



## Aspirating Smoke Detection

### Titanus ProSens, Titanus TopSens

Air samples are constantly taken in the monitored areas. By means of a high performance suction mechanism, they are fed via a pipe network to a detector chamber and checked there continuously. If smoke particles are recorded, an alarm is activated immediately.

- High sensitivity early fire detection
- Suitable for a very wide range of applications
- For volumetric and objective surveillance
- Equipped with either one or two detector modules
- Various detector modules with different sensitivity levels
  - Fire alarm at max. 0.8% obscuration per meter
  - Fire alarm at max. 0.25% obscuration per meter
  - Fire alarm at max. 0.05% obscuration per meter
- Sensitivity of each detector module can also be changed
- One fire alarm per detector module (Titanus ProSens only)
- Detection of pipe fractures or blockages of air sampling points

#### Additionally features of Titanus TopSens

- Three alarms per detector module
  - Fire alarm at e.g. 0.25% obscuration per meter
  - Action alarm at 66% of fire alarm smoke level
  - Alert alarm at 33% of fire alarm smoke level
- 10-digit bar graph display

## Application

Titanus ProSens and Titanus TopSens are used when one encounters conditions which hinder a standard solution or even make it impossible:

- Environmental conditions such as dirt, moisture, extreme cold, high voltage etc. inhibit the performance of the fire detectors.
- High halls and rooms with an intensive air change (e.g. air conditioning systems) show a strong degree of smoke dilution, thereby delaying a rapid alarm response.
- Especially sensitive objects and a high concentration of valuable property (operating data, data-dependant production means, software etc.) require particularly fast intervention.
- In a production plant running 24 hours a day, the required maintenance work cannot be performed on fire detectors if they are located in the production area.
- Access is often difficult or impossible in hollow spaces or vertical ducts.
- "Invisible" detection is desired in cultural buildings or design architecture.

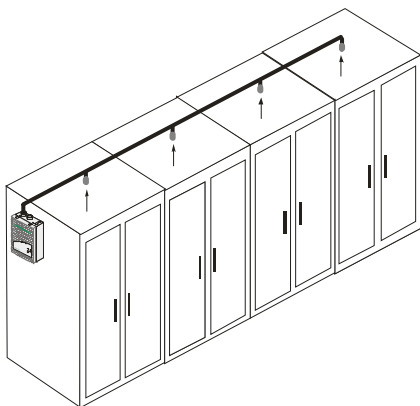
## Scope of application

|   | ProSens | TopSens |
|---|---------|---------|
| Clean rooms   |         | ●       |
| High open rooms   | ○       | ●       |
| Air conditioning systems  | ○       | ●       |
| Industrial production facilities  | ●       | ●       |
| Refrigerated warehouses   | ○       | ●       |
| Data processing service centres   | ○       | ●       |
| Invisible security particularly appreciated in buildings with cultural significance (churches, cathedrals, libraries, museums etc.) and with designoriented modern structures.  | ○       | ●       |
| Rapid evacuation requiring early detection of the sources of danger, which in an emergency allow rapid evacuation.  | ○       | ●       |
| Risk of vandalism   | ●       | ●       |
| Difficult access for maintenance e.g. areas of confidentiality, operating rooms, nuclear facilities, laboratories, high-voltage facilities, penal institutions, false ceilings, false floors, shafts, and other hard-to-access areas. | ○       | ●       |
| EMC-compatible  | ●       | ●       |

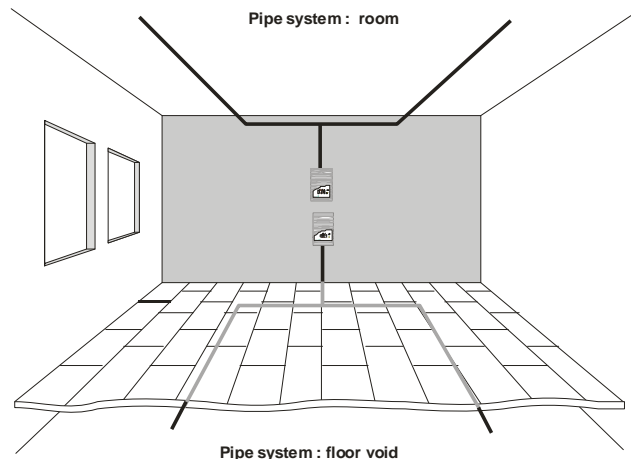
● Suitable ○ Depends on risk analysis

## Examples for object and volumetric surveillance

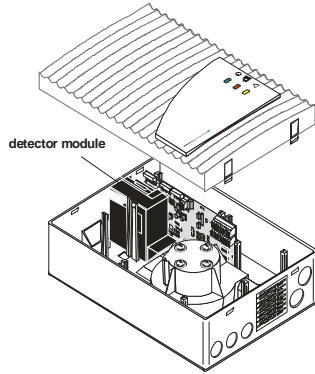
Non-ventilated and power-ventilated devices cabinets such as distribution cabinets, switch cabinets, telephone switching equipment, measuring and control units etc.



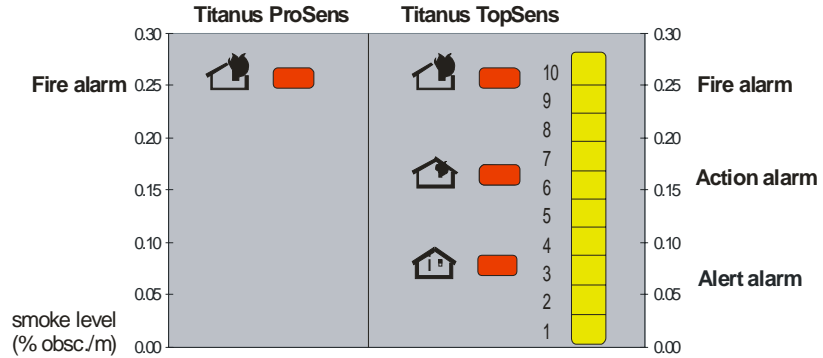
Rooms such as storage areas, high-rack storage, elevator shafts, museums, deep-freeze storage, floor voids, ceiling voids, ducts, etc.



## Operating principle, installation, commissioning and maintenance



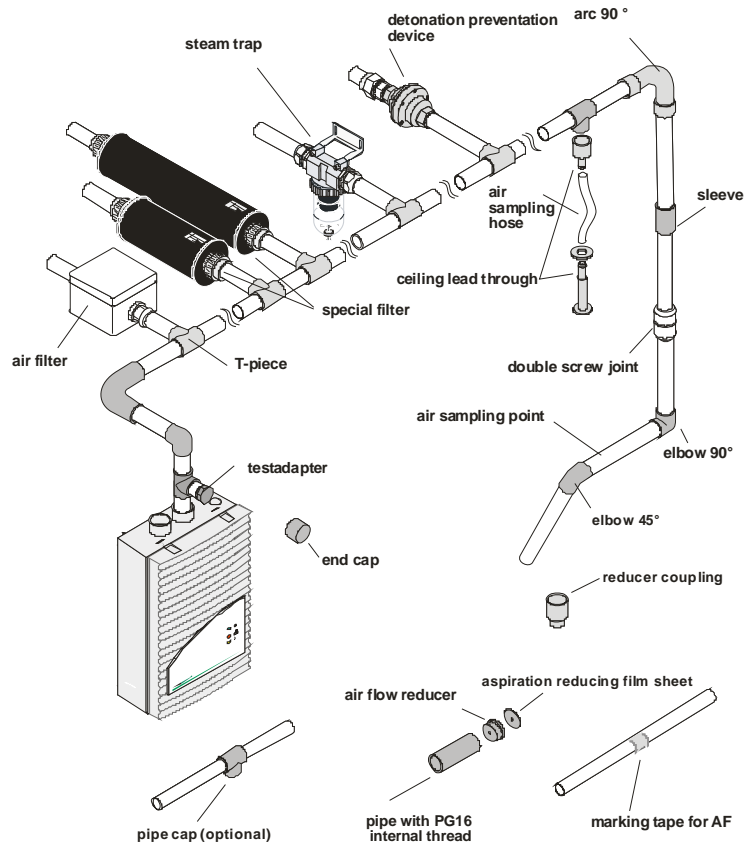
Titanus ProSens and Titanus TopSens take continuous air samples from the area monitored via a tube system with defined air sampling points. An integrated smoke detector detects an existing smoke concentration. Different detector modules with various sensitivity levels can be selected and set according to the type of application. Air flow to the detection device is constantly monitored and there will be a fault signalisation in case of blockage or rupture of the tube system.



Example: Titanus ProSens in comparison with Titanus TopSens.  
Both have detector modules with a fire alarm sensitivity of 0.25% obs./m.

Titanus ProSens and Titanus TopSens are mounted on walls or cabinets. By reversing the device the connection socket can be positioned upward or downwards. By removing the device cover, full access is provided to the detector modules without any influence on the air flow monitoring. Easy commissioning is given due to micro-processor controlled calibration of the air flow sensor and the easy set up of the sensitivity. A diagnostic device is provided for maintenance and servicing which enables rapid fault location.

## Accessories



## Technical data

|   | ProSens                       | ProSens 2                     | TopSens                       | TopSens 2                     |
|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Detector modules                        | 1                             | 2                             | 1                             | 2                             |
| Operating voltage range                 | 14 up to 30 V DC              | 14 up to 30 V DC              | 14 up to 30 V DC              | 14 up to 30 V DC              |
| Nominal supply voltage                  | 24 V DC                       | 24 V DC                       | 24 V DC                       | 24 V DC                       |
| Current quiescent                       | 200 mA (at 24 V)              | 220mA (at 24 V)               | 200 mA (at 24 V)              | 235mA (at 24 V)               |
| Current alarm                           | 210 mA (at 24 V)              | 240mA (at 24 V)               | 230 mA (at 24 V)              | 295mA (at 24 V)               |
| Starting current limitation             | 300 mA                        | 320mA                         | 355 mA                        | 385mA                         |
| Dimensions including cable screw joints | 113 x 200 x 292mm (H x W x D) | 113 x 200 x 292mm (H x W x D) | 113 x 200 x 292mm (H x W x D) | 113 x 200 x 292mm (H x W x D) |
| Protection category                     | IP 20 (IP 54*)                | IP 20 (IP 54*)                | IP 20 (IP 54*)                | IP 20 (IP 54*)                |
| Temperature range                       | -20 °C up to +60 °C           | -20 °C up to +60 °C           | -20 °C up to +60 °C           | -20 °C up to +60 °C           |
| - deep freeze version                   | -40 °C up to +60 °C           | -40 °C up to +60 °C           | -40 °C up to +60 °C           | -40 °C up to +60 °C           |
| Humidity                                | 10 up to 95 % rh              | 10 up to 95 % rh              | 10 up to 95 % rh              | 10 up to 95 % rh              |
| - green operating display               | 1                             | 1                             | 1                             | 1                             |
| - red alarm displays                    | 1                             | 2                             | 3                             | 6                             |
| - yellow fault display                  | 1                             | 1                             | 1                             | 1                             |
| - 10 digit bar display                  | -                             | -                             | 1                             | 2                             |
| Detector module                         | highest level                 | highest level                 | highest level                 | highest level                 |
| - DM-xx-80                              | 0.80% obsc./m                 | 0.80% obsc./m                 | 0.80% obsc./m                 | 0.80% obsc./m                 |
| - DM-xx-25                              | 0.25% obsc./m                 | 0.25% obsc./m                 | 0.25% obsc./m                 | 0.25% obsc./m                 |
| - DM-xx-05                              | 0.05% obsc./m                 | 0.05% obsc./m                 | 0.05% obsc./m                 | 0.05% obsc./m                 |
| Fire output (potential-free)            | 1 alarm signal                | 2 alarm signals               | 3 alarm signals               | 6 alarm signals               |
| Fault signal (potential-free)           | 1                             | 1                             | 1                             | 1                             |
| Load on contact/relay                   | 1 A, 30 V DC max. 24 W        | 1 A, 30 V DC max. 24 W        | 1 A, 30 V DC max. 24 W        | 1 A, 30 V DC max. 24 W        |
| Terminal connections                    | max. 1.5 mm <sup>2</sup>      | max. 1.5 mm <sup>2</sup>      | max. 1.5 mm <sup>2</sup>      | max. 1.5 mm <sup>2</sup>      |
| Event memory                            | yes                           | yes                           | yes                           | yes                           |
| Remote displays                         | 1 display possible            | 1 display possible            | 1 display possible            | 1 display possible            |
| Pipe system **                          |                               |                               |                               |                               |
| - max. monitoring area ***              | 2.400m <sup>2</sup>           | 4.800 m <sup>2</sup>          | 2.400 m <sup>2</sup>          | 4.800 m <sup>2</sup>          |
| - max. total length of pipe             | 180m                          | 360m                          | 180 m                         | 360m                          |
| - max. air sampling points              | 24                            | 48                            | 24                            | 48                            |
| Approvals                               | VdS no. G202064               | VdS no. G202064               | VdS no. G203058               | VdS no. G203058               |

\*expandable \*\*according to project planning guidelines; monitored area per air sampling point corresponds to a point detector according to VDE 0833

\*\*\*depending on local codes and standards

## Details for ordering

| Type         | Part no    | Designation                                       | Weight   |
|--------------|------------|---|----------|
| TP-1         | AD-05-0455 | Basic device Titanus ProSens                      | 1.55 kg  |
| TP-2         | AD-05-1905 | Basic device Titanus ProSens 2                    | 1.55 kg  |
| FS-TP-1      | AD-10-1600 | Front film sheet Titanus ProSens                  | 0.012 kg |
| FS-TP-2      | AD-10-1610 | Front film sheet Titanus ProSens 2                | 0.012 kg |
| DM-TP-25-L   | AD-10-4150 | Detector module Titanus ProSens (0.25% obsc. / m) | 0.125 kg |
| DM-TP-05-L   | AD-10-4160 | Detector module Titanus ProSens (0.05% obsc. / m) | 0.125 kg |
| DM-TP-80-L   | AD-10-4165 | Detector module Titanus ProSens (0.80% obsc. / m) | 0.125 kg |
| TT/a         | AD-05-1220 | Basic device Titanus TopSens                      | 1.75 kg  |
| FS-TT-1      | AD-10-1650 | Front film sheet Titanus TopSens                  | 0.012 kg |
| FS-TT-2      | AD-10-1660 | Front film sheet Titanus TopSens 2                | 0.012 kg |
| DM-TT-25-L/a | AD-10-4405 | Detector module Titanus TopSens (0.25% obsc. / m) | 0.125 kg |
| DM-TT-05-L/a | AD-10-4412 | Detector module Titanus TopSens (0.05% obsc. / m) | 0.125 kg |
| DM-TT-80-L/a | AD-10-4417 | Detector module Titanus TopSens (0.80% obsc. / m) | 0.125 kg |

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