



# ADDRESSABLE OPTICAL SMOKE AND RATE OF RISE HEAT DETECTOR

## TYPE FD 8060

INSTRUCTION MANUAL 01-8060-11-05



### GENERAL DESCRIPTION

FD8060 addressable optical smoke and rate of rise heat detector is designed provide early warning of a fire condition by reacting upon a fixed smoke concentration or at a rate of rise in temperature or upon fixed temperature level in the protected area.

The principle of functioning is based upon smoke particles entering the optical chamber causing distraction of infrared rays within the chamber. The principle of function of heat part is based on ohmic resistance alternation in the thermistor as a result of the ambient temperature change. The activation threshold of the detector is factory set at a specific smoke concentration level heat class. The fire detector has a microcontroller and operates a self-compensation algorithm of contamination.

The circuit board and the optic chamber (Fig.1, position 4) are mounted within the plastic body (Fig.1, position 5). Two LEDs, (Fig.1, position 3), offering 360° visibility, illuminate to indicate the following:

- Duty Mode - both LEDs flash repeatedly every 16 seconds.
- Fire condition - both LEDs illuminate constantly.
- Necessary service-both LEDs flash repeatedly with 2Hz frequency.

### TECHNICAL DATA

Supply voltage $U_i$	(15-30)V DC
Current consumption in quiescent state	< 120 $\mu$ A
Current in Fire Condition	
- with base type 8000 and 8000 D	-8mA/10.5V, 25mA/30V
- with base type 8000 R and 8000 DR	-18mA/10.5, 55mA/30V
Sensitivity	in accordance with EN 54-7:2000
Class	- A2R (according EN 54-5:2000)
Protected area	circle with diameter 15m
Installation height	up to 16 m
Output in alarm state at terminals RI/KL	OC type, through a 500 $\Omega$ resistor
Degree of protection	IP 43
Operational temperature range	minus 10°C / plus 60°C
Relative humidity resistance	(93 $\pm$ 3) % at 40°C
Dimensions (incl. base)	$\varnothing$ 100 mm, h 47 mm
Weight (incl. base)	0,100 kg
Wires	two-wire, shielded
Cross section of the wires	up to 2.5 mm <sup>2</sup>

### INSTALLATION

The fire detector type Fd8060 operates with bases type 8000 (standard base), 8000 D (base with Schottky diode), 8000 R (base with relay output), 8000 DR (base with Schottky diode and a 500  $\Omega$  resistor).

To install the fire detector and its base follow the sequence:

1. Fix the base on the ceiling of the protected premises using appropriate fixings.
2. Complete the wiring as shown on fig. 2 and in accordance with the construction projects of the site.
3. Replace the detector head on the base and rotate it in a clockwise direction to reach the base's leading channels (Fig.1, position 2). Continue rotating in a clockwise direction to complete location (Fig.3.1). The bench marks of the head and the base should fully coincide (Fig. 3.2).
4. To lock the detector head to the base separate the key from the base (Fig. 4, position 3) and keep it in a safe place, cut the technological edge (Fig. 4, position 1) of the click (Fig. 4, position 2) and complete the instructions described above.
5. To unlock the detector head insert the key into the slot, according to Fig.4, rotate the fire detector anticlockwise until rest, take the key out and continue rotating to release the head.

### TESTING THE FIRE DETECTOR

Test the fire detector after installation, as a part of the site's fire alarm system or after maintenance, in accordance with the requirements set in section Service schedule.

To test the fire detector follow the sequence:

1. Apply power to the fire detector from the fire alarm line. The range of the power is defined in section Technical data. You may supply power from the fire control panel or from an additional power supply unit.
2. Wait for 1 minute to settle the power in the fire alarm line. Exert influence on the fire detector by smoke generator or by aerosol simulator of smoke to test the optical part; or use heat tester at distance of 20 cm to test the heat part. Within 30 seconds the fire detector shall enter fire condition and the LEDs (fig.1, position 3) will illuminate.
3. Interrupt the power supply from the fire alarm line for a moment. The fire detector shall restore the Duty Mode and the LEDs (fig.1, position.3) will be extinguished.

### SERVICE SCHEDULE

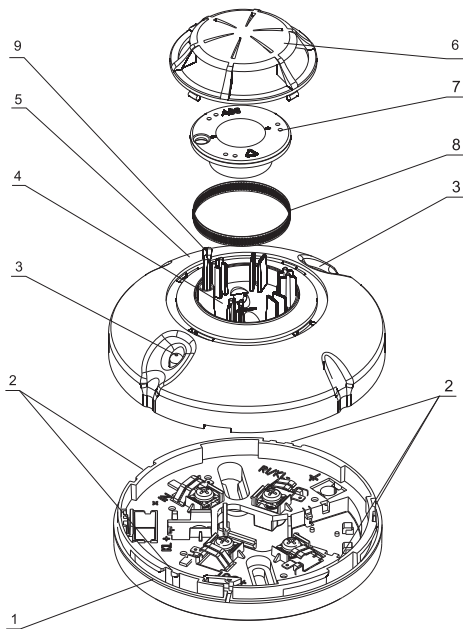
- |   |                  |
|---|------------------|
| 1. Inspection for visible physical damage                 | - weekly         |
| 2. Satisfactory operation test in real conditions         | - monthly        |
| 3. Check and clean dust contamination                     | - every 6 months |
| 4. Check and clean base and head contacts and connections | - Annually       |

To complete task 3 remove the head(Fig.1, position 6) and the chamber's upper part (Fig.1, position 7). Clean using a small brush. The chamber's upper part can be detergent washed, rinsed and dried.

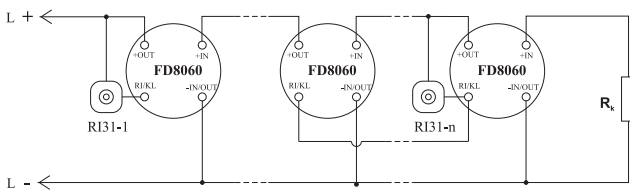
**ATTENTION: When locating the optical chamber fix the upper part so that bench marks coincide.**

### WARRANTY

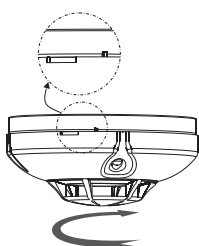
The warrant period is 36 months from the date of purchase. The manufacturer guarantees the normal operation of the unit providing that the requirements set herein have been observed. The manufacturer does not bear warranty liabilities for damages caused through accidental mechanical damage, misuse, adaptation or modification after production. The manufacturer bears warranty liabilities for damages in the fire detector caused through manufacturer's fault only.



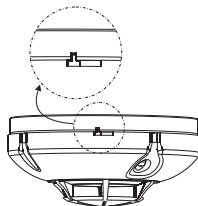
Фиг.1/Fig.1



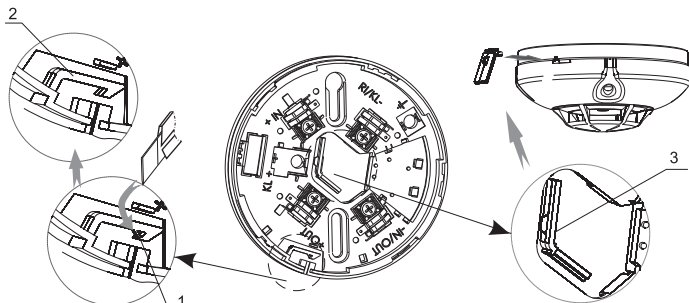
Фиг.2/Fig.2



Фиг.3.1/Fig.3.1



Фиг.3.2/Fig.3.2



Фиг.4/Fig.4