

# Smoke detectors

# FDS-CD / FDS-DD



FDS-CD

## Description

FDS-CD and FDS-DD are optical smoke detectors for mounting in all types of premises. They react to visible smoke particles (products of combustion). The detector consists of a detector head and a base. Compact plastic casing. The base has a bayonette grip to simplify service and maintenance. The detector is available with a service alarm that is used to alert for the need for cleaning and to prevent the risk of false alarms due to a dirty detector.

## Materials

Housing and base	White polycarbonate, V-0
Base plate contacts	Stainless steel
Base plate type	Bayonet base

## Models

FDS-CD	Ceiling smoke detector
FDS-DD	Duct smoke detector

## Ordering example

Type



FDS-DD

## Function

### Working principle

The detector works according to the reflection principle and consists of a measuring chamber that has air-inlets via a labyrinth which keeps out light. An infra-red LED and a photo transistor are placed in the measuring chamber. They are located so the light from the LED doesn't shine on the light sensitive transistor. If smoke particles enter the measuring chamber some of the light from the LED will be reflected by the particles and hit the photo transistor which activates the alarm.

### Alarm indication

In normal operating conditions the alarm is not given. When the smoke alarm is given the LED gives a red light.

### Service alarm

The smoke detector with service alarm has a built-in function for sensing the pollution which inevitably occurs over time. When the degree of pollution has reached the level at which there is the risk of false alarms, a service alarm is given indicating that cleaning is required. This is indicated by a red LED on the detector.

### Test

The detector function can easily be tested with, for example a testing smoke.

### Approval

The detector is approved according to standard EN-54.

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## Smoke detectors

## FDS-CD / FDS-DD

## Technical data

Supply voltage	9...33 V DC (via control unit)
Power consumption	
- in normal operation	0.14 mA at 24 V DC
- at smoke alarm	50 mA at 24 V DC
- at service alarm	20 mA at 24 V DC
Operating temperature	-10...+50deg.C (non condensing)
Max air velocity	(not wind dependent)
Indication	
Smoke alarm	Red light
Service alarm	Red light (yellow light at the control unit)
Quality control	Every detector has been tested continuously for 24 hours
Detector principle	Foto electrical, reflexion type
Protection class	IP43
CE	Conforms with the requirements of European EMC standards CENELEC EN 50081-1, EN 50081-2, EN 50130-4, EN 50082-1 and EN 50082-2 and carries the CE mark

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