

CERTIFICATE OF CONFORMITY

1. FIRE PROTECTION EQUIPMENT

2. **Certificate No:** **FM23FPUS0021**
3. **Equipment:** **ASD 535 Aspirating Smoke Detector**
(Type Reference and Name)
4. **Name of Listing Company:** **SECURITON AG**
5. **Address of Listing Company:** **Alpenstrasse 20, CH-3052 Zollikofen, Switzerland**
6. The examination and test results are recorded in confidential report number:

3035294 dated 13th November 2009

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

FM 3230:2023

8. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

9. Approval Guide Listing Category:

Alarm Signal Initiating Devices, Smoke Detectors
Alarm Signal Initiating Devices, Smoke Detectors, Very Early Warning Fire Detection (VEWFD) Systems
Alarm Signal Initiating Devices, Smoke Detectors, Protection of Refrigerated Spaces

Certificate issued by:



17 May 2023

J.E. Marquedant
VP, Manager - Electrical Systems

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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10. Description of Equipment:

Aspirating Type Smoke Detector:

ASD 535-1, ASD 535-2, ASD 535-3, ASD 535-4, ASD 535-3 HD, ASD 535-4 HD, ASD 535-1 China, ASD 535-2 China, ASD 535-3 China, ASD 535-4 China, ASD 535A-3CN, ASD 535A-4CN, ASD 535A-3HD CN, ASD 535A-4HD CN

Smoke detection technology	Scattered light obscuration
Sensitivity range	· SSD 535-1 sensitivity corresponds to 0.15%/ft (0.5%/m),
	· SSD 535-2 sensitivity corresponds to 0.03%/ft (0.1%/m)
	· SSD 535-3 sensitivity corresponds to 0.006%/ft (0.02%/m).
	All options can be set to a lowest sensitivity of 3.15%/ft (10%/m). The sensitivity range can be extended up to 0.002%/m via the pre-signals.
Firmware	Version 01.10.xx
Sampling pipe	Nominal 20mm I.D., 25mm O.D.
Pipe length – pipe network	Single pipe or double pipe, H shape, 240 m max. 3-5 holes per branch, transport time cannot exceed 120s on FM Approved systems
Alarm Levels	5 (Alarm, pre-signal 1, 2, 3, Alarm 2)
Special Features	For use with compatible Approved fire alarm controls providing separate circuits for power and the standard relay contacts on the terminal board of the detector or the analogue connection via a SLM 35/XLM 35 interface to an Approved, compatible panel.
Displays and Controls	Displays: Several LEDs on the control unit indicate the current state of the
	ASD 535. Operating, Alarm, Fault, Detector dusty/dirty, smoke levels 1-10 (ASD 535-3 / ASD 535-4 ASD 535-3 HD, ASD 535-4 HD, ASD 535-3 China, ASD 535-4 China, ASD 535A-3CN, ASD 535A-4CN, ASD 535A-3HD CN, ASD 535A-4HD CN only).
Relay Outputs	Criteria can be programmed on a max. of 11 relays (1 AMB 35
	unit on ASD 535-1 and -3, 5 units on 1st RIM 35, 5 units on 2nd RIM 35)
Accessories	Sampling pipe design software, ASD PipeFlow Version 2.8.0
	Usable expansion modules (max. 4 units)

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Accessories	· XLM 35, SLM 35, RIM 35 (2 x), MCM 35, SIM 35
	In exposed areas with atmospheric overvoltage risk, the Overvoltage Protection Board OPB 911 CP can be built into the ASD 535.
	The ASD 535 can be linked to a higher level FACP by means of potential-free change-over contacts.
	With the XLM 35 or SLM 35, the ASD 535 can be ideally connected to the SecuriFire and Integral fire alarm systems (with SLM also to SecuriPro).
	The RIM 35 enables the availability of all three pre-signal levels as well as the states “smoke sensor dirty” and “LS-Ü blockage” as relay contacts. The relays are freely configurable (via “ASD Config”).
	The MCM 35 serves to record operating data.
	Up to 250 ASDs can be networked with the SIM 35; they can then be visualised and operated using “ASD Config”.
Communication protocols	None available, requires listed panel
	A line card is used for communication between the aspirating smoke
	detector and a fire alarm control panel via an addressable loop
Coverage	FM Data sheets, local codes and standards for aspirating smoke detectors, Area of coverage per sampling hole is usually at least the same as a spot or point detector
Operating voltage range	12.4-27 VDC, 24 VDC nominal
Operating temperature range	-22°F (-30°C) to 120°F (49°C), ambient
Sampling air temperature range	0°C to 37.8°C (32°F to 100°F) tested
Humidity range	0 to 95% RH, non-condensing
Power consumption	260 - 820mA
Enclosure	Plastic (PC/ABS) Indoor use only
Model codes	· ASD 535-1; for 1 sampling tube, and 1 smoke sensor without smoke level indicator
	· ASD 535-2; for 2 sampling tubes, and 2 smoke sensors without smoke level indicator
	· ASD 535-3; for 1 sampling tube, and 1 smoke sensor with smoke level indicator

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Model codes	· ASD 535-4; for 2 sampling tubes, and 2 smoke sensors with smoke level indicator
	· ASD 535-3 HD; like ASD 535-3, with increased IP protection and painted printed circuit boards
	· ASD 535-4 HD; like ASD 535-4, with increased IP protection and painted printed circuit boards
	· ASD 535-1 China; like ASD 535-1 with labeling in Chinese language
	· ASD 535-2 China; like ASD 535-2 with labeling in Chinese language
	· ASD 535-3 China; like ASD 535-3 with labeling in Chinese language
	· ASD 535-4 China; like ASD 535-4 with labeling in Chinese language
	· ASD 535A-3CN; like ASD 535-3 with labeling in Chinese language
	· ASD 535A-4CN; like ASD 535-4 with labeling in Chinese language
	· ASD 535A-3HD CN; like ASD 535A-3CN, with increased IP protection and painted printed circuit boards
	· ASD 535A-4HD CN; like ASD 535A-4CN, with increased IP protection and painted printed circuit boards
Compatible fire alarm control panels (FACPs) and power sources	The detector is to be used with Approved control panels providing separate circuits for power and alarm initiating devices. Power to the detector (both primary and standby) can also be provided by an independent FM Approved power source. The required 24Vdc primary power and 24-hour standby power for detector must be obtained locally from a means suitable for NFPA 72 applications and is to be installed in the same room as the detector with the wiring in conduit and not exceeding 6 m.

11. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

12. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

13. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
17 May 2023	Original Issue. Reference 3035294CoC/PR455912CoC

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