S50/S65-OE

optical smoke detector for ceiling mounting

The S-50/S65-OE smoke detector for ceiling mounting is used to detect smoke in all types of premises . It is constructed to meet the rigorous standards required for smoke detector installations.

* Smoke detector of optical type
* Protected against RFI influence (radio disturbance)
* Several detectors can be connected to one control unit
* Also available with service alarm, S50-OE
* Compact plastic casing. The base has bajonette grip to simplify service and maintance.
* Temperature working range, -10 to +50°C

Function

S50-OE and S65-OE 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.

Different versions

The smoke detector is available in two models .
The basic model S65-OE has all the necessary functions for fire supervision.
The detector with the service alarm S50-OE, is used to alert for the need for cleaning and to prevent the risk of false alarms due to a dirty detector.

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 LED in S50-OE and S65-OE is not lit. When the smoke alarm is given the LED gives a red light.

Service alarm

The S50-OE 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 and by a yellow LED on the connected control unit, type ABV-S-300/D or ABV24-S-300/D.

Test

The detector function can easily be tested with, for example a testing smoke (available from Regin).

Approval

The detector is approved according to standard EN-54.

Models

S65-OE	Basic model (without base)	**S-BP**	Base for ceiling mounting
S50-OE	With service alarm (without base)	**S-BPR**	As above, but with built-in relay

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)

Material

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

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 S50-OE Conforms with the requirements of European EMC standards CENELEC EN 50081-1, EN 50081-2 and EN 50082-1 and carries the CE mark

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Mounting and Maintenance

Mounting
The detector is to be mounted in a representative ceiling position to give a good room supervision.

The detector is connected to the control unit with a two-wire loop. The last detector in the loop is connected to the end resistor supplied together with the control unit to provide a closed signal loop.

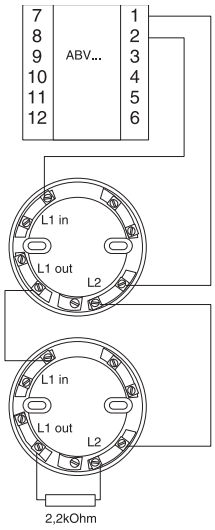
The base S-BPR makes it possible for the unit to independently give an alarm via the built-in relay.

Maintenance
Operation checks should be carried out at least once a year and the detector should be cleaned to ensure continued maximum efficiency. The cover can be cleaned using a vacuum cleaner.

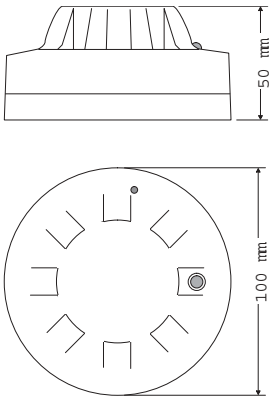
Exchange system
When the detector is dirty inside it should be cleaned thoroughly by the supplier. For this purpose there is an exchange system whereby dirty detector heads can be exchanged for cleaned ones.
N.B. Cleaning of the inside of the detector should only be undertaken by the supplier.

Dimension and wiring

Alarm unit



N.B. The end resistor must be connected to the last detector in the loop.



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