SCD 563

Smoke detector conventional

The SCD 563 is an automatic detector for the detection of smouldering fires and open fires with smoke development.

It is non-addressable and operates via the conventional fire detector line on the Securiton fire alarm system SecuriFire, SecuriTelFire, SecuriPro and SFP 512.

Fig. 1 SCD 563

Description

The SCD 563 detects smouldering and open fires with smoke development in good time. Light transmitter and photo receiver are arranged in the measurement chamber in such a way, that the transmitter light beam cannot shine directly onto the photo receiver. Only the light scattered by the floating particles reaches the receiver and is converted into an electrical signal.
An appropriate signal is sent to the control panel, if the signal values specified in the detector are exceeded.

The SCD 563 can generate the following signals:

- Fire alarm smoke
- Fire alarm in inspection mode
- Error messages in inspection mode (LED blinks at 1 Hz): contamination, fault in optical system, fault in supply voltage, EEPROM storage error
- Signalling service request in inspection mode (LED blinks at ¼ Hz):

Most important features of the SCD 563:

- Digital signal processing
- Alarm threshold tracing
- Temperature-supported smoke evaluation
- Temperature-compensated smoke part
- Signature alarm for smoke
- Multidimensional event memory
- Alarm filter to reduce the occurrence of false alarms
- Downward compatibility with SSD 521 detector series

Fire detectors may cause false alarms due to operational disturbances such as cigarette smoke, steam, heat, dust.

Planning

Country-specific guidelines for planning and installation of automatic fire alarm systems apply to the project planning.
The SCD 563 can be connected to any current increase line that satisfies the requirements listed in this document.

Mounting/Installation

Mounting and installation of the SCD 563 is accomplished with the assembly base series USB 502.

- USB 502-1 Standard base for surface mounting
- USB 502-2 Base for flush mounting in dropped ceilings
- USB 502-3 Base for damp rooms
- USB 502-4 Base for flush mounting in concrete
- USB 502-6 Standard base surface mounting without loop contact

The specifications in the data sheets shall apply for installation; detector base series USB 502.

Dimensional drawing

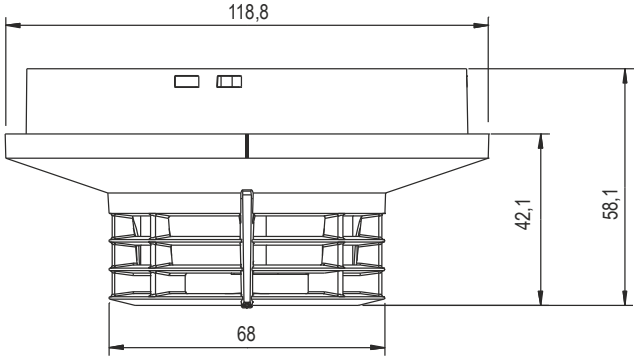


Fig. 2 Dimensioned drawing SCD 563

Connection

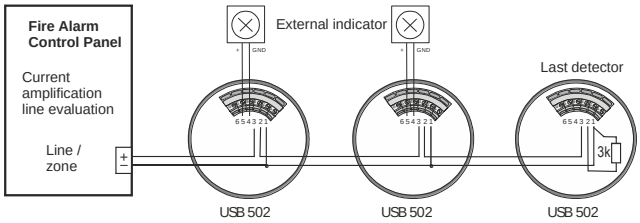
Terminal strips located in the socket USB 502 are used to connect to the electric circuit. A 5-pin strip connects the alarm and socket electrically.

Terminal	Signal
1	GND (In **and** out)
2	+ Linie (In **or** out)
3	+ Linie (In **or** out)
4	GND Alarm output
5	+ Alarm output (max. 5 mA)
6	Terminal point (shielding)

Terminal 5 (alarm output) may not be loaded with more than 5 mA

The detectors must be wired in such that the installation is interrupted when a detector is removed
(e.g. terminal 2 = plus line + in; terminal 3 = plus line + out).

Connection to conventional FACP



Connection SecuriFire

Refer to the correspondent Installation-documents SecuriFire

Connection SecuriPro

Via line interface MDI82.
Refer to the correspondent Installation-documents SecuriPro.

Connection SecuriTelFire

Refer to the correspondent Installation-documents SecuriTelFire

Connection SFP512

Refer to the manual SFP512

Revision

The SCD 563 has an alarm filter that prevents false alarms. To check the detector, it can be set to inspection mode where the alarm filter is not activated. This requires the operating voltage to be switched off for at least 10 seconds. After the voltage has been switched back on, the alarm filter is out of function for 17 minutes and the detector can be checked witch test gas that is approved from Securiton. The alarm filter is automatically activated after this time has elapsed.

Smoke signature alarm

The detector test device FDT 533 can be used in normal operation for triggering a real alarm inside a very short time.

Maintenance

The provisions of the respective country in which the facility is operated basically apply for maintenance and inspection work on danger alarm systems. The following apply e.g.:

- In GERMANY the DIN VDE 0833 Part 1 + 2 and the DIN 14675
- in SWITZERLAND the VKF Guideline and the Technical guideline of the SES (TR SES)

The national guidelines partly refer to the manufacturer's instructions concerning the inspection intervals.

SECURITON fire alarms have a detector self-test, with which the detector is automatically subjected to an extensive electronic function control. They are also equipped with an automatic contamination compensation. It is nevertheless necessary to accomplish a physical function test on the alarm on-site in regular intervals. SECURITON recommends for this purpose:

- Maintenance and inspection work should be accomplishing regularly and only by trained technical personnel (electrical specialist).
- At least once a year, a function and visual inspection has to be carried out according to the SECURITON maintenance instructions:

Examination	Smoke detector
Visual examination of the detector fastening (Socket)	X
Visual examination of the detector (Damages)	X
Visual examination of the detector inscription	X
Examination of the monitoring range (Free space not limited around the detector)	X
Triggered with test gas (Aerosol)	X
Examination of the alarm LED	X
Examination of the proper functioning of the alarm path from the detector to the fire alarm panel	X

Detectors, which are obviously strongly contaminated or mechanically damaged, must be replaced.
Optical fire detectors should always be replaced or examined and repaired in the factory (factory revision) depending on the site conditions (degree of pollution) every 5 - 8 years. Replacement or factory revision can be necessary earlier, if the environment is particularly dusty!

This product complies with the requirements of directive 2002/95/EC „RoHS“.

Although the product is not subject to the EU-Guideline 2002/95/EEC (RoHS), we comply with this Guideline voluntarily (the product is also not subject to 2002/96/EEC (WEEE), Cat. 9 (according to the leaflets "WEEE, RoHS..." Version 21/07/05 ZVEI Installation equipment and systems).

Article numbers / spare parts

Designation	Part number
SCD 563	022.237230 5000611.0111
SCD 563 MC (RAL-colour)	022.973297 5000611.0191
Accessories	
USB 502-1 standard base	123.265244 30-4100005-01-01
USB 502-1 MC (multicolour)	123.985295 30-4100005-91-01
USB 502-2 base for false ceilings	123.265246 30-4100005-02-01
USB 502-3 base for wet rooms	123.265248 30-4100005-03-01
USB 502-4 base for mounting in concrete	123.265250 30-4100005-04-01
USB 502-5 base for raised floors	123.265252 30-4100005-05-01
USB 502-6 standard base without loop contact	123.265254 30-4100005-06-01
USB 502-6 MC (multicolour) without loop contact	123.985297 30-4100005-96-01

Technical data

Functional principle	scattered light smoke detector (Tyndall-Effect)
Monitoring area	max. 150 m² [1]
Mounting height	max. 16 m [1]
permissible air speed	max. 20 m/s
Smoke detector sensitivity	to EN 54-7
Operating voltage range	18 to 30 V DC
Current consumption Quiescent upon alarm (at 30V DC)	 max. 120 µA min. 19 mA, max 22.5 mA
Alarm output for external indicator	+ 6,8 V DC (± 10%) max. 5 mA (short-circuit proof) [2]
Protection system in connection with socket USB 502	IP 44
Approval by VdS G208198	according to CEA 4021 Part B EN 54 Part 7
Declaration of performance	CPR-30-13-303-de-en
Ambient temperature range (continuous)	-25 ... +60 °C
Ambient conditions humidity (continuously, without condensation) at ≤ 34 °C	10 ... 95 % rel H
Ambient conditions humidity (continuously, without condensation) at > 34 °C	max. 35 g/m³ min. 10% rel/H
Dimensions without socket Ø x H	118 x 67,5 mm
Housing colour	Electrical white
Housing material	ABS/PC
Weight	125g

[1] Values dependent on the ceiling structure (height, inclination), according to country-specific project planning guidelines.
[2] Only the following external display lamps may be connected: RAL 720(X), RAL 721, RAL 722, MEA 720(X).

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