

## TUP 224 F901: Pneumatic sash sensor

### How energy efficiency is improved

Enables the demand-led control of the air volume in laboratory fume cupboards.

### Areas of application

Creation of VAV systems for fume cupboards, can be used especially in potentially explosive areas in zone 1 II 2 G T6, in combination with the RLP 100 F123 pneumatic volume-flow controller.

### Features

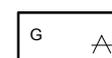
- Continuous output signal is specified as command variable to the volume flow controller
- Installation preferably to be on counterweight of laboratory fume cupboard sash
- Conformity tested as per EN 13463-1 and EN 1127-1 (Ex zone 1 II 2 G T6)
- Compressed-air connections with Rp 1/8" female thread
- Long-term-stable stainless steel spring

### Technical description

- Supply pressure 1.3 bar  $\pm$  0.1
- Measuring ranges up to 2 m possible for free-standing fume cupboards
- Linearity 2%



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Type	Measuring span <sup>1)</sup> m	Output pressure bar	Weight kg
<b>TUP 224 F901</b>	0,45...0,75	0,2...1,0	0,14
Supply pressure <sup>2)</sup> via external restrictor, $\varnothing$ 0,2 mm	1,3 bar $\pm$ 0,1	Permissible ambient temp.	0...55 °C
Air capacity, air consumption	33 l <sub>n</sub> /h	Wiring diagram	<a href="#">A03488</a>
Linearity	2%	Dimension drawing	<a href="#">M00909</a>
Control action	B	Fitting instructions	MV 505210

### Accessories

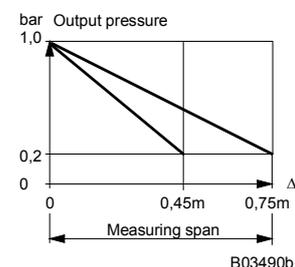
**0297832 001** Extension spring for man-sized (walk-in) fume cupboards with sliding-door movement of 2 m. Measuring span: 0,9...1,5 m.

1) Factory setting: 0,5 m; can be changed by varying the length of the spring (6 holes); measuring span: 0,9...1,5 m; with accessory no. 0297832 001

2) On the RLP volume-flow controllers, the restrictor ( $\varnothing$  0,14 mm) is fitted at input 6. For regulations on the quality of the air supply, especially at low ambient temperatures, see Section 60

### Operation

The transmitter – which works on the bleed-off force-balance principle – converts the path (i.e. the amount that the fume cupboard's sliding door is open) into a pneumatic output signal of 0,2...1,0 bar within its measuring range. Wear and tear has no effect on accuracy. The signal is fed as the command variable to the fume-cupboard exhaust-air controller. The air volume is adjusted within seconds in proportion to the amount of the opening. This decreases the risk of noxious gases escaping from the fume cupboard. The output pressure reacts in linear fashion to the opening. Control action is B: as the spring length  $\Delta l$  increases, the output pressure falls.



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### Additional information for use in explosion hazard zones

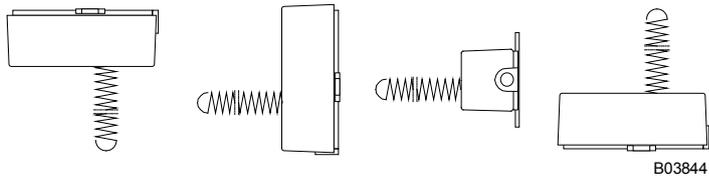
To prevent the risk of an explosion, the device must not be installed near mechanical devices or in the corner of a building. The products should ideally be fitted within the range of spark detection, extinguishing or inerting systems. When using the device with other equipment, protection systems and components, make sure that all transitions or interfaces are isolated from each other and that the system is fitted with an emergency shut-down system.

Installation and start-up may only be carried out by qualified personnel trained in the use of SAUTER pneumatic devices and ATEX guidelines.

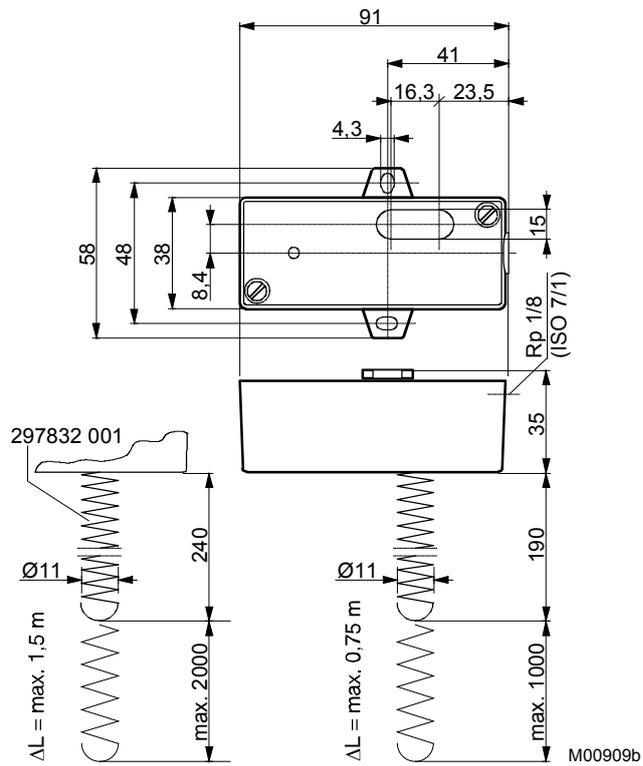
During start-up and operation the ambient temperature should not exceed the stated maximum temperature of the device. Only open the housing in a non-explosive atmosphere.

**Fitting instructions**

Can be fitted in the following positions



**Dimension drawing**



**Wiring diagram**

