

Aspirating Smoke Detection

ASD 535



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

The 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 draws 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 indicates 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-alarms and two main alarms can be programmed for each and signalled via volt free relays contacts.

There are four expansion slots for accommodating modular 1 x network card, 1 x memory card and 2 relay cards.

The ASD 535 is ideal for property and space surveillance thanks to its excellent response behaviour and is used whenever conventional point-type smoke detectors cannot be used. This may be due for example to ambient conditions (too hot, too cold, too dirty) or because operating conditions are such that access is highly restricted (prisons, false ceilings, clean rooms, laboratories, highrack storage facilities, etc.). Or because lightning-fast detection is required, e.g. in data centres.

Features

Latest generation of universal aspirating smoke detectors

1 or 2 sampling lines with separate sensors and air flow monitoring

EN 54-20 classes A, B, and C

VdS certified calculation software; ASD PipeFlow enables efficient, asymmetrical pipe layout

5 alarm levels (3 pre-alarms and 2 alarms)

Resolution <math><0.001\%/m</math>

Insensitive to pollutants thanks to particle suppression (patent pending)

Auto-learning function

Low noise level, compliant with ISO 11690-1

Refined smoke detection thanks to HD sensor (high-dynamic technology)

Low power consumption

High performance suction (>400 Pa vacuum)

Individually Replaceable Components (Sensors, PCB's etc)

Applications

High-rack warehouses and distribution centres

Museums, galleries, theatres, and cinemas

Collections of cultural artefacts, historical buildings

IT and data centres

Telecommunication centres

Laboratory and research centres

Transformer rooms

Clean rooms

Telecommunication facilities

High and Low Voltage distribution cabinets

Display cases

EDP facilities

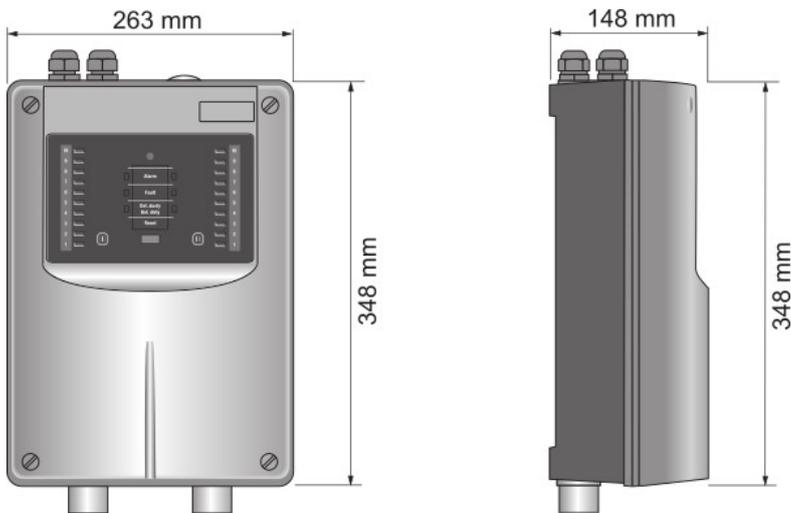
CNC control systems

Prison cells

Protection of cultural assets

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The ASD 535 is fitted with one or two SSD 535 sensors which have a wide dynamic range of 0.002%/m to 10%/m.

The SSD 535 high sensitivity smoke sensor was specially developed for the ASD 535 and is the result of extensive research.

A high-power LED combined with a Large Volume Smoke Chamber (LVSC) results in unparalleled, adjustable sensitivity with the lowest aerodynamic resistance and the utmost resistance to pollution and soiling. These features ensure long system service life and durability.

Commissioning and maintenance of the ASD 535 is done via the ASD Config PC Tool, and is calculated using the ASD PipeFlow software. This makes it possible to configure more cost-efficient asymmetrical pipe layouts. The optional MCM35 memory card module allows extensive long-term smoke level recordings (e.g. smoke and airflow values) to be stored directly on the SD memory card and analysed on your PC.

Networking

Up to 250 ASD 535 detectors can be networked on RS485 with a max of 1000m, which can be increased to 8500m using up to 5 Repeaters.

Using the Serial Master Module and the ASD Config Software the user is able to Poll, Configure and Visualise all of the connected ASD 535 detectors.

Accessories and options

An extensive range of accessories are available (25mm sampling tubes, sampling points, filters, water separators, explosion protection, etc.).

Application specific options include:

- Flame Arrestors
- Heated Sampling Points (for cold room and freezer rooms)
- Extra Large Filter Box

Specification

Supply Voltage:	10.5 - 30 Vdc
Supply Current:	290mA Quiescent (typical) (@24 Vdc)
Alarm 1 & 2:	0.02 - 10%/m (0.00087-0.457 dB/m)
Pre-alarms 1, 2 & 3:	0.002 - 9%/m (10% increments)
Interfaces:	
Alarm, Fault, Prog	3 Relays / Open Collector
Service interface	USB
No. of Expansion:	4 Slots (SIM35 / SMM35, MCM35 and 2 x RIM35)
Relay Rating:	30 Vdc / 1Amp
Standards:	EN 54-20, classes A, B and C
Approvals:	Vds G208154, 0786-CPD-20600, FM, CNAL
Temperature:-	-30°C to +60°C
IP Rating:	IP 54 (achieved without limitations)
Enclosure:	
Dimensions:	348mm x 263mm x 148mm (h x w x d)
Colour:	RAL 2807005 and RAL 3002005
Material:	ABS blend, UL 94-V0
Weight:	Approx 3,850g
Event Memory:	Max 430 events (without MCM35)
Analogue Logging:	Max 1 year events (with MCM35)
Cable Entries:	4 x M20, 1 x M25
Fan Type:	Radial, 5 Speeds, 65,000hrs (@40°C)
Suction Pressure:	>400 Pa (performance level 5)
Suction Noise:	32 dBA (level 1), 43dBA (level 3, standard)
System Criteria	Max. 2 x 120 Sampling Holes / 2 x 300m
EN54-20	(Using ASD PipeFlow)

Ordering Information

Description	Part Number
ASD535-1 Single Channel Standard Display	5000623-0101P
ASD535-2 Dual Channel Standard Displays	5000623-0102P
ASD535-3 Single Channel + Bar Graph	5000623-0103P
ASD535-4 Dual Channel + Bar Graphs	5000623-0104P
Smoke Sensor SSD535-3 0.002-10%/m	5000613.0103P
Relay Interface Module RIM35	4000287.0101P
Memory Card Module MCM35	4000285.0101P
SD Memory Card (2Gb)	4000314.0102P
Sampling Pipe	Refer D1316