

Titanus 3000

Air sampling smoke detection system



High sensitive

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- **Early fire detection for the protection of rooms and equipment with immunity to deceptive phenomena even in difficult areas with powerful interference**
 - **Adaptable, displayed sensitivities using DS11 smoke detectors**
 - **Optimum detection reliability using algorithms**
 - **The system can be ideally adapted to the conditions at the place of installation through the choice of a suitable smoke detector and the corresponding stored sets of parameters**
 - **Optimum choice of location for operation and maintenance**
 - **Monitoring and rapid fire location through the display of the analog value and the three danger levels at the device and on the parallel display**
 - **Monitored air flow in the tube system and at the air sampling points**
 - **Easy to service**

Application

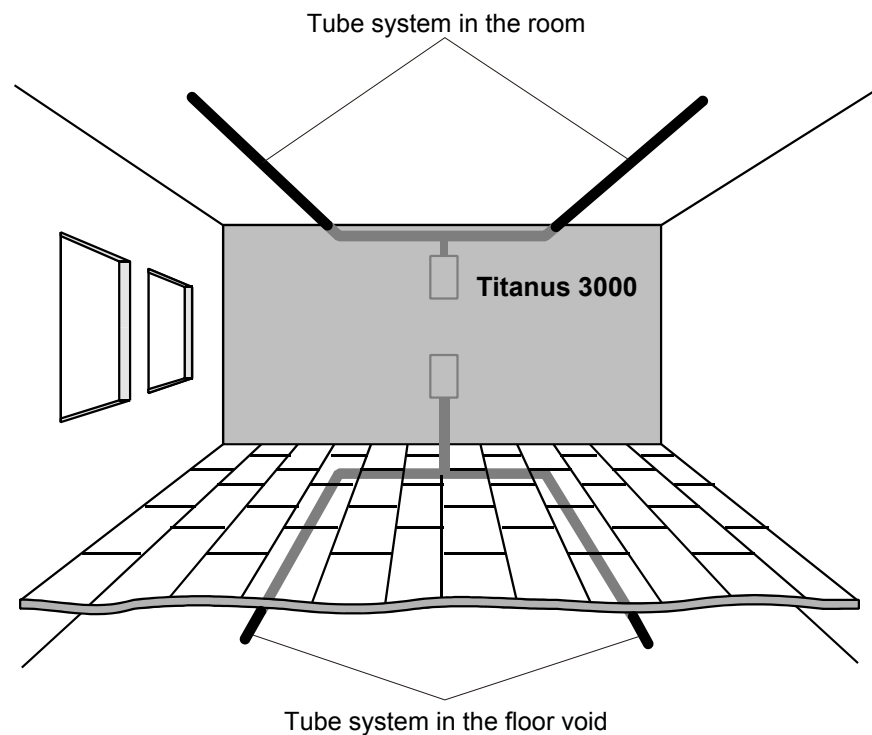
Titanus 3000 can be used wherever high sensitivity is required and where point-type detectors are unsuitable due to inaccessibility or room height, where they would spoil the decor or as protection against tampering.

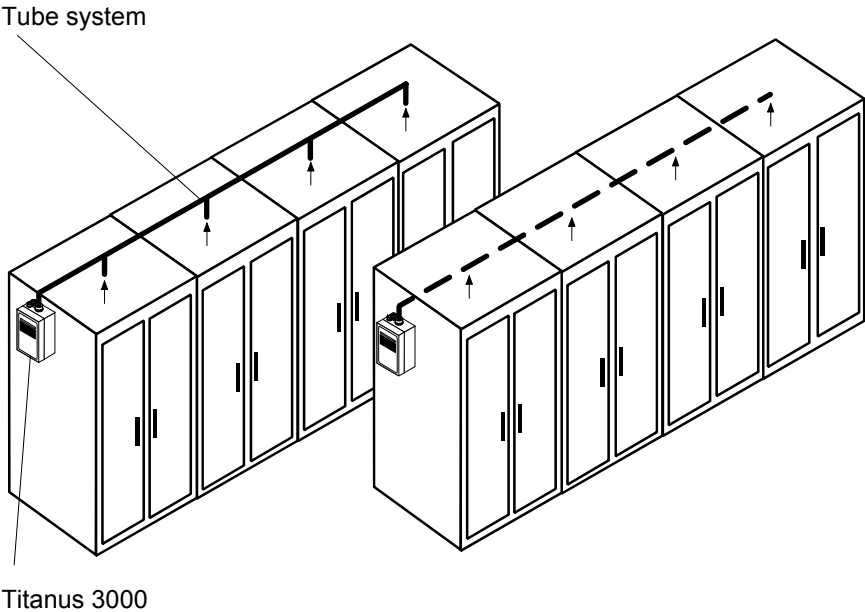
Scope of application

Titanus 3000 for the monitoring of:

- EDP systems
- Telephone exchanges and electronic equipment
- Clean rooms
- Historic buildings
- Museums with valuable and irreplaceable collections
- Floor and ceiling voids which are not easily accessible
- Unheated halls and cold storage buildings
- etc.

Room monitoring





Operating principle

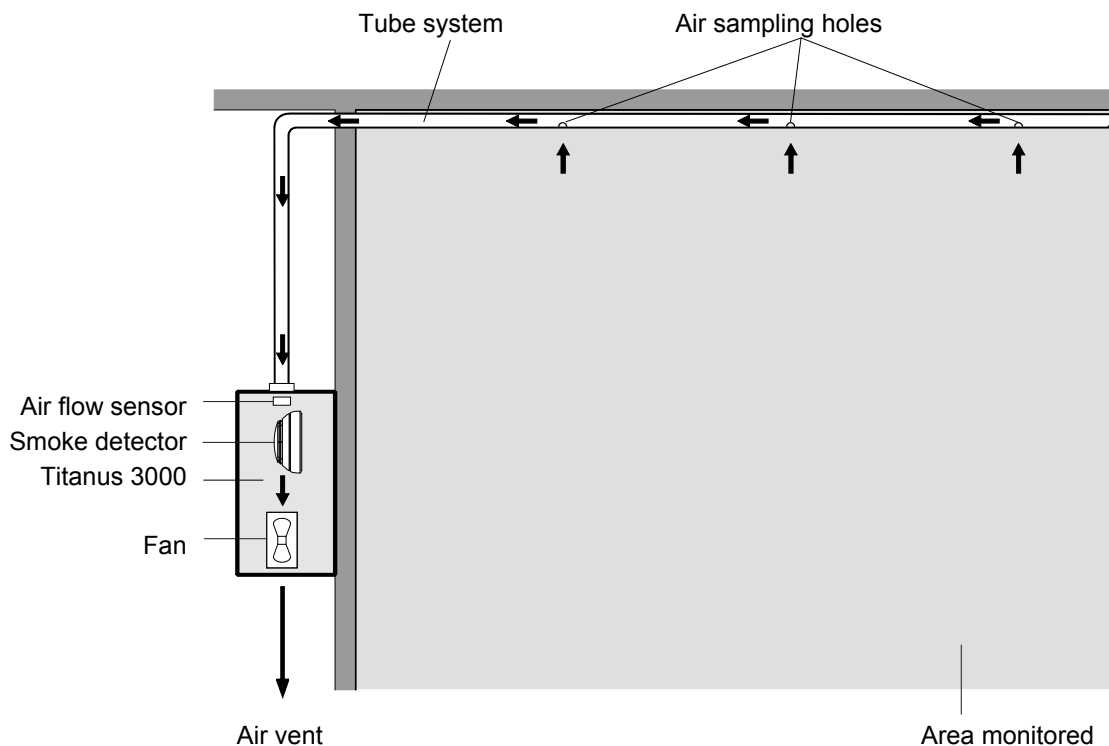
Titanus 3000 takes continuous air samples from the area monitored via a tube system with defined air sampling points (room, cabinet, etc.) and passes them on to a smoke detector. The air flows to the device below and out into the open air. It could also, e.g. with differing air pressure, be carried back by tube to the monitored area.

The smoke concentration is immediately displayed on a 10-step bar graph as well as being indicated by three flashing LEDs. The display corresponds fully with the parameterized maximum sensitivity of the smoke detector.

If, by means of its algorithms, the detector registers a danger, the three danger levels are indicated by three LEDs (Info alarm, pre-alarm and main alarm) and are available as volt-free contacts for connection to fire detection system control units.

The self-holding alarms as well as fault indicators can be reset by remote control.

Titanus 3000 with its volt-free inputs and outputs can also be operated as a stand-alone device.



Monitoring functions

All Titanus 3000 functions are continuously and precisely monitored.

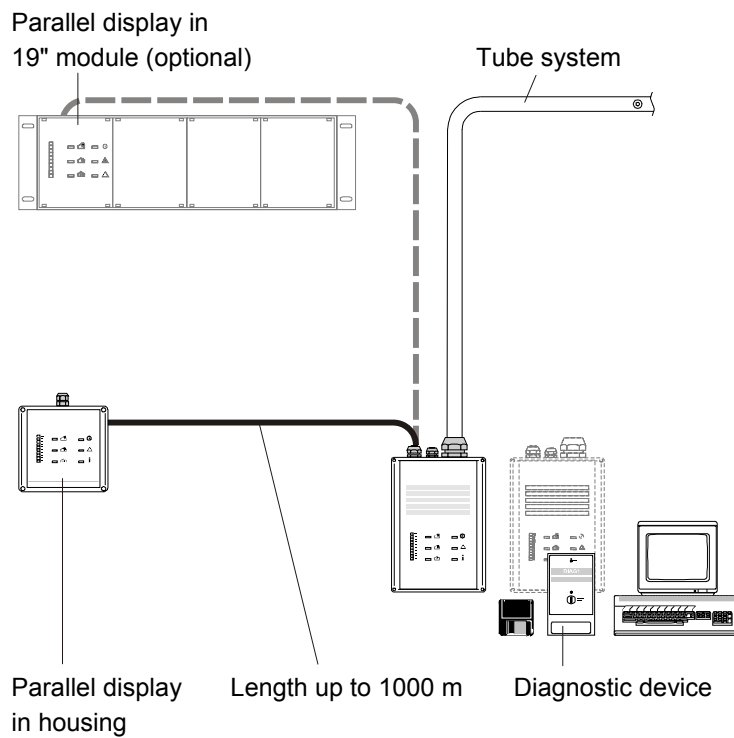
A fault signal is actuated upon:

- Fracture or blockage of the tube system
- Malfunction of the air sampling unit
- Malfunction or too high a compensation value of the fire detector used (the detector periodically carries out a test itself)

Sensitivities

Different sensitivities can be selected and set according to the type of application. By selecting a suitable type of smoke detector and adjusting its various parameter sets, Titanus 3000 can be optimally adapted to its function. In addition, a remote controlled switchover between two different parameters is possible (day/night, manned/unmanned switchover).

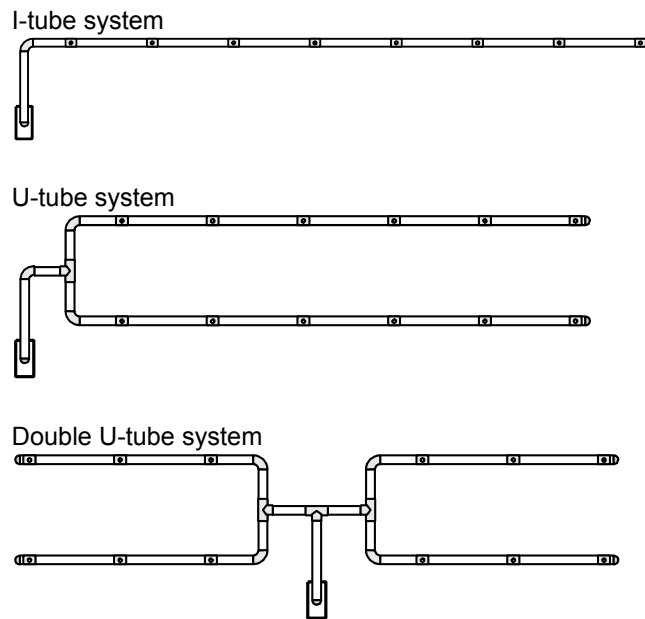
Titanus 3000 smoke detection system



Installation

Titanus 3000 is mounted on walls or cabinets. By reversing the device the connection socket can be positioned upwards or downwards. By removing the device cover, full access is provided to the smoke detector, to the terminals and to the programming elements.

Tube systems



Commissioning and maintenance

Commissioning and maintenance require little work. Automatic detector recognition, loading of the set parameters, setting and calibration of the self-learning air flow sensor are all microprocessor-controlled and carried out at the press of a button.

The Titanus 3000 gives an application error warning if the device has been incorrectly used.

A diagnostic device is provided for maintenance and servicing which enables rapid fault location. The reading-out of the current status of the device is done optically via data transmission. The diagnostic device is not required to commission Titanus 3000.

Design

Titanus 3000 consists of a closed ABS plastic housing, metallized inside with a regulated fan and precise air flow monitoring.

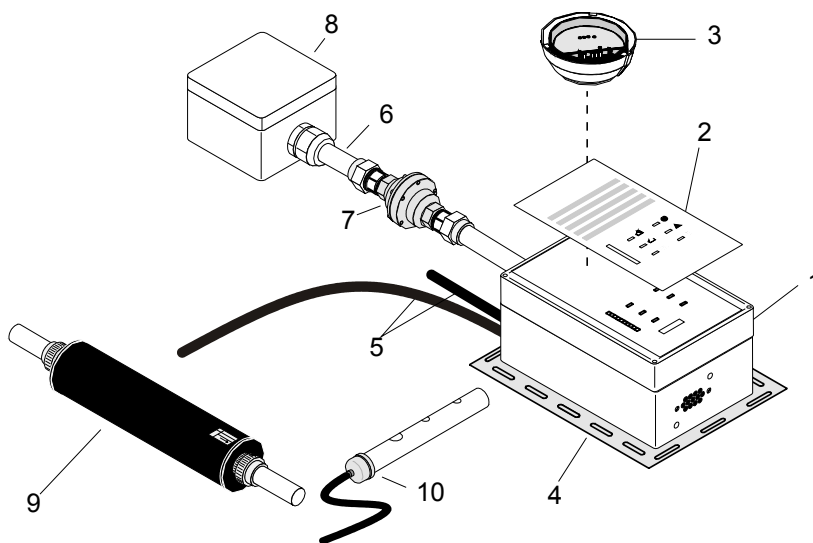
Titanus 3000 fully supervises the easily accessible smoke detector. The functions and parameters required for operation are set by means of DIL switches in the device.

The current smoke level, the alarm or fault signals and the operating condition are displayed on the front panel.

A comprehensive range of accessories is available for the engineering of an entire fire detection system: Air filters, return air element, tube system components, ceiling feed-through tubes, mounting plates, etc.

Parallel indicators are available in housings for wall-mounting or as 19" modules. All functions indicated on the front panel are also indicated by the separate display.

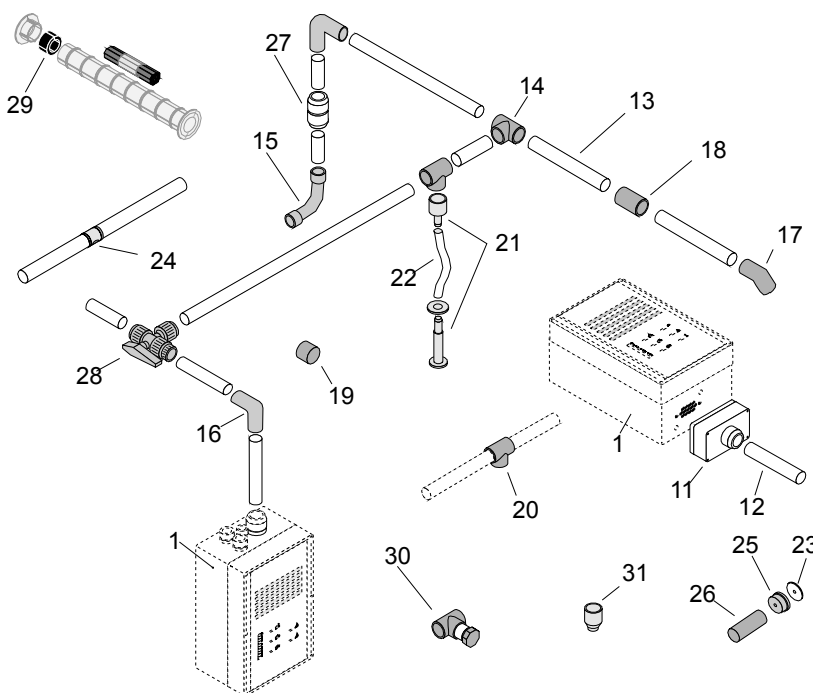
- 1 Smoke sampling system Titanus 3000
- 2 Front panel membrane
- 3 Smoke detector DO11xx
- 4 Mounting plate
- 5 Fire detection cable
- 6 Air sampling tube
- 7 Detonation protection
- 8 Air filter LF-AD for heavy dust concentration
- 9 Air filter LF-R...
- 10 Test tube (optional)



Tube system used

Tubes and accessories, PVC or ABS, halogen-free

- 11 Baffle
- 12 Return air element
- 13 Air sampling tube, outer diameter 25 mm
- 14 Tee
- 15 Bend 90°
- 16 Elbow 90°
- 17 Elbow 45°
- 18 Sleeve
- 19 End cap
- 20 Tube cap
- 21 Ceiling feed-through tubes
- 22 Flexible tube
- 23 Air intake reducing film disc
- 24 Air intake reducing strip
- 25 Air intake reducing collar
- 26 Tube with inside thread PG16
- 27 Double screw connector
- 28 3-way tap
- 29 Fire seal R90 for fire walls for combustible tube systems
- 30 Test adapter
- 31 Non-return valve, spring-loaded



Technical data

Supply voltage (Ue)	21... 30 VDC
– Rated voltage	24 VDC
Quiescent current (at 24 VDC)	200 mA ±12 %
Alarm current (at 24 VDC)	max. 320 mA
Monitoring of air flow in tube system	
– for fracture	Up to tube end
– for blockage	50 % or single hole
Sensitivities	
– Main display	
– with detector DO1161A (5308000001)	0.01 %/m (0.003 %/ft)
– with detector DO1153A (5000500001)	0.03 %/m (0.009 %/ft)
– with detector DO1151A (4930150001)	0.15 %/m (0.045 %/ft)
Display on housing front panel	10-step bar graph, Info, pre- and main alarm indicators, fault and "power on" indicators
Outputs	
– Volt-free changeover contacts to forward signals to any fire detection system control unit	Info, pre and main alarm, fault
Inputs	
– Volt-free inputs (24 V)	Reset Parameter changeover
Separately installed parallel display	max. 2
Operating temperature	–30... +60 °C
Protection category (DIN IEC 34 part 5)	
– without return air element	max. IP33, according to installation
– with return air element	IP54
Titanus 3000	
– Material	ABS, metallized inside
– Color	papyrus white, RAL 9018
– Dimensions incl. threaded connection (H x W x D)	290 x 160 x 123 mm
– Weight	2.5 kg
Approvals	
– VdS	G298050
Tube system according to planning guidelines	
– max. total tube length	200 m
– max. branch length	100 m
– tube outer diameter	25... 40 mm (1... 1.5 ")
– max. number of sampling points	20