



ADDRESSABLE OPTICAL SMOKE AND HEAT DETECTOR

TYPE FD 7160

INSTRUCTION MANUAL 01-7160-11-05



GENERAL DESCRIPTION

FD7160 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 level or upon fixed temperature level in the protected area.

The principle function of the optical part is based upon smoke particles entering the smoke chamber causing distraction of infrared rays within the chamber. The principle of function of heat part is based on the ohmic resistance alteration in the thermistor as a result of the ambient temperature change. The activation smoke concentration level (low, middle and high) and the heat class (A1R, A2R, BR) are programmable via Fire Control Panel IFS 7002 through a specialized communication protocol UniTALK.

A built-in short circuit isolator is available.

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.
- **Activated isolator** - both LEDs flash repeatedly with 1Hz frequency.
- **Short circuit at the remote indicator output** - both LEDs flash repeatedly with 2Hz frequency.
- **Necessary service** - both LEDs flash repeatedly with 2Hz frequency.

TECHNICAL DATA

| | |
|--|--|
| Supply voltage U_i | (15-30)V DC |
| Current consumption in quiescent state | < 310µA |
| Alarm state current | (2 ± 1) mA |
| Class for the heat part) | A1R, A2R, BR in accordance with EN 54-5:2000 |
| Smoke sensitivity | in accordance with EN 54-7 |
| Protected area | circle with diameter 15m |
| Installation height | up to 16 m |
| Degree of protection | IP 43 |
| Operational temperature range | minus 10°C / plus 60°C |
| Relative humidity resistance | (93 ± 3) % at 40°C |
| Dimensions (incl. base) | Ø 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 ² |

INSTALLATION

The fire detector type FD7160 operates with bases type 7100. 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 control panel IFS 7002 via the fire alarm loop.
2. Wait until the fire detector is set to Duty Mode and exert influence on the fire detector by smoke generator or another device with aerosol simulator of smoke to test the smoke part and from a 20 cm distance - using a heat tester to test the heat part. Within 40 seconds the fire detector shall enter fire condition and the LEDs (Fig.1, position 3) shall illuminate continuously.
3. Send a reset command from the fire control panel to the fire detector under testing. The fire detector shall restore the Duty Mode.

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

WARRANTY

The warranty 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.

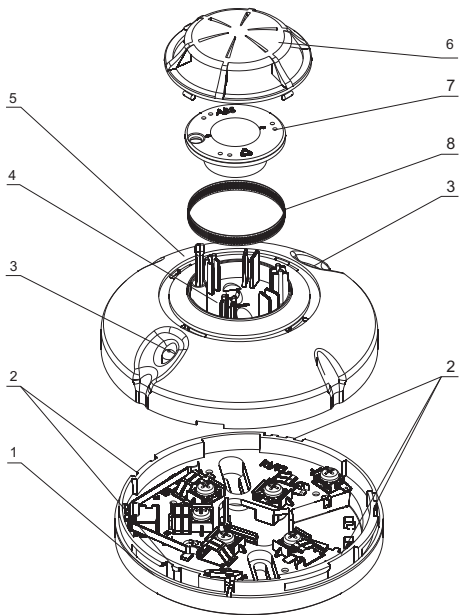


Fig.1

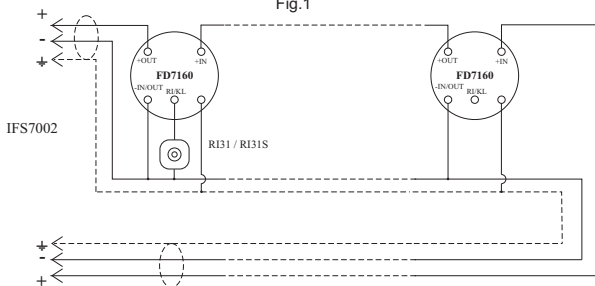


Fig.2

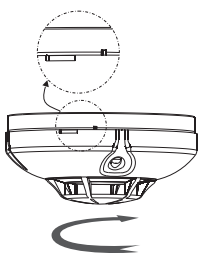


Fig.3.1

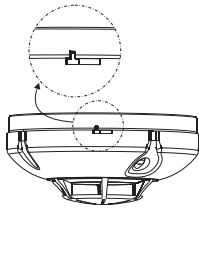


Fig.3.2

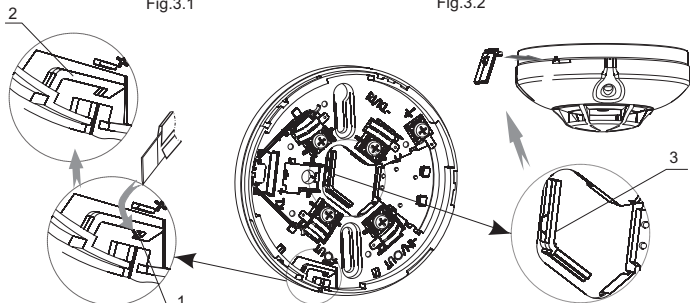


Fig.4