Dystrybucja systemów Jablotron: MBS SYSTEMS s.c.

The JA-63S independent fire-detector

This device is designed to detect the presence of fire inside residential or commercial buildings. It should not be installed in industrial premises. The battery-powered detector has a built-in local warning siren combined with a red LED indicator. The alarm information can also be transferred via a wireless connection.

The JA-63S detector combines an optical smoke sensor with a heat sensor. Both sensors have their outgoing signals processed digitally, resulting in higher false alarm immunity. The optical sensor works using a light diffusion principle and is very sensitive to the presence of large-sized particles which are characteristic of dense smokes. By contrast, the sensor is less sensitive to small-sized particles which are typical of cleanly burning fires. In particular, the smoke sensor is not capable of detecting the by-products of cleanly-burning fluids such as alcohols, for instance. This deficiency is compensated for by the built-in heat sensor. This sensor provides a slower reaction when compared to the smoke sensor, but is much better at reacting to fires with rapidly rising heat producing only a little smoke. Smoke/heat sensor participation is configurable by DIP switches.

Detection range, detector positioning

Exposing fire conditions to the smoke and heat sensors requires some level of air circulation. It is therefore necessary to install the JA-63S detectors in such a place on the ceiling that (in the case of fire) smoke masses are forced to go in the direction of the detector's position. This can usually be achieved in most buildings. However, the JA-63S is not suitable for installation in outdoor spaces or interiors with an extremely high ceiling where fire by-products would not reach the detector position.

The following table shows the detector's working range in relation to the height of the ceiling on which the detector is installed. The range is expressed as the radius of the circular fire detection area for a detector installed on a ceiling directly above:

	Ceiling height (m)					
	< 4,5	4,5÷6	6÷8	8÷11	11÷25	> 25
Smoke detection	7,5* m	7,5* m	7,5* m	7,5* m	***Not suitable***	***Not applicable***
Heat detection	5* m	5* m	5* m	***Not suitable***	***Not applicable***	***Not applicable***

Not applicable – meant for a particular ceiling height range
Not suitable –not usually used in such cases
** – the radius of the detection area below the detector*

• Installation on a horizontal level ceiling

Due to the possible occurrence of a cold air layer right under the ceiling, the **detectors must not be imbedded into the ceiling**. The distance between any point to be protected and an imaginary vertical line from the nearest JA-63S detector down to the floor must not exceed the radius indicated in the table.

• Installation on a sloping ceiling

If the JA-63S is installed just under an apex formed by the joining of two sloping ceilings the values indicated in the table can be increased by 1% for every degree of slope up to a **maximum of 25%.** If the space to be protected is under a **saw-tooth type of roof,** JA-63S detectors should be installed **under each apex**. However, a roof with a shallow saw-tooth form can be acceptable if the height difference between the highest and lowest parts of the ceiling does not exceed 5% of the total ceiling height

• Walls, partitions, obstacles, and trussed ceilings

The JA-63S **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.

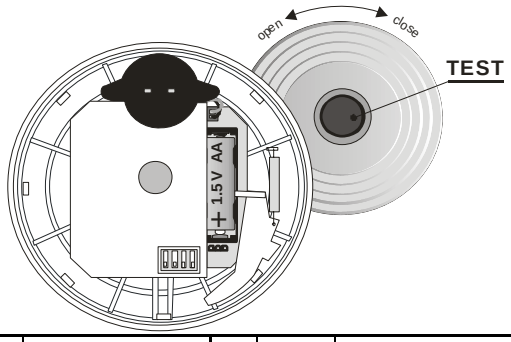
• Avoid installing the detector in the following locations:

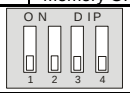
- Places with poor air circulation (niches, corners, apexes of A-shaped roofs).
- Places exposed to dust, cigarette smoke or steam.
- Places with over-intense air circulation (close to ventilators, heat sources or air conditioning outlets).
- Kitchens and other cooking places (because steam, smoke or oily fumes can reduce detector sensitivity).

Caution: The most common reason for the detector to be accidentally triggered is improper detector location.
See CEN/TS 54-14 standards for detailed installation guidelines.

Installation

1. Open the detector by turning the rear cover to the left and remove the battery
2. **Screw the rear cover** onto the desired location
3. **Set the required function** via DIP switches – see the table below
4. Please read the receiving device (control panel) installation manual before you connect the battery (remove the insulation tape) and set the control panel in learning mode
5. When the battery is connected, the detector sends a signal to connect into the system
6. After installing the detector, allow approx. 15 seconds for stabilisation. This period is indicated by the LED being continuously lit and is **followed by an auto-test**. Successful performance of the auto-test is **confirmed acoustically.**
7. Test the detector function by pressing the test button. If everything is in order, an alarm signal is sounded within 10 seconds and it is also transferred into the receiving device via wireless connection. **The testing signal is always transferred into INSTANT loop.**



1	ON	INSTANT alarm mode	3	OFF	Smoke (EN 14064) or heat (EN 54-5)
	OFF	FIRE alarm mode	4	OFF	
2	ON	Memory ON	3	ON	Only smoke (EN 14604) (heat indifferent)
	OFF	Memory OFF	4	OFF	
			3	OFF	Only heat (EN 54-5) (smoke indifferent)
			4	ON	
			3	ON	Smoke and heat (both simultaneously)
			4	ON	

Closing the detector is disabled if no battery has been installed!
Remove the battery for 1 minute whenever you change the DIP setting!

Fire alarm

Optical smoke sensor: Smoke entry into the detector is indicated as a pre-alarm state by the LED flashing. If the smoke threshold density is exceeded, a siren sound is generated, gradually increasing in volume.

Heat sensor: indication logic is equal to that of the smoke sensor.

Alarm memory: It is switched ON/OFF via DIP 2 as shown in the table. If the event memory is armed at the time of alarm, alarm LED indication continues even if normal conditions are restored. The indication can be stopped by pressing the button.

Silencing the siren during an alarm: During a fire alarm, the detector LED flashes 2 times briefly and the built-in siren sounds (at a higher intensity than during a test). Under these conditions the siren can be silenced by pressing the test button. However, if normal conditions are not restored within approx. 10 minutes (the smoke does not clear from the room or the temperature does not drop), the siren re-activates.

Testing the detector

The functioning of the detector can be tested by pressing and holding the test button for approx. 3 seconds. A properly functioning detector responds with one beep and a short flash. The alarm information is transferred to the system. A fault is indicated by 4 beeps and the LED permanently flashing. In this case, remove the battery and re-insert it after 1 minute. If the fault indication occurs again (the LED starts permanently flashing after about 1 minute), consult the installer company.

The detector should be tested this way at least once in every 30 days.

Warning: Never start a fire in a building to test the detector. Instead, use smoke-simulating aerosols for realistic testing. The information for the control panel is seen as a FIRE zone.

Battery replacement

The detector monitors its battery voltage and if too low, a report is sent to the control panel and a short acoustic warning signal is emitted every 45 seconds. Battery replacement should not be delayed by more than two weeks. As mentioned above, the detector is automatically tested after each battery insertion. **Expired batteries should not be thrown into the garbage, but disposed according to local regulations.**

Specification

Voltage	*1x AA 1.5 V alkaline battery*
Battery lifetime	*typically 2 years*
Working frequency	*433.92 MHz*
Wireless communication range	*100m (in open space)*
Smoke detection	*optical, light dispersion*
Smoke sensor sensitivity	*m = 0.11 - 0.13 dB/m pursuant to EN 14 604*
Temperature detection	*class A2 pursuant to EN 54-5*
Fire-alarm temperature	*+60 °C to +70 °C*
Acoustic power of the built-in siren	*min. 85dB/3m A*
Operational temperature range	*-10 to +70 °C*
Dimensions	*diameter 126 mm, height 65 mm*
Complies with	*EN 14 604, A2 EN 54-5, EN 50130-4, EN 55022*
Terms of use	*ČTÚ VO-R/10/03 2007-4*

Complies with EN 14 604, A2 EN 54-5, EN 50130-4, EN 55022,

CE 1293-CPD-0094

Jablotron Ltd. hereby declares that the JA-63S 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 on the web site www.jablotron.com, Technical Support section.

Note: Dispose of batteries safely depending on battery type and local regulations. Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the manufacturer after use.

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