# The SD-728 stand-alone smoke detector

The SD-728 is used to detect fire hazards in interior residential or commercial buildings (non- industrial). It is battery-powered with a built-in warning siren and red LED. It warns of fire to provide sufficient time to extinguish the fire, or to leave the premises and make calls for help. Smoke detectors need to be installed in the right place, regularly maintained and tested as described in this manual. The optical smoke detector works on the principle of scattered light and is very sensitive to large dust particles, which are dense, and is less sensitive to smaller particles generated by the combustion of liquids such as alcohol.

Detector range

The smoke detector must be installed so that any smoke easily drifts into the detector, such as on the ceiling. It is suitable for residential buildings, but not suitable for free spaces, outdoor environments or interiors with an extremely high ceiling where fire by-products would not reach the detector position.
The detector must always be placed in the section leading to the exit of the dwelling (escape route), see Figure 1. If the dwelling has a floor area greater than 150 m^2, an additional detector is required, see Fig.2.
An apartment block must be equipped with a detector in each apartment. In family houses and residential flats or maisonettes a detector must also be placed at the highest point of the common hallway or spaces (escape routes), see Fig.3.
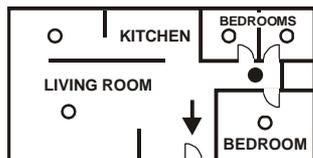
Fig. 1
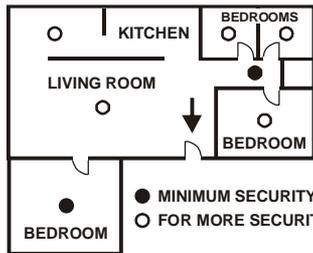
Fig. 2

It is recommended to place additional detectors in rooms where people sleep in rooms with an increased risk of fire, see Fig.2.

Positioning on level ceilings

Place the detector in the center of the room, as level as possible. Detectors must not be recessed into the ceiling (worse conditions for the spread of smoke). Never place the detector in a room corner (ensure a distance of at least 0.5 meters from the corner), see Fig 4.
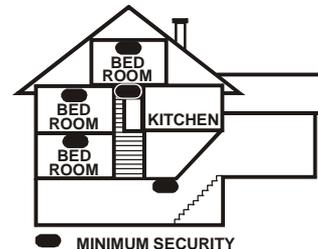
Fig. 3

- **Installation on sloping ceilings**

If the ceiling is not suitable for mounting on a level surface (eg a room under a roof ridge), the detector can be installed as in Figure 5.

Fig. 4
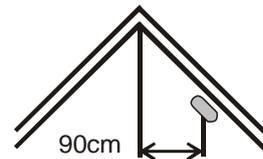
Fig. 5

- **Walls, partitions, barriers and lattice ceilings**

The SD-280 **must not be installed closer than 0.5 m from any wall or partition**. A narrow room with a width of less than 1.2m requires the detector(s) to be placed at a distance of at least one third of the room's width away. In the case of separating walls (partitions, warehouse objects) which do not reach the ceiling, the space is **considered to be fully separated if the gap between the top of the separating wall and the ceiling does not exceed 0.3 m**. A free space of at least 0.5m is required under the detector. Irregularities in ceiling shape which do not exceed 5% of ceiling height are considered insignificant – the ceiling can be regarded as being even and limits from the table are

applicable. **However, any irregularity (including beams) exceeding 5% of the ceiling height is considered to be a wall with the consequences stated above**.

● **Ventilation and air circulation**

The detectors must not be installed directly by a fresh air inlet, e.g. air conditioning vents. In the case of air being supplied through a perforated ceiling, each detector must be placed so that no perforation hole occurs within 0.6m of the detector.

● Avoid installing the detector in the following locations:

- Places with poor air circulation (niches, corners, apexes of A-shaped roofs).
- Places exposed to dust, cigarette smoke or steam.
- Places with over-intense air circulation (close to ventilators, heat sources or air conditioning outlets).
- Kitchens and other cooking places (because steam, smoke or oily fumes can reduce detector sensitivity).
- Beside lights (electrical interference can cause a false alarm)
- Areas with lots of small insects

Caution: Most false alarms are caused by improper detector location.
See CEN/TS 54-14 standards for detailed installation guidelines.

Installing the detector

1. Detach the mounting bracket from the detector by turning the mounting bracket anti-clockwise.
2. Hold the bracket on the ceiling so that it does not move during hole-marking.
3. Mark the intended location of mounting holes on the ceiling.
4. Drill the holes and insert some dowels.
5. Screw the bracket onto the ceiling thru the screw slots.
6. Open the battery cover and connect the battery to the contacts in the detector, ensure the polarity is correct.
7. Insert the battery and close the battery cover.
8. Push and twist the detector clockwise onto the bracket on the ceiling.

Warning: The detector cannot be twisted onto the mounting bracket without a battery being in the detector (mechanical interlock).

Detector functions

Correct functioning: Indicated by a flash of its LED approximately every 45 seconds.

Fire alarm: Penetration of smoke into the detector after a certain period of time is indicated by its LED blinking rapidly. If smoke persists, the built-in alarm siren sounds (intermittent tone).

End of fire alarm: An alarm lasts until the smoke disappears and can not be interrupted.

Testing the detector

The functionality of the detector can be verified by pressing and holding the test button. The detector light flickers and the siren sounds within about 20 seconds. This test should be carried out at least 1x per week. If the test button has no effect, have the detector serviced.

Warning: Never start a fire in a building to test the detector. Instead, use smoke-simulating aerosols for realistic testing.

Replacing the battery

Perform battery replacement 1x per year, or earlier if the detector makes a low battery beep at regular one minute intervals. The detector should be able to work with a weak battery for up to 14 days. Use only good-quality alkaline batteries. When replacing the battery, we recommend you to use a vacuum cleaner to remove any dust inside the detector. **Dispose of batteries according to local regulations.**

Technical Specifications

Power	*alkaline battery 9 V type 1604G (6LR61), 600mAh*
Typical battery lifetime	*approx. 1 year*
Smoke sensor	*optical, light scattering*
Sensitivity	*m = 0.11 - 0.13 dB/m (EN 14 604)*
Siren acoustic output	*min. 85dB/3m A*
Operating temperature range	*+4 to +38 ℃*
Dimensions	*Diameter 103 mm, height 40 mm*
Conformity	*EN 14 604, EN 50130-4, EN 55022*

CE **0786-CPD-20405**

JABLOTRON ALARMS a.s. hereby declares that the SD-728 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The original of the conformity assessment can be found at www.jablotron.com, Technical Support section.

Note: Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the producer after use.