SIEMENS

AD1-C11, AD2-C11

AlgoRex

Air sampling smoke detection systems

CE

- **For early fire detection in:**
  - voids which are not easily accessible
  - floor and ceiling voids
  - switchgear and control equipment cabinets
  - EDP equipment
  - closed machines and equipment
- **Suitable for the installation of smoke detectors for collective, AnalogPLUS and interactive fire detection systems**
- **Rapid fire location through alarm indication at the detection unit**
- **Detection unit location can be optimally selected for operation and maintenance**
- **Monitored air current in the tube system**
- **30m^2 / 60m^2 monitoring area per air sampling hole**
- **AD1-C11: Single tube system**
- **AD2-C11: Single and double tube system**

Building Technologies

Fire Safety & Security Products

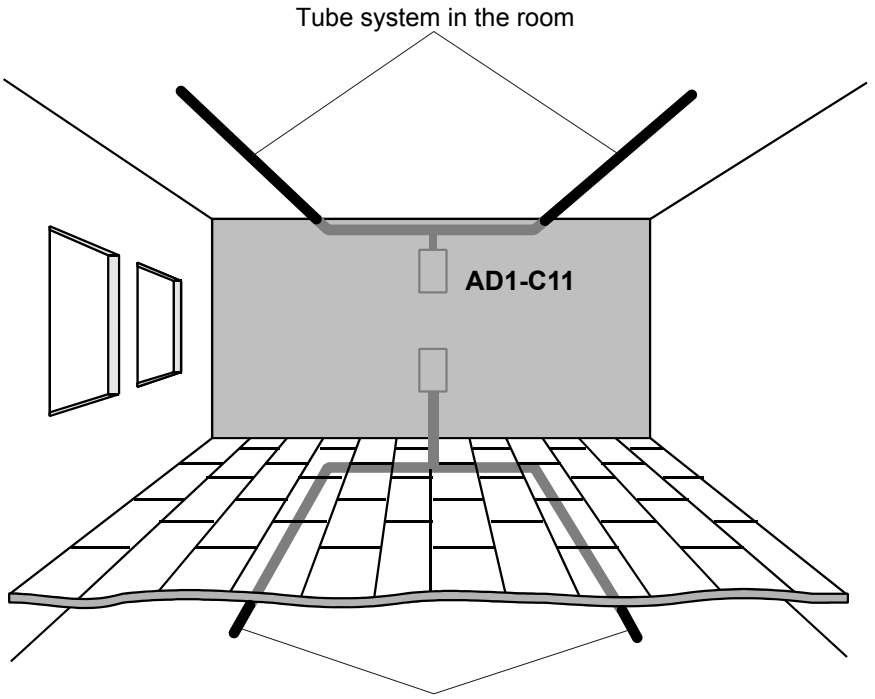
Application

Air sampling smoke detection systems allow:

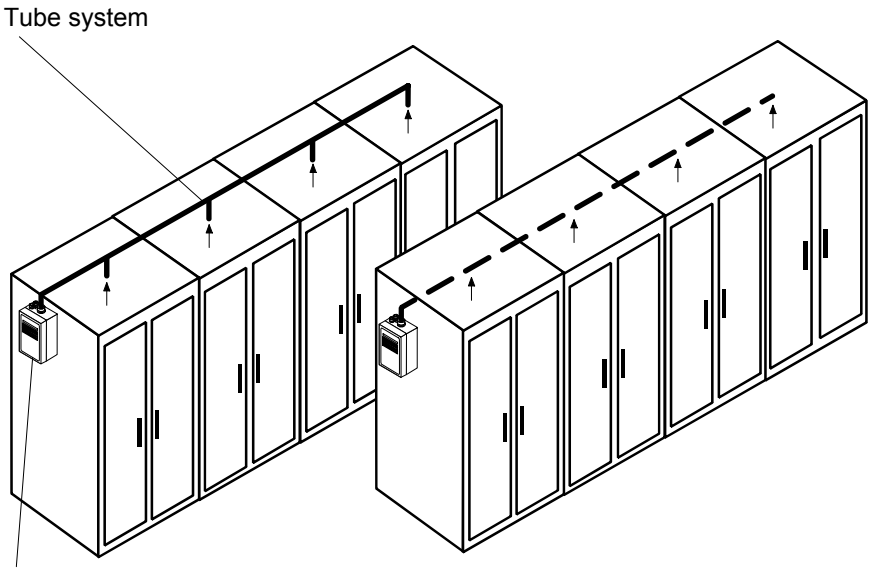
- equipment monitoring (the monitoring of cabinets with electronic or electro technical installations)
- room monitoring (the monitoring of rooms, floor voids and false ceilings)

The system can be used wherever point-type detectors are unsuitable due to poor accessibility, where architecture could be impaired, or where there is risk of tampering.

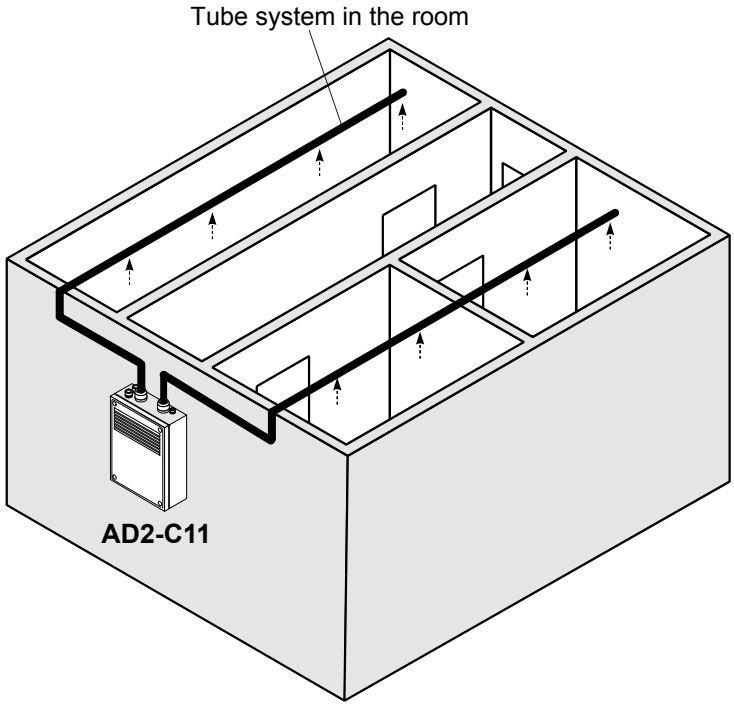
Room monitoring with AD1-C11



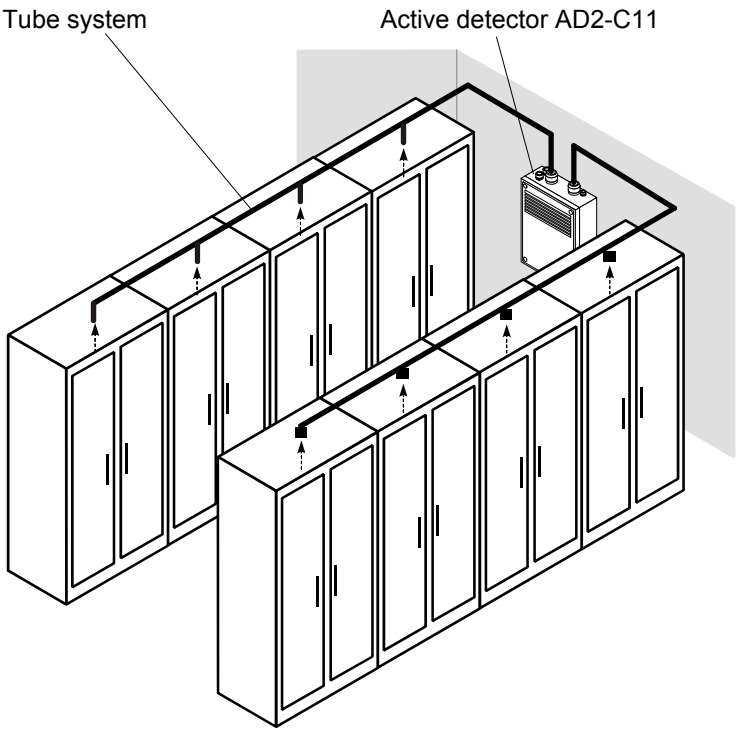
Equipment monitoring with AD1-C11



Room monitoring with AD2-C11

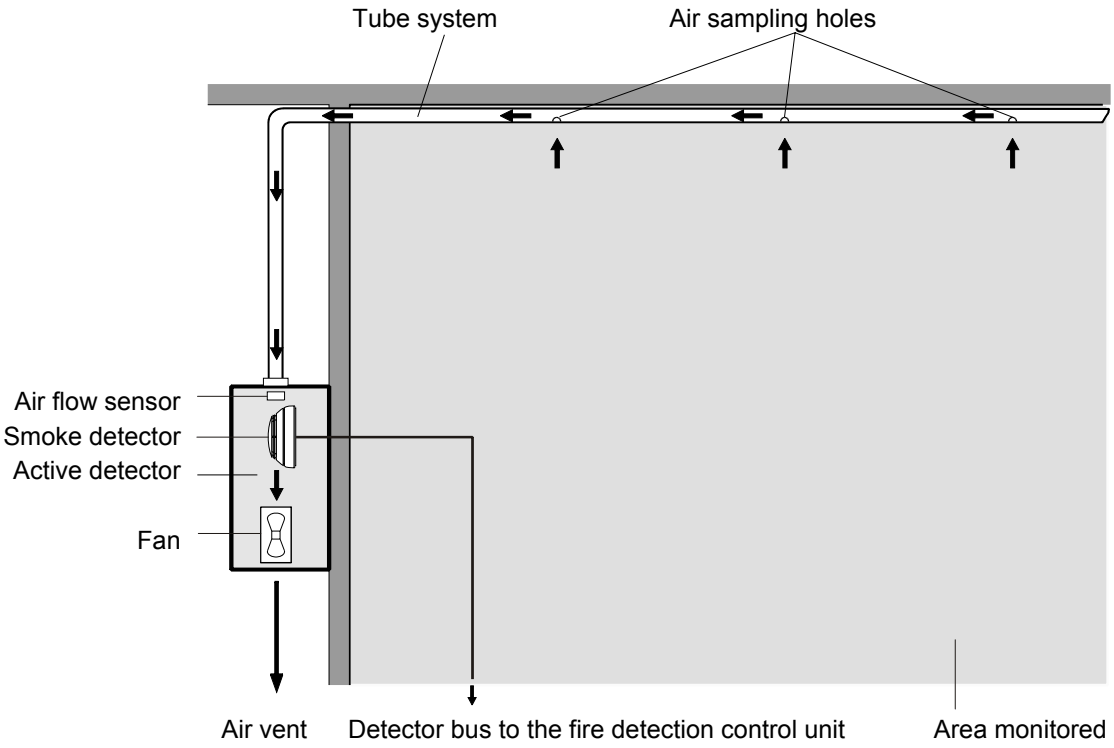


Equipment monitoring with AD2-C11



Operating principle

The active detector AD1-C11 / AD2-C11 extracts air from a cabinet or room via a tube system. The air is carried to a smoke detector in which it is analyzed for smoke particles. If the smoke concentration is sufficient, the smoke detector activates an alarm. The alarm signal is displayed at the active detector and transmitted to the fire detection control unit. With an additional smoke detector built into the MB2 detector box, it is possible to achieve cross-zoning.
The extracted air passes beneath the active detector and out into the open. However, e.g. with varying air pressure, it can also be carried back to the area monitored via a tube.

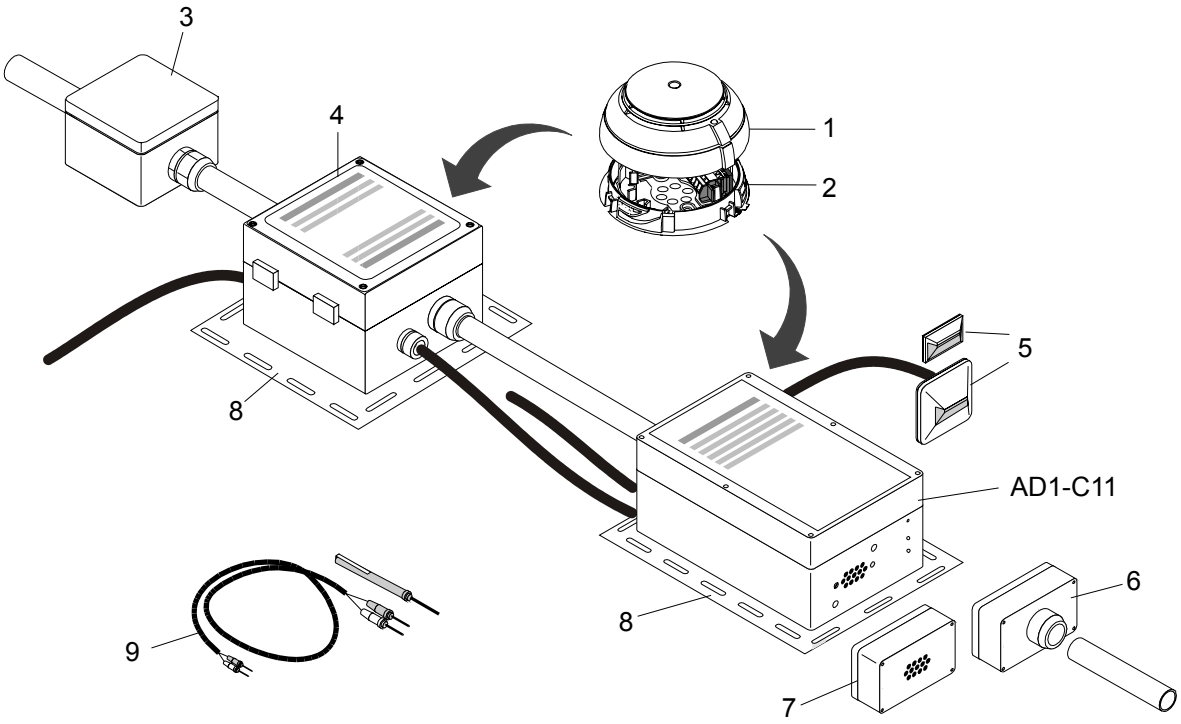


Monitoring functions

The highly accurate air flow monitoring system monitors the tube system and can detect breaks in the tube as well as the blockage of individual holes of up to 50% of all holes which is then signaled as a fault. In addition, a drop in fan performance or breakdown can be registered.

The active detector AD1-C11 / AD2-C11 consists of a closed housing with built-in fan and one air current monitoring devices. Depending on the fire detection system, one smoke detector with corresponding base are installed. The front panel contains an illuminated display panel for alarm(s) and fault. Test jacks and setting elements for air flow monitoring are accessible from outside.

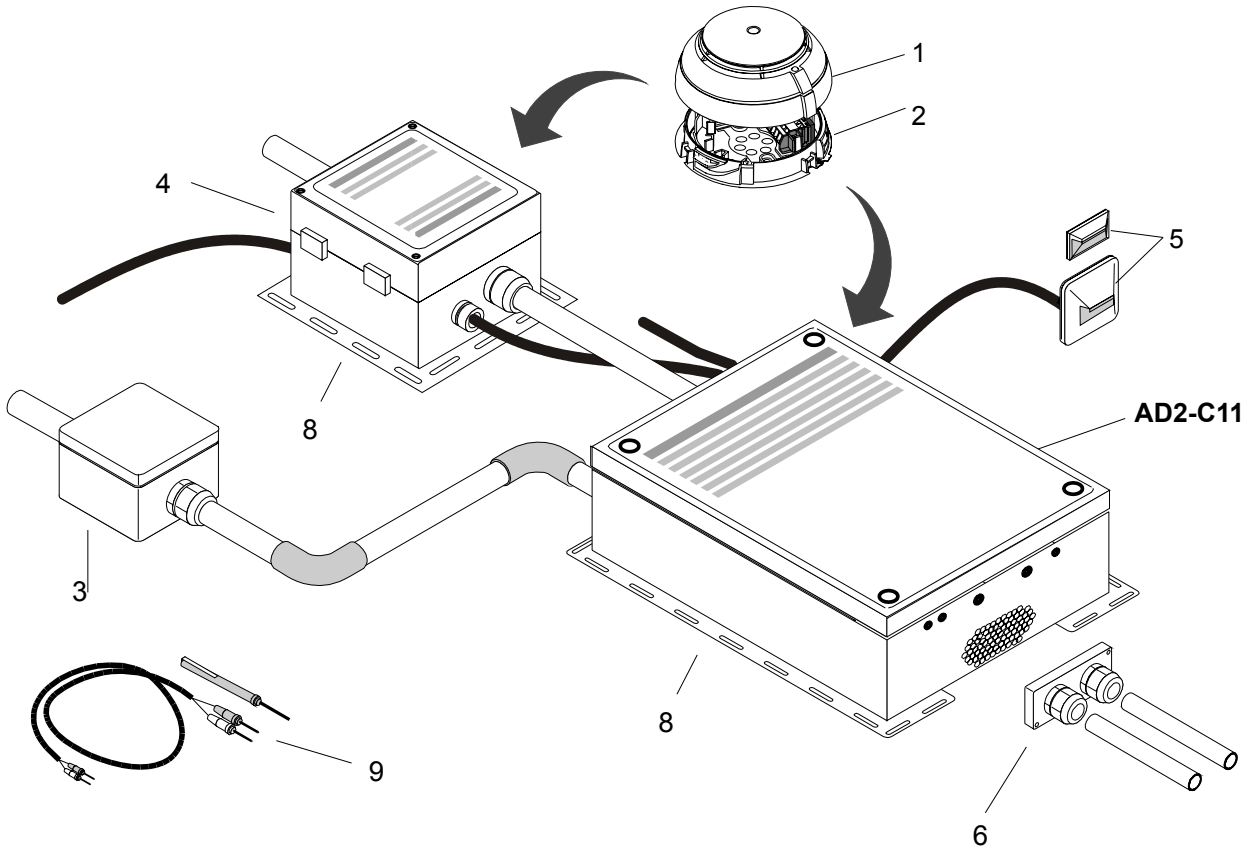
1 Smoke detector, type DO11xxA
2 Base DB11xxA
3 Air filter LF-AD for heavy dust concentration
4 Detector box MB2-C11 for cross-zoning or fire location if the tube is divided
5 External alarm indicator for separate alarm indication
6 Tube adapter for return air with varying air pressure
7 Sound absorber
8 Mounting device
9 Adjustment set



Design AD2-C11

The active detector AD1-C11 / AD2-C11 consists of a closed housing with built-in fan and two air current monitoring devices. Depending on the fire detection system, two smoke detectors with corresponding base are installed. The front panel contains an illuminated display panel for alarm(s) and fault. Test jacks and setting elements for air flow monitoring are accessible from outside.

1 Smoke detector, type DO11xxA
2 Base DB11xxA
3 Air filter LF-AD for heavy dust concentration
4 Detector box MB2-C11 for cross-zoning or fire location if the tube is divided
5 External alarm indicator for separate alarm indication
6 Tube adapter for return air with varying air pressure
7 Sound absorber
8 Mounting device
9 Adjustment set



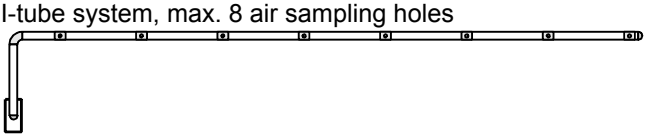
Installation

The active detector is permanently mounted on walls or cabinets. The removable housing cover allows full access to the smoke detector, to the terminals and programming elements.

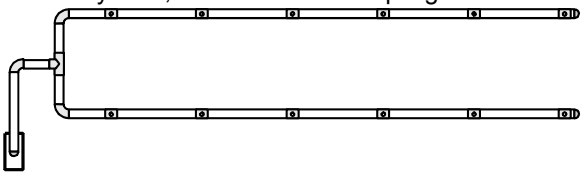
Tube systems

AD1-C11

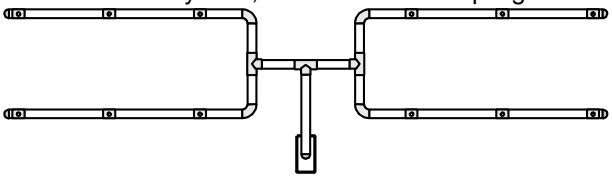
I-tube system, max. 8 air sampling holes



U-tube system, max. 2 x 6 air sampling holes



Double U-tube system, max. 4 x 3 air sampling holes



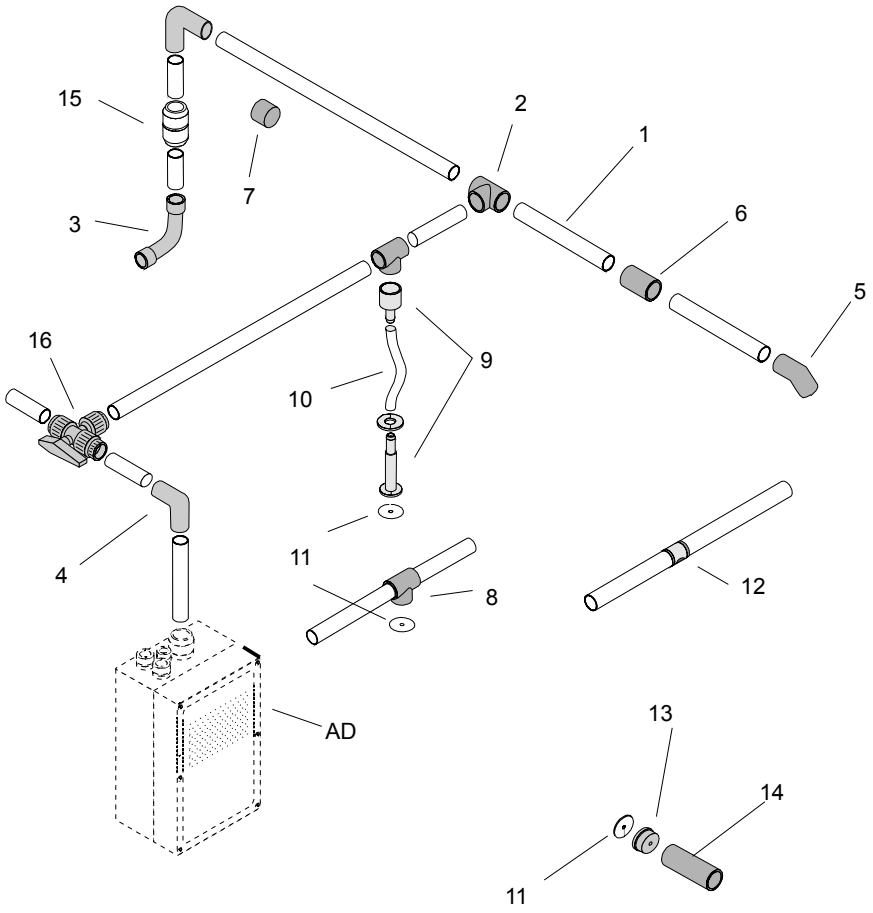
AD2-C11

2 tube system, max. 4 x 6 air sampling holes

Tube system used

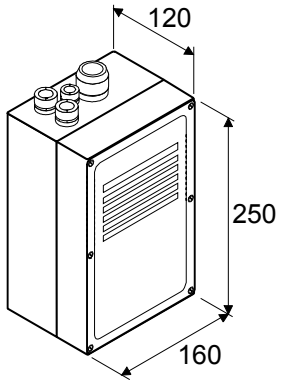
Sanitary installation, PVC or ABS, halogen-free

- **1** Tube, outer diameter 25 mm
- **2** T-Branch
- **3** Bend 90°
- **4** Elbow 90°
- **5** Elbow 45°
- **6** Sleeve
- **7** End cap
- **8** Tube cap
- **9** Ceiling void tube
- **10** Flexible tube
- **11** Suction reducing film sheet
- **12** Film strip for suction reducing
- **13** Suction reducing (metal)
- **14** Tube with PG16
- **15** Double screw connector
- **16** 3-way tap

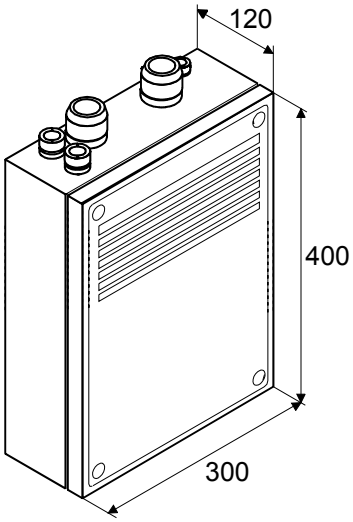


Dimensions

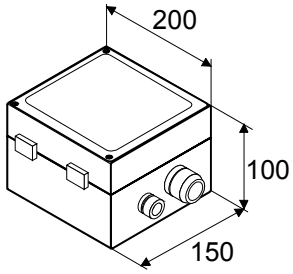
Active detector AD1-C11



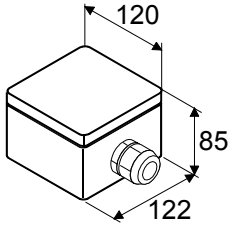
Active detector AD2-C11



Detector box MB2-C11



Air filter LF-AD



Technical data

	AD1-C11	AD2-C11
Operating voltage	14… 30 VDC	14… 30 VDC
Operating current	160 mA	260 mA
Tube system		
– Connection	1	2
– Length	max. 100 m	max. 300 m
– Outer diameter	25 mm (PG29)	25 mm (PG29)
Air sampling holes	max. 12	max. 24
Monitoring area per air sampling hole	30 m^2 / 60 m^2 *	30 m^2 / 60 m^2 *
Air current monitoring	16… 50 %	5… 50 %
Service life of fan	min. 65000 h / 40 °C	min. 65000 h / 40 °C
Operating temperature of the active detector	−30… + 60 °C	−30… + 60 °C
Temperature difference Active detector / Air sampling hole	max. 10 K	max. 10 K
Storage temperature	−40… + 75 °C	−40… + 75 °C
Humidity		
– at T = 25 ±3 °C	≥95 % rel.	≥95 % rel.
– at T = 40 ±2 °C	93 % rel.	93 % rel.
Wire cross-sectional area	max. 2,5 mm^2 AWG 14	max. 2,5 mm^2 AWG 14
Housing	Plastic (ABS)	Metal
– Protection category	IP33 / 54	IP33 / 54
– Color	light grey, RAL 7035	light grey, RAL 7035
Approvals		
– VdS	G295006	G297037

* with 2 detectors per area monitored (VdS)

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