


**BOSCH**

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# Wireless Smoke Detector FR2000 869MHz



- ▶ **Battery power supply**
- ▶ **Button for self-check**
- ▶ **Easy connection to the unit**
- ▶ **Local optical and acoustical alarm**
- ▶ **Battery change radiogram**

In the event of a fire, the detector issues a local, high-volume intermittent tone. At the same time, it radio signals the danger to the HTS3100, HTS3000, HTS50 or HTS52+ social alarm unit which then triggers an alarm via the telephone network.

This means that specific action to fight the fire is already possible at an early stage. Furthermore, endangered persons can be brought to safety in time. Smoke detectors have their technical limitations and do not necessarily react to all situations: gas, flames, heat and when hemmed in by dense black smoke.

## System Overview

The radio smoke detector FR2000 869MHz is operated in combination with the Bosch local emergency call social alarm station HTS3100, HTS3000, HTS50 or HTS52+.

It consists of three parts:

1. Smoke sensor
2. Radio module (transmitter)
3. Joint power supply

The smoke detector is particularly suitable for early fire detection when smoke develops. It detects visible, light-colored smoke which frequently occurs before flames develop or temperature rises. When it detects a fire, the smoke detector emits a loud, penetrating, acoustic alarm into the surroundings until the fire is discovered and as long as the smoke detector can function. At the same time, the radio module sends an alarm to the local station.

## Functions

The radio transmitter module is accommodated in the base of the FR2000 869MHz. Both modules are powered from a shared battery.

The FR2000 869MHz optical wireless smoke detector uses the scattered light principle. A light transmitter and photo diode are housed in a measuring chamber in such a way that no light is able to fall on the photo diode. Scattered light is only produced if smoke particles penetrate this chamber. The light beam is reflected by the smoke particles and recorded by the photo diode. The evaluation electronics generate an alarm if the levels recorded exceed a specific threshold. A test button located on the detector can be used to trigger an alarm. This can be used to check that the local alarm and alarm signaling via the HTS3100, HTS3000, HTS50 or HTS52+ are functioning correctly.

The use of radio technology eliminates the need to lay cables. Installation is restricted to securing a mounting plate with two screws.

## Certifications and Approvals

CE  
 R&TTE 1999/5/EC  
 LVD 73/23/EEC  
 EMC 89/336/EEC  
 EN 50130-4  
 EN 300220-1 / -2  
 EN 301489-1,3 V1.4.1  
 EN 61000-6-3  
 EN 50371  
 ES 59005  
 EN 60950-1

## Installation/Configuration Notes

### Installation

The FR2000 869MHz is only suitable for residential rooms. The installation location must lie within the local station reception range and radio signal must be securely received. The FR2000 869MHz is generally installed on the ceiling. Installation height is approximately of 2 to 4 m

### Programming

The FR2000 869MHz has individual coding, which must be made known to the local station. We recommend using position 6 and above. The social alarm and emergency call receiving center must be aware that a FR2000 869MHz is switched on. Furthermore, installation date and battery change must be specified; the battery usually has a working life of 1 year.

## Parts Included

| Quantity | Component          |
|----------|--------------------|
| 1        | Detector           |
| 2        | Flat-head screws   |
| 2        | Screw anchors      |
| 1        | Installation Guide |

## Technical Specifications

### FR2000 869MHz Wireless Smoke Detector

|                                 |   |
|---------------------------------|---|
| Operating voltage               | 9 V   |
| Battery type                    | 9V IEC lithium monobloc battery                             |
| Service life with a battery set | approx. 1 year  |
| Battery monitoring              | local acoustical signal and battery low message to receiver |
| Permissible ambient temperature | 5° C to + 45° C   |
| Permissible humidity            | 93 %  |
| Dimensions                      | Ø 100 x 50 mm   |
| Housing color                   | signal white, similar to RAL 9003                           |
| Mounting                        | 2 screws  |

### Smoke detector module

|                     |  |
|---------------------|--|
| Detection principle | scattered light principle  |
| Alarm duration      | Local alarm: until alarm criterion (smoke) no longer exists.<br>One radio alarm signaling operation per fire event |
| Functional test     | alarm triggering by test button  |
| Display             | yellow LED indicating the unit is operational  |

### Radio transmitter module

|                                   |                              |
|-----------------------------------|------------------------------|
| Transmission frequency            | 869,2125 MHz                 |
| Bandwidth                         | 25 kHz                       |
| Modulation type                   | FSK (frequency shift keying) |
| Modulation hub of the transmitter | ± 3 kHz                      |
| Transmission power                | < 5 mW                       |
| Range outdoors                    | approx. 200 m                |
| Coding                            | Bosch social alarm call code |
| Code signaling to HTS             | like radio finger Tx B 869   |

## Ordering Information

**ISA-WS-869 Smoke Detector**

**ISA-WS-869**

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