Aspirating Smoke Detection

ASD 533

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FIRE DETECTION SOLUTIONS

Features

Latest generation of aspirating smoke detectors for simple applications

1 sampling pipe/1 detector

EN 54-20 classes A, B, and C

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

Response sensitivity settable from 0.002–10%/m

Insensitive to dirt particles thanks to particle suppression

Auto-learning function

Low noise level, compliant with ISO 11690-1

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

Low power consumption

ASD Config PC tool

ASD PipeFlow calculation tool

Individually Replaceable Components (Sensors, PCB's etc)

Applications

Elevator shaft monitoring

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

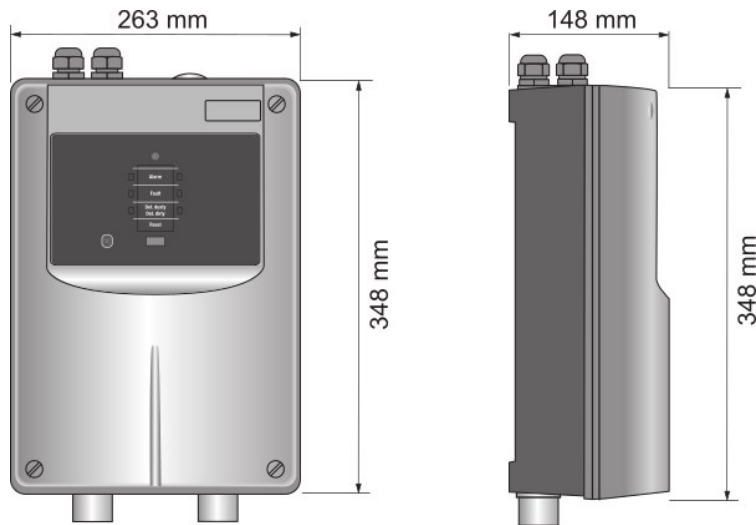CNC control systems

Prison cells

Protection of cultural assets

The ASD 533 (Aspirating Smoke Detector) is the new generation of a highly sensitive, active smoke detection system. It is based on the successful ASD 535 and is particularly well suited for monitoring smaller areas and sampling distances where a reduced sampling pipe network is sufficient.

The ASD 533 consists of a fan, a highly sensitive smoke sensor, an airflow measurement system, and evaluation electronics. The fan draws in air through sampling holes from the room or facility being monitored and then through a sampling pipe to the evaluating processor unit. Here the air samples are continually monitored for smoke particles by the smoke sensor. Airflow monitoring ensures that the sampling pipe is constantly checked for pipe breakage and any obstruction of the sampling holes. The display and control panel of the evaluating processor unit indicates alarm, fault and status reports. Any increase in smoke concentration levels is detected very early. Three pre-alarm and two main alarms can be programmed and forwarded to a fire alarm control panel via volt free relays contacts.

The ASD 533 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.

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ASD 533

263 mm | 148 mm

348 mm | 348 mm

The high sensitivity smoke sensor was specially developed for the ASD 533 and is based on the well-known SSD 535 which has a wide dynamic range of 0.002%/m to 10%/m.

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

Commissioning and maintenance of the ASD 533 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.

Accessories and options

With the exception of the flame arrester and the accessory parts for deep-freeze applications the ASD 533 is compatible with all the usual ASD 535 sampling tubes with D=25mm and other accessories. All of these can also be calculated using ASD PipeFlow.

The device concept is compatible with the use of the following options:

• Relay interface module RIM35

• Memory card module MCM35

• No provision is made for networking with SIM35 (RS 485)

Specification

Supply Voltage:	10.5 - 30 Vdc
Supply Current:	130mA Quiescent (typical) (@24 Vdc)
Alarms 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 (SLM35, MCM35, 2 x RIM35)
Relay Rating:	30 Vdc / 1Amp
Standards:	EN 54-20, classes A, B and C
Approvals:	Vds G registered, 0786 CPD registered
Temperature:-	-20°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 280 70 05 and RAL 300 20 05
Material:	ABS blend, UL 94-V0
Weight:	Approx 3,200g
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, (speed not adjustable)
Fan Service Life:	65,000 hours (@40°C)
Suction Noise:	32 dBA Typical
System Limits:	Class A: 7 Sampling Holes / 50m
EN54-20	Class B: 9 Sampling Holes / 70m
	Class C: 12 Sampling Holes / 80m

Ordering Information

Description	Part Number
Aspirating Smoke Detector ASD533	11-2000001-01-01P
Replacement Smoke Sensor SSD533	11-2200006-01-01P
Relay Interface Module RIM35	4000287.0101P
Memory Card Module MCM35	4000285.0101P
SD Memory Card (2Gb)	4000314.0102P
USB Cable 4.5m	4301248P
Sampling Pipe	Refer D1316

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