SECURITON

Aspirating Smoke Detector
SecuriRAS® ASD 535

- The latest generation of universal aspirating smoke detectors
- 1 or 2 sampling lines with separate air flow monitoring
- EN 54-20, Class A, B, and C
- VdS certified calculation software: ASD Pipe-Flow enables efficient, asymmetrical pipe layout
- Sensitivity settable from 0.002–10%/m
- Insensitive to pollutants thanks to particle suppression (patent pending)
- Auto-learning function
- High performance suction (> 400 Pa vacuum)
- Low noise level, compliant with ISO 11690-1
- Full integration in the SecuriPro® fire detection system
- Refined smoke detection thanks to high dynamic (HD) sensors

The SecuriRAS® ASD 535 aspirating smoke detector is the new generation of a highly sensitive, active smoke detection system. It offers application-specific sensitivity adjustment alongside pre-signalling and pollution analyses. The SecuriRAS® ASD 535 detects even minuscule glowing and smouldering fires and can be deployed practically anywhere.

Design and function

The SecuriRAS® ASD 535 consists of one or two independent sampling lines with sampling apertures, each with a highly sensitive smoke sensor. Air flow monitoring ensures that the sampling lines are constantly checked for pipe breakage and the sampling holes monitored for pollution. A high-performance ventilator sucks the air from the room or facility being monitored through the sampling line to the evaluating processor unit. There the air is continuously evaluated by the smoke sensors. The display and control panel of the evaluating processor unit indicate the smoke concentration of the sampled air and other alarm, fault and status messages. Any increase in the smoke concentration is detected very early. Three pre-signals and one main alarm can be programmed for each and signalled via potential-free relays or directly to the SecuriLine® ring circuit.

There are four expansion slots for accommodating modular relay interfaces and memory card prints.

Applications

The SecuriRAS® ASD 535 is ideal for property and space surveillance thanks to its excellent response behaviour. Typical applications include:

- **Space surveillance:**
  - High-rack warehouses and distribution centres
  - Archive rooms
  - Intermediate ceilings and raised floors
  - Large halls
  - Museums, galleries, theatres, cinemas
  - Cultural artefact collections, historical buildings
  - Airports
  - Informatics and computer centres
  - Telecommunication centres
  - Laboratory and research centres
  - Electronic measuring rooms
  - Transformer rooms
  - Clean rooms
- **Invisible applications:**
  - Protection of cultural assets
  - Prison cells

- **Property surveillance:**
  - Telecommunication facilities
  - High and low voltage distribution cabinets
  - Display cases
  - IT installations
  - CNC control systems

Bi-directional integration

The SecuriRAS® ASD 535 can be readily integrated into the SecuriPro® fire detection system with the optional SecuriLine® SLM 35 interface. The display and operation of, e.g. the day/night sensitivity controls are easy using the fire detection control unit.

Highly sensitive smoke sensor

The SSD 535 smoke sensor was specially developed for the SecuriRAS® ASD 535 and is the result of extensive research. Use of a high power LED combined with a large volume smoke chamber (LVSC) results in unparalleled, adjustable sensitivity with low aerodynamic resistance and supreme resistance to pollution and soiling. This ensures a long service life.

Easy to plan and commission

For straightforward, standard installations the SecuriRAS® ASD 535 with EasyConfig offers fast, foolproof, computer-free commissioning. More complex installations are calculated using the ASD PipeFlow calculation software and configured with ASD Config, the commissioning and maintenance software. This allows for better-value asymmetrical pipe layouts. The optional MCM 35 memory module facilitates the comprehensive long-term logging of smoke levels directly to the SD memory card for analysis on the computer.
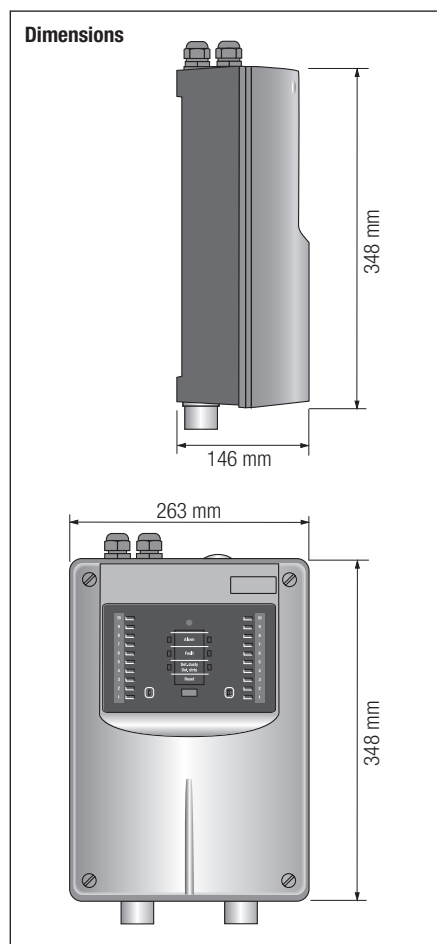
Range of accessories

An extensive range of accessories with VdS approval is available (alternative pipes, sampling points, filters, water separators, explosion protection, etc.).

Technical data

Permitted voltage range	10.5–30 VDC
Operating current, quiescent (typical)	290 mA typical (at 24 VDC)
Alarm sensitivity	0.02%/m–10%/m (0.00087–0.457 dB/m)
Presignals 1, 2 and 3	0.002–10%/m, programmable in 10% increments
Interfaces	3 relays/open collector (alarm, fault, programmable), service interface: USB
Number of expansion slots	4 (SLM 35, MCM 35 and 2 × RIM 35)
Relay contact load	30 VDC / 1 A
Standards	EN 54-20, Class A, B and C
G 208154	VdS approved
Ambient operating temperature	−20 °C to +60 °C
ICE 529 protection class	IP 54 (achieved without limitations)
Housing dimensions	263 × 397 × 146 mm (W × H, with entries × D)
Housing colour	Light grey RAL 280 70 05, Charcoal RAL 300 20 05
Housing material	ABS blend, UL 94-V0
Weight	Approx. 3850 g
Display and control Standard	1 LED (green): POWER, 1 or 2 LEDs (yellow): Fault, 1 or 2 LEDs (yellow): Alarm/Pollution, 1 reset button
Deluxe design	Supplementary: 10 or 20 LEDs (yellow) for smoke level display
Event data memory/analogue value logging	Standard: max. 430 events, with MCM 35: analogue value logging up to 1 year
Cable entries	4 × M20, 1 × M25
Ventilator	Radial, 5 speeds
Ventilator service life	65,000 hours (at 40 °C)
Suction pressure	> 400 Pa (performance level 5)
Suction noise	*43 dBA (ventilator level 3, standard), 32 dBA (ventilator level 1), *Complies with ISO 11690-1: Acoustics – Recommended practice for the design of low-noise workplaces containing machinery
System criteria tested to EN 54-20*	Max. 2 × 200 m (Easy Config), max. 2 × 240 m (ASD PipeFlow), max. 2 × 24 sampling apertures
System criteria without standard conformity	Max. 2 × 400 m (ASD PipeFlow), max. 2 × 50 sampling apertures (ASD PipeFlow)

* Adhere to the planning instructions

Dimensions

348 mm

146 mm

263 mm

348 mm

Aspirating smoke detector product line

ASD 535-1	For one SSD 535 sampling line/smoke sensor
ASD 535-2	For two SSD 535 sampling lines/smoke sensors
ASD 535-3	For one sampling line/smoke sensor and smoke level display
ASD 535-4	For two sampling lines/smoke sensors and smoke level display
SSD 535-1	Smoke sensor 0.5–10%/m alarm sensitivity (0.0217 dB/m)
SSD 535-2	Smoke sensor 0.1–10%/m alarm sensitivity (0.0043 dB/m)
SSD 535-3	Smoke sensor 0.02–10%/m alarm sensitivity (0.00087 dB/m)
SLM 35	Optional SecuriLine® ring circuit module
MCM 35	Optional SD memory card module connection, with card
RIM 35	Optional relay print module with 5 relays
ASD PipeFlow	Software for calculating sampling pipe networks
ASD Config	PC software for commissioning and maintenance

All specifications subject to change. Securiton planning guidelines are binding.
Specifications subject to change without notice. Delivery subject to availability.