

Titanus EB Aspirating Smoke Detection Systems

- **Reliable early fire detection for the protection of people and property**
- **Direct connection to the esserbus®/ esserbus®-PLus loop**
- **Tested to EN 54-20 for use in classes A, B and C**
- **Integrated bar chart display on Titanus Top Sens EB**
- **LOGIC SENS functionality reduces number of false alarms**
- **Plug & Play for quick and easy commissioning**
- **Simple adjustment of sensor sensitivity using plug-in detection module**
- **Two-alarm dependency (VdS)**



Aspirating smoke detection systems work on the principle of active fire detection. They do this by constantly taking air samples from the monitored area using an integrated fan. These samples are then passed to the evaluating unit via a pipework system.

Aspirating smoke detection systems are mainly used where very early detection is essential or the use of point-type smoke detectors is impossible due to the difficult ambient conditions. This will be the case, for example, when high rooms such as high-bay warehouses or atriums are being monitored; similarly, they might also be used where working conditions are very dirty, such as in industrial premises or recycling facilities. Another typical application area of aspirating smoke detection systems is in areas where an unobtrusive presence is desired for aesthetic rea-

sons, for example in some offices or public buildings. In these cases the pipework can be installed out of sight in the false ceiling.

Aspirating smoke detection systems are often installed as part of the equipment protection strategy to monitor machinery and equipment. However, they are also increasingly being used as fire alarm systems, e.g. in warehouses, IT departments, server and ultra-clean rooms, refrigerated areas, etc.

Titanus EB - The Modular Solution

Fire detection is performed using a modular detector module. The detector modules are plug-in devices that can be installed into the base unit of the Titanus EB aspirating smoke detection system without the need for any tools. They are available in various sensitivities up to a maximum light opacity of 0.015%/m. The system can therefore be adapted to suit the prevailing conditions in the room.

Titanus EB devices are available in two forms:



Pro Sens 2 EB Display Unit



Top Sens 2 EB Display Unit

Titanus EB Aspirating Smoke Detection Systems

Titanus Pro Sens EB

The Titanus Pro Sens EB is a universal aspirating smoke detection system that can be used in a wide range of applications. Commissioning of the Titanus Pro Sens EB compact unit is child's play. The device is already preconfigured and is delivered with a detector module, which means that no further settings need to be made on the device during commissioning.

The Titanus Pro Sens EB is equipped with an alarm and fault display as well as an operating display.

Titanus Top Sens EB

In addition to the features of the Pro Sens EB, the Titanus Top Sens EB offers the ability to implement a multi-stage alarm concept that allows a distinction to be made between information alarms, pre-alarms and fire alarms, with a separate display for the various states. Top Sens EB devices also feature an integrated bar chart display that shows the smoke density in the monitored areas.

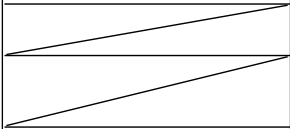
A day/night mode can be activated to provide a way of adapting the sensitivity of the sensors to potentially varying ambient conditions.

Sensor sensitivity during the night is increased by activating the "ALT-SENS" input on the device.

Detector Modules & Accessories

Detector modules with a range of sensitivities are available for Pro Sens EB and Top Sens EB devices.

The following table shows the various types of detector module and the sensitivities that can be adjusted directly on them using DIL-switches (the sensitivities of the 80152x.10 and 80153x.10 modules have been adjusted).

Alarm sensitivity (main alarm) Titanus Top-Sens®		
Detector module Type DM-TT-50-LE	Detector module Type DM-TT-10-LE	Detector module Type DM-TT-01-LE
	0.8 % light opacity/m	0.12 % light opacity/m
	0.4 % light opacity/m (standard)	0.06 % light opacity/m (standard)
1 % light opacity/m	0.2 % light opacity/m	0.03 % light opacity/m
0.5 % light opacity/m (standard)	0.1 % light opacity/m	0.015 % light opacity/m

Available versions and possible settings exemplified using a Titanus Top Sens EB detector module

A detector module is required for each pipe outlet. Each Titanus version, both the Pro and Top Sens EB, can control up to two pipe branches. The DIL-switches on the detector modules can also be used to make fine adjustments to the sensitivity or to set alarm and fault delays.

Selecting the "LOGIC SENS" function reduces the risk of false alarms caused by deceptive on-line phenomena. This can also be activated by a DIL-switch on the detector module.



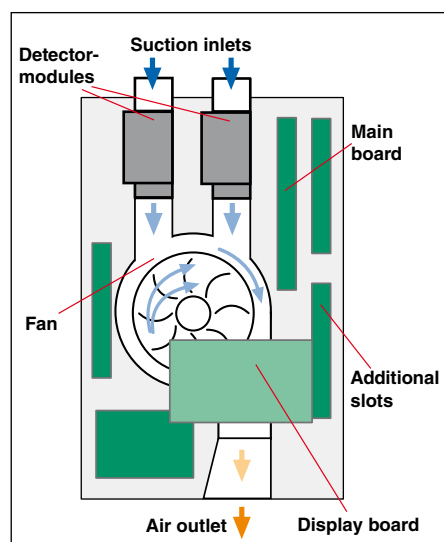
Detector module
80152x (for Pro Sens)
80153x (for Top Sens)

Detector Module Functions Activated Using DIL-Switches

- Alarm sensitivity
- Alarm delay time of up to 60 seconds
- Air flow monitoring activation threshold
- Air flow monitoring alarm delay
- Fault warning on device (latched / not latched)
- Logic Sens functionality

Two-Alarm Dependency

Fire detection is performed by a modular detector module in the Titanus EB aspirating smoke detection system. Particles are detected on the absorption principle using a high-power light source. The fact that detection in the different pipe branches is electrically isolated means that two-alarm dependency can be provided in accordance with the applicable VdS guidelines without having to install additional detector boxes in the pipe branches.



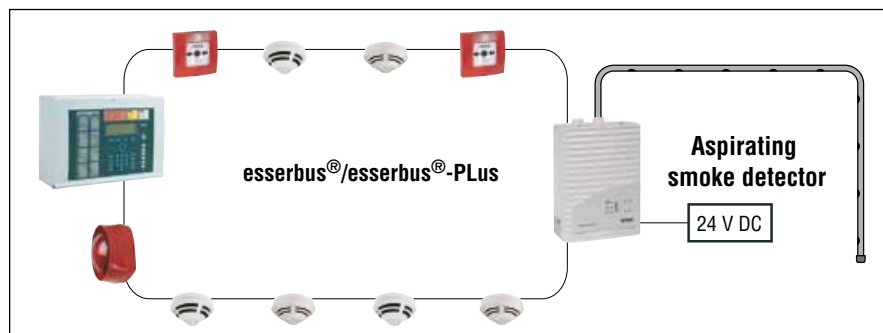
Titanus Pro Sens EB design

Direct Operation On The esserbus®/esserbus®-PLus Loop

Titanus EB aspirating smoke detection systems operate directly on the esserbus®/ esserbus®-PLus loop.

Power must be supplied via an external power supply unit to EN 54-4 A2. Titanus EB devices are direct participants on the loop and are easy to program and commission using the tools 8000 programming software. No additional software and no programming of the device itself is necessary during commissioning.

The Titanus EB aspirating smoke detection system communicates directly with the fire alarm panel of the FlexES control or IQ8Control system. Switching on and resetting of groups is carried out in a user-friendly way via the fire alarm panel. A dedicated group number can be allocated to each detector module in Titanus EB to enable localization on a pipe branch.



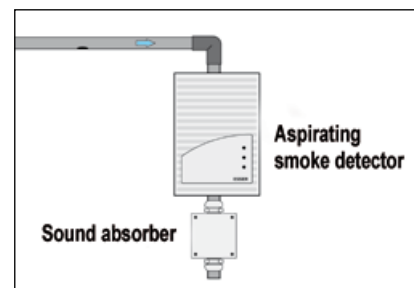
Application example: operation on the esserbus®/ esserbus®-PLus

Detection Under Stringent Noise Emission Regulations

The Titanus Top Sens EB version is available with a special low-noise fan for detection applications in noise-sensitive areas (Part No. 801531.10.SL). These special high-performance fans permits operation at greatly reduced noise levels.

Another way of reducing the noise emitted by the system is to use an external sound absorber (Part No. 80543.10). This is simply flanged onto the pipe outlet (see diagram).

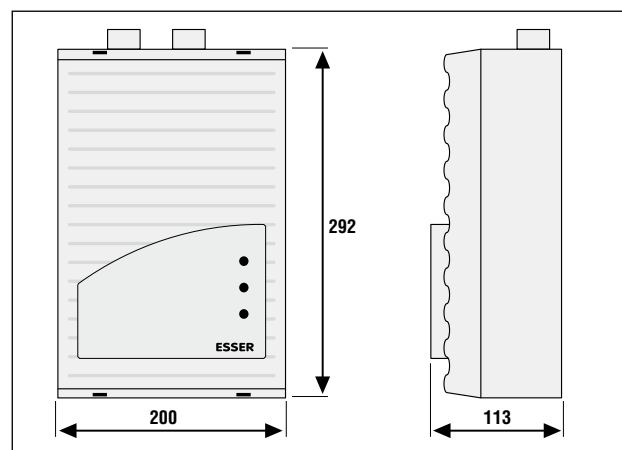
These measures permit Titanus EB aspirating smoke detection systems to be used without any problems in areas with the most stringent requirements in terms of maximum permitted noise emission levels.



	801515.10	801521.10	801522.10	801531.10	801532.10	801531.10.SL
Set in the factory for operation with one pipe	X	X		X		X
Set in the factory for operation with two pipes			X		X	X
Display of information alarm on device and FAP				X	X	X
Display of pre-alarm on device and FAP				X	X	X
Display of fire alarm on device and FAP	X	X	X	X	X	X
Display of fault on device and FAP	X	X	X	X	X	X
Bar chart				X	X	X
Plug & Play commissioning	X					X
Direct interface to esserbus®/ esserbus®-PLus	X	X	X	X	X	X
Operating temperature range -10 °C to +60 °C	X	X	X	X	X	X
Reduced noise operation	(X)*	(X)*	(X)*	(X)*	(X)*	(X)*
Low-noise operation						X

*with optional sound absorber

Titanus EB system overview



Titanus Pro Sens EB dimensions

Specifications

Operational voltage	14 ... 30 V DC
Ambient temperature	-20 °C ... +60 °C (-40 °C to +60 °C for refrigerated version)*
Storage temperature	-25 °C ... +65 °C
Humidity	max. 95% relative humidity (non-condensing)
Protection rating	IP20
Housing material	plastic (ABS)
Housing color	white, similar to RAL 9018
Weight	approx. 1.35 kg
Dimensions (WxHxD)	220 x 292 x 113 mm
VdS approval	G 206118

Order data

	Part No.
Titanus Pro Sens EB Compact Device	801515.10
Titanus Pro Sens EB Base Unit	801521.10
Titanus Pro Sens 2 EB Base Unit	801522.10
Titanus Top Sens 1 EB Base Unit	801531.10
Titanus Top Sens 1 EB.SL Base Unit	801531.10.SL
Titanus Top Sens 2 EB Base Unit	801532.10
DM-TP-50-LE Detector Module for ProSens I	801523.10
DM-TP-10-LE Detector Module for ProSens I	801524.10
DM-TP-01-LE Detector Module for ProSens I	801525.10
DM-TT-50-LE Detector Module for TopSens	801533.10
DM-TT-10-LE Detector Module for TopSens	801534.10
DM-TT-01-LE Detector Module for TopSens	801535.10
Sound absorber for Titanus EB aspirating smoke detection systems	801543.10
Device holder for Titanus EB aspirating smoke detection systems	801540
Air filter	801544.10

*Orders for refrigerated versions on request.

Please refer to our Fire Detection Technology catalog for more order data.