



Titanus SuperSens

Air sampling smoke detection system



Highest sensitivity

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- **Very high smoke detection response sensitivity (0.0025 %/m)**
 - **4 adjustable values for detector sensitivity (alarm values)**
 - 0.2 %/m
 - 0.1 %/m
 - 0.05 %/m
 - 0.025 %/m
 - **3 levels of alarm (info, pre and main alarm)**
 - **Monitoring of the air flow in the tube system and signalization of tube rupture or sampling point blockage**
 - **Early fire detection for the protection of rooms and equipment of high value and where extremely high sensitivity is requested**
 - **Design of long pipe systems possible**

Application

Titanus SuperSens can be used whenever high sensitive smoke detection is required and where point-type detectors are unsuitable due to inaccessibility, room height, atmospheric conditions or special ventilation situations (high air speeds, etc.).

Scope of application

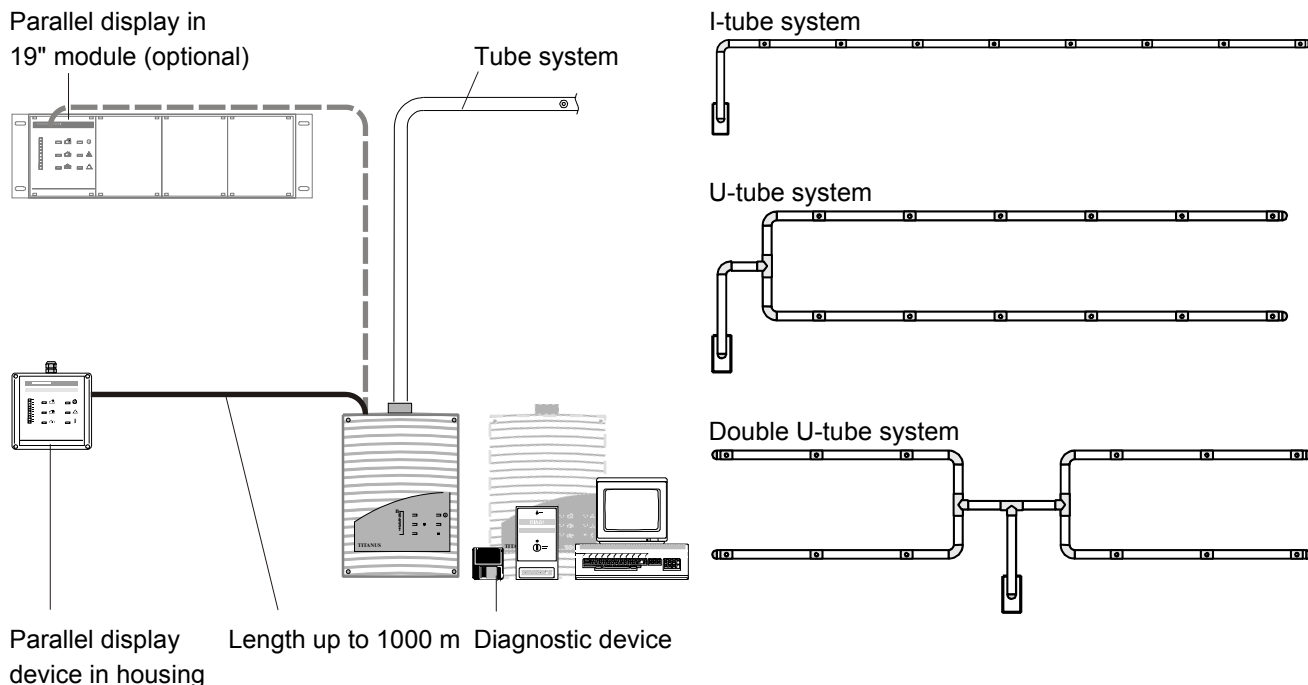
Typical applications for the Titanus SuperSens are:

- Production plants (clean rooms) in semiconductor industry
- EDP rooms
- High warehouses and halls
- etc.

Operating principle

Titanus SuperSens takes 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 which will be displayed on a 10-digit bar graph. To achieve maximum sensitivity an optical detection device with two light emitting diodes is used. Due to the wider spectrum of light compared to a laser based system different types of smoke aerosols can be detected with Titanus SuperSens. Different sensitivities 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 signalization in case of blockage or rupture of the tube system. Titanus SuperSens can be operated as a stand alone unit or be integrated in a fire detection system (through volt-free in and outputs).

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Installation

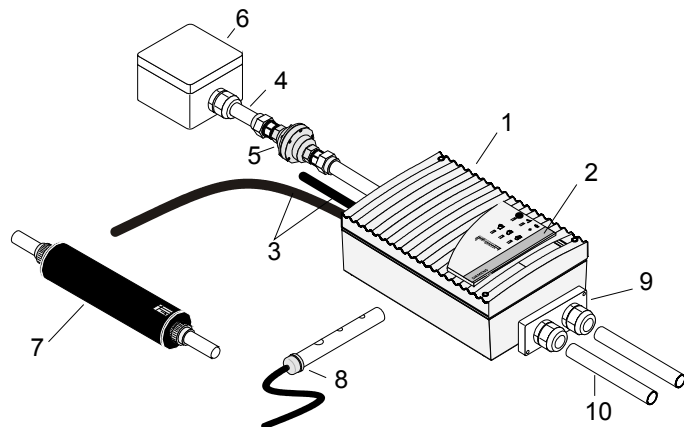
Titanus SuperSens is mounted on walls or cabinets. By reversing the device the connection socket can be positioned upwards or downwards. By removing the device cover, full access is provided to the programming modules without any influence on the air flow monitoring.

Commissioning and maintenance

Easy commissioning is provided due to microprocessor 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. Data transmission is achieved via an infrared interface from the detection unit to the diagnostic device.

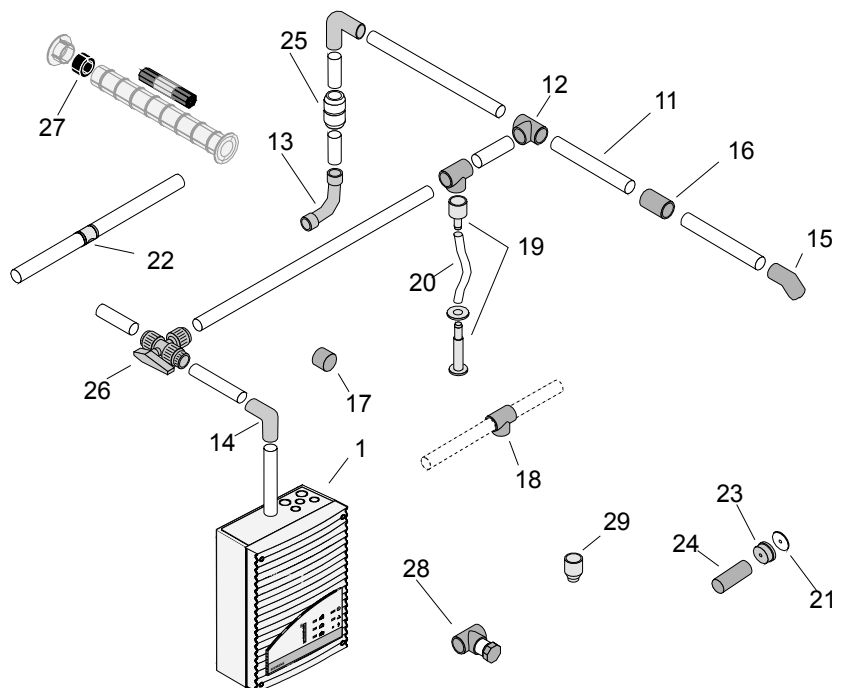
- 1 Smoke sampling system Titanus SuperSens
- 2 Label strip
- 3 Fire detection cable
- 4 Air sampling tube
- 5 Detonation protection
- 6 Air filter LF-AD for heavy dust concentration
- 7 Air filter LF-R...
- 8 Test tube (optional)
- 9 Baffle
- 10 Return air element



Tube system used

Tubes and accessories, PVC or ABS, halogen-free

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



Technical data

Supply voltage (Ue)	14... 30 VDC
– Rated voltage	24 VDC
Quiescent current (at 24 VDC)	245 mA
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
Response sensitivities (first level of bar graph indication)	
– Level I	0.02 %/m
– Level II	0.01 %/m
– Level III	0.005 %/m
– Level IV	0.0025 %/m
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
Separately installed parallel display	max. 2
Operating temperature	–20... +60 °C
Protection category (DIN IEC 34 part 5)	max. IP20
Titanus SuperSens	
– Material	ABS
– Color	papyrus white, RAL 9018
– Dimensions (H x W x D)	366 x 240 x 132 mm
– Weight	2.8 kg
Approvals	
– VdS	G201035
Pipe system according to planning guidelines	
– max. total tube length (Ø25 mm)	320 m
– max. branch length (Double-U)	75 m
– tube outer diameter	25... 40 mm
– max. number of sampling points	24
– max. total monitoring area	2880 mm ²