarm: 1 m
- Lateral clearance: 0.5 m

i In the event of other special cases, e.g. rooms larger than 60 m² or ceiling joists, please contact your dealer.



Smoke alarm wall installation

7. Assembly

The following options are available for the assembly of the base:

- Screw/dowel assembly with 1 screw: see 7.1
- Screw/dowel assembly with 2 screws: see 7.2
- Assembly with an adhesive pad: see 7.3

For a secure and permanent connection, Hekatron recommends the screw/dowel assembly.

i The fastening material for a 1-hole assembly is included in the scope of delivery. If other screws are to be used, the screw heads must not reach into the base by more than 5 mm. We recommend using 3.5 x 25 mm oval-head screws.

CAUTION:
Depending on the selected assembly method, lines may be damaged.

- ▶ Select the assembly position in a way that it can be ensured that no electric lines or other supply lines (e.g. water) can be damaged during drilling.

7.1 Screw/dowel assembly with 1 screw

- Hold the base against the ceiling and mark the hole for the desired assembly position.
- Drill a hole.
- Insert the dowel into the bore hole.
- Remove the protective foil from the fastening pad.
- Insert the screw through the round hole in the base and screw it halfway in.
- Align the base, press it against the ceiling and firmly tighten the screw.

7.2 Screw/dowel assembly with 2 screws

- Hold the base against the ceiling and mark the holes for the desired assembly position.
- Drill 2 holes.
- Insert the dowels into the bore holes.
- Insert the screws through the elongated holes, hold the base against the ceiling and firmly tighten the screws.

7.3 Assembly with adhesive pad

i Only the adhesive pad supplied by Hekatron may be used for the assembly with adhesive pad.

CAUTION

The assembly with an adhesive pad depends on the adhesion characteristics of the surface of the ceiling in the desired assembly position. If the surface is unsuitable, the smoke alarm will not permanently adhere to the ceiling.

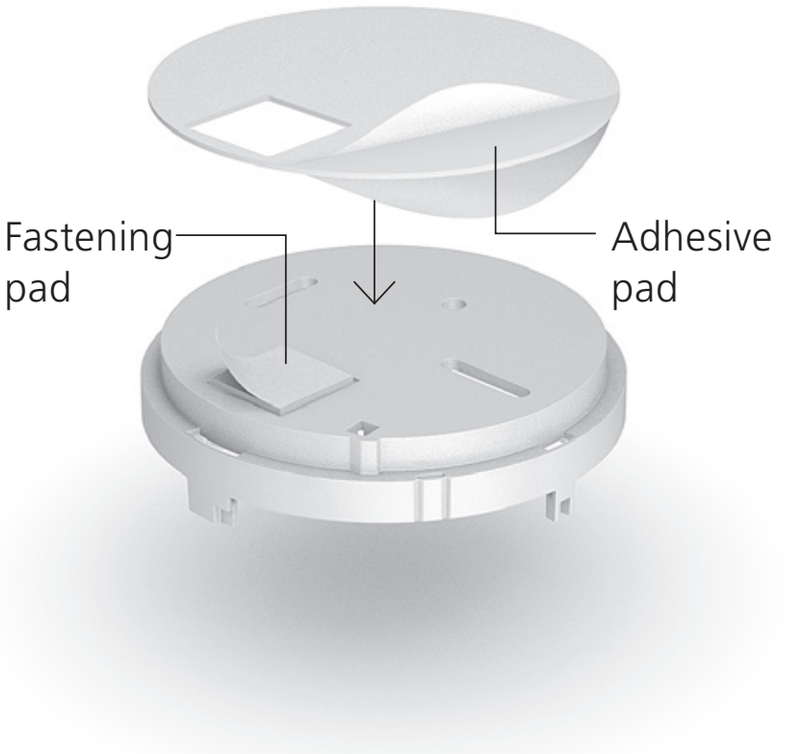
- For the selection of a suitable surface, please observe the following table:

Suitable	Unsuitable
Smooth, level, undamaged, clean and free from dust, grease and solvents	Loose paint and porous surfaces (e.g. plaster, emulsion paint, plywood, chip-boards and fibre boards)

[1] In some versions, the adhesive pad is an accessory which must be ordered separately.

i Adhesive pads may leave residues after their removal.

- Clean the surface in the desired assembly position.
- Remove the protective foil on one side of the adhesive pad and attach the pad to the base of the smoke alarm. When doing so, observe the recesses for the fastening pad.
- Remove the protective foil on the other side, hold the base to the desired assembly position and press it firmly against the ceiling (for at least 5 seconds).



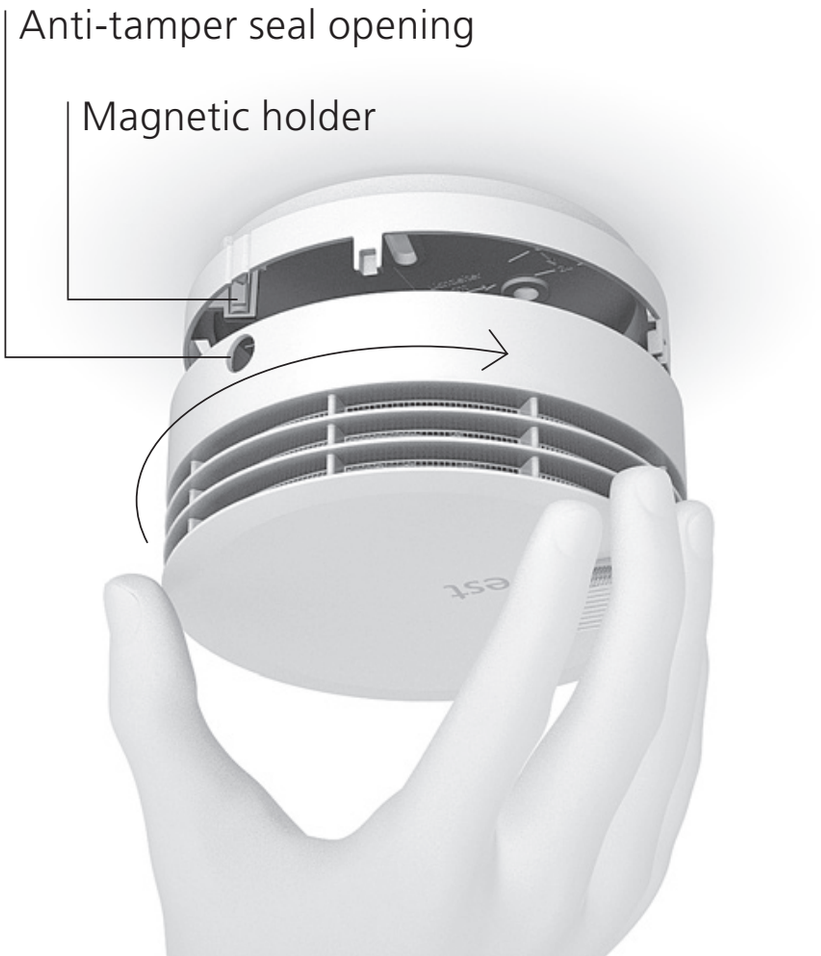
8. Commissioning

i Genius Plus X:
With radio smoke alarms, the radio module is to be installed before commissioning (see “Standard X radio module” operating manual).

- ▶ Attach the smoke alarm to the base in such a way that the round anti-tamper seal opening of the smoke alarm is positioned flush over the magnetic holder of the base.
- ▶ Turn the smoke alarm clockwise until it latches.

  ⇨ The smoke alarm will be activated automatically and execute a self-check.

i If the smoke alarm is removed from the base again, it will automatically switch off after 5 minutes.



9. Seal (accessories)

The smoke alarm can be secured against removal by unauthorised persons or sabotage by means of a seal.

Inserting the seal

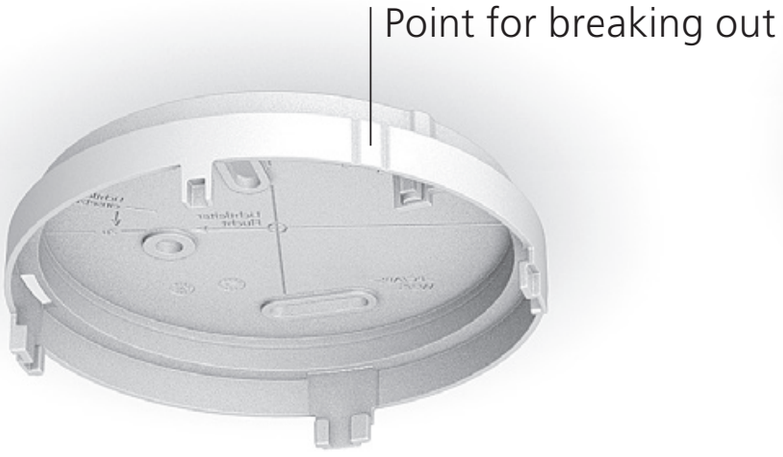
- ▶ Remove the break-out partition in the base using pliers.
- ▶ Mount the base (see chapter “Assembly”).
- ▶ Rotate the smoke alarm into the base.
- ▶ Insert the seal into the opening.

  ⇨ The opening is closed completely.

Removing the seal

- ▶ Rotate the seal by 90° using a screwdriver.

  ⇨ The head of the seal is sheared off.
- ▶ Remove the smoke alarm form the base.



10. Status signals

In normal operation, the smoke alarm carries out an automatic self-check in regular intervals. The corresponding status is signalised by means of the test button and the acoustic alarm.

i If using the Genius Plus X, the operating manual of the radio module is to be observed in addition.

Normal operation

The smoke alarm has an integrated real-time clock. This has the effect that the LED in the test button and the acoustic alarm are deactivated from 9 p.m. to 7 a.m. CET[1].

Test button		Acoustic alarm	Cause	Remedy
GREEN	Flashes every 48 seconds	---	Smoke alarm functions impeccably	
ORANGE	Flashes every 8 seconds	Short audible signal every 48 seconds	End of service life[2]	Replace the device. Deactivate the acoustic alarm.
ORANGE	Flashes every 48 seconds	-- (Acoustic alarm has been deactivated)	End of service life[2]	Replace the device.
RED	Flashes every 8 seconds	Short audible signal every 48 seconds	Fault detected[2]	Replace the device. Deactivate the acoustic alarm.
RED	Flashes every 48 seconds	-- (Acoustic alarm has been deactivated)	Fault detected[2]	Replace the device.

[1] CET: Central European Time (winter time)

[2] For example: empty battery

Fire alarm

As soon as the smoke alarm detects smoke, it enters the “fire alarm” mode. In this mode, the LED is flashing, and the acoustic alarm is sounded.

Test button		Acoustic alarm	Cause	Remedy
RED	Flashes every second	Alternating, loud alarm sound	Smoke is detected	Exit the building (s. page 3 “Behaviour in the event of fire”).
GREEN	Double-flashes every 48 seconds	---	Active alarm storage (the device has an active fire alarm)	Check environment for possible sources of smoke. Delete the alarm storage by pressing the test button briefly.

Deactivating the acoustic alarm

▶ Press the test button briefly.

⇨ In the event of a fault, the acoustic alarm is muted for 24 hours.

⇨ In the event of a fire alarm, the acoustic alarm is muted for 10 minutes. Subsequently, the alarm will be sounded again if smoke is still detected.

11. Maintenance

To be able to guarantee the impeccable function of the smoke alarm, an on-site inspection including functional test is to be carried at least once a year (12 ± 3 months), in accordance with the national directives and regulations (in Germany in accordance with DIN 14676-1).

During the functional test, the smoke alarm determines whether its operational readiness can be guaranteed for the next 15 months and signalises its corresponding status by means of the test button and the acoustic alarm.

i The smoke alarm is not suitable for using test gas.

- ▶ Only carry out the functional test by pressing the test button.

Carrying out maintenance

- ▶ Remove the dust from the smoke alarm with a soft cloth.
- ▶ If required, remove any contamination with a wet cloth. Do not use detergents.
- ▶ Ensure the following points:
  - ■ The smoke alarm is not damaged.
  - ■ There is a clearance of > 0.5 m around the smoke alarm.
  - ■ The smoke inlets are not obstructed.
  - ■ The opening for the acoustic alarm is not obstructed.
  - ■ All rooms prescribed by law have a smoke alarm (see chapter “Project planning”)

Implementing a functional test

▶ Press the test button briefly.

⇨ The smoke alarm displays its status:

Test button		Acoustic alarm	Status
GREEN	Flashes 1x	Sound indicating a positive test result	Smoke alarm functions impeccably
		Sound indicating a negative test result	Potential end of service life due to contamination within 15 months.
ORANGE	Flashes 1x	Sound indicating a negative test result	The end of service life has been reached. Replace the smoke alarm.
RED	Flashes 1x	Sound indicating a negative test result	Fault detected. Replace the smoke alarm.

Examples for all different sounds can be found on our website, in the FAQ (only available in German):
www.hekatron-brandschutz.de/faq/

12. Disposal

For the disposal, observe the national directives and regulations.

Disposing of the smoke alarm with the domestic waste is inadmissible.

Hekatron has already assumed the costs for the disposal of the smoke alarm by paying the fee to the EAR [Elektro-Altgeräte-Register; German register for old electrical equipment].

The batteries are firmly installed in the smoke alarm and cannot be replaced.

13. Environment

Our smoke alarms are manufactured in compliance with the quality and environmental management standards according to DIN EN ISO 9001 and DIN EN ISO 14001. The Genius Plus / Plus X smoke alarms meet the statutory RoHS requirements and are free from any illegal substances.

14. Terms of use

If the following terms of use are complied with, this smoke alarm has a typical service life of up to 10 years.

Genius Plus and Genius Plus X

- Commission the smoke alarm at the latest 1 year after its production date.
- Conduct the project planning and assembly according to this operating manual.
- The ambient temperature must comply with the provisions in the chapter “Technical data”.
- Maximum alarm time per year: 90 seconds
- Max. 12 functional tests or data transmissions via “Smartsonic” per year

Additionally for Genius Plus X with radio networking:

- Installation of the radio module: at the latest 2 years after the initial commissioning of the smoke alarm
- Commissioning of the radio module: max. 2 x in 10 years
- Max. 1 line or network test per year
- Max. 1 range test in 10 years
- Project planning according to the “Standard X radio module” operating manual
- Portion of radio-interferences: max. 0.2 % (= 3 min/day) in 10 years
- The maximum duration for the co-signalisation of fault messages in the radio network is 30 days

15. Product complaints

Our smoke alarms meet the highest quality requirements. Should you nevertheless have any reason to complain, please directly contact your dealer.

16. Technical data

Approved by VdS	DIN EN 14604/VdS+Q label G no.: 215026 (Genius Plus)/ 215027 (Genius Plus X)
Declaration of performance	CPR-31-13-029-de-en (Genius Plus) CPR-31-19-003 (Genius Plus X)
Sound pressure at a distance of 3 m	> 85 dB(A)
Voltage supply of Genius Plus (lithium batteries, non-removable [1,2])	3.6 V
Voltage supply of Genius Plus X (lithium batteries, non-removable [1,2])	3 V
Genius Plus battery capacity	2 x 2.2 Ah smoke alarm
Genius Plus X battery capacity	1 x 1.8 Ah smoke alarm 1 x 1.8 Ah for radio module
Smoke alarm battery life	typically 10 years
Storage temperature	-10 °C to +60 °C
Ambient operating temperature	0 °C to 55 °C
Ambient humidity at ≤ + 40 °C (permanent, without condensation)	10 to 70 % rH

[1] For safety reasons, an uninterrupted power supply is required for the smoke alarm.
[2] The optionally available radio modules are supplied via an internal battery of the Genius Plus X.

Weight with base	approx. 162 g
Protection classs	IP 40
Colour	white, silk-matte, similar to RAL 9010
Material	PC-ABS
Dimensions, height/diameter	48 mm x 104 mm

Subject to technical changes and changes in colour. No liability is accepted for mistakes and printing errors!

Obliged to safety.

The protection of people and material assets in the event of a fire has always been the main objective of Hekatron Brandschutz. We are the leading provider of technical fire protection systems in Germany and your number-one partner in this field.

Trust, safety and networking have strengthened Hekatron for over 55 years. Building on this, we have continuously developed our offer. We connect products and services to build a holistic, application-oriented solution and thus enable our customers to enter the digital era.

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