

Sinteso™ Nova

## Automatic fire detectors

FDOT251, FDOT251-S, FDOOT261, FDOOT261-S



### For use on a FDnet detector line

- Event-controlled detection behavior
- Early and reliable detection when fires occur
- Highly developed immunity to deceptive phenomena
- Supports disturbance-free function testing with DFT<sup>technology</sup>™ (Disturbance-Free Test) as well as scan and test of external alarm indicator
- Signal processing with ASAp<sup>plus</sup> technology™ (FDOOT261, FDOOT261-S)
- Smoke Entry Supervision (FDOT251-S, FDOOT261-S)
- Mimic mode for compatibility with FS20 MP6...MP8 panels

# Properties

## Features

- Resistant to environmental and interfering influences such as dust, fibers, insects, moisture, extreme temperatures, electromagnetic interference, corrosive vapors, vibration, artificial aerosols, and atypical fire phenomena
- Shock resistant, theft protection as an accessory
- Time and process-dependent detection behavior
- Proven immunity to faults in power electronics
- Protected electronics, high-quality components
- Multi-color internal indicator with 360° visibility, alignment not necessary
- Integrated line separator
- Supports automatic detector test with DFT*technology*™
- Supports scan and test of external alarm indicators
- 'One-man' testing, commissioning, diagnostics, and maintenance
- Exchange of the detector without resetting the parameters
- Exchange of the detector without a ladder at heights up to 8 m
- Seamless modernization thanks to mechanical compatibility with Sinteso bases and accessories, and thanks to auto-programming
- Mimic mode for compatibility with legacy FS20 panels
- Freely configurable modes of detection: combined optical-thermal mode or optical-only mode or thermal-only mode
- Selectable detection behavior thanks to parameter sets
- Opto-electronic measuring chamber: Obstructs disruptive extraneous light but can be relied upon to detect both light and dark smoke particles

## Ecological benefits

- Use of secondary plastic
- Efficient use of energy
- Condition-based longevity
- Environmentally friendly processing
- Environmentally friendly detector-testing without gas
- Easily separable electronic parts from synthetic materials

# Functions

## Multi-sensor fire detector FDOT251, FDOT251-S

The detectors have a sophisticated opto-electronic measuring chamber which contains one optical sensor and two thermal sensors. The optical sensor works with infra-red light at an average scattering angle of 90°.

## Multi-criteria fire detector FDOOT261, FDOOT261-S

The detectors with ASAPlus signal processing have a sophisticated opto-electronic measuring chamber which contains four optical sensors and two thermal sensors.

The optical sensors work as follows, at an average scattering angle:

- Infra-red forward scatterer, 60°
- Blue forward scatterer, 45°
- Infra-red backward scatterer, 120°
- Infra-red light, 90°

## Smoke Entry Supervision

Smoke Entry Supervision is a dual-layer safety functionality built into the FDOT251-S and FDOOT261-S detectors. It ensures that smoke can reliably reach the sensing chamber by combining the following features:

- Cover detection continuously checks whether the detector is not covered and provides live notification to the fire control panel and/or cloud if a covering object is detected.
- Grid supervision continuously monitors the insect grid and notifies a user via fire control panel and/or cloud before the contamination level prevents smoke from reliably reaching the detection chamber.

## Use

The FDOT251 and FDOT251-S detectors are designed for environments with low to moderate levels of deceptive phenomena.

The FDOOT261 and FDOOT261-S detectors are developed for detection in all environments, including complex and demanding conditions with high levels of deceptive phenomena or requiring quick response.

The following table contains examples of environments for selection of the fire detector and the parameter set.

| Environment                                             | Type<br>Property                                                | Parameter set                      |
|---------------------------------------------------------|-----------------------------------------------------------------|------------------------------------|
| Normal office, room without special deceptive phenomena | FDOT251/-S<br>No special requirements                           | Standard                           |
| Potential deceptive phenomena such as water boilers     | FDOOT261/-S<br>Steam as a deceptive phenomenon                  | Balanced<br>Suppression            |
| Kitchen                                                 | FDOOT261/-S<br>Large amounts of steam as a deceptive phenomenon | Suppression<br>BS                  |
| Hospital rooms, museum                                  | FDOOT261/-S<br>Quick response, no deceptive phenomena           | Sensitive                          |
| Clean rooms                                             | FDOOT261/-S<br>Quick and very sensitive response                | Super Sensitive<br>Ultra Sensitive |
| Ventilation systems                                     | FDOOT261/-S<br>Quick and very sensitive response                | Sensitive<br>Super Sensitive       |



More information see document 'Application guide Sinteso Fire detectors'.

# Type Overview

| Type       | Designation                        | Order number  |
|------------|------------------------------------|---------------|
| FDOT251    | Multi-sensor fire detector         | S54315-F30-A1 |
| FDOT251-S  | Multi-sensor fire detector (SES)   | S54315-F31-A1 |
| FDOOT261   | Multi-criteria fire detector       | S54315-F10-A1 |
| FDOOT261-S | Multi-criteria fire detector (SES) | S54315-F11-A1 |

## Product documentation

| Document ID | Title                                                                                  |
|-------------|----------------------------------------------------------------------------------------|
| 008331      | List of compatibility (for 'Sinteso™' product line)                                    |
| A6V14169471 | Technical manual Automatic fire detectors FDOT251/-S, FDOOT261/-S                      |
| A6V14623758 | Technical manual Modernizing Sinteso™ fire detection installations with FD40 detectors |

Related documents such as the environmental declarations, declarations of conformity, etc., can be downloaded from the following Internet address:

[www.siemens.com/bt/download](http://www.siemens.com/bt/download)

## Notes

### Disposal

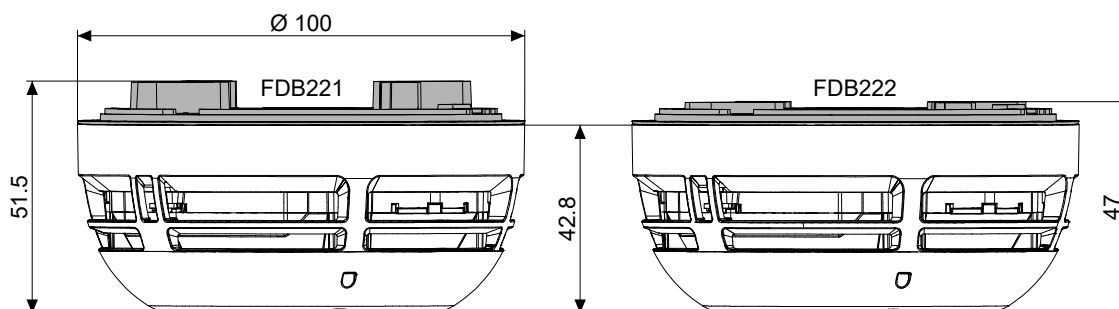


This symbol or any other national label indicates that the product, its packaging, and, where applicable, any batteries may not be disposed of as domestic waste. Delete all personal data and dispose of the item(s) at separate collection and recycling facilities in accordance with local and national regulations.  
For additional details, refer to [to Siemens information on disposal](#).

# Technical data

|                                                                                      | FDOT251, FDOT251-S, FDOOT261, FDOOT261-S                               |
|--------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| Operating voltage                                                                    | DC 12...33 V                                                           |
| Operating current at DC 32 V                                                         | FDOT251, FDOT251-S: 110 µA<br>FDOOT261, FDOOT261-S: 115 µA             |
| Operating current at DC 12 V                                                         | FDOT251, FDOT251-S: 250 µA<br>FDOOT261, FDOOT261-S: 260 µA             |
| Communication                                                                        | FDnet                                                                  |
| System compatibility                                                                 | FS20, see 'List of compatibility'                                      |
| Operating temperature                                                                | FDOT251, FDOT251-S: -10...+60 °C<br>FDOOT261, FDOOT261-S: -35...+70 °C |
| Storage temperature                                                                  | -35...+75 °C                                                           |
| Air humidity (short-term condensation permitted)                                     | ≤95 % rel.                                                             |
| Color                                                                                | RAL 9010 pure white                                                    |
| Protection category (IEC 60529)<br>detector with detector base<br>FDB221/-AA, FDB222 | IP43                                                                   |
| Protection category with accessories FDB293,<br>FDB295, FDBZ2901                     | IP44                                                                   |
| Electromagnetic compatibility                                                        | 100 kHz...6 GHz: 50 V/m                                                |
| Permissible wind speed                                                               | 5 m/s                                                                  |
| Standards                                                                            | EN 54-5, EN 54-7, EN 54-17, EN 54-29                                   |
| Approvals<br>• VdS                                                                   | FDOT251, FDOT251-S: G226018<br>FDOOT261, FDOOT261-S: G226012           |

## Dimensional drawing



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